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Recent Trends in Social Sciences

Chief Editor

Dr. R. V. Bhole

'Ravichandram' Survey No-101/1, Plot
No-23, Mundada Nagar, Jalgaon (M.S.)

Guest Editor

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Address

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Environmental Effect of Warna Dam in Context with River Shift and Salinity Problem

Jagdish B. Sapkale^{1*}, Balu L. Rathod², Nilesh K. Susware³, Pradeep S. Joshi⁴

¹ Professor, Department of Geography, Shivaji University, Kolhapur, Maharashtra, India.

* corresponding author: e-mail- sapkalejagdish@gmail.com

² Assistant Professor, Department of Geography, Kankavli College, Kankavli, District- Sindhudurg, Maharashtra India.; e-mail- balurathod267@gmail.com

³ Assistant Professor, Department of B.Voc., Gopal Krishna Gokhale College, Kolhapur Maharashtra India.; e-mail- Nileshsusware@gmail.com

⁴ Research Scholar, Department of Geography, Savitribai Phule Pune University, Pune, Maharashtra, India. e-mail- joshipradip001@gmail.com

Abstract:

The present study forms a part of Warna river basin, including Chandoli dam (Warna dam) and stretches of River channel in Maharashtra State of India. Warna River is a major tributary of the Krishna River, rises in Sahyadri ranges of Maharashtra. It flows with a straight south-east direction along the northern borders of Malkapur, Panhala, Alta and Shirol for a distance of about 129 km and meets river Krishna at Hariapur of Sangli district. The attempted research work deals with the salinisation, water logging and other downstream environmental problems related to river characteristics, more or less influenced by the dam.

Keywords: Flood damage, River Shift, Salinity, River erosion, Water logging

Introduction:

In India, the population has increased day by day. Available resources have been used by the people to fulfil the basic priorities. Frequently, the growing population in any region or of any country exerts pressure on the accessible natural resources. Most of the population depends on primary activities, secondary activities and tertiary activities. Among all of these, the agricultural activity is the dominant one. The agricultural system provides enormous benefits to the living population. This primary activity has increased the global per capita food supply, it helps to control over the hunger, also maintains the natural ecosystems in the balanced form (FAO, 2001; Tilman et.al, 2002). Lack of water for agricultural purpose, consequently reduces the agricultural productivity. Therefore, storage of water through dam, solves the water deficiency in any region. These dams provide more and sufficient benefits to the people, also impact on their economic and social well-being. Various experiences reflect that there are positive impact of dam and negative impact of dam also. Dams, by providing water for irrigation purposes reduces the flood problems, huge impounded water also used for power generation. These are the major positive effects of dam but dams are also responsible for environmental problems like, destruction of vegetation in the upstream of dam, variation in river channel morphology in the downstream of dam, salinisation and water logging problem due to over exploitation of water through irrigation are the negative impacts of dam. In context with the problems occurring indirectly due to the dam, an attempt has been made and discussed in this research work.

Methodology :

The present study deals with the assessment of river shift and the environmental problems occurs in the study area. Therefore the research work was based on the field visits and primary data collection. Shifts in river channel have studied during the field visits and measured using surveying instruments and GPS. Some sites were studied using google earth images of year 2003 and year 2014. Questionnaire survey has carried out in some villages of Warna river basin, the fieldwork was consisting of participant observation in order to carry out the problem study regarding water logging and salinity.

Shifts in Warna river channel and river bed configuration:

Some environmental problems occurs due to dam, may be directly or indirectly. An attempt have also been made to study the impact of dam and weirs on the morphological characteristics of Warna river channel, the results have been observed due to aggradation or degradation of channel. Aggradation and Degradation are the fluvial processes mostly associated with a river and its differentiating parameters. Aggradation and degradation are generally influenced by river discharge, sediment load, morphological characteristics of river channel and human interventions. If the river water is unable to transfer the bed load or the channel material then the same is deposited within the channel and channel height increases, aggradation occurs. This also leads to change the river morphology and hydraulic geometry. Degradation is another process which is responsible for the lowering of river bed and also shifting the channel banks. Fluvial deposition in terms of aggradation and its associated landforms, fluvial erosion i.e. degradation are the basic processes which are almost responsible for variation in channel cross sections and channel width adjustment. Therefore causes and influence of these processes is also discussed here.

In view of this, aggradational and degradational impact in channel has been studied because the channels are logical and efficient place to investigate the geomorphic effects of force, resistance, erosion, transportation and deposition. In Warna channel the flow of river water and the distribution of bed material have been regulated by Warna (Chandoli) dam (Sapkale, 2016).

An intervention by man has serious effects on natural processes. The degree of intervention is the outcome of technological advancements, which exert pressure on the natural resources. The increase in Population leads to increasing demand on houses, food crops and basic needs (Sapkale, 2010). One more important mechanism has observed during the studies that providing over-irrigation to the agricultural fields, the soil material getting loose that helps in heavy erosion during the monsoon. The detached loose material washed out from the fields and added with the rills and gullies of the tributaries, moreover moving as a bed load in the river channel. Uneven and low discharges after monsoon in the river channel due to controlling measures like dams and K.T. Weirs (Kolhapur Type Weirs) tends to slow-down the river velocities and carrying capacity, resulting for silting up of channel (Sapkale, 2013). In Warna river there are some K.T. weirs which also tends to disturb the natural process of sediment transportation and deposition. At some sites Lateral bars and central bars have been developed.

According to Petts and Lewin in 1979, the dam influences on downstream river channel morphology and decreases magnitude and flood frequency; also reduces the quantity of sediment load (Petts, Lewin and Erskine, 1979).

Gaeuman has studied the channel responses to changes in stream flow and sediment supply in the lower reaches of Duchesne River. Gravel-bed and sand-bed reaches of the lower Duchesne River showed particular adjustments to the discharge and sediment supply. "Sand-bed reaches tended to adjust to all perturbations with rapid bed-level changes, whereas the gravel-bed reaches adjusted primarily through width changes. The gravel bed reaches aggraded only when gravel was supplied to the channel through local bank erosion and degraded only during large floods" (Gaeuman, Schmidt and Wilcock, 2005). In any river basin, soil erosion is the major problem which is responsible for the degradation of fertile agricultural land. Eroded soil added with river water also becomes a major problem to the river environment. Deposited sediments tend to raise the flood water levels during monsoon. According to Baker and Kochel (1988) River regimes has changed directly when dams are built and blocking their channels. A dam alters the hydrological regime by regulating the flow with decreasing peaks and increasing low flow frequency. This in turn modifies the sediment transport capacity by inducing erosion or deposition and altering channel morphology. Such types of deposition have been seen in the Warna River basin and along its tributaries.

Osterkamp also observes that stress imposed by human activities on global systems has drawn attention of planners, earth scientists, environmental managers and citizens that changes have occurred since historic time but major transformations of landscapes including fluvial and coastal systems continue to occur in areas of human settlements and mineral extraction. The environmental effects of Urbanization and related activities of mining, quarrying and infrastructure development are principal factors promoting anthropogenic changes in the nature and processes of the earth's surface (Osterkamp, 2000).

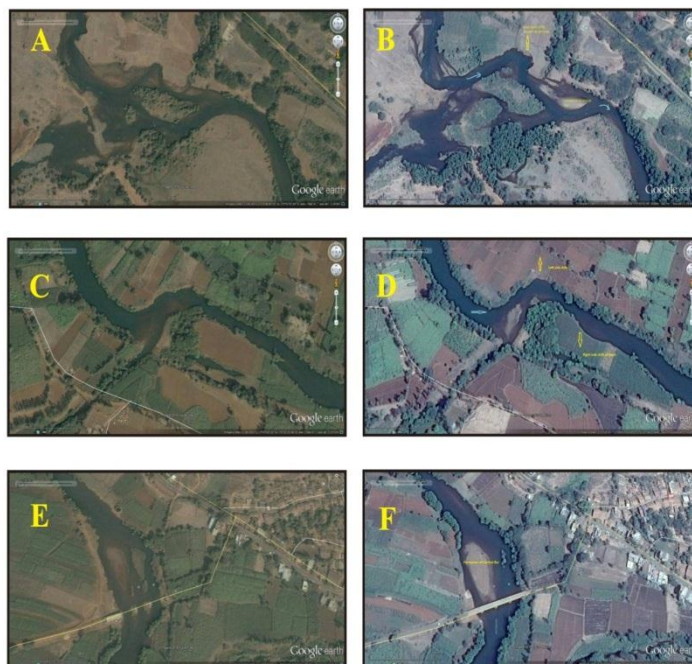


Figure 1 : (A) Warna River, near Dam - year 2003; (B) year 2014; (C) Warna River near Chandoli village - upstream side - year 2003 ; (D) Shifts towards left & right side -year 2014 ; (E) Warna River near Shitoor-Aarala village year 2003; (F) -formation of central bar shows aggradations - year 2014 (Source :Google earth image).

Human intervention in terms of excavation activities along the bank and other human related activities like dam construction in river catchments probably modify the channel geometry, and distribution of sediments and water to rivers (Sapkale, 2010). Therefore, study regarding channel morphology and changes in river behavior with response to dam and weirs in the present study has attempted. According to the pioneering work of Sapkale (2013), Flooding in the study area occurs as a result of heavy rainfall in the upper basin and also due to channel instability. The stability and channel in equilibrium can be changed rapidly as a result of natural processes and human made disturbances like excavation-sand degradation, construction of dam, K.T. weirs in river course etc. These activities can change or alters channel parameters and affecting sediment deposition in the channel. During monsoon uneven rainfall and variation in discharge also gives rise to unexpected changes in the channel bed. Similarly it has also concluded that the flood control structures like dams and reservoirs with various Kolhapur type weirs (KT Weir) are also unable to protect the agricultural land and public property from the inundation of monsoon water. The study and the surveyed cross sections also revealed that the KT Weirs as an obstruction are also responsible for the cross sectional change in the river channel. These have accountable to increase the width of channel just downstream from the weirs.

Afforestation and the soil conservation methods should be undertaken in the upper stream basin to control erosion. This could be minimizing the aggradations in channel after floods. Figure no. 1-A and 1-B are the Google earth images of the Warna river very near to the dam. Both the images shows the morphological change and variation in channel characteristics. The river is shifting for more than 25 metres towards its left side due to the lateral erosion with an effect due to the greater velocities. The shift is observed in fig no. 1-B - the image of year 2014. Channel bifurcation/braiding of channel has also seen with newly formation of central bar. Figure no., 1-C and 1-D are the images of the river near Chandoli village that shows the left side erosion and right side bank erosion with a shift of 15-20 meters. Central bar is also formed in the upstream direction of the K.T. weir (fig 1-E & 1-F), the size of the central bar is due to channel aggradation and the size has increased in the year 2014. During the flood near the bridge over the Warna river, there is a large shift towards its right side, the energy of the river water is tremendous during the release of the dam water and that causes lateral erosion of the bank and river shifts (fig 2-A & B). At some location , probably at the confluence zone of the river the trees are uprooted.



Figure 2 : (A) Lateral erosion of right bank of river warna; (B) - shifts in warna river due to heavy discharge; (C) - Water logging problem in the agricultural fields of Kavthesar.

Salinity problem due to Canal-Irrigation facility:

The problems of salinisation and waterlogging have observed at some locations in the areas of Warna basin. Salinisation means the concentration of salts on the soil layers. Soils contain salt, resulting from the disintegration of rocks and weathering processes. At the time of weathering process, the salts are releases from the parent rocks and added to the soils, also dissolved in rain water. Rainwater with dissolved salts either infiltrates into the ground or added to the river or streams. That means the water sources and soils; they all are containing some amount of salt. The Non-polluted and fresh mountain stream contain upto 50 parts per million (ppm) of salt; that is very little amount as compare to the salt content of 35,000 ppm in sea water (Pillsbury, 1981). When the amount of salt increases and salt in the soil reaches upto 0.5 to 1.0 percent, then the soil of the agricultural land is not suitable for its plant growth, it becomes toxic to the cropping plant (Kovda, 1977). If the rainfall is less and unable to wash the salts from the top surfaces, then concentration of salts, increases- gives rise to serious problems of salinisation. Ground water is having large amount of salt concentrations. Therefore if ground water table, near to surface increases in the agricultural fields, then it also increases the potentiality of the salinisation, in that case water logging problem and salinisation problems occurs simultaneously. According to Goldsmith and Hildyard, (1984), the water-salt balance of the soil is very essential. That means amount of water, which lost from the soil must be balanced by entering the water to the soil. The rate of salt in soil also increases due to the process of 'evapotranspiration' (Goldsmith and Hildyard, 1984). At least 50 percent of world's irrigated land now suffers from salinisation (white, 1977).

Turukwadi, Kotoli, Rethare, Gondoli, Nerli are the villages , where canal facilities became a problem and shows a negative impact on agriculture. Other villages also facing the same problem, as the canal water resulting for

water logging and also increasing the salinity in the soil. The above villages have also selected for the study and questionnaire survey for observing the salinity problems in the villages.

Due to canal, salinity of the soil is rising and this affecting on agriculture. People have negative approach towards canals, but still 84% people are positive towards the importance of canal. About 72% of people says that canals are not profit making for them. Poor quality of construction, water leakages, ignorance of government & administration resulted into loss instead of profits. According to the village people their soil/farm were rich before construction of canal there are some negative changes in their soil. 73.20% people says after this canal swamp condition occurs in the soil and 68.04% people says salinity of soil is increased.

The water gets release through the dam in the canal once in a month and the water remains there (in canal) 5 to 6 days. During this period there was no control on water by any government or irrigation authorities. Some leakages are inviting excess water to the field ,so the rills enter in farms, it makes bogginess/swampy soil in the agricultural lands. This resulting for increase in salinity and destroy agricultural productivity.

According to the opinion of the native people , the major loss from this canal is it's improper location/way. It passes from the central area of the village. If the path of canal is from forest area/barren land, then it would be helpful to stop water leakages and also useful to the villagers. According to some people this canal should be based on Karnataka's canal model and some other people says it should be based on Mumbai canal model, it means iron pipe-line may be more better than the existing open canal.

The over irrigation and mismanagement of water is main reason for soil salinity. Figure no. 2-C shows the salinity problem in the village area of Kavthesar. Salinisation and waterlogging problem also observed in some villages like Charan and Danoli.. The scales of such problems due to dam and its irrigation water are very negligible, only some villages reflected these problems.

The Warna River is perennial throughout the year, therefore resulting to increase the ground water level in the surrounding areas This increasing rate of ground water level and over exploitation of irrigation tends to increase the problem of waterlogging in the agricultural fields of this village. Water is impounded for many days and unsuitable for crops. Such areas are covered by wild grasses and bushes. At the same sites salinisation also occurred, when the water logged areas dried, then salt accumulated on the upper surfaces of soil. The proper maintenance of the existing canal should be regulated in the study area.

Conclusion :

At some sites within the river, channel siltation has also occurred, also gives rise to some serious problems for the river processes. It has observed that sudden release of dam water causes lateral erosion, leads to shifts in channel stretches. In the command area of Warna river basin, many places have been noticed with the problem of water logging and salinity. The over irrigation also leads to soil salinisation because salt and other decomposed minerals are spread on the top of soil due to capillary action during day time. To control over the salinity and water logging problem, the modern irrigation methods like sprinkler and drip irrigation system should be used. The existing canals, which supply water to the villages of the Warna basin significantly very important, but at some sites there is a leakage problems from canals. Therefore canals should be urgently repaired, so that it helps to save the water and also minimizes the salinity problem due to such leakages.

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Impact of COVID-19 on Education

Waghmare Bhagyashri Bhima

Assistant professor, Department of Chemistry, M.S.G.College, Malegaon-Camp

Abstract-

The study investigates the impact of COVID-19 on education. This paper attempts to gain a better understanding of how the COVID-19 crisis may affect students' learning. The current situation is phenomenal and this makes it difficult to predict the impact that it will have on student achievement, attempt to gain a better understanding of how physical school closure may impact education and learning. It looks at the different direct and indirect ways through which the virus, and the measures adopted to contain it, may impact student's achievement. It indicates that students will suffer a learning loss.

Keywords: *COVID-19, education and learning, student's achievement.*

Introduction:

The Corona virus has been on the rise since December 2019, causing widespread fear, instability, anxiety, insecurity and death worldwide. Nearly all the countries have fled under the shadow of this death. It is important to think seriously about the political, economic, social, cultural and psychological consequences of this corona. The outbreak of the corona virus is a major crisis facing the post-World War II world. The crisis has affected all aspects of human life. The disease should not be caused by the lack of antibiotics, so the only option now is to take preventive measures. Therefore, efforts are being made in all countries to control the disease, depending on the policy of lockdown. The uncertainty created by this situation has created an atmosphere of fear around the world. Corona has had a huge impact on nearly 150 crore students in the world in the field of education. Schools and colleges have closed. In the future, reading e-books and studying through e-learning will increase without going to school-college. But places like India will still have many limitations on the use of e-learning. But the kids won't play together anymore. This will have a very bad effect on young children. Corona will be followed by tele-working and video conferencing.

Theme

Physical school closure

Physical school closure and the adoption of online education may negatively affect students' learning through four main channels: less time spent in learning, stress symptoms, a change in the way students interact, and lack of learning motivation.

Less time spent in learning

Most of student's formal learning takes place in schools and colleges. The closure of school and college buildings and the move to a distance education environment may result in students spending less time in learning.

Stress symptoms

Students who are confined at home due to COVID-19 may feel more stressed and anxious. Many students are likely to have developed post-traumatic stress disorder (PTSD) symptoms that include less concentration, nervousness and insomnia.

A change in the way students interact

Classroom activities provide a crucial role in helping students acquire social skills that have important implications for their future personal and professional growth. The interaction of students with teachers and with other students is found to be essential for the development of positive self-esteem, self-confidence, and a sense of identity. It also improves students' capability to work in groups in collaborative and productive ways.

Learning and inequality

COVID-19 and the closure of schools and colleges may not affect students equally. Students from less advantaged backgrounds can experience more noteworthy learning loss during this emergency period than their more advantaged counterparts. This may be due to differences in non-financial parental support, schools attended and students' digital skills. Significant learning disparities may possibly appear also between native students and migrant students.

Amount of time at home with children

Children may especially need the presence of their parents at home as they do not possess the independent learning skills, attention spans to succeed in Virtual Learning Environments for very long. Those with lower levels of education are also disproportionately in occupations that are less likely to be performed from home.

Digital resources at home

Students from higher socioeconomic status are significantly more likely to have a laptop or a computer with broadband internet at home than those from lower socioeconomic status. With the unavailability of computers/laptops at home in many low-income households, students are likely to gain access to online classroom learning only through their mobile phones, which makes any completion of work and uploading it onto an e-platform very difficult.

Teachers' digital skills

Teachers who have been training in the use of ICT as a teaching resource is more likely to work in schools with higher proportions of socio-economically disadvantaged students in their classes. They are more aware of the importance of technologies and their fast-paced evolution and, hence, more eager to undertake continuous ICT professional development.

Students' digital skills

With lack of basic digital skills puts these students at risk of not being able to fully benefit from online activities.

Conclusions:

Students' online learning is expected to suffer a lot. Despite the widespread move to online teaching, student progress will not simply be the same as if schools were open. The impact of COVID-19 on students' achievement is likely to vary according to socio-economic status. The switch from offline to online learning caused by COVID-19 is likely to affect negatively on all the students from schools and colleges, who have higher difficulties in adapting to the new learning environment.

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India Justice Report 2020 via-a-vis Justice Delivery System in India- Issues & Challenges.

Dr. Ratnadeep Yadavrao sonkamble

Assistant professor, Rajarshi Shahu Law College, Barshi, Dist. Solapur, Maharashtra.

Justice consists not in being neutral between right and wrong, but finding out the right and upholding it, wherever found, against the wrong [i]

Theodore Roosevelt

Abstract:-

Present paper is based on the Indian justice report 2020, the report has taken the comprehensive analysis of the Police, Prison, Legal aid, and the judiciary. The paper would discuss the present position of the justice delivery system in India in the light of the Indian justice report. Paper focuses upon the deficiencies of the system and suggests the solutions to overcome the shortfalls.

Keywords;- *Police, Prison, Legal aid, Judiciary, Report, Representation, Budget, Shortfalls, Strength, etc.*

Introduction

The India Justice Report (IJR) focuses on similarities and monitoring the rise of the Indian legal system, and falls in each state's institutional and financial capacity to provide justice, based on the most up-to-date information figures from the government. In November of this year, the first-ever ranking was issued. The ranking is based on a number of factors. Budgets, human capital, facilities, workload, and diversity all have quantitative metrics. The India Justice Report 2020 examines the institutional potential of the country's justice system. It ranks states based on defined criteria across four pillars of justice—judiciary, police, jails, and legal aid—following the practice established in the 2019 study. The Report does not pit one state against another when ranking states; rather, it highlights the strengths and weaknesses of each state. The Report is timely in that it compiles a large amount of digested information in one location, particularly in light of an exceptional year in which we experienced a full lockdown followed by a cautious opening up with physical distancing requirements—all due to the highly infectious COVID-19 virus.[ii]

The pandemic was unforeseen, but none of the country's sub-systems were running at maximum capacity, and when the pandemic struck, they were found to be woefully inadequate. Based on the flaws found in the previous study, one is forced to ponder what would have happened if the many had come together? The Law Commission's findings the Government of India, the National Police Commission, and the Mulla's All India Committee on Jail Reforms Committee as well as a number of other committees the four foundations had been introduced consolidated The police, for example, would have The judiciary has been better linked to the communities it serves, the jails have been better handled without the major shortfalls in medical care that they face today, and all first responders, including police and legal aid workers, have been better educated and qualified. Even in the midst of the pandemic, justice delivery may have looked different.

The first comprehensive analysis of Indian police, prisons, and judiciary in justice delivery has been taken by the Tata Trust. An unwelcome picture of the Indian justice delivery system has come out from the scientific study undertaken by the Tata Trust, Mumbai. The country's capacity to deliver justice has serious deficits with under-capacity and gender imbalance plaguing these three pillars and a funding crunch affecting state services like free legal aid, according to a ranking of states based on official data compiled by Tata Trusts partnered with the Centre for Social Justice, Common Cause, Commonwealth Human Rights Initiative, DAKSH, TISS- Prayas, Vidhi Centre for Legal Policy, and How India Lives on the India Justice Study. In 2019, the first India Justice Report was issued.[iii]

The Tata Institute of social sciences, Mumbai has done outstanding work to understand the present status and effectiveness of the police, prison, legal aid, and judiciary in India through the Justice Report. The Indian justice report 2020 is prepared by applying the scientific method. The Report has taken cognizance of all the stakeholders working towards the improvement of the Indian justice system. The commendable purpose of the Report is to attract the attention of the stakeholders in the system to two important areas of national concern—access to justice, and the health of our institutions responsible for justice delivery. The Preamble of the Constitution guarantees the people of India Justice, Social, Economic, and Political, for the fulfillment of the constitutional obligation various institutions are created through the constitutional mechanism. The functioning of any legal system is based on its internal mechanism. The aspirations of the people towards a law or legal system can only be strengthened if that system is not working in a vacuum. The strength of any legal system is always connected to various factors such as Social, political conditions of the legal system in which it is functioning. The Indian justice Report has highlighted the various factors in the justice delivery system, the report has given a strong message of caution to all who are connected with the system. The issues addressed in the report address a series of topical and urgent issues. They give us an overview of the core actors in the Indian justice system – the police, the prisons, and judiciary and law enforcement. It analyses the different pillars of the justice system specifically in line with their budgets, infrastructure, human resources, workload, and diversity. The study of the justice system in India has made an important contribution. It contains many systemic defects and weaknesses, including the abysmally low priority granted in State budgets to the judicial machinery, the

persistence of average budgetary requirements. While stressing how inefficiencies in the functioning of any organization in the justice system have a negative impact on the functioning of other institutions and ultimately impede access to and delivery of justice, the report also provides a comparison of how widespread such issues are in different states across India. It shows how state machinery has changed over time and identifies a major stumbling block to fully comprehending how it works. The stereotyped, top-down approach of public institutions has become banal, preventing any fresh perspective on the issues plaguing the justice system. Any light from outside the system is not only unwanted, but it is often widely regarded as a threat to the state's functioning. What's important is that you're exposed to scientific methods with an open mind. Those who are in positions of power that control critical issues that obstruct access to and implementation of justice must have the foresight to pay attention before it is too late. In India, The police force is diverse. The police force has a low representation of SCs, STs, OBCs, and women, with several vacancies in the reserved categories. Court trials that are still pending Training for the police force Just 6.4 percent of the police department have received in-service training in the last five years on average. That means that over 90% of those who work with the public lack current training. Women make up just 7% of the 2.4 million police officers in the country, but they make up 6% of the officers. Similarly, they make up 28% of the lower courts, but just 12% of the High Court. Detainees awaiting trial in 2016, 67.7% of people voted. Under-trial detainees made up a significant portion of India's jail population.[iv]

This figure is higher than the 66 percent it was a decade earlier. Correctional officers, there are only 621 correctional officers employed in India's 1,412 jails. In India's subordinate courts, there are 28 million cases pending, with 24 percent[v] of them pending for more than five years. At least one out of every four cases in Bihar, Uttar Pradesh, West Bengal, Odisha, Gujarat, Meghalaya, and the Andaman and Nicobar Islands has been pending for more than five years. More than 2.3 million lawsuits have been pending for more than ten years.

Conclusion

On the one hand, the data on the police, prisons, legal aid, and the judiciary that the India Justice Report has brought together provides strong evidence that the whole system requires urgent repair. On the other hand, the segmentation of the data into budgets, human resources, infrastructure, workload, and diversity helps to pinpoint areas of infirmity where quick improvements can be made with relative ease and On the one hand, the India Justice Report's data on the police, jails, legal aid, and the judiciary provides compelling proof that the entire system needs urgent repair. The segmentation of the data into budgets, human resources, facilities, workload, and diversity, on the other hand, aids in identifying areas of infirmity where rapid changes can be made with relative ease and have the real potential to spur improvements down the road. Ensure that underrepresented groups, such as women, SCs, OBCs, STs, and religious minorities, are better represented in the justice system when filling vacancies (and elsewhere) to ensure that the justice system represents the diversity of the population it serves. Ensure the publication of checked, disaggregated, reliable, and timely data that is seamlessly serviceable for informing policy and practice through governance to improve accountability in the justice system. Each cog of the criminal justice system will start by complying with Section 4 of the Right to Information Act, 2005, which requires visible and full compliance with the duty of proactive disclosure. The budgetary allocations to every segment of the justice system (particularly the judiciary and prisons) keep pace with cost increases, are proportionate to cost increases elsewhere, and do not lag behind other allocations. Increase the provision of justice facilities in rural areas, including access to and infrastructure in courts, police stations, and legal aid clinics, to address the current gap in access to justice. There is a divide between the rural and urban populations. This involves putting a premium on the availability of qualified lawyers and paralegals in underserved areas. Ensure that the government authorizes objective analytical studies on various aspects of India's justice system on a regular basis in order to ensure a more educated and evidence-based approach to policy making.

Reference

- [i] A quote by Theodore Roosevelt.
- [ii] Indian Justice Report, 2020, by Tata Trust, Mumbai.
- [iii] Ibid
- [iv] Ibid
- [v] Ibid

Marketing strategies of FMCG Companies in Rural market

Prof. Liyakat R. Sayyad

Assistant Professor, MES, Arts, Commerce & Science College, Sonai, Dist:- Ahmednagar, Maharashtra, India

Abstract

In this study researcher aims to analyze various marketing strategies of Fast moving consumer durable goods (FMCG) companies to promote products into rural segment. and also to study how these company followed marketing strategy to cover such huge rural market. Further, the study will also make an attempt to understand that the Fast Moving Consumer Goods (FMCG) sector in rural and semi- urban India is estimated to cross US\$ 100 billion by 2025. Rural FMCG market accounts for 40 per cent of the general FMCG market in India, in revenue terms.

Keywords: - FMCG, Marketing Strategy, Rural segment, Product, Promotional strategy.

Introduction

We often mention things like potato chips, bath soap, butter, toothpastes, razors, household care products, packaged food and beverages, etc. But can we know under which category this stuff come? they're called FMCGs. FMCG is an acronym for fast moving consumer goods, which ask things that we buy from local retailer, supermarkets on day to day , the items that have high turnover and are relatively cheaper. FMCG goods are popularly named as consumer grocery. Items during this category include all consumables (other than groceries/pulses) people patronize regular intervals. The foremost common within the list are toilet soaps, detergents, shampoos, toothpaste, shaving products, packaged foodstuff, and household accessories and extends to certain electronic goods. These things are meant for daily use of frequent consumption and have a high return. In financial year 2018, the size of the FMCG market in India amounted to about 23.6 billion U.S. dollars. This sector had recorded significant growth rates in recent years and accounted for 45 percent of the country's FMCG market. Rising income levels had led to a transparent increase in non-food expenditure (As per Statista 2021). Therefore the FMCG marketing has been growing gradually over the years and now's become bigger than the urban marketplace for FMCGs.

Objectives of the Study

The study concentrates on the following sub objectives.

- To study various marketing strategies of FMCG companies to promote products in rural market.
- To study most preferred products in FMCG categories.

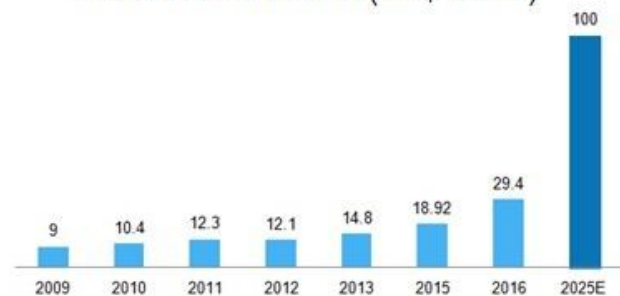
Methodology of the Study

In this study secondary data have used to undertake this research. The study is conceptual and exploratory in nature. This secondary data collected from various published and unpublished journals, various articles available on various websites, textbooks and different popular journals to analyze the marketing strategy of fast moving consumer goods companies for selling & promoting their brand in rural market.

Current Scenario of FMCG Market

Major players in FMCG industry in India are shown here. As per the reports in the last few years, the FMCG market has grown at a faster rate in rural segment in India compared to urban segment. Other segment like Semi-urban and rural are also growing at a rapid pace and FMCG products account for 50% of the total rural spending. As per the study of India band equity foundation (ibef) the retail market in India is estimated to reach US\$ 1.1 trillion by 2020 from US\$ 840 billion in 2017, with modern trade expected to grow at 25% per annum, which is likely to boost revenue of FMCG companies. Revenue of FMCG sector reached Rs. 3.4 lakh crore (US\$ 52.75 billion) in FY18 and is estimated to reach US\$ 103.7 billion in 2020. As per survey report FMCG market is expected to grow at 9-10% in the year 2020.

The Fast Moving Consumer Goods (FMCG) sector in rural and semi- urban India is estimated to cross US\$ 100 billion by 2025. The overall Rural FMCG market in India is accounts for 40 per cent in terms of revenue. As fa as the leading retailers is concern, Dabur generates over 40-45 per cent of its domestic revenue from rural sales. Hindustan unilever



Source: AC Nielsen, TechSci Research, Dabur Reports
 Note: E - Estimate

limited revenue in rural market is 45 per cent of its overall sales while other companies earn 30-35 per cent of their revenues from rural areas.

Marketing Strategies Followed by FMCG Companies

A marketing strategy is the basis of a marketing plan. A marketing plan covers specific actions to successfully implement a marketing strategy. For example – “Use a low cost product to attract rural consumers. Today’s FMCG industry is a multi-billion dollar sector that’s typically dominated by well-established household brands around the world. Therefore, it can be easily said; FMCG industry is considerably big and demanding in India. FMCG marketer’s follows a different combination of strategies. Some of the major strategies adopted by FMCG companies to make their brands outstanding in competitions are as below:

➤ **New Product Development**

A company can add new products in their product line through the acquisition of other companies or by making one’s own efforts on new product development. With the help of new products a company can enter into growing market and it also supplement its existing product lines. For example; Procter and Gamble is leading company in the world as reputed for new products development. Those companies who do not develop new products would be in great risk and might face stagnation in future. Some companies which have thrived in the market due to innovative product development are FMCG companies.

➤ **Product Flanking**

Product flanking relate to the introduction of different variety of products at different prices, to cover as many market segments as possible. It is mainly offering the same product in different sizes and in different price to tap diverse market opportunities. The idea behind this concept is to change the core product by offering different variations in size and price so that the consumer can finds some products to choose from. Cornflakes in small sachets and premium detergents (Surf excel, Tide, Ariel etc.) in small pouches are examples of this strategy.

➤ **Wide Distribution network**

In order to survive and succeed in a highly competitive market company have to have a distribution channel. Some well-known FMCG companies are: Parle, Britannia, ITC, Nestlé, Unilever, Procter & Gamble, Coca-Cola, Pepsi etc. has very wide distribution network systems have made them market leaders. Due to this strategy company increase the number of customers or by encouraging more consumption.

➤ **Multi-brand Strategy**

A company often develops different brands in the same group. There are various motives for doing this. The logic behind this strategy is to tap as much of the market share as possible. FMCG company cannot rely on single brand to cater to the entire market.

➤ **Brand Reliance**

Brand reliance is also one of the strategies followed by fmcg companies. But the challenge for the company to constructing a credible brand is essential to the success of a product. In addition once a brand become popular in a rural emerging market it will more than likely retain that trust suitable to the brand stickiness of rural customers. The Companies which are entering into this market with unknown brand have found connected on established and trust brands to be a successful strategy for gaining consumer trust. If companies have strong brand name then either launch of new product or selling existing one become easy.

➤ **Promotion & Advertising Strategy**

Take the case of Marico we came to know this company followed different promotional and advertising strategy in the urban as well as rural segment. Marico received plethora of medals and awards for its varied promotion campaigns is proof enough. Marico uses all types of media like Television, online, print media etc in its marketing mix. Some of the continuing advertisement of Marico are: • Nihar- Dikho Khoobsurat, Karo Khoobsurat, • Saffolalife- protect heart. This company is also known to rope in a lot of celebrity for its endorsements like Vidya Balan for Nihar, Ranveer Singh for Set Wet and Deepika Padukone for Parachute are some examples. Hence, This strategy is very effective for gaining attention as well as promoting their brand in market. As far as Lifebuoy is concern “Tandurusti ki raksha karta hai Lifebuoy ...” tagline made significant impact on customer.

Conclusion

In this cut throat competition every company in the field of fmcg realized the value of rural market. Such FMCG companies will succeed in rural market whose products are branded and have marketing strategy, heavy advertising, slick packaging and strong distribution networks. One more important factor is prices of raw material play an important role in determining the pricing of the final product. Therefore the rural marketing has been growing gradually over the years and now is become bigger than the urban market for FMCGs. Now the challenge for the marketers is weather to follow same strategy for all segments or to go with specialized strategy to each sector.

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Application of QR Code Technology in Providing Library Services in Government Law College Library, Mumbai: An Overview

Dr. Subhash Dhule

Librarian, Government Law College, Churchgate, Mumbai

Abstract:-

This paper presents the structure and types of QR codes and its application in Government Law College, Library Mumbai and its advantages and disadvantages.

Key Words: QR Code, Types of QR Code, Application of QR Code in GLC Library

Introduction:

Government Law College (GLC) Mumbai established in 1855, has the distinction of being the oldest Law College in Asia, dating even prior to the University of Mumbai, and enjoys a pre-eminent reputation for excellence in the field of legal education. The Government Law College library is known for its rare collection of books and treatise on various subjects not limited to law. It is probably the most frequently visited section of the college, and most certainly the haven for the dedicated law students. The Library also possesses the original copy of the Indian Penal Code as drafted by Lord Macaulay in the year 1886. The Collection of library has more than 43000 books including 300 rare books which has been preserve by scanning and 210 CD (Audio Law Books) for visually changed students, 11 print form journals and separate Electronic Research Room (ERR) which has 21 computers it is helpful for access legal database and e- resources to library users., Library has 7 newspapers having Marathi , English, English Language, Library is computerized by using SLIM-21 Library Management Software for smooth running of library work. In Government law college library, Mumbai has application of QR code for providing various library services.

Review of Literature:

According to Perumal Ramasamy (2019) studied the Usage of QR Code in J.C. College of Law library: A Study where the researcher uses QR code technology in law library for providing different library services to user for easy to access the library. Lonbodara Parabhai (2017) Use of QR Code in Library where the researcher study the use of QR Code in library and benefits of QR Code. Sndeeep Kumar Pathak (2017) Application of QR Code technology in providing library and information services in academic libraries: A case study. The researcher studies the feature of QR code technology and application of QR Code technology in Indian Institute of science Education and Research (IISER) Bhopal.

Objective of the study:

- To study structure of QR code and types of QR code
- To study the advantage and disadvantage of QR code
- To study application of QR code in GLC Library.

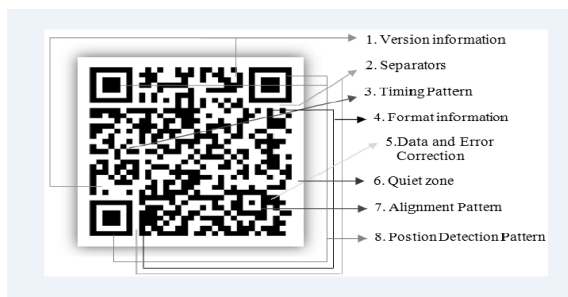
QR CODE

QR Code is Quick Response Code a QR code is a type of matrix barcode first designed in 1994 for the automotive industry in Japan. A QR code is machine readable optical labels that contain information about the item to which it is attached.

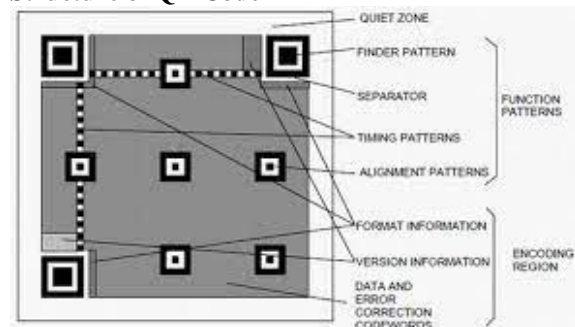
- **Static QR Code:** Once this type of QR code is generated than we cannot change the cod again this QR code non editable.
- **Dynamic QR Code:** This type of QR Code we can change the information according to the change of time and need. This QR Code is editable.
- **Types of QR Code**

There are five different types of QR codes such as

- QR code Model 1 and QR Code Model 2
- Micro QR Code
- IQR Code
- SQR Code
- Frame QR Code



Structure of QR Code



Source: - <https://www.researchgate.net/figure/Structure-of-QR-Code> fig1 275650586



Source ; <https://www.researchgate.net/figure/Structure-and-components-of-QR-code-1> fig2 261424538

Elements of QR Code:

- Position Pattern
- Timing Pattern
- Quiet Zone
- Data and Error Correction Key
- Alignment Pattern

QR Code generation and reader

Some of the QR Code generators and readers are as follows

- QR Code Pro (www.qrcodepro.com)
- Google QR Code Generator(https://www.the-qrcode-generator.com/)
- Kaywa (http://qrcode.kaywa.com)
- QR CODE MONKEY (https://www.qrcode-monkey.com/)
- Bee Tagg (https://apps.apple.com/us/app/beetagg-qr-reader/id313157282)

Requirement for Scanning/ reading of QR Code

- Smart Phone with QR Code reader/scanner software
- Handy Scanner/ Handy terminal
- Fixed Scanner

Application of QR code in academic Libraries.







Application of QR Code in academic libraries is as follows. The Academic libraries can generate different QR Code in library for betterment of library services and to save the time of user and library staff, it proves the law of library science that is “ to save the time of user” by S.R. Ranganathan






















We can generate QR code of following library services such as

- Website URL , Library Web OPAC, Library Tour, Library Rules and Regulation, Image File, PDF File, Telephone Number, SMS Message, Contact details, WIFI Login, Library fee payment, Email Address, Instagram, LinkedIn, Plain text, Reference services etc

Application Of Qr Code Technology In Glc Library

Application of QR code in academic libraries such as Law College Libraries. In Government law college Library, Mumbai has Application of QR Code is used for providing various Library services such as Library WEBOPAC, Access of E- Resources, NLIST, GLC Digital Library, Legal Database services, Access list of Audio Books and List of Rare Books, University syllabus, library collection, Library rules and regulation, Ask a Librarian, Library membership form etc. Most of users are very satisfied with QR Code application services. Library has save time and papers as well as save environment.

GLC Mumbai Website 	GLC Library WEB OPAC 	NLIST 
MANUPATRA 	ADVANCE LEXIS NEXIS 	SCC ONLINE 

WESTLAW 	LAW FINDER 	LAW OLD QUESTION PAPERS 
GLCLIBRARY E-RESOURCES 	GLC LIBRARY AT AGLANCE 	LIST OF RARE BOOKS 
LIBRARY MEMBERSHIP FORM 	CONTACT NUMBAR 	ASK TO LIBRARIAN 
UNIVERSITY SYLLABUS 	LIBRARY RULES AND REGULATION 	OPEN ACCESS E- E-RESOURCES 
GLC DIGITAL LIBRARY 	LIBRARY COLLECTIONS 	LIST OF RARE BOOKS 
GLC DIGITAL LIBRARY 	LIST OF AUDIO BOOKS 	LIST OF NEWSPAPERS 
GLC LIBRARY SERVICES 	GLC LIBRARY STAFF 	FREE WIFI SERVICES 

Advantage of QR Code

- Open source technology.
- User Friendly.
- Easy to access.
- Large storage data in small space.
- Help in information literacy.
- Use any where
- No specific skill required
- No additional technology required

- Anyone can generate it.
- Environment friendly and save the paper.
- Increase user satisfaction
- Save money and time.

Disadvantage of QR Code

- Requirement of smart Mobile Knowledge for operation
- QR Code Software for operation.

Limitation of QR Code

- Requirement of Smart Phone with QR Code reader software
- Awareness of QR Code Technology
- QR Code reader Software

Conclusion:

Academic libraries are now adaption various technologies in libraries for providing better service to user. Now QR code technologies are usefully for library services to save the time of user and library and also save environment. So adaption and application of QR code technology for betterment of library services.

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Legal education in India with reference to changing facets of society

Dr. Anand Mahadeo Kasle

Assistant Professor, G.J Advani Law College, Mumbai

Abstract

Legal Education plays a vibrant part in conveying out societal modification. As an impending apparatus and a authoritative intermediate of taking changes in the society it allows portrayal out of the finest in the organization, awareness and spirit of individuals. It prepares a distinct with aptitude to comprehend and redirect upon acquaintance and progressions and to act in a accountable way. Legal education is a classes of foremost torrent education connecting the study of law. It indoctrinates the aptitude to make use of law, to analyse it and to disparage it as a member of the legal community. It emphasizes on the specific freedom as also on the development of society, cohesion and solidification of rule of law. The improvement of extraordinary quality legal education is a criterion to high quality legal practitioners. The present papers investigate incipient challenges and projections in the milieu of legal education in India with reference to changing facets of society.

Introduction –

Law and order are the medicine of the body politic and when the body politic gets sick, medicine must be administered."- Dr. Babasaheb Ambedkar

Legal education and its importance to establish rule of law in society to convey justice does not receive stern precedence though one can easily study history of modern times which shows that lawyers are social scientist who gave leadership to nations. Legal education is a kinds of central rivulet education comprising the study of law. It teaches the competence to make use of law, to analyse it and to disparage it as a member of the legal community. It emphasizes on the discrete self-determination as also on the growth of society, cohesion and solidification of rule of law. The movement of high superiority legal education is a precondition to great superiority legal practitioners. Law is the protector and vindicator of righteousness and freedom. Legal education involves the education of laws commonly to lawyers before entry into law profession. Law of a society is the regular of its societal standards The essential to evaluate and review the prospectuses and methodologies of law courses with a neutral to promotion them for meeting the new contests and the requirements of the society is felt all-inclusive. Legal education may serve the society by communicating to law students general and cultural education making them good law surviving citizens. The intention of legal education is to bring out among students the aptitude, interest, commitment, skills and knowledge necessary to perform variety of roles in society including works for socially excluded people and the poor at the local level, to espouse the cause of justice.

The rapidly growing Indian economy needs to update its legal education mechanism to suit to the requirements of the competitive world. Legal education and Legal Aid is State's duty and not Government's charity. Equally affirmative is the implication that while legal services must be free to the beneficiary, the lawyer himself has to be reasonably remunerated for his services. The legal assistance to a poor or indigent accused who is arrested and put in jeopardy of his life or personal liberty is a constitutional overbearing mandated not only under Article 39-A but also by Articles 14 and 21 of the Constitution. It is sine qua non of justice and where it is not provided, injustice is likely to result and undeniably every act of injustice corrodes the foundations of democracy and rule of law. In a democracy the machinery of justice must be readily accessible to all. Equality before law and equal protection of law guaranteed by our Constitution will merely be a formality.

The progress of high quality legal education is a prerequisite to high quality legal practitioners. The need to assess and revise the curricula and methodologies of law courses with an objective to upgrade them for meeting the new challenges and the needs of the society is felt worldwide.

Law of a society is the standard of its social values. The aim of legal education should be to equip the law students with qualities of good lawyer having mastered the theory of law, its philosophy its functions and its role in a democratic society. The emphasis of legal education must be on preparing legal professionals as also good citizens including legislators, judges, policy makers, public officials, civil society activists having altruistic feelings and sense of social service.

Legal Education System in India –

Usually, universities in India offered Legal education as a three years graduate degree and five year graduate degree. The eligibility requirement for the Bachelor of Law was that the applicant already has a Bachelor's degree in any subject from a recognized institution and Common entrance test (CET).

Influence of Globalization on Legal Education in India-

Globalization has thrown up new challenges to legal profession. It is the procedure by which a given indigenous disorder or entity succeeds in expanding its reach over the globe and by doing so, develops the capacity to label an opposing social condition or entity as local under its impact. Globalization makes it gradually tough for legal study to be contained within the territorial boundaries of national legal systems.

Feebleness of Indian Legal Education -

4.1.1 Easy Admission in Legal Education: Legal education has currently arisen as a hopeful business motion for the law institutions which are mostly run by capitalists. The main problem is that the team of Bar Council and

the university which is responsible for the inspection of colleges seeking permission to start law courses overlooking the various areas of law institutions because of their own problems.

4.1.2 The teaching faculties and teaching methods: The law colleges are quiet familiarized to the stage hoary method of teaching through lectures in a class room. No attention is paid to these suggestions and recommendations made by the committees assigned the role of advancement education. The students are slightest worried about acquisition knowledge rather their stress is on the accomplishment of tiniest obligation of passing the course.

4.1.3 The defective Examination system: The laws colleges adopt the outdated examination pattern. The disorder of covering a part of the prescribed syllabus and misconception of remembering the selected questions rules the perch. The mark sheets of students are image of their skill to stein up few topics instead of their diagnostic and applied qualities.

4.1.4 The immaterial syllabus: Even after being asked by the UGC Committee and Bar Council of India for upgrading of syllabus of law courses here remain a lack of uniformity in law curriculum of different Universities. For Example, various Universities in Maharashtra upgraded their law syllabus before 10 years. Further the inclusion of too many subjects in the syllabus has diluted the concept of teaching skills and research alignment. Law education must be made more applicable to the profession and its challenges.

4.1.5 Vast differences among Law Institutions: The cumulative level of differences amongst the level of educational institutions have created a big gulf into high income class education groups and the rest of institutions. The culture and teaching learning process of these law institutions differs widely as regards the student learning outcomes as also behavioural growth of the passed out candidates

4.1.6 Shortage of good teachers: Generally, the law colleges fail to attract talented law professional for joining as teachers in their institution. The requirement of requiting the NET qualified applicants as lecturers has habitually limited the choice of appointing good teachers. Also selection committees, in different universities are restricted to make free judgments of the quality of teacher due outward influence of religion, language and caste.

4.1.7 Problem of Placement: Students usually complete their placement with a lawyer, NGO or a corporate house. The law students are anticipated to learn the skill of reading and maintaining case records, legal research, drafting and client interviewing and counselling. Students are required to maintain a roznama of their visits to lawyer's chamber and courts recording the work they did there and the proceeding observed. Their diaries and their preparation for the mock trial and mood court do replicate their learning from placement. Practical training in law colleges imparted though choosing one of these methods or their combination, namely, legal and clinic, class based lectures and model, and exterior assignment.

Suggestions to Make Legal Education More Effective-

5.1.1 The appropriate step needs to be taken in the matter so the law graduate acquires sufficient experience before they become entitled to practice in the Courts.

5.1.2 The legal education must reflect participation of representative of the Judiciary, bar council and UGC.

5.1.3 The Bar Council should regulate vigilantly and handle the affiliation of colleges.

5.1.4 The case methods and problem methods should be made compulsory and must carry more marks than theory.

5.1.5 Necessary amendments should be made to supplements lecture method with problem method and other modern technique of importing legal education.

5.1.6 Participating in mood courts, mock trails and debaters must be made compulsory and marks awarded. Practical training in drafting pleadings, contracts can be developed in the last year of the study.

5.1.7 Students' visits to the courts are made compulsory so as to provide greater exposures.

5.1.8 Practical skills of a lawyer are taught/leant thought one of the three ways: first classroom teaching classroom teaching coupled with court visits; second through placement with lawyers: and third' live-client cases handled in a legal aid clinic or Lok Adalats.

5.1.9 One of the main issues to be taken into thought in this exercise is the number and quality of publications that a teacher has been able to generate. This importance on research is placed keeping in mind the higher standpoint of indorsing research amongst academicians. On the same lines, the number and quality of cases argued by a teacher concerning legal aid should become a norm for gauging a teacher for the drives of his career advancement schemes. In this manner, we shall be refining the excellence of law teaching in the country.

Conclusion –

Globalization of legal profession has thinned this appeal of profession to great extent. Now, legal profession is perceiving extreme change in the globalizing world. Countries around the world have been introducing and developing the code of conduct for legal professionals to meet the experiments posed by globalization. There is a need to subsidize towards a greater cause of inculcating the values and ethics into the minds of young law students and graduates through its numerous training programmes and formulating them to look the fresher trials of the legal education in changing facets of Indian society.

Refereces-

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Effect of Larval Digenea on Carbohydrate Content in The Tissues of Hepatopancreas of The Gastropod Snail *Indoplanorbis Exustus*.

P. R. Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract

Histopathological and biochemical changes in the carbohydrates were observed in hepatopancreas of the snail Indoplanorbis exustus, which act as intermediate host for trematode parasites. Levels of carbohydrates have been shown to fluctuate with larval digenia in the hepatopancreas of the infected snails. Due to infection of larval digenia the carbohydrates deplicated in hepatopancreas. It is due to carbohydrate uptake from hepatopancreas by the parasites. Therefore an Indoplanorbis exustus, eats for two; for itself and secondly for the parasites as pregnant mammals.

Key Words: larval digenia, hepatopancreas, histopathological, carbohydrate depletion.

Introduction

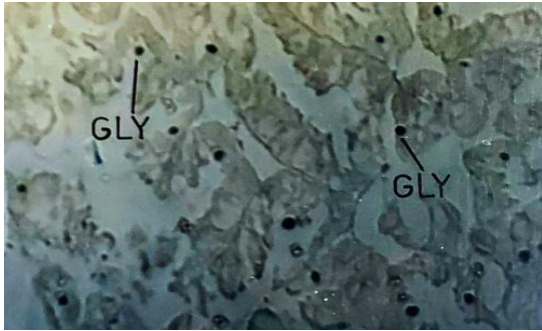
Mollusks, especially several gastropods species like *Indoplanorbis exustus* are available in large number in fresh water ponds with slow moving. The species preferred shallow water and can be found all substrate types. They act as intermediate host for trematode parasites. Structural and functional changes occur in the tissues of animals due to parasitism vary from tissue to tissue. It is essential to have insight the histological and histochemical analysis of the tissues. This can be helpful for better understanding of pathological condition and damages of the tissue under the stress of parasites. Histopathological study is also useful to find out exact location, at which the parasite attacks. Effect of parasite stress on changes in biocompounds of different tissues of gastropod have been reported by Bertman M.(1980) ; Carter O. S. and Bogitsh B. J. (1975); Krishna G. V. R, (1980) ; and Karyakarte and Yadav (1981) had done the studies on freshwater larval trematodes of Marathwada, stated different kinds of trematodes in varieties of freshwater snails. In present work attention had been paid to study this host-parasite relationship. To study this relationship histological and histochemical techniques were utilized. The most common site of infection was interlobular haemocoel of the digestive glands or hepatopancreas. However in highly infected snails the trematode parasite may found in gonads. For this work several snails were observed for their gigantism of snails, fragility of shell as marks of infected snails with larval digenea. The work was extended to study the effect of them on carbohydrate content in the hepatopancreas.

Materials And Methods

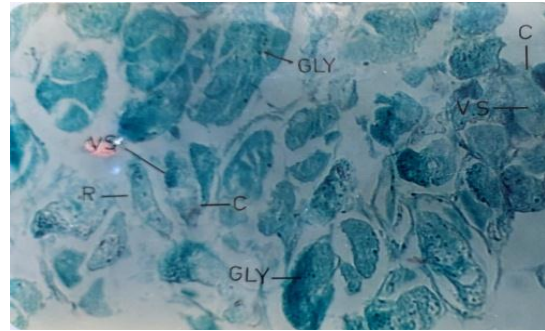
The snails *Indoplanorbis exustus* were collected from the Godavari river of Nashik district of Maharashtra, near Nadur madhyameshwar Dam. The snails were normally found near thick bed of algae in the river, remained attached to any hard substance or found crowing on stones in shallow water. The snails were maintained in tap water inside plastic troughs with continuous water refreshment and aeration for 4-5 days. They were provided with fresh food of *Hydrila*, *Chara* and *Marselia* leaves twice a day. The group of healthy or non-infected snails characterized by moderate sized and without any pigmentation of body whorl, maintained as control while the other group of snail characterized by gigantism, larger in size with yellowish pigmentation observed at basal region of body whorl and fragility of shell maintained as experimental. Hepatopancreas of infected snails and non-infected snails were studied for histopathology and histochemistry, for carbohydrates. The control and experimental *I. exustus* snails were dissected. The target organ hepatopancreas were removed and fixed in Bouin's fluid for Periodic Acid-Schiff (PAS) method to demonstrate glycogen and Alcian blue method as to demonstrate mucopolysaccharides. The fixation period was of 24 hr. The tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60° C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of hepatopancreas of snail were used for microscopic Observations.

Observation And Results

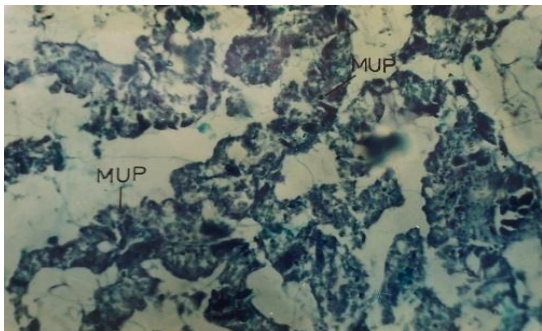
The snails were found to be infected by *Cercaria ovalae*. The parasitized snails exhibit external signs of infection as gigantism, yellowish pigmentation at basal region of body whorl, increased body weight etc. The infection of trematode parasites caused several pathological changes in the hepatopancreas as compared with hepatopancreas of control snails. In non-infected hepatopancreas, the cells were columnar having central nuclei but in the infected hepatopancreas the cell shape becomes squamous. The nuclei of these cells were displaced towards base. The epithelium of the tubules was characterised by erosive disturbances with heavy vacuolization of columnar digestive cells. The connective tissue of the gland was specified by cells with lipofuscin (granulocytomes). The digestive cells were affected by necrosis and finally by lyses. By applying Periodic Acid-Schiff (PAS) method in order to stain the hepatopancreas, it was observed that amount of glycogen was decreased in the hepatopancreas of infected snails than non-infected snails. Vacuoles were observed in hepatopancreas and life history stages of trematode parasites were notable in large numbers occupying greater part of the tissue. Fine glycogen granules were observed in the radia and cercaria.



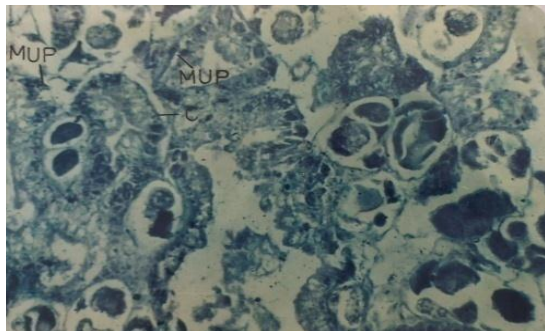
a) Section of non-infected hepatopancreas showing presence of glycogen. PAS Staining method (20 x 20).



b) Section of non-infected hepatopancreas showing reduced amount of glycogen. PAS staining method (20 x 20).



c) Section of non-infected hepatopancreas showing presence of acid mucopolysaccharides. Alcian blue method (20 x 20)



Section of infected hepatopancreas showing reduced amount of acid mucopolysaccharides. Alcian blue method (20 x 20).

GLY: Glycogen, **MUP:** Mucopolysaccharides, **C:** cercaria, **VS:** Ventral sucker, **R:** Redia.

The mucopolysaccharides were stained by Alcian blue method. They were found to be decreased in the hepatopancreas of the infected snail as compared to non-infected snail. The vacuoles were present in the infected snails. The mucopolysaccharides had very little amount in the redia and cercaria larvae.

Discussion:

The severity of histopathological changes dependent on intensity of parasites, damage caused by parasites and rate of metabolism in the target tissues. Bertman M. (1980) reported intensity of mechanical injury and cytolysis depended on number and size of parasite in the hepatopancreas of *Lymnaea stagnalis*. In the freshwater infected snail *I. exustus* the number of life history stages had flooded the hepatopancreas and caused disintegration or partial damage to secretory and storage cells. In present Histopathological study, it was evident that due to trematode parasite degenerative lesions in basement membrane, rupture, flattening and vacuolization of digestive tubules with deformity of cells was predominant. There was reduction in cytoplasm and degeneration of nuclei. An attempt was made to study the carbohydrate content in the form of glycogen and mucopolysaccharides, in the hepatopancreas by Periodic Acid-Schiff's reagent and Alcian blue method respectively. It was observed that glycogen granules and mucopolysaccharides were considerably present in the hepatopancreas of control snail. In the infected snail's hepatopancreas, the amount of glycogen and mucopolysaccharides was greatly reduced. The probable reason for carbohydrate depletion would be active ingestion of it by hepatic cells and absorption across the body wall of parasite. Carter O. S. and Bogitsh B. J. in 1975 had reported pathogenic effect of digenic trematode *Schistosoma mansoni* on *Biomphalaria glabrata* with altered histological abnormalities and degenerative changes in the tissues of lobular digestive glands. The present works go hand in hand with importance of histopathological studies along with considerable damage in the tissues of *I. exustus* infected with larval digenia.

Acknowledgement

The author is thankful to Principal Dr. D .B. Shinde, G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities.

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Histolytic and Cytochemical Observations of the Effect of Larval *Digenia* on *Indoplanorbis Exustus* in Relation with Protein

P.R.Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract

*Histolytic and cytochemical changes in the protein and protein related aliens were observed in hepatopancreas of the snail *Indoplanorbis exustus*, which act as intermediate host for trematode parasites. Levels of basic proteins, protein bound NH₂ and sulphhydryl have been shown to fluctuate with larval digenia in the hepatopancreas of the infected snails. Due to infection of larval digenia the proteins and structural component of protein depicted in hepatopancreas. It is due to protein nutrient uptake from hepatopancreas by the parasites. Therefore an *Indoplanorbis exustus*, had to face histolytic and cytochemical degenerative changes leading to death due to parasitism as proteins were essential source of energy and repairing mechanism tool.*

Key Words: larval digenia, hepatopancreas, cytochemical, histolytic, protein depletion.

Introduction

Several gastropods species like *Indoplanorbis exustus* are available in large number in fresh- water bodies having aquatic vegetation and stagnant water. The species preferred shallow water and can be found all substrate types. These freshwater slow moving aquatic snail *Indoplanorbis exustus* act as refractory to infectious of digenic trematode. Only mature snails act as host for trematode parasite and became economically important, in that it is responsible for the transmission of several species of trematodes. The digestive glands or hepatopancreas act as most seriously affected tissue of the snail. Studies on pathogenic effect of digenic trematode, within their intermediate molluscans hosts have dealt with altered histology and biochemistry of lobular digestive glands with mechanical injury by presence of life cycle stages of parasites. The work was carried out by Krishna G. V. R, (1980); Mohandas A. (1974) and many other workers. By attraction of this, the present work was carried out to study altered histopathology and histochemistry to trace host-parasite relationship. To study these histological and histochemical techniques were utilized to study the protein component. The attestation was paid on to study basic proteins, protein bound amino group and sulphhydryl group of protein histopathologically, in the hepatopancreas of both infected and healthy snails as due effect of larval digenia lodging in it. The digestive glands or hepatopancreas was common site of infection. However in highly infected snails the trematode parasite may found in gonads. For this work several snails were observed for their gigantism of snails, fragility of shell as external symptoms of infection.

Material And Methods

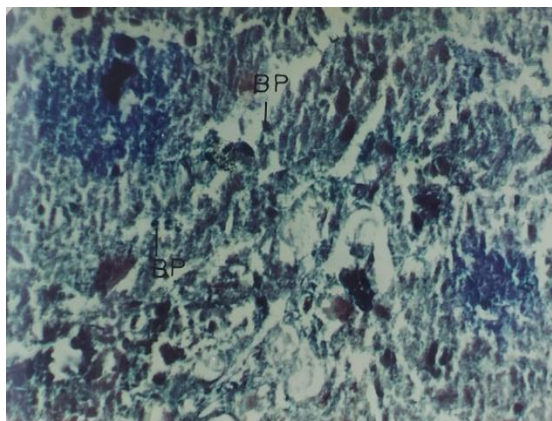
The freshwater mature snails *Indoplanorbis exustus* were collected from the Godavari river of Nashik district of Maharashtra, near Nandurmadhymeshwar national bird sanctuaries. During collection, it was

cleared that the infection occurs only from the month of October to December and only in mature/larger snails get infected and the smaller one were healthy. They were collected from rocky substratum surrounded by aquatic vegetation. It was the shallow water, where they lived. The snails were maintained in tap water inside plastic troughs with continuous water refreshment and aeration as well as food like *Hydrilla*; for 4-5 days. The group of healthy or non-infected snails characterized by moderate sized and without any pigmentation of body whorl, maintained as control while the other group of snail characterized by gigantism, larger in size with yellowish pigmentation observed at basal region of body whorl and fragility of shell maintained as experimental or infected snails. The digestive glands or hepatopancreas of infected snails and non-infected snails were dissected out from the control and experimental *I. exustus* snails and used for histolytic and cytochemical study. The tissues of target organ, hepatopancreas were fixed in Carnoy's fluid for detection of basic proteins by mercury bromophenol method and ninhydrin- Schiff's method for protein bound NH₂. The tissues were also fixer in 10% formalin for ferric- ferricyanide method as to demonstrate SH group for 12 hr. After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60°C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of hepatopancreas of snail were used for microscopic observations.

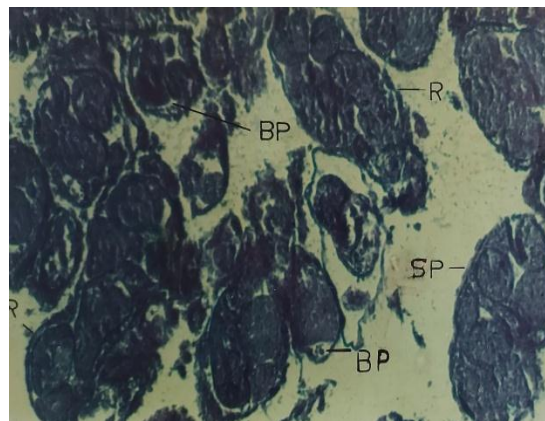
Observation And Result

The snails were found to be infected by *Cercaria ovalae*. The trematode parasite multiply in snail hosts, lead to gigantism of the snail hosts and increased body weight. There was yellowish pigmentation at basal region of body whorl. The infection of trematode parasites caused great harm to their snail hosts associated with several pathological changes in the hepatopancreas as compared with hepatopancreas of control snails. In non-infected hepatopancreas, digestive tubules were compactly arranged, surrounded by single layer of columnar epithelial cells rested on a basement membrane and with centrally placed nuclei but in the infected hepatopancreas the cell shape becomes squamous. The nuclei of these cells were displaced towards base. The epithelium of the tubules was characterised by erosive disturbances with heavy vacuolization of columnar digestive cells. The digestive cells were affected by necrosis and finally destructed by autolysis. The sporocyst, depot of miracidium and miracidium, the depot of *Cercaria ovalae* larvae was found to be in the inter digestive gland tubular space.

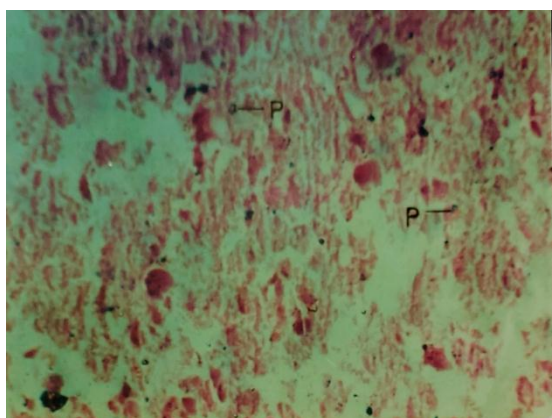
For confirmation of host – parasite one sided affection of parasite only, an attempt was made to study the protein content qualitatively in the form of basic protein, protein bound NH_2 in the hepatopancreas by mercury bromophenol blue method and ninhydrin-Schiff's method was used respectively. The protein bound amino group (NH_2) has structural and regulatory function in the proteins. The sulphdryls (SH) was also observed by Ferric Ferricyanide method as its presence in cysteine amino acids of protein structure.



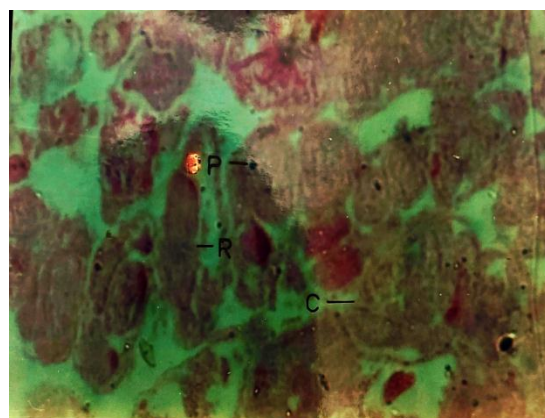
a) Section of non-infected hepatopancreas showing presence of basic proteins mercury bromophenol blue method (20 x 20).



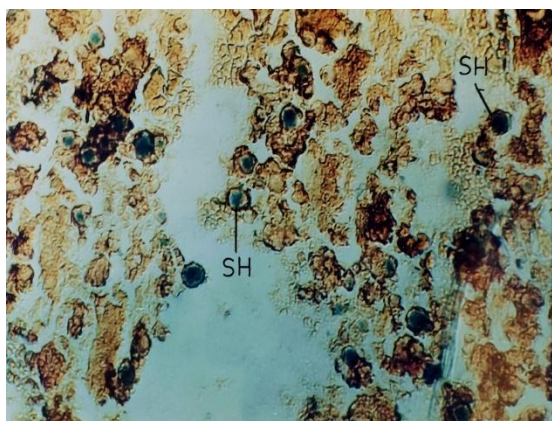
b) Section of infected hepatopancreas showing reduced amount of basic proteins. mercury bromophenol blue method (20 x 20).



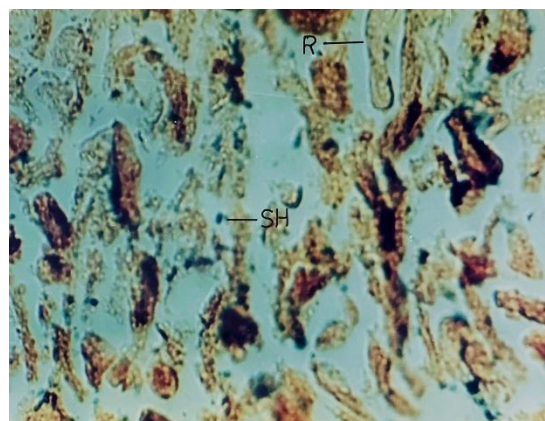
c) Section of non-infected hepatopancreas showing presence of protein bound NH_2 Ninhydrin-Schiff's method (20 x 20).



d) Section of infected hepatopancreas showing reduced amount of protein bound NH_2 Ninhydrin-Schiff's method (20 x 20).



e) Section of non-infected hepatopancreas showing presence of sulphdryls (20x20) Ferric Ferricyanide method for SH group.



f) Section of infected hepatopancreas showing reduced amount of sulphdryls (20x20) Ferric Ferricyanide method for SH group

- BP: Basic Protein, R: Radia, SP: Sporocyst, P: Protein, C: *Cercaria*, SH: sulphdryls

The present study came to point that basic protein, protein bound NH₂ and sulphdryls was considerably present in the hepatopancreas of control snail in comparison with hepatopancreas of infected snail. It was clear that energy requirement of trmatode parasite was from the reserve food of the host tissues hence proteins, protein bound NH₂ and, sulphdryls declines in the hepatopancreas.

Discussion

The survival of life of the aquatic snails dependent on amount of oxygen in water, rainfall, amount of water in summer season, temperature of water, aquatic vegetation etc. Similarly with equal importance it also dependent on parasitism. When the miracidium larva comes in contact with the *I. exustus* it pierces into the soft body of snail. Apical papilla and secretions of penetration gland will help the larva to bore into the body of snail. Ben Dawes (1959) reported penetration of miracidium into *Limnaea truncatula*. In the body of snail miracidium develops into sporocyst stage followed by redia, cercaria, and metacercaria which leads its way to definitive vertebrate host visiting to water bodies to become liver fluke. These stages and their number flooded the hepatopancreas of host. The intensity of parasites, damage caused by parasites and rate of metabolism of food stuffs like protein in the target tissues were found to be most important as they alter the cytochemistry leading to histolytic changes in hepatopancreas and finally the death of snail, leaving only empty shell as memories of planorbis floating on water bodies. Bertman M. (1980) reported intensity of mechanical injury and cytolysis depended on number and size of parasite in the hepatopancreas of *Lymnaea stagnalis*. In the freshwater infected snail *I. exustus* the number of life history stages had flooded the hepatopancreas and caused disintegration or partial damage to secretory and storage cells. Choubisa S.L. (1988) also reported Histological and histochemical observations on the digestive gland of *Melanoides tuberculatus* (Gastropoda) infected with certain larval trematodes with mechanical and physiological damages. In present study, it was evident that due to trematode parasite there was reduction in size of epithelial cells, degenerative lesions in basement membrane, rupture, flattening and vacuolization of digestive tubules with deformity of cells, increasing of inter and intra-tubular spaces of glands was predominant. There was reduction in cytoplasm and degeneration of nuclei. An attempt was made to study the proteins in the form of basic proteins and protein bound NH₂ as well as sulphdryls as component of protein structure. The basic proteins and protein bound NH₂ were stained by mercury bromophenol blue method and Ninhydrin-Schiff's method respectively. The sulphdryls also called a thiol was also studied by staining it with Ferric Ferricyanide method.

It was observed that basic protein, NH₂ as the amino substituent and sulfur bonded hydrogen atom SH was considerably present in the hepatopancreas of control snail. In the infected snail's hepatopancreas, the amount of basic protein along with precursors of protein synthesis like NH₂ and SH of sulfur containing cysteine was greatly depleted. The probable reason for depletion of these would be active ingestion of it from hepatic cells and absorption across the body wall of parasite. The reduction in the amount of stored nutrients and energy due to increasing demands of the developing stages of parasites. Carter O. S. and Bogitsh B. J. in 1975 had reported pathogenic effect of digenic trematode *Schistosoma mansoni* on *Biomphalaria glabrata* with altered histological abnormalities and degenerative changes in the tissues of lobular digestive glands. The present work has also absolute studies along with considerable damage in the tissues of *I. exustus* infected with larval digenia as per earlier reporting of Carter and Bogitsh In *Biomphalaria Glabrata*.

Acknowledgement

The author is thankful to Principal Dr. P. V. Rasal, G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities.

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Impact of Cupric Chloride on Biocompounds in the Haepatopancreas of The Snail *Indoplanorbis Exustus.*

P. R. Kokate

P. G. Department of Zoology G.M.D. Arts, B.W. Commerce and science Collage, Sinnar, Dist. Nasik (M.S.)

Abstract

Copper and potassium salts have lethal activity against mussels and have been used primarily to control zebra mussels and snails that are hosts to parasites, causing schistosomiasis. In present study, effect of sub lethal concentration of cupric chloride for 12 hrs. Was observed on bio compounds in the cells of hepatopancreas of freshwater gastropod, *Indoplanorbis exustus*. The histochemical observations indicate that total contents of carbohydrates and protein decrease in the tissue but total lipid content increased.

Key Words :- *Indoplanorbis exustus*, Cupric chloride, Biocompounds, Energy reserve, stress condition.

Introduction

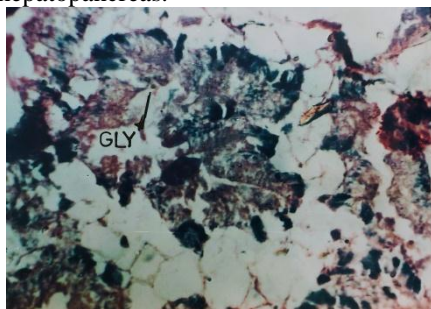
The copper salts gave most promising results for the control of the snails. They are readily soluble in water and inexpensive. In this context, the present study was undertaken to study the effect of cupric chloride on carbohydrate, protein & lipid content of hepatopancreas of the freshwater snail, *Indoplanorbis exustus*, which acts as an intermediate host to many trematode parasites. Their destruction is essential to control the trematode parasites. Hosea and Finlayson (2005) reported that copper sulphate solutions containing 252 mg/L copper, were effective for controlling freshwater snail New Zealand mud snails (*Potamopyrgus antipodarum*) from infested wading and angling gear. Copper products (copper sulphate and copper carbonates or chelates) can be used to control molluscs in open water systems. Toxicity evaluation and comparative mortality increases as the time of exposure as well as concentration of the copper product increased. Hanumante et.al. reported the intoxication of *I. exustus* with copper sulphate and barium chloride for 24 hr.

Material and Methods

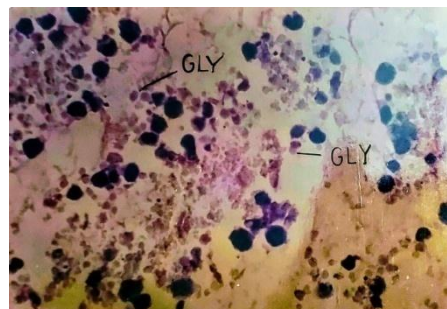
The snails *Indoplanorbis exustus* were collected from Godavari river of Nashik district of Maharashtra. They were acclimated to laboratory condition in the well accreted aquaria having aquatic plants such as *Hydrilla* and *Vallisneria* for two days, for this purpose same water was used for the snails from which they were collected. Healthy adult snails of approximately the same weight were chosen for experiment. The cupric chloride was dissolved in experimental water so as to give 0.001%, 0.002% to 0.01% concentrations. A batch of 10 snails was introduced in each container. A simultaneous control was also maintained. The 0.006% solution of cupric chloride was found to be lethal to 50% snails. The behaviour of snails was observed for 12 hr. After 12 hr. of exposure they were scarified and the hepatopancreas fixed in Bouin's fluid, Conroy's fluid and formal calcium. The tissues were dehydrated by standard method and embedded in paraffin. The sections were cut at 7 microns. The glycogen were stained by Carmine staining method. The basic proteins were stained by Mercury bromophenol blue method, while lipids were stained by Sudan Black 'B' method.

Observation and Result

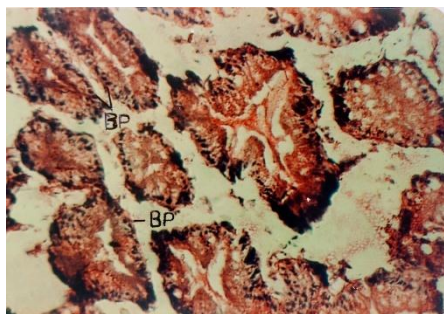
The snails were found to move from one place to another by extending their foot After 5 hr. mucus was exuded from the body. They secreted abundant mucus and was observed at the mouth of the shell. They were found to be with their body completely inside the shell at 6-7 hr. The snails died after 12 hr. Hepatopancreas tissue showed various Histochemical changes after 12 hr. exposure to cupric chloride. Observations and photomicrography were made under light microscope. The hepatopancreas of control snail showed presence of the numerous digestive tubules with various shapes and sizes and which were separated by inter tubular space. The lumen of the tubules were lined by columnar digestive cells with basal nuclei. They contain granular deposits of glycogen and basic protein in the cytoplasm. The lipid globule was also present in the hepatopancreas of the snail. The cupric chloride toxicity shows marked structural disruption, degeneration of the digestive tubules, fragmentation of the columnar digestive cells with degeneration of basement membrane. Depletion of glycogen and basic protein granular deposits and accelerated lipid granules was remarkable in tissues of hepatopancreas.



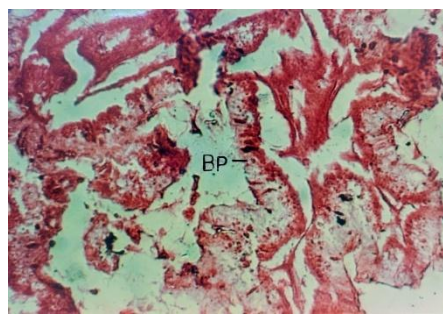
a) Section of HP : presence of glycogen
Carmine staining method (20 x 20)



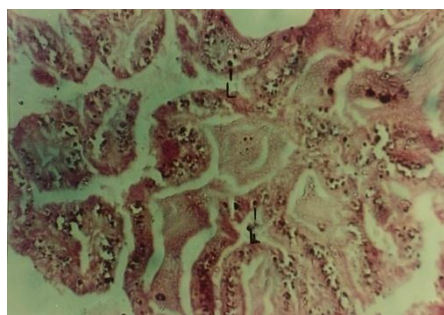
b) Section of HP: reduced amount of glycogen
Carmine staining method (20 x 20)



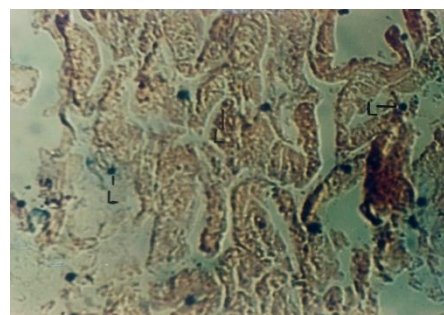
c) Section of HP : presence of basic protein protein Mercury bromophenol blue method (20 x 20)



d)Section of HP: reduced amount of basic Mercury bromophenol blue method (20 x 20)



e) Section of HP : presence of lipids. Sudan black B method (20 x 20)



f)Section of HP: increased amount of lipids Sudan black B method (20 x 20)

HP : Hepatopancreas, GLY : Glycogen ,BP: Basic Protein L:Lipid.

Discussion

In the present investigation, on histochemical observation the carbohydrate, protein contents were reduced & lipid content increased due to pesticides impact. It is due to conversion of glycogen into fatty acids or triglycerides (Gabbott, 1976). Swami et al. (1983) also suggested a shift in carbohydrate & protein metabolism to lipid synthesis in freshwater mussel, *Lamellidens marginalis*, exposed to metacid. The amino acids degeneration results in formation of keto acids, which provide acetate units for lipid biosynthesis.

Thus possible mechanism for increase in lipid content in the cells of the hepatopancreas is due to increased lipid biosynthesis, less degradation of lipid & might be accumulation of lipid in hepatopancreas during the period of exposure. Alterations of tubular cell structures could be caused by the destruction of the basement and topical membranes. Krebs's (1972), had shown that there is significant loss of stored energy while converting pre-stored glycogen into lipids. This finding is also compared by the work of Anger & Dawirs (1981). Suggesting that environmental pollutants interfere the metabolic rate of organism inhibiting lipid utilization.

Acknowledgement

The author is thankful to Principal Dr.D .B. Shinde,G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities.

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Focous on Carbohydrate Content In The Gonads of *Indoplanorbis Exustus* Infected With Larval Digenia.

P.R.Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract:

It is found that, the digenic trematode had a complex life cycle where the snail Indoplanorbis exustus acting as first intermediate host, in which it evolves until the second generation sporocyst stage. This step of the development of the parasite takes at about 3-4 months during which it invade the ovotestis. This severe infection was marked by gigantic snail with yellowish pigmentation of body whorl of shell, fragility of shell and parasitic castration. The main focus was on glycogen content as a carbohydrate and it was found to be depleted although very fine granules were observed in the larval stages of parasites associated with degeneration of gonadal tissue. During the course of time of parasitism, the author believes that trematode parasite use the hosts reproductive energy in the form of glycogen.

Key Words: digenic trematode, intermediate host, parasitic castration, ovotestis, glycogen depletion,

Introduction:

It had become a well-known fact that trematode infection has an inhibiting effect like parasitic castration, on molluscan reproduction. Direct attack on gonad is rare but does occur. The most common site of infection is in the interlobular haemocoel of the digestive gland or hepatopancreas of the snail. However in gross infection an overspill or overcrowd of sporocysts and rediae occur in gonads. Therefore gonad itself is not a primary site of infection. Not only the gonads are infected but they also reach oothecal glands. Wright's unpublished data have reported that sporocysts of an unidentified Logifurcate furcocercaria have been found in the oothecal glands surrounding the uterus of *lymnaea peregra* in North Scotland. The some other important contributors who studied the gonads were Porter, (1938); Uzman (1953) and Gresso, (1979). Here the attempt had made to study the carbohydrates contents of gonad histopathologically. Molluscs generally act as first intermediate hosts of digenean life cycles stages (Rohde 2005) and their larval stages develop in the digestive gland and gonad of them. In severe infection the digenic trematodes were penetrated in the gonads of *Indoplanorbis exustus*.

The present work was carried out to study altered histopathology and histochemistry to trace host-parasite relationship. For this histological and histochemical techniques were utilized to study the carbohydrates component. The attestation was paid on to study the carbohydrates specifically in the form of glycogen histopathologically, in the gonads of both infected and healthy snails as due effect of larval digenia lodging in it. For this work several snails were observed for their gigantism of snails, fragility of shell as external symptoms of infection.

Material And Methods:

The mature snails *Indoplanorbis exustus* were collected from the Godavari river of Nashik district of Maharashtra, near Nandurmadhyameshwar national bird sanctuaries, as only mature snails get infected. The smaller or immature snails were healthy. During collection, it was cleared that the infection occurs only from the month of October to December. They were collected from rocky substratum surrounded by aquatic vegetation. It was the shallow water where they live. The snails were maintained in tap water inside plastic troughs with continuous water refreshment and aeration as well as food of aquatic like *Hydrilla*, *Chara*, *Vallisneria*, for 4-5 days. The group of healthy or non-infected snails characterized by moderate sized and without any pigmentation of body whorl, maintained as control while the other group of snail characterized by gigantism, with yellowish pigmentation observed at basal region of body whorl and fragility of shell maintained as experimental or infected snails.

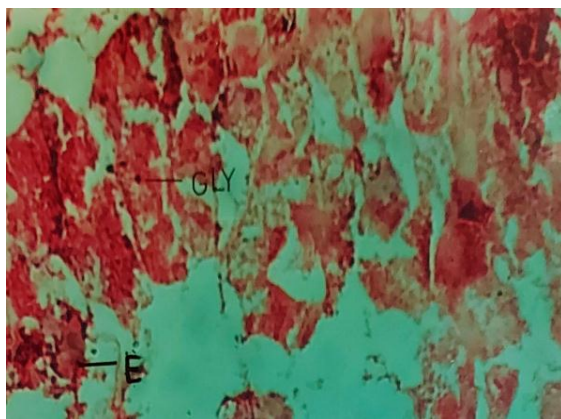
The gonads of infected snails and non-infected snails were dissected out from the control and experimental *I. exustus* snails and used for histopathological study. The tissues of target organ, the gonads were fixed in Bouin's fluid for detection of glycogen by carmine staining method, and periodic acid Schiff's method. After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60° C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of gonads of the snail were used for microscopic observations.

Observation And Result:

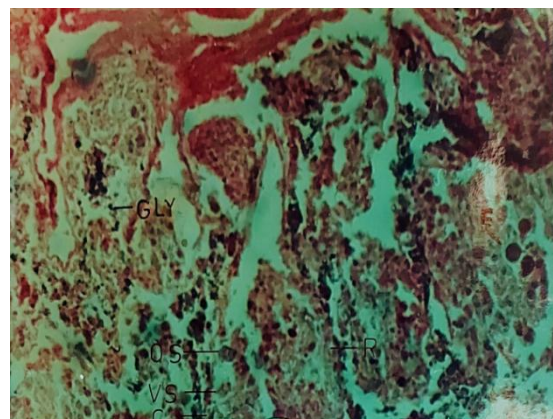
The infected *I. exustus* snails became gigantic with yellowish pigmentation of body whorl which was consequences of infection. Gigantism increased the body weight and found to be correlated with parasitism. In severe infection trematode parasite multiply and increased in number and invade the gonads also, after

hepatopancreas. The time duration for lodging of parasites was considerably longer about 3 – 4 months which was more than sufficient for multiplication, propagation and growth of trematodes. It might be the possible reasons for gigantism in these snails. Baudoin (1975) highlighted increased survival of its host, the parasite benefits for longer reproductive period.

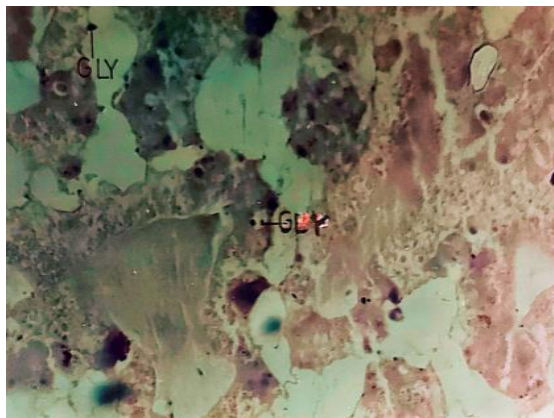
It was also observed and concludes that the parasites had all potentiality as they invade up to gonads in the inner most whorls and destroyed the gonads (parasitic castration). In the hermaphrodite *I. exustus* snails, the gonads consist of numerous rounded lobes containing male and female germinal cells in a composite structure called ovotestis. The control or non-infected tissue of this target organ of experiment showed ova and sperms. The infection of trematode parasite caused degeneration of gonadal tissue or these rounded lobes. The spaces between these rounded lobes were occupied by the larval stages of trematodes. By applying carmine staining method and Periodic Acid-Schiff (PAS) method in order to stain the glycogen, it was observed that amount of glycogen was decreased in the gonads of infected snails than non-infected snails. Vacuoles were observed in the gonads and life history stages of trematode parasites were notable in large numbers occupying greater part of the tissue. Fine glycogen granules were observed in the rediae and cercariae.



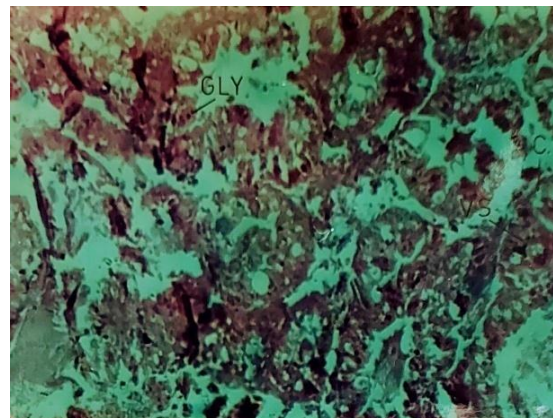
a) Section of non-infected gonads showing presence of glycogen. Carmine staining method, (20x20).



b) Section of infected gonads showing reduced amount of glycogen. Carmine staining method, (20 x 20).



c) Section of non-infected gonads showing presence of glycogen PAS staining method (20 x 20).



d) Section of infected gonads showing reduced amount of glycogen PAS staining method (20 x 20).

GLY: Glycogen, **E:** Eggs, **R :** rediae, **C :** cercariae, **OS :** Oral Sucker, **VS :** Ventral Sucker.

Discussion

The digenic trematodes multiplied in *Indoplanorbis exustus* and for this huge population energy source was only the reserve food from the host tissues. These parasites feed on reserve food like glycogen (carbohydrate) converted form of glucose. They innervated the gonads which considered as vital organ of reproduction. Although their route was uncertain but observed to be causing varying degree of histopathological and histochemical changes degeneration of numerous rounded lobes containing male and female germinal cells

leading to parasitic castration. The results obtained showed that the depletion in amount of glycogen as compared to healthy snail's gonad was notable in *I. exustus* due to parasitic stress. Both the methods for detection of glycogen as a carbohydrate gave confirmation for depletion of glycogen from gonads. As small glycogen granules also observed in larval stages of digenic trematodes, it was cleared that trematode parasite use the hosts reproductive energy in the form of glycogen. In this regards Dreyfuss G. et.al. (1999) and J. Jokela et.al. (1993) support my finding.

Acknowledgement:

I am very grateful to Principal Dr.P.V.Rasal,G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities.

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Studies on Proteins From The Gonads of *Indoplanorbis exustus* Naturally Infected With Larval Digenia.

P.R.Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract:

Every animal from unicellular to multicellular reproduce to continue the race on the planet 'earth' and becomes the part of ecosystem surrounding to it. The freshwater snail *Indoplanorbis exustus* economically important as it act as intermediate host for digenean parasites. It is found that, the digenic trematode had a complex life cycle, in which it evolves until the second generation sporocyst stage. This step of the development of the parasite takes at about 3-4 months during which it invade the ovotestis. In this course of time it causes adverse effect in the gonads. The severe infection was marked by gigantic snail with yellowish pigmentation of body whorl of shell, fragility of shell, parasitic castration and inhibiting effect on reproduction. It was most pronounced that an energy requirement of trematode parasite was from the reserve food of the host tissues hence proteins and protein bound NH_2 declines in the gonads.

Key Words: digenic trematode, intermediate host, parasitic castration, ovotestis, protein depletion,

Introduction:

Representatives of recognized gastropods *Indoplanorbis exustus* acts as intermediate host for trematode digenean parasites. Interest in their pathogens and parasites arises primarily from the role of gastropods in the transmission of trematodes of medical and veterinary importance. It had become a well-known fact that trematode infection has an inhibiting effect on molluscan reproduction. After overcrowd of hepatopancreas or in severe infection they became invasive towards gonads or ovotestis as *Indoplanorbis exustus* represent hermaphroditic sex. The sporocysts and rediae occur in gonads and reach up to oothecal gland. Wright's unpublished data have reported that sporocysts of an unidentified logifurcate furco cercaria have been found in the oothecal glands surrounding the uterus of *lymnaea peregra* in North Scotland. The some other important contributors who studied the gonads were Porter, (1938); Uzman (1953); Ong P.L., Kuan E. (1973) and Gresso, (1979). The protein from gonad or either from host tissue might be important factor for early development of host and parasites which encounter the host gonad. Therefore attempt had made to study the proteins contents of gonad histopathologically. Molluscs generally act as first intermediate hosts of digenean life cycles stages (Rohde 2005) and their larval stages develop in the digestive gland and gonad of them. The present work was carried out to study altered histopathology and histochemistry to trace host-parasite relationship and stress of parasite. For this histological and histochemical techniques were utilized to study the protein component. The attention was paid on to study the basic proteins and protein bound amino group histopathologically, as NH_2 (amino group) binds the proteins. For experimental work the gonads of both infected and healthy snails were used.

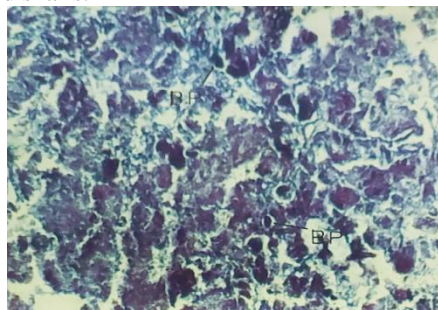
Material And Methods:

The freshwater mature snails *Indoplanorbis exustus* were collected from their natural habitat, the Godavari river of Nashik district of Maharashtra, near Nandurmadhyameshwar national bird sanctuaries, as only mature/larger snails get infected. The smaller one was healthy. They were collected from rocky substratum surrounded by aquatic vegetation from shallow water. The snails were maintained in tap water inside plastic troughs with continuous water refreshment and aeration as well as food like *Hydrila*, *Chara*, and *Valisnarea* also with mulberry leaves; for 4-5 days. The group of healthy or non-infected snails characterized by moderate sized and without any pigmentation of body whorl, maintained as control while the other group of snail characterized by gigantism, with yellowish pigmentation observed at basal region of body whorl and fragility of shell maintained as experimental or infected snails. Actual understanding of infectious of snail only after dissection. The gonads of infected snails and non-infected snails were sacrificed from the control and experimental *I. exustus* snails and used for protein demonstration in gonadal tissue. The tissues of ovotestis or gonads were fixed in Carnoy's fluid for detection of basic proteins by mercury bromophenol method, and ninhydrin- Schiff's method for protein bound NH_2 . After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60° C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of hepatopancreas of snail were used for microscopic observations and qualitative detection of basic protein and protein bound NH_2 in tissue sections.

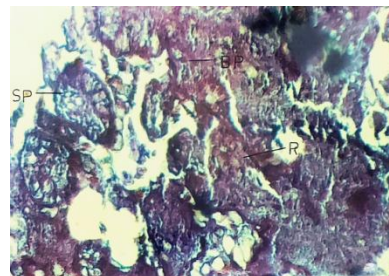
Observation And Result:

It was found that there is correlation between parasite prevalence and adult size of gastropods. Many authors called it as gigantism in host parasite system. How it takes its way in *Indoplanorbis exustus*? was uncertain to me, as availability of naturally infected snails for this study was based on field collections. The study reveals that, comparatively the infected snail shows gigantism, fragility of shells, pulsatile tentacles and yellowish pigmentation of outer most body whorl. Histopathological study of healthy or non-infected snail gonad indicate that the gonads consist of numerous rounded lobes or may called acini as containing still further smaller lobes, containing male and female germinal cells. It was therefore a composite structure called ovotestis.

The control or non-infected tissue of this target organ of experiment showed ova and sperms. The infection of trematode parasite caused degeneration of gonadal tissue or these rounded lobes by cytolysis followed by necrosis. In the infected gonads it was also found that the spaces between these rounded lobes were occupied by the larval stages of trematodes. The present study further point out that basic protein and protein bound NH_2 was considerably present in the gonads of control snail in comparison with infected snail. It was clear that an energy requirement of trematode parasite was from the reserve food of the host tissues hence proteins and protein bound NH_2 declines in the gonads. The gonads were vital egg producing organs containing protein therefore large numbers of egg clutches were laid by *I. exustus* by control snails when maintained in aquaria in comparison with infected snails.



a) Section of non-infected gonads showing presence of basic proteins mercury bromophenol blue method (20 x 20).



b) Section of infected gonads showing depletion of basic protein mercury bromophenol blue method (20 x 20).



c) Section of non-infected gonads showing presence of protein bound NH_2 Ninhydrin-Schiff's method (20 x 20).



d) Section of infected gonads showing depletion of protein bound NH_2 Ninhydrin-Schiff's method (20 x 20).



e) Egg clutch of healthy snail.- Eosin stained

Discussion:

These studies had targeted the histological, histochemical and histopathological alteration in the gonads of due to infection of digenean parasites. Resulted output of the experimental work was the gonads of *Indoplanorbis exustus* had altered their native structure by cytolysis keeping only fragmented tissue of gonads with full of different larval stages of digenean parasites and the gonadal tissue under necrosis. The digenean trematodes made their absence in control tissue, in that concern the term 'histopathology' feeled to be misnomer but used in present work in correlation with host parasite relationship. Parasites greatly influence the survival and reproduction of the snail in severe infection of parasites. The process of gonad development, their maturation, gamete formation as well as gamete spawning was not exceptions for parasite attack as depletion of proteins. It was found that not only gonadal tissue organisation, bio compounds like protein are affected but also laying of the egg clutches are also greatly influenced. The microscopic observation and photomicrographs obtained with a digital camera suggested that both basic proteins and NH_2 bound proteins was tremendously reduced which affect resulted into not to reproduce by severely infected snails.

In a review of the literature concerning to other molluscan gastropod infected with different trematode parasites invaded in the gonads were Wright C.A. (1956); Sullivan J.T. and Palmieri J.R. (1978); Jacqueline F. and Gerald W. (1991); and some other notable workers.

Acknowledgement:

I am very grateful to Principal Dr. P.V.Rasal, G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities and for discussion regarding academics.

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Histopathological Determination of Lipids From The Hepatopancreas of *Indoplanorbis Exustus* Infected With Larval *Digenia*.

P.R.Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract:

The freshwater snail was infected with larval digenia. In severe infection by the huge number of trematode parasites caused degeneration of the digestive tubules of hepatopancreas. Degeneration involved cytolysis followed by necrosis of the tissue. Still the infected snails were survived for longer period of time. The digestive glands was almost or completely destroyed and showed only the depot of lipids. This increased lipid content in heavy infection might have several reasons such as carbohydrates were consumed and utilised as source of energy by both host and parasite. Secondly it might be biosynthetic shift in carbohydrates and protein metabolism to the lipid synthesis in the snail host or it might be an adaptive mechanism by host for to live and let live.

Key Words: Hepatopancreas, sever infection, biosynthetic shift, enhanced lipids, and adaptive mechanism.

Introduction:

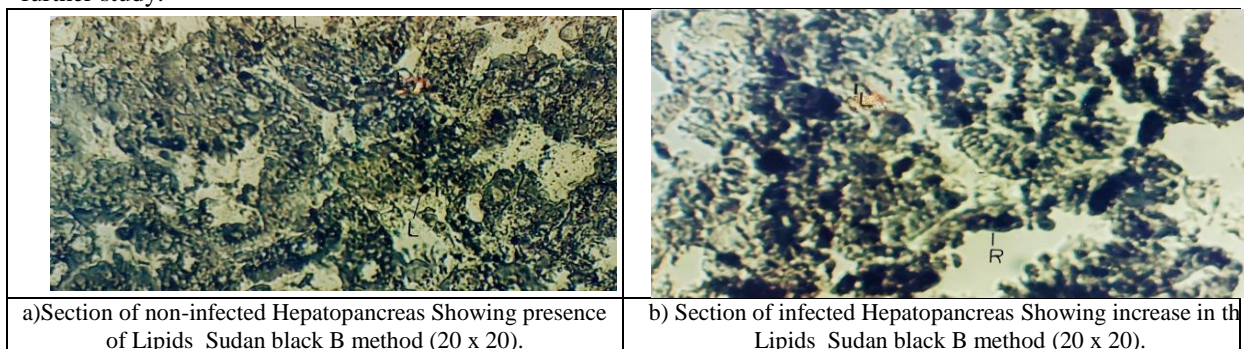
Hepatopancreas or digestive gland of freshwater snail *Indoplanorbis exustus* is one of the most vital organs associated with alimentary canal and working as like liver and digestive gland of higher vertebrates. These snails' acts as host for trematode parasites and during course of parasitism the digestive gland is found to be most seriously affected tissue of the snail. The intensity of damage increases in proportion with the number of larval stages, their size and type of parasite larvae. They cause various Histopathological and histochemical changes in the target tissue. In present investigation, study was made on these changes in relation with lipids. The structural and physiological changes caused by larval trematodes on molluscans have been reviewed by number of workers with recaptured protocol. The notable were Cheng T.C. (1963); James (1965); Wright (1966); Sullivan J.T. and Palmieri J.R. (1978).

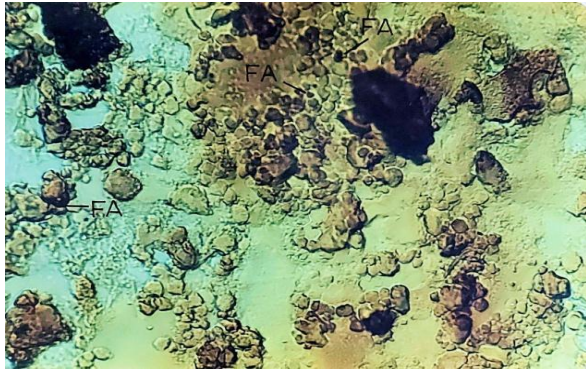
Material And Methods:

Indoplanorbis exustus were collected in fall session from Gondeshwar pond at Sinnar dist. Nashik of Maharashtra., vegetated naturally with clean and stagnant water. They were acclimatized by forming large and small sized, two separate groups (control and experimental) in the clean beakers of large capacity so as to observe the occurrence of cercariae. The protocol of feeding with fresh Hydrila leaves, two times in a day with refreshment of water was followed daily for a week. Generally experimental or infected snails were identified by their large size, yellowish pigmentation and fragility of shells. They were sacrificed and target tissue of hepatopancreas was fixed in formal calcium for detection of lipids by Sudan black B method. The 10% formalin was as fixative used for Fischer's method to detect fatty acids. After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60° C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of hepatopancreas of snail were used for microscopic observations of localization of lipids.

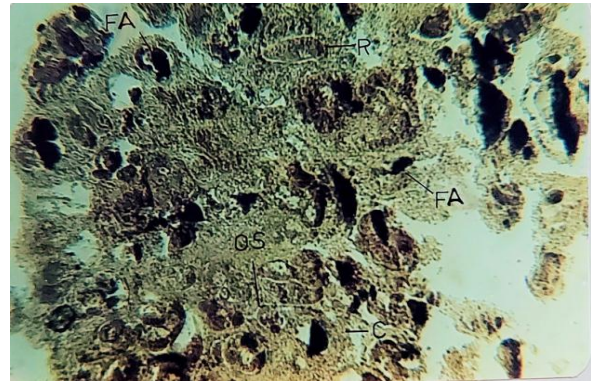
Observation And Result:

Lipid is a term applied to denote the group of substances which are soluble in non-polar solvents and insoluble in polar solvents for this instance they have key role in eukaryotes. They were observed in the tissues of hepatopancreas for non-infected and non-infected *Indoplanorbis exustus*. For observations of lipids in general sudan black B and Fischer's method for fatty acids were applied. The lipids formed black precipitate with sudan black B and cytoplasm stained red. In the infected hepatopancreas, it was observed that the lipid content was increased than non-infected snails. The lipid content was also step-up in trematode life history stages such as redia and cercaria. The fatty acids which are simple lipids, stained dark blue in Fischer's method for fatty acids. They were also increased in the hepatopancreas of infected snail. Its increased amount was seen in redia and cercariae. The observations were made microscopically at 20x20 magnification and microphotographs were captured for further study.





c) Section of non-infected-Hepatopancreas Showing presence of Fatty acids Fischer's method (20 x 20).



d) Section of infected Hepatopancreas Showing increase in the Fatty acids Fischer's method (20 x 20).

Discussion:

Lipids form biological membranes in eukaryotes as they are insoluble in polar solvents like water, with equal importance as they also act as a reserve source of energy. In this context, the present work was carried out in correlation with the host-parasite relationship of *Indoplanorbis exustus* and trematode parasite. Histopathogenesis in hepatopancreas infected with trematode larvae showed histolytic changes in the target tissue. However, it was interesting to note that there is no any depletion in lipid and fatty acid content in the tissue as compared to that of hepatopancreas tissue of control snail but there was a considerable increase in both lipids and fatty acids. In this connection, the host was a beneficiary in their host-parasite relationship although it caused many histolytic degenerative changes in the tissue of hepatopancreas.

The increase in lipid and fatty acid content was considered under the heading 'reserves of food and thereby energy'. In severe infection by the flood of trematode parasites causing degeneration of the tissue of the key digestive gland, hepatopancreas, by cytolysis, still the infected snails survive for a longer period of time and made an exclamation mark on the host-parasite relationship. The digestive glands were almost completely destroyed and showed only the depot of lipids. This increased lipid content in heavy infection might have several reasons-

1. Carbohydrates were directly utilised for metabolism and lipids were stored as an energy source for survival.
2. Lipid biosynthesis might have increased due to parasitism.
3. Hepatopancreas (digestive gland) of molluscs was a multipurpose organ like for absorption of ingested food stuffs, secretion, etc. It might have absorbed or retained the lipids due to parasitic stress.
4. It might have an adaptive mechanism for survival.
5. It might have a biosynthetic shift in carbohydrates and protein metabolism to the lipid synthesis in the snail host.

The reason may be so, but carbohydrates were eaten and utilised first and lipids might be stored as reserve food in further adverse conditions created by tiny parasites; shortly called survival of the fittest.

Comparable results were obtained in the current investigation wherein the digestive cells of the hepatopancreas were degenerated in snails affected by parasites. Lal et al. (1955), Southgate (1970), Reader (1971) Moore et al. (1973), Karyakarte et al. (1976).

Acknowledgement:

I am very grateful to Principal Dr. P. V. Rasal, G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory facilities and for discussion regarding academic dimensions.

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Quantitative Demonstration of Acidphosphatase In The Hepatopancreas of The Snail *Indoplanorbis Exustus* Infected With Larval *Digenia*.

P.R.Kokate

P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science college, Sinnar Dist. Nashik.

Abstract:

The freshwater snail *Indoplanorbis exustus* became severely infected with larval digenean. The process was completely natural and affect the host by irreplaceable loss. However some interesting things to note in present findings, was the increase in acid phosphatase activity associated with degeneration or autolysis of cells of digestive tubules as comparable to the hepatopancreas of noninfected snails. It is present in lysosomes and due to break open of lysosomes the acid phosphatase increased in amount. This increased amount of acid phosphatase may degenerate the tissue of host but the overall growth and survival of host was observed for longer period of infection.

Key Words: *Indoplanorbis exustus*, larval digenean, acid phosphatase, hepatopancreas.

Introduction:

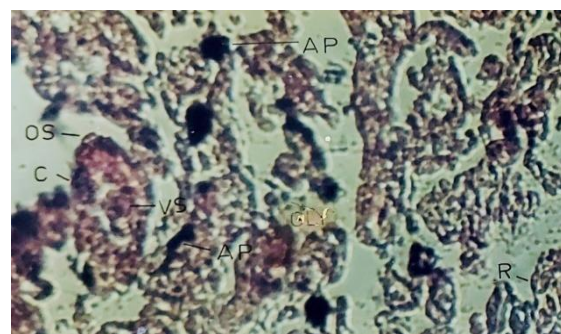
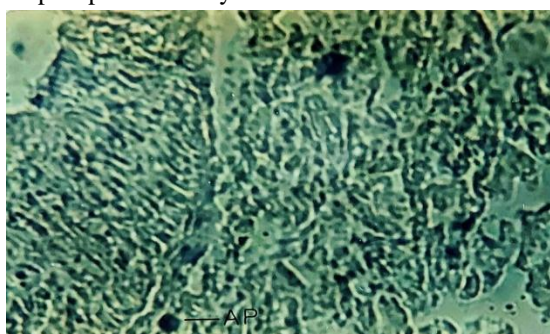
Enzymes, which increase the velocity of biochemical reactions, are classified into six groups according to the type of chemical reaction they catalyse. One of the group namely the hydrolase include acid phosphatase. These enzymes are abundantly present in plants and animals. In the animal cell it is present in lysosome and the main role of these enzymes is in the formation of shell in the molluscs. Marxen et al., (2003) indicated that Alkaline and acid phosphatase involved participate in mollusc shell formation. The acid phosphatase activity increased due to stress or the action of various chemicals was observed by Kumar and Kumar 1997; Jaroli and Sharma 2005; Abdul Naveed et al., 2011. In this curiosity the parasitic stress on acid phosphatase have been studied histochemically in the tissue of the digestive gland or hepatopancreas of gastropod *Indoplanorbis exustus* infected with larval digenean. The reason was considered as any induced stress either chemical or parasitical had to affect the metabolism of target animal.

Material And Methods:

The collection of freshwater snails *Indoplanorbis exustus* was done from confluence of Godavari and Darana river, (a healthy ecosystem for feeding and breeding) near Nashik of Maharashtra. They were acclimated as control and experimental in the clean beakers of large capacity so as to observe the occurrence of cercariae. They were fed with fresh leaves of *Hydrilla* and *Valisneria*, two times in a day with refreshment of water. This was followed daily for a week. Generally experimental or infected snails were identified by their large size, yellowish pigmentation and fragility of the shells. The lead nitrate method was used to demonstrate the Acid phosphatase for this purpose the noninfected and infected snails were dissected and tissue of hepatopancreas was fixed in chilled acetone separately. After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58-60°C). Prepared blocks of tissues were sectioned at 5-6 microns. The incubated and stained sections of hepatopancreas of snail were mounted in glycerine jelly and used for microscopic observations of localization of acid phosphatase.

Observation And Result:

The hydrolytic enzymes acid phosphatase have been studied histochemically in the tissue of the digestive gland of gastropod *Indoplanorbis exustus* infected with larval digenean parasite. The Lead nitrate method used to demonstrate it. The elongated digestive tubules were found to be completely distorted. The tissue of hepatopancreas was compactly arranged in healthy snails but in infected snail it had many vacuoles indicating degeneration of tissue. There was considerable increase of acid phosphate in the infected hepatopancreas in comparison with healthy snails. The brownish black precipitate in the tissue section of hepatopancreas shown acid phosphate activity/ occurrence.



- a) Section of noninfected Hepatopanceas showing presnce of acid phosphptase.
Lead nitrate method (20 x 20).
AP: Acid Phosphatase, OS: Oral Sucker, VS: Ventral sucher, C: Cercaria, R: Radia,
- b) Section of infected Hepatopanceas showing presence of increased amount of acid phosphatase
Lead nitrate method (20 x 20).

Discussion:

Histopathogenesis in hepatopancreas infected with trematode larvae showed histolytic changes. However it was interesting to note that, in this host-parasite relationship there was no any depletion in acid phosphatase content of infected hepatopancreas tissue as compared to that of hepatopancreas tissue of contol snail but there was considrable increase in acid phosphatase. Generally, it should to be reduced as the snail was parasitized or infectd with larval digenean and they were damaged or affected most of organs including hepatopancreas.It is the general considration that diseased or damage in the major organ of enzymes synthesis, the enzyme cotent should have to reduce but it was not observed in the present study. In this concern the host was beneficiary in their host-parasite relationship, although caused many histolytic degenrative changes in the tissue of hepatopancreas or nevertheless they completely or partially destroid the hepatopancreas depending upon intensity of infection.However the destroid hepatopancreas by larval digenean might be the reason for increase in acid phosphatase activity because its presencce noted in the lysosomes. As tissue of hepatopancreas degenrate or damaged by some other factors like induced chemicals, the wall of lysosomes ruptured thereby libration of acid phosphatase and hence increased in amount. It was intresting to note that these lysosomal enzyme like acid phosphatase had the role in destruction of cells of digestive glands called autolysis, and as the matter of fact these lysosome are 'suicidal bags'.The obtained results are in accordance with those obtained by Kumar and Kumar 1997; Jaroli and Sharma 2005; in the intoxicated clams and Cheng T.C.,1979, Wright, C. A., 1956, Sumner A. T.,(1969), in molluscs.

By considering all above facts, few questions of author, remained unsolved and made a path for further study- After autolysis of hepatopancreas how the infected were survived for longer period of time?

As the overall growth observed to be increased during period of infection also, does the librated or released acid phosphatase help in growth of shell by absorbing the calcium?

Acid phosphatase had the role in destruction of cells of digestive glands called autolysis; does this acid phosphate fully responsible for degeneration of hepatopancreas or is it the parasites?

Acknowledgement:

The author is very grateful to Principal Dr.P.V.Rasal,G.M.D. Arts, B. W. Commerce and Science College Sinnar for providing the necessary laboratory and library facilities to pursue the study.

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Studies on Histopathological Determination of Compound Lipids From The Hepatopancreas Of *Indoplanorbis Exustus* Infected With Larval *Digenia*.

Gauri B. Shahane¹ prakash R. Kokate²

^{1,2}P. G. Department Zoology, G.M.D. Arts, B.W. Commerce and Science College, Sinnar Dist. Nashik.

Abstract:

The freshwater snails were infected with larval digenia. In severe infection also it shows increase in glycolipids and phospholipids in the hepatopancreatic tissue. However the digestive gland tubules of hepatopancreas was completely destroyed by parasites which involved cytolysis followed by necrosis of the tissue. Still the infected snails were survived for longer period of time. The reason of their survival might be increased in amount of compound lipids. Glycolipids related with cellular growth and development and phospholipids has more resistant to oxidative stress therefore provide protection to tissues with active metabolism. Some other parameters may be-

1. Carbohydrates were consumed and utilised as source of energy by both host and parasite.

2. It might be biosynthetic shift in carbohydrates and protein metabolism to the lipid synthesis in the snail host or it might be an adaptive mechanism by host for survival

Key Words: *Glycolipids, phospholipids, parasite stress, cellular growth, metabolism, increased heterolipids.*

Introduction:

Compound lipids are esters of fatty acids and alcohols containing additional groups. They are also called as "heterolipids." as made up of different groups. The glycolipids and phospholipids are the compound lipids. Glycolipids related with cellular growth and development and phospholipids has more resistant to oxidative stress therefore provide protection to tissues with active metabolism., Nelson D.L.(2004), Voet, D., (2004). In viewpoint of this, the present work in relation to this was carried out to test the determination of compound lipids, histopathologically in the hepatopancreas having stress of trematode parasites *Indoplanorbis exustus* used for experiment, was a freshwater snail acting as host for trematode parasites and easily available in shallow water in stagnant water bodies having aquatic vegetation. These trematodes alter the histopathology and histochemistry of the target tissue. In present investigation, we the 'Guru-Shishya' made the focus on these alterations in relation with compound lipids. The structural and physiological changes caused by larval trematodes on molluscan have been reviewed by number of workers with recaptured protocol. The literature reviewers were Cheng T.C. (1963); James (1965); Wright (1966); Sullivan J.T. and Palmieri J.R. (1978).

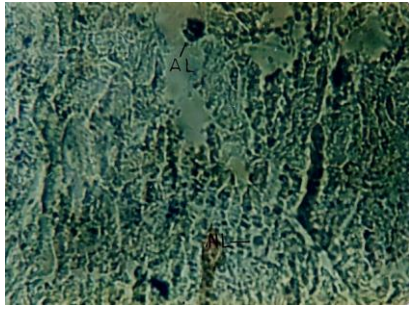
Material And Methods:

The freshwater snails, *Indoplanorbis exustus* were collected from k.t. weare of river 'Deonadi' near Deopur at Sinnar tahasil in Nashik district of Maharashtra., vegetated naturally with clean and stagnant water. They were acclimatized in the laboratory in clean glass beakers by forming healthy and infected snails. Approximately but found to be more correctly the infected snails were identified externally by their large size, the shell with yellowish pigmentation and fragility. The clean beakers of large capacity were used for artificial residence of snails, so as to observe the occurrence of cercariae. The protocol of feeding with fresh *Hydrilla* and *Marsilea* leaves, two times in a day with refreshment of water was followed for a week. They were sacrificed and target tissue of hepatopancreas was fixed in formal calcium for detection of compound lipids by Nile blue sulphate method. The method did useful for the glycolipids and phospholipids After fixation period of 12 hr. the tissues were washed, dehydrated in alcohol grades, cleared in xylene and embedded in paraffin wax (58 -60° C). Prepared blocks of tissues were sectioned at 5-6 microns. The stained sections of hepatopancreas of snail were used for microscopic observations of the glycolipids and phospholipids. The microphotographs were captured with the help of digital camera.

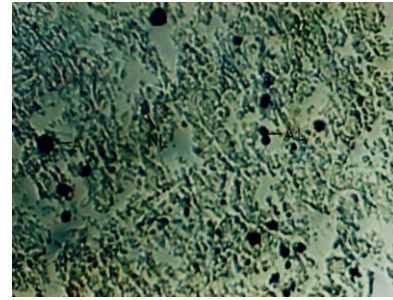
Observation And Result:

The compound lipids when reviewed chemically and functionally have key role in eukaryotes. They were observed in the tissues of hepatopancreas for non-infected and non-infected *Indoplanorbis exustus*. For observations of compound lipids specifically the glycolipids and phospholipids, Nile blue sulphate method was used the glycolipids having acidic and neutral nature stained differently. Sites containing neutral lipids stained red and acidic lipids blue. In the infected hepatopancreas, it was observed that both glycolipids a types compound lipid content, was observed to be increased than non-infected snails.

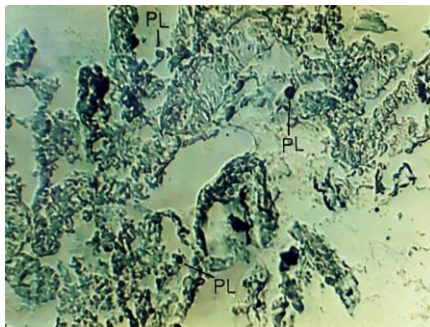
The phospholipids stained dark blue in Nile blue sulphate method for phospholipids. They were also increased in the hepatopancreas of infected snail. Its increased amount was seen in redia and cercariae. The observations were made microscopically at 20x20 magnification and microphotographs were captured for further study.



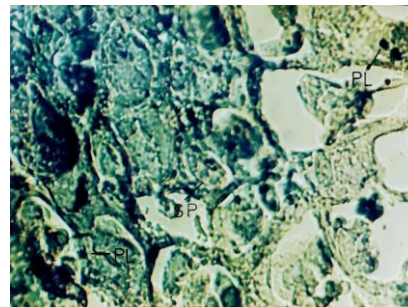
a) Section of non-infected Hepatopancreas
 Showing presence of glycolipids
 Nile blue sulphate method (20 x 20).



b) Section of infected Hepatopancreas
 Showing increase in the glycolipids
 Nile blue sulphate method (20 x 20).



c) Section of non-infected-Hepatopancreas
 Showing presence of phospholipids
 Nile blue method (20 x 20).



d) Section of infected Hepatopancreas
 Showing increase in the phospholipids
 Nile blue method (20 x 20).

Discussion:

Lipids in general acts as reserve source of energy in all animals. The compound lipids or very second class of lipids had certain correlation with host-parasite relationship of *Indoplanorbis exustus* and trematode parasite. Histopathogenesis in hepatopancreas infected with trematode larvae showed histolytic changes. However it was interesting to note that there is no any depletion in lipid and fatty acid content in the tissue as compared to that of hepatopancreas tissue of control snail but there was considerable increase in both glycolipids and phospholipids. In this connection the host was beneficiary in their host-parasite relationship, although caused many histolytic degenerative changes in the tissue of hepatopancreas or nevertheless they completely or partially destroyed the hepatopancreas depending upon intensity of infection.

The increase in glycolipids and phospholipids content was considered under the heading 'reserves of food and thereby the energy' for host followed by parasite. In severe infection by the flood of trematode parasites causing degeneration of the tissue of key digestive gland, hepatopancreas by cytolysis still the infected were survive for longer period of time. It means the compound lipid anabolism was probably increased due to infection in the host. Did the parasite provided something useful for biosynthesis of glycolipids and phospholipids? The digestive glands was almost completely destroyed and showed only the depot of lipids. This increased lipid content in heavy infection might have several reasons-

1. Anabolism of glycolipid indicates that, it might be the adaptive mechanisms of host as glycolipids related with cellular growth and development of host, hence it was survive after severe infection. Similarly increase in phospholipids also supports their survival as phospholipids have more resistant to oxidative stress therefore provide protection to tissues with active metabolism.
2. Carbohydrates were directly utilised for metabolism as and when consumed, on the other hand both glycolipids and phospholipids were stored as energy source for survival in infected life by host denoting adaptive mechanism of host.
3. Hepatopancreas (digestive gland) of molluscs was a multipurpose organ like for absorption of ingested food stuffs, secretion, etc. It might have absorbed or retained the compound lipids due to parasitic stress.
4. It might be biosynthetic shift in carbohydrates and protein metabolism to the heterolipids synthesis in the snail host.

In summary, carbohydrates were eaten and utilised first and compound lipids might be stored as reserve food in further adverse conditions created by tiny parasites as far as the chemistry physiology of glycolipids and phospholipids is considered. Comparable results were obtained in the current investigation wherein the digestive cells of the hepatopancreas were degenerated in snails affected by parasites. Lal et.al. (1955), Southgate (1970), Reader (1971) Moore et.al. (1973), Karyakarte et. al. (1976).

Acknowledgement:

We are very grateful to Principal Dr.P.V.Rasal,G.M.D. Arts, B. W. Commerce and Science College, Sinnar for providing the necessary laboratory facilities and for discussion regarding academic dimensions.

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Defining and Decoding 'Sustainable Urban Mobility' For Children in Indian Cities

Dr. Sumant Sovani

Associate Professor, KES Shroff College of Arts and Commerce, Bhulabhai Desai Rd., Kandivali (W), Mumbai

Abstract

Urban transportation system has passed through remarkable transformation since historical times. However, these changes are intense and infinite since the Industrial Revolution. Indian cities are not exception to these changes either. The transition that has taken place in Indian towns and cities is unique, thankfully due to a collage of old historical layout and new imposition of British colonial effect and Industrial Revolution. Transportation in Indian urban landscape is, therefore, very complex and untidy. Independent and comfortable mobility is a pre-requisite and a barometer of urban existence. However, children, who constitute almost one fourth or one fifth of the total urban population in each urban settlement, is regrettably the most ignored lot in urban transport planning. The present research article attempted to define the urban mobility from children's point of view, with a basic presumption that, what is tenable mobility pattern to children is ought to be tenable to all. The article thus derived the acceptable, workable, adoptable and measurable definition of Sustainable Urban Mobility in Indian context. At the end the article has also worked out the parameters for measuring the very sustainability of children's mobility in Indian cities and towns.

Key Words: Neighbourhood Mobility, Sustainable Mobility, Sustainable Transport, Urban Mobility, Urban Transport, Walkability.

Introduction:

*Like a canary in the coal mine,
children are an indicator species for the health of a city;
If there are no children seen on the streets,
the city is not meeting its residents' needs.*

-Richard Gilbert and Catherine O'Brien

There are two main approaches that urban geographers deal with. The first is 'The system of cities in a space' and the second is 'The city as a system'. While all cities and towns have some common features, they differ in other characteristics. And in that sense, every city and town is unique. Cities also vary in their very systems. Urban transportation, as a system, also passes through the phases of transformation; sometimes due to external forces, and sometimes due to internal reasons. Like any system, changes in urban transportation system are inevitable and changes are infinite.

Transitions in Urban Transportation.

The word civilization has originated from the Greek word 'civitas' i.e. city or urban centre. It is obvious then, urbanization and civilization are strongly associated. During the early phase of ancient cities, roads were very narrow and unpaved. However, the merchant class was a main force behind the advancement in transportation in these ancient cities. As a result, a few cities, for example, *Teotihuacan*, what is now Mexico City, started developing a planned street system. (World Book, 2005) Similarly, in other ancient cities too, the thrust was given to developing transportation networks, resulting in various transport patterns and land use design. (Avari & Bujor, 2007). Paved roads were built in Mesopotamia and in the Indus valley. In the medieval cities, Romans and Persians built stone-paved roads to facilitate quick movements of the Army. The medieval Caliphate later even built tar-paved roads. *Timgad*, now in Algeria, had the orderly arrangements of streets. (World Book, 2005) During an ancient era, urban land use and urban transport patterns were predominantly centric to one or two prominent nodes like the temple, the church or the palace. (Morris, 1994) With the emergence of industrial cities in the late 18th century, a major impact of Industrial Revolution on urban transportation was visible throughout the world. Transportation in the past, which was highly oriented to a mere connectivity between different nodes, was later focused on accessibility, speed, connectivity and mobility.

Urban Transportation in India.

Ancient Indian urban settlements were characterized by a strong urban centre with the existence of either a religious place or a palace of the local ruler. With times, Indian cities have changed due to the influence of British colonial rule as well as the Industrial Revolution. Indian urban settlements, thus, evolved into towns, cities and metropolitan cities, and the transportation in Indian cities eventually became very complex. Moreover, the impacts of industrialization on old and historic cities are very much visible in form of a collage the old fused with the new pattern in many present Indian cities. With times, NMT (Non-Motorised transportation) modes remained underutilised, and made the movement of motorised modes less efficient. A very little attention is given to improving the facilities for non-motorised modes. (Mohan, 2001) The overall neglect of NMT and pedestrian facilities has led to increase in the number of motorized vehicles, resulted in road accidents, social inequality, poor mobility, and deterioration of the quality of life. (Leather, Fabian, Gota, & Mejia, 2011) Indian cities are now more complicated and untidy. (Haufschild, 2015) It is quite evident that, with times, transport infrastructure in Indian cities has swelled in size but degraded in service. Regrettably, the very people and their transport needs remain unattended. The Indian Roads Congress (IRC) did try to consider people's apathy in its 'Guidelines for Pedestrian Facilities' in 1988-89. (Indian Roads Congress, 1988) But, it was

inadequate and failed in implementation. Current transportation in India favours motorization. Even in new townships and cities like New Mumbai and newly planned extensions/suburbs of old towns like Panchkula, NOIDA, OKHLA, Hyderabad, etc., very less emphasis is given to provide and maintain quality footpaths (sidewalks) and dedicated corridors for public transport buses and cyclists. This further adds to environmental problems and social disparity. Besides, it diminished the economic viability of urban transport. Urban transport in India cannot afford to serve only personalized car/private transportation. As private vehicles monopolize streets; pedestrians, cyclists, and the handicapped are left with fewer and fewer safe choices for moving around. (World Resources Institute, 2005) An attempt was made to strengthen public transportation by providing dedicated corridors for public transport buses through Bus Rapid Transit System (BRTS) first in Pune, Ahmedabad and then in other Indian cities. The attempt indicated partial success in some restricted areas. (Rangarajan, 2010) and (Anuj Jaiswal, 2012).

Indian cities are also going to face even bigger challenges of the ever growing population in general and urban population in particular. The estimates as to how the urban population in India is constantly swelling. (Table 1) **Table 1: Present and Projected Growth in Total and Urban Population of India**

Year	Population (billion)	Urban population (million)	% of Urban Population to total population
2001	1	285	27.8
2031	1.5	583	38.0
2051	1.7	820	47.5

Source: B.I. SINGAL, (2010), Towards Sustainable Urban Transport in India, JOURNEYS November 2010 Page 14

This ever growing urban population is bound to be demanding urban infrastructure more in quantity and better in quality. Planning and managing cities is going to be the toughest challenge for India. Big cities will face this problem with great intensity. It also possesses a challenge to the concept of sustainability, liveability, walkability and pedestrian facility in Indian cities. The main requirement of the developing countries is 'their development'. And the route to development naturally goes through transportation. However, it is necessary to understand that development of transportation is like a 'boon and a bane' as a combo-offer. Transportation will lead to development and more development will further demand additional transportation. (Zegras, 1998) This is a vicious cycle indeed and plays a cruel joke on the planners. The harder they try to solve the problem, the more demanding it turns out to be.

Mobility and its Dimensions.

Mobility is the 'ability to move easily' (The Concise Oxford Dictionary, 1995) and it is concerned with people as end-users. Mobility is related more to safety, comfort, quick movement, walkable and less motorized means of travel. Mobility provides access to daily wants, needs and activities and it is specific to neighbourhoods. More socialization and exposure to varied activities demand more mobility. Planning priorities therefore need to give focus on issues related to NMT and mobility, which revolves around safety, comfort, independency and reliability, (Dhoniwal, 2009) and a mere accessibility need not always bring better mobility. (Sovani & Bhole, 2016) As a results, some attempts are seen to integrate the motorized and non-motorized means of travel, like for example, 'The Tenth Malaysia Plan focused on a new approach 'public transport as the primary spine, supported by a pedestrian-friendly street network' made an attempt for the same. (Government of Malaysia, 2010) It is a genuine experience that one reaches to a very distant place within a city swiftly due to advanced means of transportation and better accessibility, but struggles to reach his actual destination due to poor on-ward connectivity or miserable walking conditions. The root question arising here is whether intra-urban accessibility is important or neighbourhood mobility? This also leads to a more pertinent question: 'Can intra-urban accessibility be achieved without better neighbourhood mobility'? The professed opinion is that both intra-urban accessibility and neighbourhood mobility are interrelated. Moreover, their parallel existence and exemplary fine-tuning is essential for city's decent functioning. Good neighbourhood mobility is a foundation of better urban accessibility.

Urban mobility also reflects equity and equality, fundamental rights of citizens, inclusiveness and thus it has a socio-political dimension as well. The Preamble and the Directive Principles of the Constitution of India assure its citizens equality, freedom of movement and equal access to opportunities. Uniform mobility provides uniform access to services and opportunities and freedom of movement within and beyond city limits. Local self-governments of urban centres, charge several kinds of taxes like street tax, green tax, tree cess, etc. City dwellers are, therefore, consumers. Better mobility is a paid service and thus a right, rather than a favour; and therefore, urban citizens have every right to have better mobility. (Sovani & Bhole, 2016)

Children's Perception on Urban Mobility.

Perception of urban mobility of children is ought to be different from that of adults. Children in the age group of 10 to 15 are still dependents, but yet have their own sphere of life. On the one hand, as children, their primary inclination is academic in nature and hence, they regularly attend schools and such related activities. On the

other hand, they are also inclined to visit other places close to their homes for various works those are personal and family related. Children's mobility is therefore, associated mainly to the neighbourhood of their residence, and this in turn and provides a collective portrayal of urban mobility. School going children are comparatively objective and free from bias. Mobility of school going children is, therefore, decided to be the basic parameter of urban mobility. The fundamental presumption used here is 'if mobility for children is good at neighbourhood level, the mobility is ought to be good for society as a whole at city level. Good neighbourhood mobility will also reflect city design and structure, societal response to local needs and socio-cultural and environmental health of neighbourhood.

Mobility and Sustainable Mobility

The word sustainability in transportation was first traced in 1990s. (Replogle, 1991) Later, sustainable transportation became the key term within the development discourse of almost all government, NGOs and private sectors. A sustainable transport system must provide mobility and accessibility to all urban residents in a safe environment. World Business Council for Sustainable Development (WBCSD) carried out a worldwide study on assessment of transport conditions (WBCSD Report, 2001). The term 'sustainable' has now become a chorus we hear everywhere including urban planning. (Zegras, 2005) It's very difficult to rebuild an existing city, but efforts to curtail the need of motorized transport will go a long way in making mobility sustainable. The modern notion considers citizens as participants and technology as a facilitator. Combination of these two leads to transformation of the city, and an effective way to this transformation is to make cities sustainable. (Schneider Electric, 2016).

There are various definitions of the term 'mobility'. Historically, mobility was seen as a product, which is an outcome of vehicles, infrastructure and energy consumption. And regrettably therefore, the focus of urban planners has always been to enhance infrastructure supportive to automated vehicular transport. Mobility was also defined as 'an answer given by an individual to his transport needs. This answer can be in the form of a direct effort (walk) or an indirect resort to other non-motorised or motorised mode of transport. (Xavier & Boareto, 2005). In an attempt to make cities sustainable, there is a universal movement of 'Walk to Work (Rojano, 2011) and (Mid Day, 2016)'. This movement, however, remains symbolic and hence not sufficient enough to bring substantial changes in the quality of city life. It is primarily because, walking in neighbourhood, either to access various services or for various social purposes, is multi-layered, frequent, intense, profound and passionate than a mere symbolic one point agenda of 'Walk to Work.' (Ugo & Noland, 2012) Neighbourhood mobility is, therefore, highly significant. Some studies have also seen mobility as a reason of social churning. It is also stated that mobility is a public function that intends to provide accessibility to all. Mobility is a norm and a purpose to satisfy different transport demands. (Boareto, 2005) Tenable mobility is not just a need of people to move around, but also a luxury, which contributes to the quality of their life. (Schneider Electric, 2016) Better mobility means more active and satisfying personal and social life. It is also stated that logical end of good mobility is the realization of accessibility; and good accessibility enhances and encourages non-motorised mobility. (UN Report, 2013) Mobility, thus, basically a concept related to interface of an individual's day to day movement in and around the neighbourhood of his residence. It is a basic concept related to non-motorised means of travel'. Then, at this juncture, the mute question is what would be an end effect of good mobility? This can also be asked more specifically as to what cost the mobility is made available.

Regrettably, urban mobility has always been secondary to planners over the motorized means of transport. Despite low cost, infrastructure of non-motorised transportation such as pedestrian bridges, paths, sidewalks, greenery, sheds and road crossings are often ignored because of their non-revenue generating nature. (World Bank, 2016) On similar grounds it is also noticed that in urban centres, there is a cyclical degradation of public transport and increase in travel time. This has resulted in a transport network with a high premium. On the one hand, neighbourhood mobility is ignored and hence common man is unhappy. On the other hand, motorized transportation is costly due to several taxes, cess, and toll to use road networks, and also time consuming due to traffic related issues and hence, even rich is also unhappy. And yet, there are hardly any forceful efforts seen to make urban mobility sustainable.

Sustainable Urban Mobility for Children

Sustainable urban mobility is a matter of concern. According to recent studies, every year more than 5,00,000 people die in road accidents and 70% of these deaths occur in developing countries. Statistics indicate that out of the total deaths in road accidents, 65% of deaths involve pedestrians and regrettably, 35% of these pedestrians are children. (Nantulya & Reich, 2005). A Child Friendly City (CFC) guarantees rights of every citizen. One of the rights is 'walk safely in the streets on their own'. (O'brien, 2004). The thrust on CFC focuses one important change in the earlier perceptions. One finds a departure from the original assumption that 'a city fit for adults is fit for children'. It is now being turned around. The present day perception is 'a city fit for children is fit for adults'. The new perspective is that a 'city designed with children in mind will be more inclusive, and more readily meet the needs of all members of society'. (O'brien, 2004) Child and youth friendly urban environments must ensure age-appropriate independence and better transportation options like walking, biking and transit. This will discourage the use of cars. (CYFC, 2009) . Independent mobility is a right of children and it must

ensure to explore and use the outdoor environment and public spaces, independently (Janneke Zomervrucht D. B., 2005).

Global Perspective:

The urban mobility for children is, therefore, a global concern. Thankfully, the global response to attempt this issue of achieving sustainable mobility is very encouraging. Some cities have undertaken projects of comprehensive research and planning to improve 'walkability'. 'Transport for London' defined walkability as "the extent to which walking is readily available to the consumer as a safe, connected, accessible and pleasant activity." (Transport for London, 2004) For New Zealand, it was defined as the extent to which the built environment is walking-friendly (New Zealand Transport Agency, 2007). Other cities, particularly in Europe, have developed plans and supporting policies specifically to improve the walkability and ability to ride a bicycle in the whole city. The Dutch city 'Delft', in 1986, was the first to realise a comprehensive bicycle network in an existing town. Today its municipality wants to improve further the position of cyclists in Delft with special emphasis on children. (Janneke Zomervrucht D. B., 2005) Most of the studies are now also linking sustainability of urban Mobility with children. In Iran, for example, the view that if children are involved in planning cities, the results will be more sustainable and child-friendly than current urban development policies was well executed. (UNICEF, 2005). Good public transportation, quiet streets, well-lit places and Bike Park were top priorities listed by children of the city of Abbotsford in Canada. (Enns, 2010) In Canada, 'The Smart Commute Schools Program - Transportation 101' is an educational outreach program organized by Smart Commute Hamilton that focuses on promoting active and sustainable modes of transportation in elementary and secondary schools. (SRTS, 2005) Similarly, in the USA, a project 'Safe routes to schools' (SRTS) by the US Dept. of Transport aims to arrest the problem of decline in walking and cycling of school children (National Center for Safe Routes to School, 2005) and (SRTS San Fransisco, 2010). Project TLC (Transportation for Livable City) also aims at achieving better walking and cycling in the neighbourhood of San Francisco, USA. (Dave, 2002) Neighbourhood mobility matters a lot to children. Hence, if their opinions are sought, they can be vocal beyond our expectations. In one such research, the children in age group of 10-14 in Johannesburg, South Africa have spoken out openly about the unsafe places in the neighbourhood, pedestrian problems, public transport, street light, traffic conditions, and road crossings. (Kruger & Chawla, 2002) Just above 50% Children in developed countries like Norway walk or cycle to school. Their school trips are short, but not free from traffic; and interestingly their leisure time activities are also car driven with parents and not on their own independently. (Fyhri & Hjorthol, 2006) Exposure of children in developed countries like the USA due to poor neighbourhood situation is very low not only in terms of their routine activity of going to school, but also in terms of their recreational physical activity of outdoor play. (Handy, 2008) Studies related to urban mobility of school children in western developed world is primarily related to study of physical activity of children and their health related issue. (Richard Larouche, 2013) The Belgian 'free public transport policy for specific target group like Senior citizens (+ 65) and children (below 12)' in Brussels since 2003 was mainly aiming to promote (children's) mobility and improving image of public transport. (Cathy Macharis, 2006).

It is a shocking reality that increased traffic has made the average age at which children can or are allowed to independently crossing the street has gone up from 6 years old in 1970 to 8 years old in 1993 and 8.5-9 years old in 2003. (Zomervrucht, Boyd, Kips, Schepel, & Torenstra, 2005) With this trend probably, children may be able to cross the road independently only in their teen age. This speaks a volume on independency and safety of urban mobility.

Asian Perspective:

Asian countries have a balance mix of both Motorised Transport (MT) and NMT in their cities; and for quite a long time both these modes survived with great integration. Regrettably, however, in a blind attempt to copy the western model of development, particularly post world war in 20th century; these countries compromised with their strengths. These countries put a restriction on NMT and Non Motorise Vehicles (NMVs). Manila in Philippines banned NMV initially in 1950's but some of them re-emerged in 1990's. Thailand banned them in Bangkok 1960 and Pakistan banned it in Karachi in 1962. Indonesia followed the trend in Jakarta in 1988, and then lifted the ban briefly in 1998 before reversal. In developing countries like Bangladesh, there is still an intense attempt to eliminate NMT like cycle-rickshaw. Over the last few years, the government of Bangladesh has implemented policies to phase out non-motorized transport, particularly rickshaws, from the major traffic spines of Dhaka City. A similar trend is seen in other cities of developing countries like, Manila in Philippines, Surabaya in Indonesia, and Beijing in China. (Mamun Muntasir Rahman, 2005)

Even in India, New Delhi too banned cycle-rickshaw in early 1980's and also put restriction on the number of cycle-rickshaw registrations as well as licensing. The irony is that these countries justify their banning of NMT and NMV giving absurd reasons like 'NMVs are causing congestion'. (Mamun Muntasir Rahman, 2005)

This has resulted in a shifting to more and more MT in Asian countries. Walking, which was once a preferred mode of mobility has changed to MT in some select cities of Asia. (Table 2)

Table 2: Walking Mode Share Changes in Selected Asian Cities

City	Ref. Year	Share of Walking Mode in % in the Ref. Year (b)	Ref. Year	Share of Walking Mode in % AFTER the Ref. Year (d)	Mode with Greatest Gain (Motorized)
(a)	(b)	(c)	(d)	(e)	(f)
Bangalore	1984	44.00	2007	8.33	Two-wheeler and car
Changzhou	1986	38.24	2006	21.54	Two-wheeler and car
Chennai	2002	47.00	2008	22.00	Two-wheeler
Delhi Nanchang	2002	39.00	2008	21.00	Two-wheeler and car
Shanghai	2001	44.99	2005	39.11	Car
Xi'an	1986	38.00	2004	10.40	Two-wheeler and bus
	2002	22.94	2006	15.78	Bus

Source: James Leather, Herbert Fabian, Sudhir Gota, and Alvin Mejia (2011); 'Walkability and Pedestrian Facilities in Asian Cities: State and Issues'; Asian Development Bank's Sustainable Development Working Paper Series; No. 17 Page 3

However, after realising the consequences of traffic menace, these nations learnt a lesson of sustainability. These countries are now trying to restore some of the NMT and their attempts to keep a balance of both MT and NMT are visible. The draft strategy for the Philippines states that 'Reserving and reclaiming space for pedestrian traffic is as important as providing lanes for cars. (Government of the Philippines, 2009)'. Similarly in Indonesia, as per the Traffic and Road Transport Act of Indonesia, motorists must give priority to the safety of pedestrians and bicyclists. (Government of Indonesia, 2011) Even Abu Dhabi has developed an Urban Street Design Manual that integrates the concept of the pedestrian realm into overall street composition. Similarly, Vision Statement of City of Bam in Iran expressed the wish to achieve a collective dream towards the creation of a child-friendly, peaceful and ecologically efficient city. (UNICEF, 2005)

Indian Perspective:

Studies carried out on urban mobility in the Indian context are relatively very few. These studies mainly address mobility problem from the adults' point of view and not the children's. Besides, most of these studies are concerned to accidents, accessibilities and density of urban transport facilities. As a result, it is hardly possible to bring any generalised utility of these studies in children's perspective. Besides, in a separate study, the comparison among the Asian cities also shows that Indian cities are below or well below average in urban transport conditions. (Table 3)

Table 3: Transport Conditions: Results of 22 Asian Cities

Well below Average	Below average	Average	Above Average	Well above Average
Karachi <u>Kolkata</u>	Bangkok Bengaluru Hanoi Manila <u>Mumbai</u>	Beijing <u>Delhi</u> Guangzhou Jakarta Nanjing Shanghai Wuhan	Hong Kong Kuala Lumpur Seoul Singapore Taipei Tokyo Yokohama	Osaka

Source: Asian Green City Index (2011) Assessing the environmental performance of Asia's major cities. A research project conducted by the Economist Intelligence Unit, sponsored by Siemens available at <https://www.siemens.com/press/pool/de/events/2011/corporate/2011-02-asia/asian-gci-report-e.pdf>

Physical activities of children, particularly urban children are declining. One such research on Indian Urban Children indicates a similar trend. (Sumathi Swaminathan, 2011) Providing a sustainable transport system is a complex and a difficult task. Needs and demands of people belonging to different groups are not only different but also often conflicting. Children's mobility is therefore, associated mainly with the neighbourhood of their residence.

Local Perspective:

Mumbai Metropolitan Region has more density, better infrastructure and independent body like MMRDA to look after its transportation needs. The city life is very vibrant. It has very a pulsating life right from early morning till late night. Other than better transport network, the region also has pedestrian friendly infrastructure such as sidewalks, road dividers, road crossings, traffic islands, pedestrian signals, sky walks, subways, better

tilled footpath, etc. However, children are still not in a position to enjoy the infrastructure independently. Children in most of the Indian cities are equally dependent either on parents or some formal means of commuting to schools and other places daily. In fact, their exposure to neighbourhood is rapidly declining.

Need of Defining Sustainable Urban Mobility

From the above discussion, it is very clear that urban transportation regrettably never received priority in planning. NMT modes like walking, cycle, cycle-rickshaw and *tonga* are important components of the Indian urban transport system. It not only helps to achieve better mobility but even provides employability to the urban poor. And regrettably, today's transport planning, in the first place, is not even thinking about modes of transport like walking, cycle, cycle rickshaw and *tonga*; and the question of their inclusion in the urban landscape does not arise at all. It is natural, that over a period of time, motorized transportation (MT) is ought to accelerate. However, planners must not compromise the very need and objective of sustainable urban transport. They, therefore, must also incorporate non-motorized travel in transport planning till it becomes obsolete in absolute terms. Against this background, 'Defining and decoding Sustainable Urban Mobility for Children in Indian Cities' aims to understand the degree of sustainable mobility comfort accorded to children in the Urban India.

Two questions which are to be answered are -

1. 'What is the acceptable definition of Sustainable Urban Mobility for Children in Indian Cities?' and
2. 'What are the parameters for measuring the very Sustainable Urban Mobility in Indian Cities?'

Foundation of Deriving the Definition of Sustainable Urban Mobility

Gaps in the present Studies:

The study carried out so far in the realm of mobility, particularly children's mobility in cities across the global to local level shows some specific trend. Studies in the western world has emphasized on decrease in physical activities, declining walking and thus increasing health issues like obesity among the school children. Some of studies at the Asian and Indian level have, however, emphasized accidents, traffic congestion, pollution and issues alike. Therefore, one comes across some specific gaps in the research carried out on the issue of mobility of school children in urban environment. The main areas of gaps are -

- 1) Issues like mobility comfort, independency in comfort and children's perception on mobility are not studied.
- 2) Many additional activities related to children's sphere of life as an individual or as an integral part of family are not considered.
- 3) Studies primarily at the neighbourhood level are missing.
- 4) Studies carried out related to children are less.
- 5) Such indices are not measured at the neighbourhood level and more specifically not measured for unescorted children.

It is clear that the gaps in the present studies are equally significant in the studies related to mobility of children in urban environment. This is also true that such studies in the Indian context are further less or diverted to other issues. It is therefore; decided that present study will focus on defining and decoding the parameters of the generic term of Sustainable Urban Mobility.

Basis of Present Studies:

Urban Population of India is now above 30% of the total population of the entire Country. It has therefore, a sizable children population, which is quite large to influence the overall life and routine of each city in India. A study dedicated exclusively to the needs and the issues of children, which is otherwise rare is now, a must. The issues related to children's mobility are many and they are unaddressed and unattended. This situation provides a strong foundation and a basis for this study. It is a well-accepted fact now, that sustainability is the inevitable ethos of modern development, and urban transportation is no exception to it. It is also now clear, that a city friendly to children is a city friendly to all. And in that spirit, sustainable urban mobility must be focused upon children's needs.

At the macro level, children form a sizable part of any population group, which is large enough to influence the very city life. At the micro level, a school-going child is a reason and a purpose for a family to re-orient its daily routine. And hence, the more the child is free and independent, the more the family is relaxed. Similarly, at the city level too, the more the school-going children move around freely and independently, the more it endorses the city's socio-economic and transport environment in a respectable way. Interestingly, both these micro and macro levels of city settings are correlated and co-terminus. Ignoring children's transport needs and mobility comfort is ignoring the very opportunity of city development. It is for this very reason now, that mobility with its sustainability must be studied.

Children as a group, is like an ever-growing organism and is an ever-learning entity; always curious to know and courageous to take challenges. But, at the same time they are ignorant about ground realities and innocent of the real-world brutalities. All this probably make them more vulnerable. Ignorance and innocence sometimes may project them as careless and useless. In reality children are not careless but they are 'cared' less; children are not useless but they are 'used' less. (Bhushan, 2011) Children's perception of an issue is many a times at par

with that of adults. And for this reason at least, one must consider them, hear them out on the issues of their life sphere.

Against this background, this attempt is made to work out the definition of Sustainable Urban Mobility for Children and decoding its parameters of measurement from children's point of view. The very definition of Sustainable Urban Mobility for Children and its structure of measurement will be a strong foundation for the further studies.

Defining Sustainable Urban Mobility for children

Mobility is not just related to reaching from one part of the city to the other. It is more related to finishing part of the very journey undertaken for a specific or many purpose(s). According to B. I. Single, "it is often the worry over the last mile that makes a commuter use his personal vehicle". (Singal, 2010) Sustainable urban mobility is, therefore, related more to neighbourhood mobility needs of city dwellers. The author could trace out following few definitions of Sustainable Urban Mobility. But, on close scrutiny, he had also identified certain omissions in each of these definitions.

1) *Children's independent mobility means their ability to move in public space without any adult accompanying them.* (Hillman, 1991)

This definition includes independency and safety, but lacks environmental aspects and ambience

2) *Mobility as measured by throughput rather than utility.* (Daly, 2002)

This definition is focused on the process than its end results.

3) *Sustainable urban mobility means a child friendly city that guarantees the right to every young citizen to walk safely in the streets on their own.* (O'brien, 2004)

This definition includes independency and safety, but lacks environmental aspects, ambience and mobility infrastructure

4) *Maintaining the capacity to provide non-declining accessibility in time.* (Zegras, 2005)

This definition includes sustainability but lacks in children specific need and neighbourhood mobility

5) *Sustainable urban mobility means a child-friendly city. And a child-friendly city means a city which has a system of good governance committed to fulfilling children's rights.* (UNICEF, 2006)

This definition is too generalised and lacks mobility infrastructure, ambience and environmental aspects.

6) *Sustainable urban mobility is a system that incorporates economic viability, environmental stability and social equity by meeting the needs of transport and land use of both current and future generations in an efficient manner.* (Kayal Priyamvada, 2014)

This definition sounds to be inclusive. However, this definition links mobility to land use and silent on either of the children specific issues of comfort, safety and independency.

Workable Definition of Sustainable Urban Mobility for Children

Based on World Bank report, the term sustainable urban mobility for children is associated with four 'A's: Always, Acceptable, Available and Affordable. (World Bank, 2016) The quality of mobility conditions must be **always** the same. In other words, for this generation and for all future generations, it must be forever the same. It should be free to move, at ease and in comfort. It should be a system immune to degradation. Mobility conditions must be **acceptable** to everyone in the neighbourhood or city. In other words, it must be safe, suitable and satisfactory to everyone including boys and girls, men and women, toddlers and children, young and old, workers and executives, traders and tourists. Mobility conditions must be **available** easily to everyone. In other words, it must be uniform, adequate, tolerable, and user-friendly, and can be more independent. Mobility conditions must also be **affordable**. In other words it must be reasonably priced to both the rich and the poor.

From the churning of various diverse views discussed above, the author of this research article, had then derived a modified acceptable, workable, adoptable and measurable version of 'sustainable urban mobility for children' as-

'The Sustainable urban mobility for children is a set of travel conditions suitable to them today and tomorrow; which are economically realistic and independent, socially safe and inclusive and environmentally durable and pleasant, and applicable in various urban conditions in India.'

What it intends from this definition is-

1. Children enjoy sustainable and specific travel/mobility conditions and options, 2. at par within and between cities across India; 3. which are tangible on economic, Social and environmental standards of survival.

This definition has helped the author to formulate the following hypotheses.

- 1) There is an association between the purpose of mobility of children to school and in neighbourhood and means of travel they use for mobility.
- 2) There is an association between the purposes of mobility of children to school and in neighbourhood and time distance they need to travel.
- 3) Children in Indian Cities in general feel safe and independent to move around in their neighbourhood every day.

4) Children in Indian Cities enjoy good ambience in their neighbourhood.

Testing of these hypotheses through the field work and surveys in the letter stage indirectly helped him to test his own definition of Sustainable Urban Mobility.

Measuring Sustainable Urban Mobility for Children

There are various parameters and indices used in measuring sustainable urban mobility. A few important Parameters and Indices of Sustainable Urban Mobility are discussed below.

Walk Score: Walking is the most sustainable means of urban transport. Walk Score is based on the distance to amenities such as grocery stores, schools, parks, libraries, restaurants, and coffee shops. Walk Score's algorithm awards maximum points to amenities within 5 minutes' walk (.25 mi), and a decay function assigns points for amenities up to 30 minutes away. Scores are normalized from 0 to 100. Based on the Walk Scores Parameters, the grading of the walk score is done as '**Walker's Paradise**'; '**Very Walkable**'; '**Somewhat Walkable**' and '**Car-Dependent**'. (Source: www.walkscore.com) Many Asian cities can generate a very high 'Walk Score' due to old and historical layout of the cities, as it does not include quality aspects of walkability like street lights, sidewalks or footpath width and length, street design, safety from crime, etc. (James Leather, 2011) Walk score in Indian context, therefore, can be misleading.

Walkability Index: Walkability Index is designed around safety, security, economy, and convenience of traveling on foot. (Krambeck, 1999). The national average Walkability index for India in 2008 was just 0.52. (CSE, 2009) and (James Leather, 2011). Walkability score comes in as a handy tool for the planners. Some research has also linked the walkability with the built environment. Built environment and other city design factors undoubtedly influence walkability, but it is preposterous to hypothesise that only mere urban design and actual mobility behaviour has any relation, particularly in children's perception. (Sovani & Bhole, 2016)

I_SUM: I_SUM (Index of Sustainable Urban Mobility) is probably one of the exhaustive indices worked out to measure Sustainable Urban Mobility. It has been worked out with eighty-seven Indicators forming thirty-seven Themes, under nine Domains. (Antonio Nelson, 2010).

GWI: The Global Walkability Index (GWI), as developed by H. Krambeck for the World Bank, provides a qualitative analysis of walking conditions including the safety, security, and convenience of the pedestrian environment. (Krambeck, 1999)

STI: Apart from the above indices, 'Sustainable Transport Indicators' (STI) is also developed to measure urban sustainable transport composite index' based on environmental, economic and social indicators. (Haghshenas, 2013) All these indices are not suitable for measuring Sustainable Urban Mobility as these indices are a result of studies meant for a general purpose for whole of urban universe, and not specific to a particular section of social group like children. Hence, appropriate changes are made to make these indices workable according to definition of Sustainable Urban Mobility.

Workable Parameters and Indices of Sustainable Urban Mobility for Children in Indian Context.

Measurement of urban mobility is a Herculean task. Perception on urban mobility changes with people and their socio-eco-cultural background. It also changes with their location, time, season, urgency and purpose of movement. The problem is complex. A need was felt to have a unique, novel and widely acceptable parameter to judge and formulate urban mobility, particularly for Children.

Based on the definition, a broad idea of measuring sustainable urban mobility for children is summarised as follows:

Economically realistic *and independent* set of travel conditions can be measured with **(1) mode of transport** being used by children and **(2) distance they normally travel while moving in the neighbourhood independently**; Socially *safe and inclusive* set of travel conditions can be measured through the **(3) degree of physical comfort** and **(4) psychological comfort** children feel and **(5) level of social safety that the children sense in the neighbourhood**; and Environmentally *pleasant and durable* set of travel conditions can be measured considering the overall **(6) pleasurable ambience children are exposed to** and the **(7) pedestrian friendly durable infrastructure made available to children for moving in the neighbourhood**.

On each of these **(1) to (7)** parameters listed above, detailed variables were identified to gauge the actual perception of children on Sustainable Urban Mobility in MMR. Based on his further field work and survey, the author has formulated his own 'Composite Sustainable Urban Mobility Index' (*C_SUM*) Thus, the author has successfully derived the acceptable, workable, adoptable and measurable definition of Sustainable Urban Mobility from Children's point of view. This definition and the parameters will now set the basic framework for further similar studies in other Indian towns and cities.

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Impact of Lockdown on Retail Investors in Stock Market

Mr. Ashish Bhasme¹ Mr. Kiran Sakat²

¹Assistant Professor, Department of BBA, Vivekanand College, Kolhapur.

²Assistant Professor, Department of Economics, P. V. P. Mahavidhyalaya, Kavthe Mahankal, Sangli.

Abstract

Due to COVID-19 pandemic situation government of India announced complete lockdown in India. Almost all sectors were stopped their economic activities so workers lost their jobs or there was no earning source for the people. So, some people with their savings entered in the Indian stock market. In this paper researchers tried to understand what was the impact of lockdown (Covid-19) on attraction of new retail investors/traders. Also, researchers tried to study the behaviour of existing traders. This research paper based on primary as well as secondary data. Those people invest their fund in long term trade they earned good profit comparatively and also, they suggest others to trade in long term holdings for good returns and having less risk. Those respondents who are trading since before lockdown and who they increased their fund, out of that more than 70% people are now in profit.

Keywords- Covid-19, lockdown, investors/traders, stock market.

Introduction:

Indian Stock market is one of the oldest stock markets in Asia. Bombay Stock Exchanges (BSE) and National Stock Exchanges (NSE) both are very famous stock markets in India and maximum trade takes place in those markets. BSE was established in 1875 while NSE founded in 1992 and started trading from 1994. More than 1800 companies listed in NSE while more than 5500 companies listed in BSE. As we see history of Indian stock market and its index then, we can conclude that, Indian stock market is flourish market. So Indian as well as foreign investors/traders attract towards it. But if we consider the population of India then there is a need to increase retail investor or we can say traders in Indian stock markets. In March 2020 Government of India announced complete lockdown in India due to COVID-19 pandemic situation and almost all sectors were stopped their economic activities so workers lost their jobs or we can say there were no earning source for people. So some people with their savings entered in the Indian stock market. They open D-mat accounts and started trading. Some existing traders (trading before lockdown) added more fund to get benefits of lockdown. In this paper researchers tried to understand what was the impact of lockdown (Covid-19) on attraction of new retail investors/traders. Also, we tried to study the behaviour of existing traders.

Objectives:

- 1) To Study the attraction of new traders after lockdown
- 2) To study behaviour of existing traders

Research Methodology:

This is an empirical research study. For this study, researchers have used primary as well as secondary date. Primary data were collected through e-questionnaires from 40 respondents and secondary data were collected through websites and research papers.

Scope:

Scope of the study is limited to Kolhapur and Sangli districts of Maharashtra.

Data Analysis and Interpretation:

1. There out of 40 respondents 50% are from 25-35 age groups. While 32.5% are from 35-45 age. So we can say 82.5% of trader's beings to age between 25-45 years.
2. In Indian Stock Market self employed, government servants. Private employees, Students are involved as a trader. Even housewives also taking initiative now a days. Government employers and private employers have maximum share, that is 67.5%.
3. From all the 40 respondents 25% respondents gets Rs. 10000-20000 per month as their income.
4. 60% respondents have their D-mat account with Zerodha out of 40. While 52.5% respondent have account with Upstox. Noteworthy things are that 37.5% respondents have their D-mat account with two different brokers and 5% traders have account with four brokers.
5. Out of 40 respondents 62.5% are started trading after lockdown (March 2020) and reaming 37.5% traders are existing traders, means they are trading from before lockdown.
- 1) In the existing trader 73.33% traders increased their fund in lockdown to get benefit of market fall, 13.33% trader keeps their fund as it is. While 13.5% withdrawn all or some part of existing fund in lockdown situation.
- 2) More than 50% trader gets the knowledge and information about stock market through videos and articles. While 45% and 37.5% respondents collect information through friends, colleague & relative and webinar, conference respectively.
- 3) 32.5% respondents traded in intraday in their initial days while near about 60% respondents tried all the other categories. But new only 45% respondents trade in intraday while 50% respondent's trade in long-term holding and future option categories.
- 4) Out of the 40 respondents 92.5% traders are part time traders.

- 5) More than 50% trader added up to Rs. 25000 as their initial fund in stock market.
- 6) 32.5% trader as per the need they take advice from different sources either paid or free. 12.5% people were taking paid call service in past.
- 7) Till a date around 40% respondents get more profit from long-term holding. While 27.5% respondents get good profit from position or swing trading.
- 8) As per the personal experience of respondents 60% respondents say share market is a regular earning source. While 42.5% respondents say, it is a good way of saving.
- 9) Out of total respondents 40% are overall in loss condition while 40% in profit condition and remaining 20% are in no profit no loss condition.
- 10) Lastly, out of 40 respondents 90% says they will suggest their friends, relatives and other regarding share market trading. Those who will suggest for trading out of those 67.5% will suggest for trade in long term holdings and 37.5% will suggest for swing or position trading.

Conclusion:

Many new traders of Kolhapur and Sangli district were attracted towards stock market. Those respondents who are trading since before lockdown and who they increased their fund, out of that more than 70% people are now in profit. Many traders loss their fund because they don't have any proper and updated knowledge of stock market. So, after some days they leave stock market trading. Those people invest their fund in long term trade they earned good profit comparatively and also, they suggest others to trade in long term holdings for good returns and having less risk. As people say trading in share market is a way of saving and one of the regular earning sources. Some people trade in share market as main earning source.

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An Analysis of Tax and Non-Tax Revenue in Maharashtra

Mr. Kiran Sakat

Assistant Professor, Department of Economics, P. V. P. Mahavidyalaya, Kavathe Mahankal, Sangli

Abstract

Public income is important for the economic progress of a country or a state. There are different sources of public revenue, the classification of those sources and studying their similarities and differences is an important factor in the study of public revenue. This research paper studies the revenue receipts of the Maharashtra State Government. The research paper considers taxes, share in central government Tax, non-tax revenue, interest receipts and central government grants. The revenue receipts for the four years from 2016-17 to 2019-20 has been studied. Maharashtra's total revenue has increased during this period. This growth rate is 11% in 2019-20. Taxes are the largest source of income for any government. The average tax revenue receipt growth is 10%. Central government grants are growing the fastest, growing at 18% in 2019-20. Maharashtra's total revenue is growing, but growth rate is slow.

Keywords: Revenue Receipts, Tax Revenue, Non-Tax Revenue, Central Grants.

Introduction:

The classification of public income is as important as the classification of public expenditure. The purpose of the classification of public income is to identify different sources of income and to know their similarities and differences. Different sources of income have different effects on the economy. Proper knowledge of the characteristics, properties, consequences, etc. of each resource makes it easier to analyze the position of the resource in the economy and its effect on the total revenue of the government. The classification of public income is important, so it is important to study the properties of sources of income. A comparative study of sources of public revenue is required. In this research paper, a comparative study of the sources of revenue income of Maharashtra State from 2016-17 to 2019-20 has been done. The various sources of government revenue have been classified by several economists. They include Adam Smith, Prof. Bastable, Talyer, Dr. Dolton, Prof. Mehta has tried to clarify the government's revenue from the government's revenue collection objectives. There are some flaws in the theoretical classification of government revenue but the classification that is actually useful to governments has been created today. Almost all countries in the world use this classification. It is roughly classified as revenue account and capital account. The Government of India adopted this classification in 1957-58. Revenue income is an important source of government revenue. The word revenue means, "Revenue receipts refer to those receipts which create any liability or cause any reduction in the assets of the government. They are regular and reoccurring in nature and government receive them in its normal cause of activities." There are different sources of income in the revenue department and the most important source is tax. Tax is defined by Seligman as follows, "a compulsory contribution from a person to the government to defray the expenses incurred in the common interest of all without reference to special benefits conferred"

Objectives of the Study:

- 1) To study the revenue receipt of Maharashtra State Government.
- 2) To study the sources of revenue of the State Government of Maharashtra

Research Methodology of the Study:

This present Study is descriptive in nature and fully based on secondary data. Data have been collected from various government reports, research articles, books, authentic websites and other published sources about government revenue to make this study more understandable and simpler.

Revenue sources of Maharashtra State Government

Tax revenue is the highest among government revenue sources, so tax revenue needs to be considered in detail. Maharashtra State Government has the highest share of sales tax in the tax revenue; it was 81174 crores in 2016-17. From the financial year 2017-18, the Government of India changed the sales tax and introduced a new 'Goods and Services Tax' by maintaining the sales tax on some goods. Due to this tax, the sales tax was divided into two parts, 'sales tax' and 'goods and services tax' in the financial year 2017-18 and was implemented all over India.

Table 1. Component wise OTR of the State (in crore)

Component	2016-17	2017-18	2018-19	2019-20	Avg. Simple Growth Rate
State Goods & service Tax	NA	50063 (29.81)	82352 (44)	86470 (43.34)	24.24
Sales Tax	81174 (59.42)	54894 (32.69)	35725 (19)	38066 (19.08)	-10.21
Stamps & Registration Fees	21012 (15.38)	26442 (15.74)	28545 (15.22)	29500 (14.78)	11.00
State Excise Duties	12288 (8.99)	13450 (8)	15321 (8)	17977 (9.01)	11.57
Taxes & Duties on Electricity	6670 (4.88)	7345 (4.37)	10085 (5.38)	9820 (5)	11.80

Taxes on Vehicles	6741 (4.94)	8665 (5)	8613 (4.59)	8599 (4.31)	6.91
Land Revenue	1799 (1.32)	2310 (1.38)	2088 (1.11)	3520 (1.76)	23.91
Other Taxes on Incomes	2312 (1.69)	2205 (1.31)	2583 (1.38)	2450 (1.23)	1.49
Tax on Goods & Passengers	1877 (1.37)	984 (0.59)	837 (0.45)	1750 (0.88)	-1.69
Other Taxes & Duties on Commodities & Services	2743 (2)	1590 (1)	1389 (0.74)	1381 (0.69)	12.41
Tax on Agricultural Income	0	Neg.	Neg.	Neg.	0.00
All	1,36,616	1,67,948	1,87,538	1,99,534	11.51

Source: Economic survey of Maharashtra- 2020-21

Above table no.1 in the first year of implementation of Goods and Services Tax in Maharashtra, Rs. 50063 crores were collected as GST and 62.5% of the total tax revenue was deducted from both taxes and it was more than the year 2016-17. In the two years 2018-19 and 2019-20, the GST has increased and the sales tax has decreased. Taken together, the share of total tax revenue has increased. "Stamp and Registration fees" is increasing but the share in total taxes remains the same. 'State Excise Duties' are increasing and the share of total taxes is fixed at around 8%. 'Tax on Vehicles' is increasing; their average growth rate is 7%. The growth rate of Land Revenue is almost the same as the growth rate of GST which is 24%. Tax on & Passengers is declining, on average it has come down by 2%. Other taxes and duties on commodities and services seem to be declining and taxes on agriculture are much lower than other taxes. Considering the total tax revenue of Maharashtra, it was Rs 136616 crore in 2016-17, it increased to Rs 199534 crore in 2019-20 and on an average, it is increasing by 11.51%. The imposition of GST seems to have reduced sales tax, but the rate of increase in GST is about 25% which is higher.

Table No. 2. Tax Revenue Receipts (in crore)

Year	Own Tax Revenue	Share in Central Tax	Total	Simple Growth Rate
2016-17	136616 (80)	33715 (20)	1,70,331	-
2017-18	167948 (82)	37203 (18)	2,05,151	20.44
2018-19	187538 (82)	41953 (18)	2,29,491	10.60
2019-20	199534 (85)	36220 (15)	2,35,754	2.65

Source: Economic survey of Maharashtra- 2020-21

The central government's tax share in Maharashtra's tax revenue is declining. The share of central government tax in total tax revenue was 20% in 2016-17, it decreased to 15% in 2019-20. In other words, the growth of the central government's share is less than the growth rate of the Maharashtra government's tax revenue.

Table No. 3 Non - Tax Revenue Receipts (in crore)

Year	Interest Receipts	Other Non-Tax Revenue	Total	Simple Growth rate
2016-17	3259 (26)	9450 (74)	12,709	-
2017-18	4163 (25)	12517 (75)	16,680	31.24
2018-19	4191 (26)	11652 (74)	15,844	-5.00
2019-20	2600 (15)	14251 (85)	16,851	6.35

Source: Economic survey of Maharashtra- 2020-21

The government gets revenue through taxes as well as non-tax revenue, which has increased in the period 2016-17 to 2019-20, but has declined by 5% in the financial year 2018-19. There is not much change in the amounts of tax received through other non-tax means during this period; only the income from interest has decreased in the year 2019-20. The share of non-tax revenue in total revenue has increased to 85%. From 2016-17 to 2018-19, the share of interest income is 25-26% and the share of non-tax income is 74-75%. The ratio of the two to the total income does not seem to have changed much.

Table No. 4. Total Revenue Receipts (in crore)

Year	Tax Revenue Receipts	Non- Tax Revenue Receipts	Central grants	Total Revenue Receipts	Simple Growth Rate

2016-17	170331 (83)	12709 (6)	21653 (11)	2,04,693	-
2017-18	205151 (84)	16680 (7)	21823 (9)	2,43,654	19.00
2018-19	229491 (82)	15844 (6)	33662 (12)	2,78,996	14.50
2019-20	235754 (76)	16851 (5)	57276 (18)	3,09,881	11.00

Source: Economic survey of Maharashtra- 2020-21

Maharashtra's total revenue, it is increasing, but the pace of speed is slowing down. Growth rate was 19% in 2017-18, it decreased by 4.5% to 14.5% in 2018-19. In 2019-20, the decline continued and the growth rate was 11%. The net increase in revenue seems to have been Rs 105,188 crore in these four years.

Considering tax revenue, non-tax revenue, central government subsidy, the ratio of these three to the total revenue is stable. However, the tax revenue has been declining. In the financial year 2016-17, the tax revenue was Rs 170331 crore and the share of total revenue was 83%. In 2017-18, it increased to Rs 205,151 crore and it was 84% of the total revenue. However, it declined in 2018-19, and continued to decline to 76% of total revenue in 2019-20. Tax revenue declined by 7% during the period. Non-tax revenue was Rs 12,709 crore in 2016-17 and the share of total revenue was 6%. In the year 2019-20, the non-tax revenue increased but the share of total revenue decreased to 5%. Non-tax revenue grew by a net Rs 4,142 crore in four years. Central government grants seem to be steadily increasing except for 2017-18. In the year 2016-17, the central government grant was 21653 crores and the share in the total revenue was 11%. This increased to Rs 57,276 crore in 2019-20 and the share of total revenue was 18%. Compared to the grants of 2016-17, the net increase in grants in 2019-20 was Rs 35623 crore, which is more than double.

Conclusion:

Although Maharashtra State Government's tax revenue has been increasing on a rough scale, its share in total revenue has been declining. The increase in central government grants means that the Maharashtra government is taking advantage of the grants to carry out development works. This is great indicator of progress. But the share of taxes paid by the central government to the Maharashtra state government is declining. In general, total revenue slow growth rate in but better than many other States.

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Indian Economy Under Global Crisis of Covid-19

Dr. Krishna Shankar Shahane¹ Dr. Rajendra Shankar Shahane²

¹Associate Professor and Head, Department of Economics, Recognised Research guide, Savitribai Phule, Pune University, GESs RNC Arts, JDB Commerce & NSC Science College Nashik Road, Nashik.

²Assistant Professor, Department of Economics, PVGs S.S. Dhamankar College, Nashik.

Abstract-

The pandemic of COVID Corona-19 begins from the Wuhan, China and afterwards loosely Spade all over on the planet and severely hits universes economy even as living souls, rally of contamination infection. The Coronavirus threatening to all or any people provides tremendous harm world by many ways, the crisis affects Indian economy aboard economy of universe severely warm, most all the sectors as like agricultural sector, education sector, Telecommunication sector, Travel business, Tourism and Aviation sector, pharmaceutical sector, oil and gas sector heated badly. thus the demand and provide development disturb badly that ought to perceive by trying economic study over the current present disaster of covid -19 pandemic with special prevalence to Indian Economy.

Key Words - COVID -19, Corona, Pandemic, Lockdown.

Introduction –

The current severe international slump is because of COVID-19, that caused a recession or a depression in economies of entire world. it's the biggest international slump since the Great Depression in earlier period of nineteenth century. The crisis began because of the COVID-19 lockdowns and alternative precautions taken throughout the COVID-19 pandemic. By Gregorian calendar month September 2020, the majority all economy had fallen to recession or depression, while all emerging economies were in recession. COVID-19 pandemic that was begins from metropolis of China and quickly lines universe at the majority of inhabited territory. The large collapse over the planet in 21st century, underneath shadowy world's economy within the large passing happens internationally, that gets more than 2,959,324 deaths cases, confirmed positive 137,278,683 while 110,472,479 recovered complete as on 13th April 2021. If there ought to arise a happening of India, complete passing happens was 1,71,089 absolute cases confirmed to 13,689,453 and 12,253,697 recuperates. Coronavirus Covid is presently catching practically all piece of the globe. This current debacle severely hits whole world and economies alongside an Indian Economy. The current exploration is directed to look through the however Coronavirus, pandemic endure various areas of Indian economy.

Objectives of the Research –

1. Evaluate effect of Covid -19 Corona pandemic on Indian Economy.
2. To discover the effects the present disaster on distinctive key areas of an Indian economy.
3. To determine the economic impacts of covid-19 over Indian economy.
4. Discover the depth of economic issue imposed by corona -19 pandemic.

Rationale of the Study –

1. It is important to evaluate and find the pathway over the current economic crisis.
2. Research is essential to show the pathway analysts, strategy producers, academicians and government.
3. Research may show the knowledge for the new researcher to find out the remedies over the current economic crisis with special reference to Indian economy.

Methodology-

The recommended research analysis on the purpose Cantered on the economic effects of Covid terribly over Indian economy. to find the fitting discoveries from the outcomes analyst gathered the knowledge by utilizing logical auxiliary technique for assortment of data for analysis by utilizing totally different sites, Newspapers, magazines, diaries, books and then forth to seek out the vital discoveries with relevancy the financial effects of present Coronavirus crown pandemic of crown on Indian economy.

Disturbances in Demand and supply Mechanism

The impacts cause because of disturbances in demand facet activities. The complete chain of production and demand cycle is disturbances because of Brobdingnagian uncertainty and fall in market have diode to double whammy of business. The key sectors that are face most loss with in the crises because of disturbances includes such as in Tourism, Hospitality and Aviation sectors. Tourism that account for 9% of Gross Domestic Product. Aviation that contributes around 2.4% of GDP has severely impacted and these sectors include employees around 42.7 million of individuals. Sectors such as auto, that contributes 10% of GDP and employee around 40 million of people, is declining unceasingly because of less of demand and because of that the marginal corporations and different industries has forced to finish off. Closing of cinema halls and complex malls has affected the retail sector and consumption pattern of clients in terms of necessities and luxury products. The consumption pattern of client has wedged and has shown a downfall because of fall in financial gain and lost jobs particularly to the daily wage earners. The constant concerns of the pandemic within the public have affected their mental eudaemonia and confidence level that postponed their purchasing decision. The services like travel and transport is stops because of internment across the country as has direct impact on slowdown in economic activities.

The result causes thanks to disturbances in provide aspect activities. Some targeted industries within the provide aspect choose the conclusion that area unit the marginal companies. India being the highest exporter of stuff material and import supply merchandise of goods that area unit required for their intermediate and final goods are on pause now due to the delay in supply of goods from china. Various sectors such as pharmaceuticals, automobiles, electronics and chemical products etc are facing a shortage of required component. As china accounts for 27% of India's automotive half imports. India imports concerning 85% of active prescription drugs ingredients from china and thanks to the issue, there is a clear stage of shortage in accessibility and so costs might maintain hike. Due to the imprisonment and world pandemic the business is hampering with the assembly There is concerning 55% of electronics are imported from china that has fell right down to down to a proportion.

Sector wise Effects of Covid-19 on Indian Economy

a. Increase in Unemployment-

The pandemic has unleashed devastation hands on scene in India. As per the Centre for observation Indian Economy around 21 million pay rates employees lost their positions throughout April to August. There were 86 million salaried positions in India during 2019-20. In August 2020, the tally was down to 65 million after 3.3 million positions were gone in the specific month. In January 2021, India saw an unemployment rate of over six percent. This was a significant improvement from the previous month. A harmful impact on an economy as giant as India's caused due a total lockdown was close at hand. Unemployment went just about 24 percent in April 2020.

b. Telecommunication Sector-

There are plenty of changes within the telecommunication space of India even before the COVID 19 attributable to temporary worth battles between the specialist organizations. Most fundamental administrations and areas have kept on running during the pandemic gratitude to the execution of the 'telecommute' attributable to limitations. With over 1 billion associations beginning at 2019, the telecommunication area contributes concerning 6.5 percent of GDP and utilizes terribly nearly 4 million individuals. Expanded broadband utilization had an immediate effect and brought about tension on the organization.

c. Education Sector

The pandemic has disturbed the schooling space as individuals are compelled to stay reception. The colleges and universities keep shut since the time the cross-country internment was forced. Varied youngsters are battling to remain tuned in to the difficulties of online classes. Understudies and educators in urban areas, towns and towns scramble to adapt to the requests of the occasions. From September 21, understudies of sophistication 9-12 were permissible.

d. Travel, Tourism and Aviation sector

Indian travel and therefore the travel business are one among the most foremost perceptibly terrible affected areas by the Covid pandemic. The contribution of the Aviation Sector and Tourism to our GDP stands at concerning 2.4% and 9.2% respectively. The business enterprises sector served approximately 43 million people in FY 18-19. Aviation and Tourism were the first industries that were hit considerably by the pandemic. The common accord looks to be that COVID can hit these industries more durable than 9/11 and therefore the Financial Crisis of 2008. These two industries have been dealing with severe cash flow problem since the beginning of the pandemic and are staring at a potential 38 million lay-offs, which translates to 70 per cent of the total workforce. Inline with IATO estimates, these industries could incur losses of concerning 85 billion Rupees due to travel restrictions. The Pandemic has conjointly led to a wave of innovation within the fields of contactless boarding and travel technologies.

e. Food and Agricultural Sector-

Since agribusiness enterprises is that the foundation of the country and a chunk of the general public authority reported fundamental category, the result is perhaps progressing to be low on each essential agricultural creation and use of agro-inputs. A few state governments have just permitted free development of natural merchandise, vegetables, milk and so on Online food staple stages area units smartly affected as a result of hazy limitations on developments and stoppage of coordination vehicles.

The Covid-19 pandemic has driven the globe economy into a downswing. The immediate and backhanded impacts of the pandemic square measure likely to endure for over two years.

As the expertise throughout the internment has appeared, a large number of the peoples in republic of India experienced diminished food utilization and craving, because the capability of the interior food apportioning network remained inefficaciously used. milk request fell by 20 to 30 percent during the lockdown, the ability of milk by the cooperatives likewise fell. Poultry producers confronted the biggest misfortunes because the interest for eggs and chicken fell forcefully Across the India.

f. Pharmaceuticals Sector –

The pharmaceutical Business has been on the increase since the beginning of the Covid-19 pandemic, particularly in Asian countries, the most important producer of generic medicines globally. With a market size

of \$55 billion throughout the starts of 2020, it has been billowing in Asian countries surging in India, exporting Hydroxychloroquine to the world.

There has been a recent rise within the costs of raw materials foregin from China because of the pandemic. Generic medicine are the foremost compact because of serious reliance on imports, discontinuous supply-chain, and labour inconvenience within the business, caused by social distancing. At the same time, the pharmaceutical business is troubled as a result of the government-imposed bans on the export of critical drugs, equipment, and PPE kits to make sure adequate quantities for the country. The increasing demand for these drugs, coupled with hindered accessibility is making things harder. Easing the financial stress on the pharmaceutical companies, tax-relaxations, and addressing the labour force shortage may well be the differentiating factors in such a desperate time.

Conclusion-

The demand and supply mechanism of Indian economy heated badly because of the covid corona-19. most all the sectors of the Indian economy come back underneath the shadow of recession because of this crisis, the research paper concludes that agricultural sector, education sector, Telecommunication sector, Travel, Tourism and Aviation sector, pharmaceutical sector, oil and gas sector along with each and every dependent sector are under the huge threatening of covid-19. In India, there were disturbances within the accomplishment of food stuff, assortment of harvests, deficiency of transporters, barricades in the vehicle of things, closures within the retail market. Few fields like Telecommunication, pharmacy sector shows massive rise within the same time period.

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Consumerism of Shailendra's Songs on Digital Media Platforms by the Commoners

Dr. Sunder Rajdeep¹ Mr. Sagar R. Bhalerao²

¹HOD and Asst. Prof. Dept. of Communication and Journalism, University of Mumbai

²PhD Research Scholar, Dept of Communication and Journalism, University of Mumbai

Abstract:

The lyrics written by Shankar Shailendra showcase all aspects of human nature. His songs focus on the plight of the commoner in the post-independent era. As we know, cinema reflects life as well as entertains us. Similarly, music is also an integral part of movies and through it; a lyricist is able to reach the masses. Shailendra has made immense contribution to Hindi cinema by writing some of the most popular lyrics. Despite enormous contribution, there's not much of academic researcher done on Shailendra's work. Lyrics with progressive thought and emotions written by Shailendra are still popular today and people enjoy listening to it on digital platforms like YouTube. This study is an attempt to analyze how Shailendra's songs are effective and contemporary. In order to gather the data, a research tool was developed. Songs depicting social issues were taken into consideration for this study. Data was gathered using the research tool developed for the research study. Survey of 100 adult participants (50= Female and 50= Male) was done for this quantitative research. The findings indicate that Shailendra's lyric still appeal the masses and they expect good and meaningful lyrics from the current lyricist in this digital era. Also, this study is an experiment to guide future lyricist to compose meaningful songs that can bring changes in the society and can shape the next generation.

Keywords: Consumerism, Shailendra, Bollywood Songs, Digital Media, Lyrics

Introduction

Poet Shankar Shailendra is a renowned name among the poets who brought social reality before the masses through his work. His poems depict the scenario of post-independent India where he is seen talking about corruption, injustice, exploitation of labor, capitalism. In his work he is not only highlighting the problems but also suggesting solutions for the same. He chose poetry as his medium to reach out to as many people as possible. The real feature of his poem is that the audience does not have to take much effort to understand his songs. The films for which he wrote the songs were very popular. A lot of research work has been done on films in which Shailendra worked. For example, there is a lot of research material on actors and director of film in which he worked but there's no research work done on Shailendra as a lyricist. Common man is the central character of most of his songs. His songs received immense love from the public but were ignored by critics. For a lyricist or a songwriter who write songs for movies have some limitations. They have to write songs to suit the storyline of the respective cinema. However, the real skill lies for a lyricist who, despite their limitations, tried to express his thoughts in his songwriting. Which is evident in Shailendra's songs. In his songs many aspects like feminism, humanism, and socialism have been touched. These songs have inculcated true human values for the coming generations. In today's age when the quality of song lyrics in cinema is worsening more and more, it is necessary to study, understand and critique songs written by Shailendra. This study is an attempt to analyze how Shailendra's songs are effective and contemporary in the present time for the masses.

Review of Literature

Hindi Cinema has portrayed social life and role plays through songs and scripts. The social reality gets invariably reflected in the cracked mirror of Indian cinema, sometimes realistically and sometimes elliptically. But under the glamour of realism, the harsh facts of life invariably peep out. This is so because however, escapist or realistic cinema may be, it cannot remain unaffected by political and social milieu. Although an important trend throughout film history, especially in the developed countries, the usage of cinema as political propaganda has dissipated with time, and it is currently almost restricted to the documentary format. However, the fictional productions from underdeveloped countries can still be broadly regarded as a political statement, as a result of the unstable political and sociological aspects of third world countries. (PIB, 2017) India is one of them. In post-independence era many films were made on the social aspect of Indian society, which depicted importance of social harmony and national integration. Cinema presents an image of the society. It is a powerful medium that provides useful and entertaining information on history, civilization, religion, politics and socioeconomic aspects in various regional languages (Mallareddy, 2015). Consumerism broadly concerns consumption. Specifically, it refers to the excessive over-consumption of consumer goods without regard to the negative impacts to people and the planet (Dauvergne, 2008). Same applies to media also. Media should provide good and acceptable content for the audiences; this is stated by several media researchers. In Shailendra's lyrics one can observe the positive connotations about the life struggle of commoners. In film like Awaara (Kapoor, 1951), Asali Nakali (Mukherjee, 1963), Guide (Anand & Danielewski, 1965), Teesari Kasam (Bhattacharya, 1966) and so on, Shailendra penned fabulous songs that reflected the plight of common man, his struggle, emotions and expectation from the world. As a director, actor late Raj Kapoor made films that carried socio-political message and portrayed the world of underprivileged, marginalized sections of society, bringing out the iniquitous and inequitable parts of Indian society. His movies not only gained name and fame for him in India but also established him on the world map. The humanistic approach and ground reality have been seen in Raj Kapoor's films' songs, to a great extent this credit goes to Shankar Shailendra (Bharati, 2013).

Aim- To study consumerism of Shailendra's song by the masses using digital media.

Objectives 1. To analyze perception of masses on Hindi Film lyrics.

2. To study the recent development in the field of Indian film lyrics.

3. To study role of Lyricist Shailendra in the life of masses in the age of digitization.

Research Question

1. Is there any requirement for meaningful lyrics in Hindi cinema for the masses?

2. Is there any significance of Shailendra's lyrics in the age of digital media?

Methodology

The study adopted qualitative method to achieve the aim and objective of the research. The data was gathered using the research tool developed, consisting of a questionnaire made with the help of academic researchers, specialized person from the field of media and entertainment industry and lyricist working for Hindi cinema. Total 100 college going adult (Age group 18-28) students (50=Female, 50= Male) were involved in this research, who are using YouTube platform more than 2 Hours to listen music daily. All respondents are from Mumbai MMRDA region. Quantitative aspect of this data was gathered and analyzed with the help of research tool.

Limitation

1. Survey was conducted in English language. 2. Universe of this research was limited to Mumbai MMRDA region only. 3. Due to COVID-19 half of the survey was conducted through online mode.

Result and Discussion:

In order to find out the results of research questions and to test hypothesis, data was gathered by using above methodology and it was analyzed. Results are as follows.

Chart 9.1 Awareness about Lyricist Shailendra

This graph shows that, most of the respondent (N=70) are aware about Shailendra and they frequently listen the Shailendra's songs on multimedia platform, i.e., YouTube.

Chart 9.2 Respondents on Contemporary Film Lyrics

Above graph 9.2 is shows that, most of the respondents are neither satisfied nor dissatisfied (N=32) with the contemporary Hindi film lyrics, whereas 29 Respondents are Very dissatisfied with today's Hindi film lyrics. They wanted to experience good quality and meaningful songs as it was in 70-80's era. As per the Chart no. 9.3, around 89% respondents are happy with Shailendra's lyrics and demanded improvisation in contemporary Hindi film lyrics. Even Maximum respondents (N=80) don't like remix or remake of songs. From this response one can say, There is serious demand by the youngsters to write meaningful songs by contemporary lyricist.

Chart No. 9.3. Preference of Improvisation of Contemporary Hindi Lyrics

To know the significance of Shailendra's lyrics in today's age of digital media, respondents were asked about the familiarity with the top 10 Shailendra's songs which have been watched by YouTube users. As shown in the chart 9.4 most of the respondents are aware about the Top-10 songs written by Shailendra. Most of the respondent agreed that, there are very few lyricists in Hindi film industry who tried to give philosophical touch to film lyrics and Shailendra was one of them. From this result one can say that, there is significance of Shailendra's lyrics in today's generation and they are enjoying his lyrics on digital platforms.

Chart 9.4 Consumption of Shailendra's Songs

Conclusion

There are many songs that touch millions of hearts but most of the time the consumer of the song is not aware of the name of lyricist/song writer. Shailendra as a lyricist was attached to the ground reality of the society. He used his work to make people aware about the life struggles and tried depicting human emotions and values through his lyrics. Therefore, contemporary lyricist, film makers and common public should understand the relation between epistemology of Indian culture and Shailendra's songs, which will be really helpful for the new generation to get an essence of Indian philosophy through Shailendra's songs and its relevance in contemporary era. There is a serious requirement by the new generation for the best quality and meaningful film lyrics.

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Recent trends in Law as a social science.

Dr. Asmita Prajakt Patil

Assistant Professor in Law, Shahaji Law College, Kolhapur

Abstract

The legal profession plays an important role in the administration of justice. As it helps in maintaining a balance between the legislature and the executive as well as judiciary, it is fundamentally important for the administration of justice in the country. It is created by the state for public good.¹ The legal profession has undergone a huge transformation since independence. Legal profession is regulated by the advocates act of 1961. The act provides for the formation of Bar Council of India which has the authority to lay down standards of professional conduct for advocates. To promote and support law reforms. To promote legal education and to lay down the standards for this education. In short the Advocates act lays down a brief guideline to the legal profession.

Due to globalisation, the nature of legal profession is gradually changing in India. Today foreign law firms are seeking entry in the Indian legal system, due to which the effects of world economy are being felt. Many new challenges are being faced due to globalisation. Now it is time to adopt and promote a new outlook for legal profession in India. For the same we need to verify the nature of legal education in India

As far as legal education is concerned, the law schools and colleges initiate and undertake various activities like moot courts, mock parliamentary debates, field visits and various internship activities as suggested by the Bar Council of India rules.² Earlier these activities were enough for a holistic development of a student. But today we need many extra methodologies in order to make a law student develop in the profession in the real scene. Today law schools are shifting from pedagogical methods to andragogical methods. The teaching methodologies of law schools are mostly focussing upon gaining experience.

Today if we see the overall demand of lawyers in a legal market, clients want the lawyers to be techs savvy, prompt as well as represent them in all jurisdiction and forums. Firm culture is developing now-a-days as a result of which a client can get all types of legal remedies under one roof. Hence many times solicitor firms are preferred rather than a single advocate. Hence law schools are laying more emphasis on incorporating new technology, blended learning and inter-disciplinary courses. For this purpose practical and experimental teaching methodologies are adopted by the law schools as well as colleges.

In order to focus on the experimental teaching methodologies, innovative teaching techniques like flipped classrooms, role-play, and think-pair share are introduced to make student aware of the practical aspect of legal profession. In order to make a student aware of recent structure of legal profession, there is great need for law schools to focus on legal clinics and incubators. These should be integrated with the law courses. Besides more focus should be laid on technology integrated courses.

Legal profession today is very different from the traditional legal practice. The legal field is developing with many branches and specialisations. Law students should be well versed with all the recent amendment and changes in the basic expectation of senior lawyers as well as the whole society. As many other fields are also having a connection with the legal field, legal education should be integrated with various other technologies like artificial intelligence, block chain technology, big data analytics, machine learning, cyber security, cyber forensics, alternative dispute resolution mechanism, space and law.

After the trends in legal education, we need to see the trends in legal service delivery. The delivery of legal service can be done by various modes like practise in courts, providing legal aid to the needy, lok adalats, nyaya panchayats. Most of the rules of legal service authority are regulated by the legal service authority act. Which constitute legal service authority at national level, state level as well as district level. Earlier such kind of legal services was just a face to face contact between the clients and the lawyers but today the outlook has changed a lot. Now-a-days legal service is provided with social networking.³ Besides we also have legal process outsourcing. Because of legal process outsourcing, many foreign firms are entering into Indian markets.

As legal profession is inclining towards firm culture, we have various virtual firms providing lawyers and their clients. They are very flexible in their outlook as far as the providing of legal service is concerned. They also try matters with a very feasible cost. These types of virtual firms are very helpful to the clients as they save time as well as energy and update the clients with the present standing of the case.

Besides trends in legal service delivery, we need to see the trends which shape the legal industry in the real scene.⁴ Legal fields have undergone a lot of changes in view of doing a law practice. First and foremost is due to advancement of communication and technology, lawyers are not tied to offices, and rather they prefer to work remotely. Working remotely in the sense, they can provide legal service through virtual platform. Due to mobiles and laptops, access to lawyers is becoming very easy. Clients can approach the lawyers through emails

¹ <https://lawtimesjournal.in> as visited in April 2021-04-15

² www.indiatoday.in as visited in April 2021-04-15

³ Authored by Maj. Gen. P K Sharma (Retd) Prof and Director, Amity Law School

⁴ www.veritext.com as visited in April 2021-04-15

and by logging into the firm websites. They have virtual conferences and meetings with each other and can discuss the facts about the case and have concern discussions.

Now-a-days free lancing is also available in legal field. Legal free lancing is a viable carrier. There is increasing demand for free lancers. Today there is a trend of going paperless. Huge boxes of brief cases and other relevant documents are now not a necessity. Today all the relevant documents of a case are available in soft mode like facts of the case, relevant evidence required for the same as well as the law points considered by the courts while deciding the judgements.

Precedents that are the court decided judgements are very important as very important while arguing a case in the court of law. Due to advancement of technology, various supreme court and high court judgements are recorded virtual and their reports are available online there are various websites giving us relevant data about the reports of the judgements of national importance.

Besides this there is social media which acts as a messenger of various checks and balances given by the legal field. Social media also acts as a legitimate tool for marketing and doing business. Though there are many ethical issues surrounding the use of social media in legal field, the use of social media is increasing to a great extent.

Global networking has touched the legal field to a great extent. Indian law firms are entering the foreign markets and gaining a lot of amount of money. Besides many foreign law firms are also entering the Indian society and providing legal services. Due to this there is a lot of opportunities created in the legal field as these firms strongly rely on the legal process outsourcing. Many issues of international level can be sorted out by such type of global outsourcing. Due to such kind of trends we can really see that the world has become a global village.

A Study on the Mobile Friendliness of Indian Universities and Digital Literacy

Mr. SAGAR BHALERAO¹ Mrs. AMRIN MOGER²

¹PhD Research Scholar, Dept. of Communication and Journalism, University of Mumbai, India

²Incharge-BMM, Guru Nanak College of Arts, Science and Commerce

Abstract

Information and communication technologies (ICTs) have penetrated all areas of our day-to-day life, especially in the learning process. India has 4.67 million active mobile connections (TRAI, 2017). Mobile phone usage requires affordability and digital literacy. In this context, digital literacy has become much more than the ability to handle computers, smartphone, new electronic gadgets just like traditional literacy. It helps us to adopt basic skills which required for the communication and dissemination of information (Karpas, 2011). Using these skills one can actively participate in civic society and contribute to a vibrant, informed, and engaged community. Websites are the face of an organization. Universities in India use websites for communicating with its students. A mobile phone is one of the widely used tools by students to access websites. This study aims to analyze mobile usage and friendliness of Indian University Websites (IUW) for higher education and learning. The study also examines the usage and accessibility features of IUW (n=729). The analysis demonstrated a significant number of IUW failed to achieve mobile friendliness and accessibility features for enabling learning. The study, however, suggests Universal Design (UD) as a feature for enabling better communication and dissemination of information and accessibility of IUW using mobile phones.

Keywords: Digital Literacy, Communication, Accessibility, Indian University Websites, Mobile Phone Friendliness, Universal Design.

Introduction

Educational websites are all around us. However, users don't always find it easy to access these websites especially due to its inaccessibility features. With the increasing use of mobile phones, these phones can be used as an access point to Indian University websites (IUW), which depict educational information. Websites has a large knowledge base that offers services such as site documents server, search facility, e-mail server and user registration (Andy, J., Papanikolaou, T., and Sissingar, M. 2001). We feel proud to be part of India as the second largest population having the third largest higher education system in the world by volume of learners enrolled. The higher education system in India is associated with the Universities operating at both central and state level. This higher educational system has evolved through decades and met various demands of social transformation that India as a country is undergoing. However, technology does not transform learning and literacy by itself, but only in conjunction with other social and economic factors. Similar is the social transformation envisaged through the Indian constitution is pluristic and voluntary in nature with the state having the crucial role of setting norms and evolving the policies in consonance with the central government directives. There are several policies and directives of the central government with reference to education. This research study takes a point of departure from the directives regarding the educational transformation with the advent of digitization of learning information as available in the IUW, to examine the mobile friendliness of these digital formats.

Growth of Mobile phone Users and Digital India

There is an exponential growth in Information and Communication Technology (ICT) in India. Personal Computer (PC) penetration in India was 18 per 1000 as per Manufacturer's Association of Information Technology (MAIT) annual report published in July 2006. India had 164.81 million active Internet subscribers as on March, 2013 [Telecom Regulatory Authority of India (TRAI)]. This is according to the report 'The Indian Telecom Services performance Indicators' of January – March, 2013 released on 1st August, 2013. I-Cube [Internet in India] study released and conducted annually by IMRB. Thus, it validates the use of websites to bridge the gap and outreach. ICT also has been emphasized in the Biwako Millennium Framework (BMF) and UNCRPD guidelines. It has specifically directed on application of ICT for 'Access to information and communications, including information, communication and assistive technologies' for 'Divyangjan' - persons with disabilities. Recent 'Digital India' Campaign (DIC) by government of India, promotes the usage of ICT in all domains including digital libraries. Therefore, mobile friendliness and accessibility of Indian University websites form a pre-requisite for digital India and accessible India.

Digital Inclusion and Mobile phone Accessibility

'Digital inclusion tends to be solely associated with technical accessibility issues' (Steyaert, 2005). 'A particular focus of attention has been the inaccessibility of virtual learning environments for disabled students' (Newland, Pavey and Boyd, 2004). In a review of accessibility issues in higher education, Seale (2006) noted that, although disabled students may have access to computers and the Internet, they may not necessarily have access to accessible online learning resources and activities, and stated that in this sense, disabled students may still be 'have-nots', and experience what Burgstahler (2002) described as the 'second digital divide'. Seale and others such as Draffan and Rainger (2006) have attempted to expand the context within which accessibility is understood to include not just technical issues, but also pedagogical and institutional factors. Such moves have

helped to expand our concept of accessibility, but on their own they only partially contribute to the improved conceptualization and understanding of digital inclusion.

Accessibility of Websites of Indian Universities and Persons with Disabilities.

'A website is increasingly the place where customers get that vital first impression' (McGovern, 2006). Accessibility of these websites to students with and without disabilities will be the test of its global reach (Poothullil J.M.M and Kalbage A., 2013). All the Universities in India are guided and monitored by the University Grants Commission (UGC). The National Assessment and Accreditation Council (NAAC) is one of the autonomous bodies established by the UGC to assess and accredit institutions of higher education in the country. Since the year 2010, the Government of India, Ministry of Social Justice & Empowerment made a provision of Rs.20 lakh for adopting websites to be accessible to PWDs under the Scheme of the Implementation of Persons with Disabilities Act (SIPDA) and requested all Central/State Universities recognised by the UGC to provide self-contained proposals.

Mobile friendliness of Indian University Websites and Digital Literacy

If website is the face of an organization in the new medium, its ability to reach globally can be only assessed based on its accessibility. World Wide Web Consortium (W3C) compliance is a qualification for any website that can be easily accessible by students with and without disability. Information and communication technologies (ICTs) have penetrated all areas of our day today life, especially in the learning process. India has 4.67 million active mobile connections (TRAI, 2017). There are several studies on usage of mobile and University website. However, there are very few studies on usage friendliness and challenges of mobile phone devices for accessing IUW. Digital literacy refers to the ability to define what sorts of information are needed; locate the needed information efficiently in digital space; evaluate information and its sources critically; incorporate selected information into one's knowledge base; understand the economic, legal, and social issues surrounding the use of digital information; and access and use digital information ethically and legally (American Library Association, 2000).

Objectives

The objective of the present study was to assess the quality of websites designed by the Central and State Universities in India in terms of its usage, easiness, accessibility, information, digital literacy and participatory features. The study also aimed at measuring these features from the perspective of the user.

Research Questions

Following research questions provided direction for the study:

1. What is the significance of the IUW in terms of the information sought by the mobile phone user?
2. Does the IUW follow the guidelines of UNCRPD with reference to access to information on a mobile phone?
3. What is the perspective of the mobile user of the IUW in terms of usefulness?
4. What is the perspective of the mobile user of the IUW in terms of ease of access?

Hypothesis

1. The IUW provides the information sought by the mobile phone user?
2. The IUW does not follow the guidelines of UNCRPD with reference to access to information on a mobile phone?
3. Mobile phone user of the IUW found it very useful?
4. The mobile phone user of the IUW had an ease of access?

Methodology

Since the study aims to analyze mobile usage and friendliness of websites of Indian Universities for higher education and learning, emphasis was given to survey, with purposive and convenient method. The study examined the ease of usage, usefulness and accessibility features of University Grant Commission (UGC) approved Indian Universities from the perspective of the users (n=64). An online Google survey was developed as the research tool and the same was provided to the users of IUW on their mobile phone to gather the data in a period of one month 1st to 31st January 2018. The data gathered were analyzed using SPSS. The descriptive and inferential analysis demonstrated a significant number of websites failed to achieve mobile friendliness and accessibility features for enabling learning. Since this study is essentially aimed at assessing the usage of qualities of IUW in terms of design, format, functional and accessible features. Care was taken to choose the IUW available on the in the Annual report of UGC for the year 2016-17 on 3rd December, 2017 to assess and measure these features. The specific day 3rd December, 2017, being 'World Disability Day' was selected for studying the accessibility features of these websites, considering the significance of the day in a year for 'Divyangs' - persons with disabilities. On this particular day, 792 IUW were carefully studied. Screen shots of the IUW were also used as part of the sample. In this study, the researchers have tested these IUW for W3C compliance and assessed them. The assessment was based on the following parameters: accessibility, design, and participatory features. The same was done using the inventory of the IUW and the structural analysis for tabulation of the data. As the websites followed no single standard, there was a need to standardize the website

area. The screen shots of every home page of the websites of 792 IUW were captured on mobile screen and printed out. These prints were then overlaid with an 'F' shape on top of it, just below the masthead of the IUW. The content analysis of the IUW in terms of accessibility was done online using web-based validator tools for accessibility. The Universal Resource Locator (URL) of the website of the IUW to be tested was, typed in the address slot and tested online for its validation. The results of the test were considered as data for analysis. The online free test tools used for accessibility in this study include validator tools for 'markup validation', 'cascading style sheets validator', 'mobile validator', and they are available at the following links:

1. <http://validator.w3.org/>
2. <http://jigsaw.w3.org/css-validator/>
3. <http://validator.w3.org>
4. <https://www.seocentro.com/tools/seo/mobile-friendly.html>

Limitations

The following are the limitations of the study:

1. Due to paucity of time and resources, only screenshots of 792 IUW were studied.
2. 792 IUW selected for the study belonged to Central, State, Private and Deemed to be University categories as on 3rd December 2016.
3. The websites were downloaded on smart mobile-phone, assessed and analyzed only on 3rd December 2017 i.e., World Disabled Day. No updates were studied.
4. The accessibility of electronic documents linked with web pages of IUW selected for the study is not included in the study.
5. Only websites of 792 IUW in English and Vernacular language were selected for the study.
6. Manual checking was from the perspective of the researcher.
7. No efforts were made to test the websites from the perspective of 'Divyangs' - persons with disabilities.

Analysis and discussion

During the study, it was observed that all the 792 IUW could be accessed using the URL links provided in the Annual report of UGC for the year 2016-17. But few of the IUW had basic features of accessibility such as information dissemination features, screen reader, font size or color change, and alternative text for the visuals for the blind. None of them had the used of captions for the video or Indian Sign Language (ISL) for the deaf persons in India.

Information and dissemination features

Providing and disseminating information through website content in vernacular/local language, is one of the strong information and dissemination features of a website, in terms of its reach to the rural masses. In a country like India, it is important to have the website content in the regional language. During the study, it was observed that most of the websites were in English and only few websites among IUW (Table 1) had regional language information features among both Central and State Universities.

Table 1: Information and dissemination facility offered in the websites of UGC approved universities in India

TYPE OF UNIVERSITY	WEBSITES WITH VERNACULAR		WESBITES WITH DOWNLOADABLE INFORMATION		WEBSITES WITH STUDENT HELP INFORMATION		WEBSITES WITH VIDEO FOOTAGE & PHOTOGRPHS		WEBSITES WITH NEWSLETTER & RESEARCH PUBLICATIONS	
	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
Central Universities (CU)	2	45	01	46	02	45	0	47	0	47
State Public Universities (SPU)	56	304	06	354	05	355	2	358	0	360
State Private Universities (SPRU)	60	202	09	253	12	250	1	261	0	262
Deemed to be Universities (DU)	119	04	01	122	1	122	0	123	0	123
Total	237	555	15	775	20	772	3	789	0	792

Table 2, 'F' Pattern as Design Feature in IUW

TYPE OF UNIVERSITY	DESIGN 'F' PATTERN		Total
	NO	YES	
Central universities	7	40	47
State public universities	69	291	360
State private universities(spru)	75	187	262
Deemed to be Universities (DU)	18	105	123
Total	169	623	792

As stated in Table 2, only few IUW have used the 'F' pattern design. This means majority of the Universities in India do not consider the significance of reading pattern of students. This is relevant in terms of the equalization theory that suggests that small or big, recent or ancient, the universities of India are able to compete on equal terms for imparting manpower development and research for persons with and without disabilities.

Conclusion

Two decades has passed since the IT Act has been passed in India. Even though it has made changes in implementing web accessibility features, IUW India have made efforts to use this new medium with global and local reach. A good website in order to promote higher education for students with disabilities would include all possible features of accessibility, participation, information and networking. It would be technically a complaint, if these features of website accessibility are not present. In India, every IUW should ideally have regional language version of the site for the educated and the net savvy local student population. These IUW cannot afford to ignore the large population of Internet users with mobile phones, among students with disabilities. The Website of NAAC ranks the highest in terms of number of features available followed by the Website of Karnataka University (www.kannadauniversity.org) and Punjab University ([http:// puchd.ac.in/](http://puchd.ac.in/)). The front page of most of IUW is organizational centric. In this aspect the normalization theory holds true. The most glaring aspect in this study is the lack of regional language version of the website in central universities. Clearly these IUW have not targeted the neo-literate and digital literacy of the population, which would prefer reading content in their own language. Very few of the IUW have the links to new interactive and social communication tools like blogs, guest books, and RSS feeds. A majority of them do not even have feedback or complaint form details (Table 3). However, it is encouraging to note that on "World Disability Day" i.e., 3rd December 2017, some of the IUW had accessible features. The research scope of this study was very limited. A more exhaustive study could reveal more interesting accessibility aspects on how the IUW look at the Internet and their websites as medium of mass communication to enhance the access to higher education for all for social transformation leading to development.

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Subjective well-being and Coping Strategies in people who worked from home and had to go to their offices during Quarantine; A Comparative Analysis

Ishita Goyal

Msc Clinical Psychology, Christ (Deemed To Be) University

Introduction

The first cases of Corona Virus (COVID) were reported in Wuhan, China in late December 2019. By the end of March/April the virus spread to such an extreme, affecting 3 million people, and 201 countries. According to Frank & Grady (2020), since the virus was contagious, lethal and was spreading like wildfire, a nationwide 'lockdown' was put into force. The Indian Government took necessary steps and put the entire country into a nationwide compulsory quarantine in March (Chatterjee and Chauhan, 2020). Quarantine has been defined by the Centres for Disease Control and Prevention (2017) as the separation of humans or animals to prevent the spread of disease. People are confined and their movement is restricted so as to protect them from being exposed to a contagious disease. Being in a lockdown meant that people had to stay at home, either close their businesses or work from home. Physical contact with anyone was avoided unless urgently required to do so. The consequences of lockdown hence have not only physical (e.g., illness, hospitalization) and financial (e.g., redundancy, financial insecurity) components but also psychological (e.g., anxiety, loneliness) (McKibbin & Fernando, 2020). People who have been in quarantine during the SARS pandemic report it as an unpleasant experience. The psychological effects include separation, isolation, boredom, uncertainty and in extreme case attempting suicide (Bai, Lini, Lin et al., 2004). Hawryluck et al. (2003) studied 129 quarantined persons during SARS epidemic who responded to a web survey. It revealed high prevalence of psychological distress. Symptoms of Post-Traumatic Stress Disorder (PTSD) and depression were found in 28.9% and 31.2% respectively. PTSD and depressive symptoms were found to be associated with either acquaintance or direct exposure to a person with SARS. Thus, we see the experience of being quarantined led to a decrease in a person's subjective well-being. Sibley, Chris et al (2020) call for an urgent need to assess the short-term psychological effects of responses to COVID -19 and lockdown.

Subjective well being

Subjective well-being (SWB) research focuses on how and why people experience their lives in positive or negative ways (Diener, 1984). The concept was first introduced by Wilson (1967) and was defined as a person who is 'young, healthy, well-educated, rich, extroverted, optimistic, worry-free, high self-esteem and last but not the least with a very high intelligence score.' However, in recent times, the conceptualisation of SWB has evolved drastically. Psychologists want to explore factors other than the demographics which can influence our SWB (Diener, 1999). The focus is now on understanding the internal processes which lead to our experience of well-being and happiness. Stones and Kozma (1985) reported that SWB was a broad concept which included how people respond emotionally to circumstances, their reported life satisfaction and judgement. Okun, Stock, & Covey, (1982) conceptualised SWB into 3 dimensions – affective, temporal and cognitive. In a way, we can divide SWB into two components of affective and judgement. Diener, Suh, Lucas, & Smith (1999) defined SWB as life satisfaction and positive and negative affect. The affective component focuses on the occurrence of positive and negative emotions experienced by the people. The cognitive judgemental component, life satisfaction, focuses on the cognitive evaluation of person's quality of life. Thus, we can define SWB as a sense of well-being which comprises of 3 factors - life satisfaction and high positive and low negative affectivity. According to Headey and Wearing (1989) our SWB is usually in a state of normal equilibrium, but due to major life events (positive or negative), it can deviate from normality. But this deviation also depends on the intrinsic factors of people. Some people undergoing similar circumstances may choose to evaluate them and differently due to their unique expectations, values and experience (Diener and Suh, 1997).

Coping Mechanism

The negative long-term effects of physical and psychological stress have been researched extensively by many (Follingstad et al., 1991; Gelles & Harrop, 1989). An important result is that most people are able to come out of the stress by coping effectively. Coping is a term that means the method an individual use to bring their psychological status back to homeostats when they are faced with a mental or physical stressor. In mentally taxing situations, we exhibit a broad range of thoughts and behaviours to manage the stressful demands of the situation (Lazarus & Folkman, 1984). The first distinction between the various coping behaviours was done by Moos in 1995. He gave the concept of approach and avoidant coping. It is as words say, in approach construct, the person who is facing the stressor tries to make changes to external environment to reduce the causes of stress. In avoidance construct the person tries his hardest to avoid dealing with a particularly distressing situation. A second way to distinguish between coping strategies is to divide them into cognitive and behavioural strategies (De Ridder, 1997; Holahan & Moos, 1987). Cognitive strategies include efforts made by individuals to change the way they look at a situation whereas behavioural strategies include actions by the individuals which are observable to others. One of the most commonly used models of coping was given by Lazarus and Folkman (1984). They postulated that there are two types of coping which people use – problem-focused and emotional-focused involving attempts to solve the problem creating the stressful situation, and

emotion-focused, which aims to manage negative emotional responses associated with the stress (D'Zurilla & Nezu, 2001). Within this model, problem-focused coping is viewed, in general, as "the more useful and adaptive form of coping" (p. 220). According to Cohen (1987) the coping strategy used by people depends on the different type of stressors. Thus, the situation determines what kind of an approach will be used by a person (Cohen, 1987; Holahan & Moos, 1987).

Review of Literature

In the past, SWB was studied with variables like social background, age, social support, personality traits which formed a static relationship (Headey & Wearing, 1990). However, researches have now started to explore the dynamic relationship of SWB, i.e. the cause and effect of change in SWB (Abbey and Andrews, 1985; Atkinson, 1982; Headey et al., 1985). A major emphasis of these researches was how adverse life events affect our SWB. Headey & Wearing (1990) conducted a research to understand the relationship between subjective well-being and coping strategies during the time of adversities. They reported that avoidance strategies like denial can be extremely harmful. People who rely on these strategies show an increase in their negative affect, thus decreasing their SWB. Ryu, Yang and Choi (2020) investigated the stress level coping mechanism and its effect on the subjective well-being of police officers in Korea. The aim was to determine how the coping strategy used influenced the police officer's subjective wellbeing. They reported that problem focused coping mechanism was an important mediating factor for stress and subjective wellbeing, especially for the positive affect component. A negative correlation was also reported between job stress and SWB. People with high job stress had lower positive affect and lower life satisfaction. According to the, to increase the police officer's SWB, it was important to raise their positive affect. Avoidance coping style had a negative correlation to SWB. Chatterjee & Chauhan (2020) reviewed how the recent stressor of COVID-19 was affecting people's well-being. The experience of COVID -19 and being quarantined was reported to be extremely high on negative affectivity. Taylor et al. (2008) researched the psychological effects of Australia's outbreak of equine influenza in people who were quarantined and those working as health care workers. Results showed that quarantined people had less severe symptoms of post-traumatic stress than health care workers. Health care workers experienced a greater stigma, depression, anxiety and avoidance. Taylor et al. also reported "increased anger, annoyance, fear, frustration, guilt, helplessness, isolation, loneliness, nervousness, sadness, worry, and were less happy".

Significance

The benefits from the nationwide imposed quarantine have to be weighed against possible negative psychological outcomes. Even though according to theological ethics, it was for the 'Greater good', The psychological effects need to be addressed to make quarantine an effective public health measure and to prevent negative outcomes. Made people use different types of coping mechanism. The research will help psychologists understand how people respond to a life crisis. My research can be taken forward to form therapeutic interventions which can help analyse at risk people and help them. This research will also help to flatten the curve of mental distress due to quarantine. The pandemic is currently unfolding, and solid, reliable information about how people are responding to this crisis is needed now.

Rationale

According to DeNeve, K. M., & Cooper, H. (1998) future research is needed to determine how personality influences SWB in non-Western cultures along with an examination of situational factors such as daily events, goal strivings, and resources. According to Sibley et.al (2020), there is a need to explore the relationship between lockdown and its effect on well-being of people in parts of the world other than New Zealand. They also emphasised the need for research studies which included factors which can influence subjective wellbeing, like gender, ethnicity, pre-existing health condition or disability, and employment status and personality and coping strategy. Pleeging, Burger and Exel (2019) report that there is a research gap on how different groups of people report subjective wellbeing and hope. Headey & Wearing (1990) emphasised for a need to see how subjective well-being and coping strategies are dependent on other variables like, a favourable outcome, reaction to adversity and hope. Chatterjee and Chauhan (2020) emphasised a need to explore psychological effects of COVID 19 on health care professional and people who work in essential services. They also suggested a need to examine the coping strategies of people who worked in essential services, as they believed that adaptive coping strategies can help them lower the symptoms of PTSD. The aim of the study was to compare the Subjective Wellbeing and Coping Mechanisms in men and women who worked in office and those who worked from home.

Objective

- To examine the effect of work mode (work from home and office) on a person's subjective wellbeing and coping mechanisms.
- To determine which coping mechanisms predict wellbeing in people.

Operational Definition

Subjective well-being – A person's experience of life satisfaction and positive and negative affect.

Coping Mechanism – It is the way in which people deal with stress to bring themselves back to homeostats. It includes two major components avoidant and approach coping. The sub dimensions are self-distraction, active

coping, denial, substance use, emotional support, instrumental support, behaviour disengagement, venting, positive reframing, planning, humour, acceptance, religion, self-blame.

Methodology

Hypothesis

- There is a difference in people’s subjective well-being, and coping mechanism when they are working from home and office during quarantine.
- There is a difference in the subjective well-being and coping mechanism between men and women.
- There is a positive correlation between adaptive coping mechanisms and subjective well being.

Sample

The sample is working employees from banks in Mumbai, India who are in the age group of 28 – 48 years old. They had completed their Bachelors in commerce as their minimal education. 95% of the population was Hindu, 1% Muslim and 4% Sikh.

Sample size – 100 people who worked from home and 100 people who had to go to work. The sample is further divided into 4 groups. 50 females who went to office, 50 females who stayed at home, 50 males who went to office, 50 males who stayed at home.

Sampling Method - Purposive sampling method was used. The researcher went to various banks to give the questionnaire to the participants. People who were in the age group of 28-48 year old, lived in Mumbai and had the same cadre and payscale were included. People who had to change their jobs or stop working during quarantine were not included. People who were suffering from any form of clinical disorders were also not included.

Research Design

The research design used is exposed facto design .

Tools Used

1. **Subjective Well Being**. – To measure the life satisfaction, Satisfaction with Life Scale (Diener et al, 1985) was used. It is a 5-item scale which measures the cognitive judgments of one’s life satisfaction. Participants have to rate how they feel on 5 items using a 7-point scale that ranges from 7 for ‘strongly agree’ to 1 for ‘strongly disagree’. The reliability using the Cronbach alpha index, was $\alpha = .84$ (Galankis, Micheal & Lakioti, et al, 2017). The inter-item correlations in the SWLS were positive and statistically significant ($p < .001$), ranging from $r = 0.44$ to 0.64 . it has a high construct validity of 0.98 and a good divergent validity since it showed low to moderate negative correlation to experiencing of negative emotions and moderate positive correlation to positive emotions. It has a concurrent validity of 0.77 .

To measure the affective component, the Positive and Negative Affect Scale (PANAS) by Watson and Clark (1998) was used.

It consists of 20 items, on a 5-point scale ranging from ‘very slightly or not at all’ (1) to ‘extremely’ (5). The Cronbach alpha coefficient was 0.86 to 0.90 for positive affect and 0.84 - 0.87 for negative affect.

2. **Coping Mechanism** – Brief Cope Inventory by Carver (1997) was used. It is a 28-item questionnaire scored on a 4-point Likert Scale ranging from 1 = ‘ I haven’t been doing this a lot’ to 4 = ‘ I have been doing this a lot’. the Cronbach’s alpha value ranged from 0.25 to 1.00 . the test retest reliability ranged from 0.05 to 1.00 .

Procedure

The study was conducted with the banking employees in Mumbai, who were cashiers and in the same payscale. They were identified using the inclusion and exclusion criteria and approached with the informed consent form and asked to participate in the study. They were emailed the Google Forms and were asked to fill them.

1. Demographic Characteristics

Table 1 (let go)

<i>Socio Demographic Characteristics of Participants</i>						
	H		O		Total	
	N	%	N	%	N	%
Gender						
Female	46	46.9	46	47.4	92	47.2
Male	52	53.1	51	52.6	103	52.8
Religion						
Hindu	89	90	90	92	179	91.8
Christian	1	1	1	1	2	1
Jain	1	1	0	0	1	0.5
Muslim	3	3.1	4	4.1	7	3.6
Sikh	4	4.1	2	2.1	6	3.1

Note: H = People who worked from Home, O = People who worked from Office, N = Number of people
 The resulting total sample was equal to $N=195$. Out of the 195 participants, $46(47.2\%)$ participants were female, while $103(52.8\%)$ were males. The breakdown of the participants by their Mode of work was Women who

worked from home = 46 (46.9 %), Women who went to office = 46 (47.4), Men who worked from home = 52 (53.1%) and Men who went to office = 51 (52.6%). Ages ranged from 28 - 48. Majority of the participants were Hindus N = 179 (91.79%). There were 7 (3.58%) Muslims, 6 (3.07 %) Sikhs, 2 (1.025 Christians and 1 (0.51%) Jains. All the participants were married and had an equal paying job on the same cadre level in banks. They had all passed the basic level of higher education required for jobs in banks.

Descriptive and Inferential Statistics

Table 2

<i>Difference in SWB, and Coping Strategies between men and women</i>						
	Women		Men		t (193)	p
	M	SD	M	SD		
SWB	51.22	17.575	60.11	12.875	-4.053**	0.01
COPEa	42.96	9.307	43.26	9.840	-0.222	0.824
COPEm	27.87	9.876	22.83	6.701	4.203**	0.01

Note: M = Mean, SD = Standard deviation, SWB = Subjective Well Being, COPEa= Adaptive Coping Strategies, COPEm = Maladaptive Coping Strategies, ** p < .01

It was hypothesised that there will be a significant difference between men and women in their reported measures of Subjective Well Being, and Coping Strategies. A t-test was performed to test this hypothesis and the results are shown in Table 2. The results indicated that women (M = 51.22, SD = 17.575) had a lower SWB, $t(193) = -4.053, p < .01$, as compared to men (M=60.11, SD = 12.875). For adaptive coping strategies, there was no significant difference between women (M = 42.96, SD = 9.307) and men (M= 43.26 SD= 9.840), $t(193) = -0.222, p > .05$. Women (M = 27.87, SD = 9.876) showed a higher usage of maladaptive coping strategies $t(193) = 4.203, p < .01$ as compared to men (M= 22.83, SD = 6.701).

Table 3

<i>Difference of SWB, and Adaptive Coping Mechanisms in Work from home and Office</i>						
	H		O		t (193)	p
	M	SD	M	SD		
SWB	63.34	9.549	48.41	17	7.426**	0.01
COPEa	46.82	8.912	39.38	8.758	5.875**	0.01
COPEm	21.72	4.848	28.73	10.214	-6.310**	0.01

Notes: H = Worked from Home, O = Worked from Office, M = Mean, SD = Standard deviation, SWB = Subjective Well Being, COPEa= Adaptive Coping Strategies, COPEm = Maladaptive Coping Strategies, ** p < .01

A second hypothesis stated that people who worked from home had higher SWB and used adaptive coping. The results are shown in Table 3 after conducting a t-test. Consistent with the hypothesis, the SWB for people who worked from home (M= 63.34, SD = 9.549) was higher than people who had to go to their offices (M = 48.41, SD= 17), $t = 7.426, p < .01$.

It was also hypothesised that people who went to work would use more maladaptive coping strategies than people who worked from home. Consistent with the hypothesis, people who worked from office (M = 28.71, SD = 10.214) used more maladaptive strategies $t = -6.310, p < .01$, as compared to people who worked from home (M = 21.72, SD = 4.848).

Table 4

<i>Difference of SWB, and Coping Mechanisms in Women</i>						
	WH		WO		t (90)	p
	M	SD	M	SD		
SWB	64.87	8.060	37.57	13.366	11.865**	0.01
COPEa	49.37	7.687	36.54	5.656	9.116**	0.01
COPEm	20.93	3.895	34.80	9.152	-9.457**	0.01

Note: WH = Women who worked from home, WO = Women who worked from Office, M = Mean, SD = Standard deviation, SWB = Subjective Well Being, COPEa= Adaptive Coping Strategies, COPEm = Maladaptive Coping Strategies, ** p < 0.01

Further, it was hypothesised that women who worked from home had higher SWB and Adaptive Coping Mechanisms. A t-test was conducted and shown in Table 4. The results were statistically significant as women who worked from home (M = 64. 87, SD = 8.060) had a higher SWB, $t(90) = 11.865, p < .01$ than women who worked from office (M = 37.57, SD= 13.366).

Women who worked from home (M = 20.93, SD = 3.895) had a lower usage of maladaptive coping strategies as compared to women who worked from office (M = 34.80, SD = 9.152), $t(90) = -9.457, p < .01$.

Table 5

<i>Difference of SWB, and Coping Mechanisms in Men</i>						
	MH		MO		t (101)	p

	M	SD	M	SD		
SWB	61.98	10.5888	58.20	14.712	1.501	0.137
COPEa	44.56	9.373	41.94	10.216	1.355	0.179
COPEm	22.42	5.500	23.25	7.771	0.531	1.329

Note: MH = Men who worked from home, MO= Men who worked from Office, M = Mean, SD = Standard deviation, SWB = Subjective Well Being, COPEa= Adaptive Coping Strategies, COPEm = Maladaptive Coping Strategies.

Further hypothesis stated that men who worked from home had a comparatively higher subjective wellbeing and adaptive coping mechanisms as compared to men who went to office. However, no significant difference was found between the two groups.

Table 6

<i>Tests of Normality</i>						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
NewPosLS	.029	193	.200*	.997	193	.987
NewTot_PosCope	.034	193	.200*	.996	193	.892
NewTot_NegCope	.045	193	.200*	.994	193	.639

*. This is a lower bound of the true significance.
 a. Lilliefors Significance Correction

Normality of the data for SWB was found to be 0.029(df = 193, p < 0.200). Shapiro Wilk statistics appear to be 0.999 (df= 193, p < 0.987). Normality for Adaptive Coping Strategies was found to be 0.034 (df= 193, p < 0.892). Normality for Maladaptive Coping Strategies was found to be 0.045 (df = 193, p < 0.200). Shapiro Wilk Statistics appear to be 0.994 (df=193, p < 0.639).

Table 7

<i>Correlation Between SWB, Hope, and Coping Strategies</i>							
Variable	N	M	SD				
SWB	194	55.91	15.513	-			
COPEa	195	43.35	9.52	0.457**	0.529**	-	
COPEm	194	25.22	8.475	-0.480**	-0.503**	-0.014	-

Note: N = Number, M = Mean, SD = Standard deviation, SWB = Subjective Well Being, COPEa= Adaptive Coping Strategies, COPEm = Maladaptive Coping Strategies, **p < .01.

It was hypothesised that a positive correlation exists between SWB and Adaptive Coping Mechanism. It was also hypothesised that a negative correlation exists between SWB and Maladaptive Coping Mechanisms. Pearson Product Moment correlation was used and the results are shown in the Table 6.

Statistically significant positive correlation was between SWB and Adaptive Coping Mechanisms, $r = 0.457$, $p < .01$. A negative correlation was found between SWB and Maladaptive Coping Mechanisms, $r = -0.480$, $p < 0.01$.

Table 8

<i>Multiple regression Analysis of Adaptive Coping Strategies and on SWB</i>				
Variable	B	SEB	R ²	t
Behavioural Disengagement	-.112	10.268	-.598	-1.493**
Active Coping	.201			2.502**

Note: F = 16.467, p < .01. ** = p < .01.

A multiple regression was done to find which particular factor in the Brief Cope scale best predicted SWB. Behavioural disengagement was the factor in Maladaptive Coping strategies which was the best predictor of low SWB. Active Coping was the factor which predicted high SWB.

Discussion

The aim of the research was to assess how COVID-19 impacted the subjective well-being, and Coping Mechanisms of people, depending on their gender and work mode. It was hypothesised that there will be a significant difference between men and women in their reported measures of Subjective Well Being, and Coping strategies. The t-test performed reported that women experienced lower Subjective Well Being as compared to men. Stevenson and Wolfers (2009, p. 27) speculated that women can experience lower subjective wellbeing as they are higher on the risk of neuroticism, decreased social cohesion and greater household duties as compared to men. This can explain why women experienced a state of lower well being during lockdown as there must have been a significant rise in the anxiety and household duties for them, with little or no social connection. Meisenberg & Woodley (2015) also suggested that due to the higher rates of female employment, or a system that insists on female employment, there is a decrease in the female well-being. The results also reported a decreased amount of hope in women during the lockdown as compared to

men. Heaven & Ciarrochi (2008) found that hope significantly declines in girls as they grow old and their life experiences broaden. The women in our study were from India which is a country enforcing gender stereotypes making women largely responsible for child and house care. These experiences of women during quarantine can also explain how the hope in women declined. There was no significant difference found between the adaptive coping strategies of men and women, however, it was found that women did experience an increase in the use of maladaptive coping strategies. Women have been found to use emotion focused coping strategies whereas men use problem focused or instrumental focused coping strategies to handle stress (Matud, 2004; Endler & Parker, 1990). This has led to women experiencing higher levels of anxiety and depression as compared to men (Blalock & Joiner, 2000). This also explains why women experienced a lower level of well being as compared to men. Several authors (Almeida & Kessler, 1998; Barnett et al., 1987) have suggested that the impact of gender on the stress process could be conditioned by traditional socialization patterns. The traditional female gender role prescribes dependence, affiliation, emotional expressiveness, a lack of assertiveness, and the subordination of one's own needs to those of others. On the other hand, the traditional male role prescribes attributes such as autonomy, self-confidence, assertiveness, instrumentality and being goal-oriented. These types of attributes would make it difficult for men to accept and express feelings of weakness, incompetence and fear, while for women it would be more difficult to take a proactive problem-solving stance. The stress associated with gender role identification is different for each sex because women are more likely to identify with the feminine gender role, and men are more likely to identify with the masculine gender role. By contrast, the role constraint hypothesis argues that gender differences in coping may be explained by differences for men and women in the likelihood of occupying particular social roles and the role-related resources and opportunities (Rosario et al., 1988). The results also revealed that during lockdown, people who worked from home reported greater well being, hope and use of adaptive coping mechanisms. Olson (1987) & Bailyn (1989) reported that working from home can reduce the anxiety and difficulty of managing children and taking care of the elders of the home. It also frees a person from the rigid timings of an office making work life more flexible. However, there was no difference in men who worked from home and office, contrary to the expectation. Lewis & Cooper (1995) reported in their study that work from home environment leads to employees having a greater sense of responsibility and self-motivation which can increase work pressure. It can explain why the seemingly beneficial effects of work from home were decreased for men and resulted in no difference. Work from home was beneficial for women as they didn't have to worry for their children at home and the flexible work time may have resulted in them being more attached to their children and family. Hope acted as a predictor for wellbeing in people during lockdown. According to Wikstromm, Lorentzen & Lorentzen (2018) higher levels of hope predict greater academic achievement, more positive physical health behaviours, and higher life satisfaction, as well as decreased internalizing and externalizing behaviours. In their research Arampati et al. (2019) explored how positive expectations from an adversity can reduce the negative impact on a person's SWB. They reported that people with more positive expectations for the future before the referendum announcement experienced smaller decreases in subjective well-being and adapted quicker to this adverse event. In addition, we found evidence that individuals who shifted from positive to negative expectations before and during the adverse event, respectively, had significantly lower subjective well-being than individuals who had consistent positive expectations.

This can explain how hope is a predictor of Subjective well being in the participants. Research on adaptability to adverse circumstances like disasters have reported that hopeful thinking leads to well being in those affected. (Brazeau & Davis, 2018).

The research revealed that active coping, a type of adaptive coping method that mentally or behaviorally attempts to deal with a stressor by using one's own resources (Zeidner & Endler, 1996) was a predictor of well being in people during lockdown too. The aim of this method of coping is to either change the nature of stressor or how the person perceives it and change one's reaction to it. Freire, Ferradas, Valle, Nunez & Vallejo (2016) found that people who used positive reappraisal, support-seeking, and planning techniques to combat a stressor had a higher well being related to self-acceptance, environmental mastery, purpose in life, and personal growth. Behavioural Disengagement and Venting were found to be negative predictors of well being. Both of these maladaptive coping techniques were predictors of low well being in people. The study shows that during a pandemic our psychological functioning is extremely critical to our well being and how we react to it.

Further studies

Further studies can explore how the house environment can play a role in the participant's well being. Personality can also play a major role in a person's well being and experience during lockdown. Many people used instrumental coping during lockdown, and studies can explore what those mechanisms were. The future studies can also divide the participants in groups according to their age and assess how the well being of people who were close to retirement was different from people who had just started working.

Limitations

There are various limitations that exist in the study. The participants were from India, a country that is less Western, Educated, Industrialized, Rich, and Democratic (WEIRD) which can make the results less generalizable to those living in western countries. Since it was a cross-sectional study, we can't make predictions about directionality and causality. Longitudinal study would be a better approach as the psychological outcomes are reported to fluctuate during the COVID-19 pandemic (Pirutinsky, Cherniak, & Rosmarin, 2020). This can help us understand how hope and coping mechanisms played a role in people's well-being during the different stages of lockdown and pandemic.

Conclusion

Although the findings provide useful insight into the roles of coping in supporting well-being in low resourced contexts where pre-existing social-structural vulnerabilities are likely to be exacerbated during the COVID-19 pandemic, we realised that difference can exist due to gender and the work mode.

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A Critical Study of Food Wastage in India

Dr. B. T. Waghmare

Head Department of Economics New College Kolhapur

Abstract

India is second largest population in the world. Approximately 1.37 billion or 1,369 millions of population estimated in 2019 as compare to 1.354 billion in 2018. Population growth rate for 2019 is 1.08%. In 2019, India ranks 68 for population lives below poverty line with 29.8 % of total Indian population. India's Hunger Index (GHI) indicator values have an outsized impact on the indicator values for the region. In the 2019, Global Hunger Index, India ranks 102nd out of 117 qualifying countries. With a score of 30.3, India suffers from a level of hunger that is serious. One third of the food produced for the human consumption, which amounts to 1.3 billion tones, gets lost or wasted this reports according to Food and Agriculture organization (FAO) of the UN. This study is an attempt to focus on the food wastage in India by various reasons and how to reduce such wastage by implementing innovative directions respectively.

Keywords: *Food wastage, GHI, India, events, package, processing, production*

Introduction

In India food wastage is happening at harvesting, transporting, processing, packaging and consuming. Food is an essential part of our life and due to increasing in population the demand of food has also increases due to which there is a lot of crisis in food. Every day about 30% of children in the world die out of poverty and malnutrition. In addition, India produces large quantities of pulses, oilseeds, sugarcane, milk, poultry, meat and fish. According to the FAO estimates, nearly 40% of the food produced in India is lost or wasted. Food Loss and Waste (FLW) is not confined to India alone, as the FAO studies have shown that yearly global FLW is nearly 30% of cereals, 40 to 50% of horticultural crops, 20% of oilseeds, meat and dairy products, and 35 % of fish.

Objective Of Study

- To study global scenario of food wastage
- To study present scenario of Food Wastage In India
- To list out different causes of food wastage in India
- To give suggestions based on the study

Research Methodology

The present study is based on the secondary data published by various agencies, government reports organizations. The present study uses information provided by IFPRI, Global Hunger Index of 2019, FCI, Ministry of Agriculture, Newspapers, Magazines, Books, Economic journals and Internet etc.

Global Scenario Of Food Wastage

Food waste is defined in different ways by institutions and within the specialized literature. Food Waste means the waste that takes place during industrial processing, distribution, and final consumption. The most significant losses are concentrated of the food supply chain, primarily due to limits in the cultivation, harvesting, and preserving techniques, or due to a lack of adequate transportation and storage infrastructures in the developing countries. In industrialized countries, the largest proportion of waste occurs at the final stages of the food supply chain (household consumption and restaurants and food service establishments, in particular). However, even in these countries, the losses recorded at the agricultural stage are not negligible (due to sizing and esthetic standards, product quality regulations, production surpluses, or economic factors). For example, in Italy in 2009, 17.7 million tons of agricultural produce was left in the fields, representing 3.25% of total production (Segrè and Falasconi, 2011). In agriculture, it appears on a first analysis that the food losses are attributable to climatic and environmental factors, and disease and parasites. The significant differences found within this stage between developing and developed countries may be attributed to the available technology and infrastructures, agricultural expertise and the techniques used for land preparation, sowing, cultivation, harvesting, processing, and storage.

Scenario Of Food Wastage In India

Out of the thousands of hurdles that India faces everyday Food wastage strikes accord every common man can strip to. It's everywhere you see .The shops, homes, and parties' even kid at school throw away meals and those vegetables they dislike. Large number of people sleeps without food. They search food in bins, on roads, streets to feed themselves. This scene can be visualized anywhere you or me live. They beg on red lights, roads to fulfill their needs. As an Indian citizen, we should strive hard to reduce this grave situation. Because by tackling malnutrition problem, we are not only solving this problem but a chain of economic problems would be solved to some extent. We can't call ourselves "Developed" till we eliminate malnutrition. Among various methods, immediate method is to control and contain wastage. If we reduce food wastage, it will not only feed growing population but also contribute to the economy positively. Reducing food wastage will imply a plethora of food; feeding the needy will create a healthy economy. On the other hand Pressure of demand on resource will reduce.

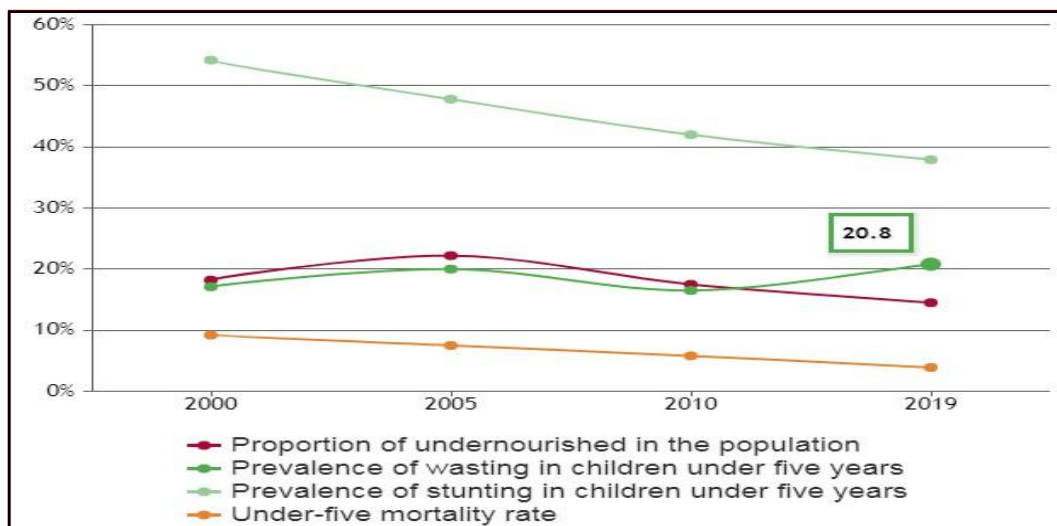


Fig. Indian trend for indicator value

Child wasting rate is extremely high at 20.8 percent which is the highest wasting rate. India achieved a record food grain and horticultural production of 281 and 315 million metric tons respectively in 2018-19. Represent 14.5% of the Indian population, which makes India the home to the largest weak population in the world Food wastage is a global problem Some organizations in the country are working towards helping to reduce this food wastage by collecting the food and distributing it to the needy. They collect from Weddings, events, restaurants, hostels respectively. Food wastage in India is caused before it gets packaged. This is caused due to the loopholes in the transport and infrastructure system in India. The government initiated by finding investments to develop better technology and other resources to reduce this food wastage.

Causes Of Food Waste In India

Functional events like weddings and from restaurants, hostels and houses are a major source for food wastage of cooked food. One of the major food wastes comes from hostels. So it is our duty check this problem and helps to sort it out. Even in India the food gets wasted in every household, event and also in institutions like universities and school. In functional events food is prepared in bulk amount but lot of amount gets wasted. Food wastage is a major issue in hostels and it is our duty to check its wastage and try to minimize it. Food wastage in India, throughout the whole food supply chain, from farmers to consumers is due to various reasons, such as:

(Phukan, 2017)

1. Natural calamities, 2. Lack of storage space 3. Improper care, 4. Wastage by consumers
5. Improper post-harvest management, 6. Lack of infrastructural facilities 7. Poor transportation facilities 8. Inadequate packaging 9. Lack of refrigerated transport, 10. Lack of awareness
11. Stock management inefficiencies, 12. Inefficient distribution 13. Corruption

Suggestions

The amount of food wasted in India is surprising. Food wastage is also linked with waste of land, water and energy resources. Also, wastage of food grains, fruits, vegetables have also led to the increase of prices in recent years. The food which gets wasted can be used to feed the hungry poor

people. One of the solutions can be by giving students in university or institution of what they want to eat so this can help to reduce food wastage. India should adopt measures from other countries to tackle the situation. While China has a storing capacity of 150 million tons of grains, India has it only for 60 million tones. India should focus on infrastructural facilities related to food storage, warehouses, godowns, packaging and logistics and the existing facilities should be improved. Also they should keep track on the road damages. Major reforms need to be undertaken in the functioning of the Food Corporation of India (Phukan, 2017).

Conclusion

Researcher concludes that with the rising food prices or the prevalent food inflation in India can be effectively evaded by good food waste management practices. Consumers should reduce wastage of food and should track food purchased, how it gets discarded, how costs can be saved on various components like labor, disposal and goods purchased. Food waste can be prevention contributes towards India's GDP. Food waste reduction should imply using less of fuels for refrigeration, transportation purposes thus preserving the environment as a whole. The society should be awakens about the sensitive and unrealized issue of food wastage. Also farmers, food industry, guests, consumers, government, policymakers etc. should contributes in making a positive move towards Food wastage in India.

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Crime Against women in India A case study of Lucknow city

Kaneeze Ibrahim K.A.R.Sayed

Assistant Professor, Burhani College-Department of Geography

Abstract

The 22nd century has brought civilization to a stage where the academicians, researchers, thinkers, theorists are converging on one issue that is the deterioration of the value system of the society. The elevated crime graph of different nature in the cities is the extreme demonstration of the personality of the people, their dissatisfaction and frustration. The present scenario of the society of Lucknow city is highly at risk. Though Lucknow city has a rich cultural heritage, the plague of social problems has to swallow its sophistication and delicacy. As the megacities of India are degrading in terms of social values, Lucknow can't be excluded among them. Violence against women is socially a very sensitive issue and more so in our country where we have a special place for family honor. The semantic meaning of crime 'crime against women' is direct or indirect physical or mental cruelty to women. The present paper has an attempt to explain the crime against women in Lucknow city. Database and methodology opted for the present study based on secondary sources of data. Analysis of crime against women in the present study subject is to availability of data.

Introduction

Crime is an act in violation of the law and the criminal is a person who does an act in violation of the law.⁵ Crime against women is socially a very sensitive issue 'crime against women' is direct or indirect physical or mental cruelty to women. Society doesn't want to give of her own free will and which causes her either physical injury or emotional trauma or both.⁶ Various kinds of violence against women are molestation, eve teasing, Bigamy, fraudulent marriage, adultery and enticement of married women, abduction and kidnapping, rape, harassment to women at working place, wife beating, dowry deaths, female child abuse and abuse of elderly female etc.⁷ Thus rape is not only a crime against women it is a crime against the entire society. Codes are their fore expected to deal with sexual crime against women with the utmost sensitivity.⁸ The main reason behind violence against women is as a breakup of families, weakening of family ties and loss of security and assurance as a fall out of displacement and the availability of received compensation lead to an increase in alcoholism among men often resulting in violence against women. Here I have taken major issues related to crime against women in Lucknow city like Cruelty by husband and his relatives, Dowry death, Sexual harassment and molestation and rape.

Objective

The main objectives of the present study are as follows

- To analyze the crime against women in India
- To assess the crime against women in Lucknow city
- To give some recommendations and suggestions for betterment of women in the society.

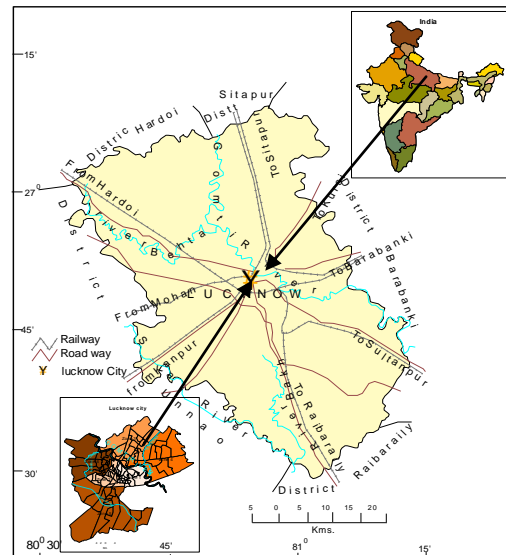
Data base and Methodology

Data base and methodology adopted for study is based on secondary sources of data. Data collected from NCRB Govt. of India official site. Collected data have analyses through simple statistical technique and graphical presentation through graph and charts.

Problem of Study area

Lucknow city formed the central part of the province of Oudh and capital of Uttar Pradesh occupies central position of the district. It is situated along the side of the river Gomti- a tributary of the river Ganga. It lies in between 26°30' to 27° 10' North latitude and 80°30' to 81° 13' East longitude. It covers an area of 2544 sq. km and city is 310.104 sq km. Violence against women is wide spread and viewed on one of the cruelest social

(Source: Nagar Nigam and Planning Commission of Lucknow city)



mechanism to suppress women. Lucknow city is not an exception of crime against women.

Last few decades the graph of crime against women is continuously increasing in Lucknow city. From 2004 to 2018 crime rate have increases at the rate of 515 percent. Not only the all crime but also crime against women is also seem to be increased.

⁵ Madan, G.R. (2002). Crime and its causes (Indian Social problem), sixth edition, Allied Publishers Pvt. Ltd., New Delhi, p. 55.

⁶ A.R. (2003), Indian social problem, second edition, Rawat Publication, Jaipur, p. 244.

⁷ Dutt, R.K. (2003). Crime against women. Reference Press, New Delhi.

⁸ Raghwan, R.K. (2004). Crime against women, frontline, vol. 21, Issue 02.

Discussion

Violence against women is socially a very sensitive issue and more so in our country where we have a special place for family honor. Health of the women often causes the domestic violence. Loss of access to common property resource, lack of sanitation facility, loss of livelihood, Marginalization of women, decline in social status, additional work load and responsibility cause violence against women. it would round strange but true that many women think that right for their men to resort to some degree of violence which has tacit approval of family elder and community leader. When the protectors turn into predators and the ultimate suffers are women folk out who endure the violence with great courage and they can't speak out or walkout of the family in such situation of the family. Only in grave situation such issues come to be known outside. This make this subject under the study is very difficult over to comprehend.⁹ Unequal power relation has led to discrimination against women. Violence on women manifests even before birth and early life, married life and domestic violence, rape murder, dowry deaths etc. Where the basic reasons are for violence against women is their inferior status, educationally, emotionally, politically and socially in a male dominated society. Other factors are responsible for increasing criminalization of society Media, and images. In order to analyze the crime against women in Lucknow city first is to discuss about the crime against women in India.

Crime against Women in Lucknow City

According to report of NCRB, 7.4 percent crimes against women are registered annually.¹⁰ It is pointed out in 2005 crime against women increases by 7.9 percent.

Table: 1 Five yearly trend of Crime Against Women in India 2001-2018					
Years	2001	2005	2010	2015	2018
Rate of Crimes	7.4	7.9	18	53.9	58.8

Source: NCRB 2001-2018

During 2001 as compared to during 2005 recording 18 % increases, from 2005 to 2010 increases 18 percent, during 2010 to 2015 it increases at the rate of 53.9 percent and from 2015 to 2018 the rate of crime recorded 58.8 percent.

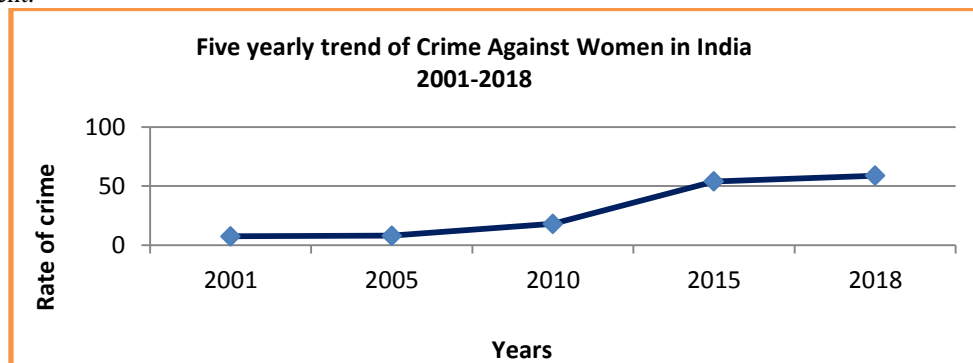


Fig.1

The rate of crime against women has increased from 2001 to 2018 is 58.8 percent that is clearly revealed by the table 1 (fig 1). Crime against women in U.P. is 15.7 percent increase of Total crime in India and rate of total cognizable crime against women is 58.8 percent, which is the major point of consideration.

Crime against Women in Lucknow City

The detail of crime against women under different head is present in table 2, it show that the total incidence of crime against women found increasing trend from 2010 to 2018.

Table:2 Crime Against Women					
Crime	2010	2012	2014	2016	2018
Cruelty by husband and his relatives	43.8	32.7	40.6	64.7	87.7
Dowry deaths	3.6	1.1	2.2	3	1.4
Rape	3.8	1.7	3.8	7.4	8.6
Sexual harassment	7	8.1	16.7	23.1	29.9

Source: NCRB 2010-2018

According to the table present in table, it is detect that the 43.8 percent of the Cruelty by husband and his relative and women harassment followed by molestation 7 percent in 2010. It was 3.8 recorded the rape cases and 3.6 percent dowry death were recorded in 2010.

⁹ Manohar, A. (2006). Violence against women, Yojna, p. 35.

¹⁰ The Hindu, 25 June 2005,

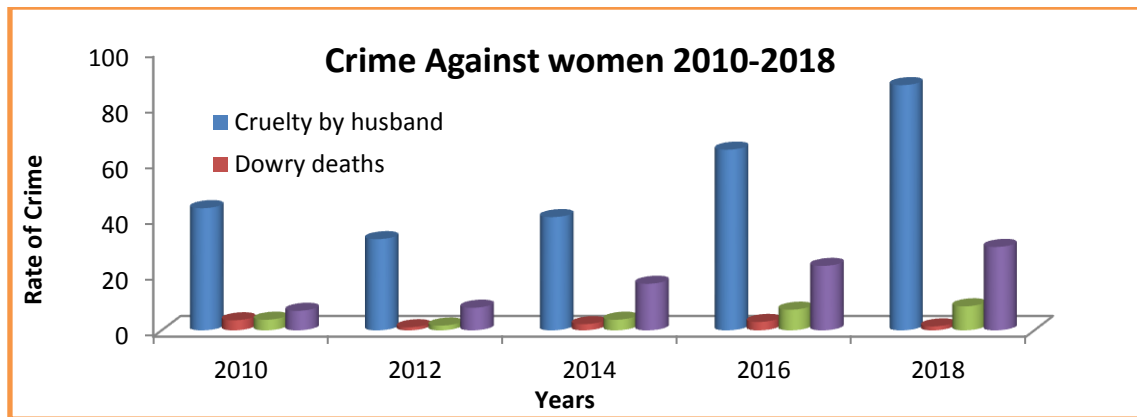


Fig.2

Table 2 (fig 2) clearly reveals that all the crime against women recorded increasing trend during the course of study. The significant increment can be seen the sexual harassment and molestation and beaten by husband. Where is cruelty by husband and his relative increase by 87. 7 percent from 2010 to 2018 there sexual harassment and molestation increases by 29.9 percent from 2010 to 2018. Though the dowry death and rape cases have also increased but less than cruelty by husband and sexual harassment. It is noted that in the period of the study highest trend of violence against women are character loss, kidnapping, molestation, women harassment and dowry deaths. The main reason behind it unequal educational status, economic, political reason and alcoholism, poverty, are also responsible for crime against women. Despite existence of a number of special legislation for providing protection to women, the proportion of the crime against women has deteriorated. Women continue to be victim of various kind of crime like, Rape, Dowry deaths, molestation, kidnapping, eve teasing etc. The message to be conveyed to women is that the best protection comes from their own vigilance and alertness courage to publicize atrocities through their village and cities, elders and elected officials of the panchayat and nearest women cell.

Conclusion

After foregoing discussion of the crime against women in Lucknow city, it can be concluded that the city is facing a grave threat of social problems like any other metropolitan city of the India as world. If the trend continues, the problem would go beyond manageable limit. In this paper to analyze the crime against women in Lucknow city some major indicators have been taken to consideration. The women living in such pathetic condition is not only suffers from physical problem but mental retardness hence causing devalues. Many indulge in different types criminal activity related with women. Some time women are target because of poverty, loneliness and increasing expenses of her spouse and spouse's family members.

Recommended

It is very to mitigate the crime against women in the society some suggestion and recommendation can be made to cope with the problem.

1. Awareness campaign should be initiated to make women aware about the problem and the dangers they are facing.
2. Besides strict implementation of laws to curve the crime against women, rehabilitation centers should be opened for the divorcee women and widow, so that their further exploitation can be reduced.
3. Special attention should be paid to the status of women their health status, children marriage, sexual abuse, and to involve them constructive activities through imparting vocational trainings, so that they would not be involved in the activities like, prostitution to earn their livelihood.

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Role of Indira Awaas Yojana in Rural Development

Dr. Gurunath Isharam Samant

Assistant Professor Department of Economics, Dr. Babasaheb Ambedkar Mahavidyalay, Peth-Vadgaon, Tal- Hatkanangale, Dist-Kolhapur

Abstract:

The present paper modestly attempts the role of Indira Awaas Yojana and its contribution in the developments of rural areas. The concern scheme is benefited for the below poverty line people of rural region. The scheme has various shades and shapes concerning the rural development. Rural development is important for Development of country. So, various programmes have declared by Government of India. Rural developments are main focus on education, health, housing, road, agriculture, bank, industries, etc. Similarly various programmes are working for below poverty line families. The rural housing programme is beginning for rural development by Government of India. Among the rural housing programme very popular housing scheme named as Indira Awaas Yojana. The role of Indira Awaas Yojana is remarkable for rural development because in this scheme financial help for construction of house by Center can state Government to below poverty line families in rural areas.

Keywords: *Indira Awaas Yojana, Poverty, Rural development, BPL. Agriculture, Banking, etc.*

Introduction

The development of economy can be active mainly through agriculture and rural development. It is because of the fact that about 70 percent of population is living in rural area and agriculture is their main source of livelihood. But unfortunately most of the rural areas or agriculture sector are undeveloped and needs institutional mechanism to promote development of competitive and free markets for agriculture products and services. The rural housing programme is beginning for rural development by Government of India. Among the rural housing programme very popular housing scheme name is Indira Awaas Yojana. This scheme is start up for below poverty line people in rural areas. The role of Indira.Awaas Yojana is remarkable for rural development because in this scheme financial help for construction of house by Center can state Government to below poverty line families in rural areas. In order to realize the objective of government housing for all by 2022 there is a need to create an enabling environment especially in rural areas so that the people living in rural areas can construct a pucca house with all basic amenities with ease. PMAY-G was launched in 1 april 2016, to address the existing and to bring in place a more comprehensive initiative of providing shelter to those in the rural areas devoid of proper shelter.

Review Of Literature

Bimal and Savita Singal (1991): They have expressed their views in the article entitled "Rural Housing in Haryana". In this article have conducted the study in Hissar district of Haryana, with a sample of 60 household selected, randomly from two village which have been constructed in last 10 years. There are more or less repetitions of old designs, lacking most of the functional and sanitary facilities. There is a need for improvement in contemporary housing designs and keeping mind the requirement of the rural families.

Prakash Chandra Mathur (2008): He has expressed his views in the report entitled "Evaluation of Indira Awaas Yojana in Orissa". He has expressed report is based on primary and secondary sources data. In this work, five districts selected for study. This report find out that the guideline has been mostly followed with regards to selection of under preference to some beneficiaries by Pallisabha. Cost of IAY effective when compared with similar structures built by PWD.

Arjun Kumar (2014): He expressed his views in the paper entitled "Estimating Rural Housing Shortage." This paper mention that re-estimate the rural housing shortage in 2012 using the latest data sets – the census of 2011 and NSS housing condition rounds unit record data for 2008-09 and an improved methodology and the estimation procedure used by the technical group an urban housing shortages 2-012. This paper also compares these two estimates of rural housing in 2012 and analyses the difference in the estimates of the various factors for assessing housing shortage. Based on the findings it also seeks to suggest. Based on the findings it also seeks to suggest measures to eradicate shelter deprivation and enhance the quality of life in rural India. The main conclusions of this paper that the growth rates of rural housing stock and households can be seen to have decelerated over time.

Salve Parkash Vankar and V. B. Bhise (2012): In the study entitled “Evaluation of India Awas Yojana in Jalna District” they have expressed their views. This article examines that keeping in view of the shortage and quality of housing, the Government of India since independence has a number of development programmes for the rural areas, particularly for the rural poor living below poverty line. Policy legislations have been incorporated and planning process has been administered for improving the housing situation in the country. This article mention that the problem of houseless seriously, Government of India with a view to provide houses to the SC, ST and freed bonded labors living below poverty line, launched Indira Awaas Yojana in 1985-86 as component of Rural Landless Employment Guarantee Programme (RLEGP)..

Dr. D. Kumuda (2014):Dr. D. Kumuda has expressed the paper entitled “Performance of Indira Awas Yojana (IAY) and rural development in India”. His paper reveals that, housing is one of the basic requirements for the survival of human beings. Ownership of a house provides an economic security and social status for a citizen in the society. The identity and social reorganization associated with ownership of house provides an individual with unmans confidence to get involved into many social activities. Table, affordable and accessible housing is directly and indirectly linked to human well-being. One can easily understand the socio- economic status of a family just by watching physical attributes of their housing. Good housing and its surroundings indicate the standard of living of the family; it provides facilities for education, recreation and many other facts of life.

Objective:- To study the role of Indira Awaas Yojana in rural development

RESEARCH METHODOLOGY

The present studybased on secondary data. The study takes into consideration the period from the year 2001 to 2018 to analysis the overall performance of Indira AwaasYojana in rural areas of Maharashtra. The secondarydata relating to this study have been collected from the various reports such as Ministry of Rural Development, Government of Maharashtra and reports relating to IAY.

Role of Indira Awaas Yojana In Rural Development

Housing is universally recognized as one of the basic human rights. It is the responsibility of the Government to ensure that every citizen has a safe, secure and health place to live, work and leads a life of dignity. By ensuring the right to adequate housing in rural areas, the need to enhance quality of life and opportunity of growth addressed. A large number of rural households especially those belonging to the vulnerable section are unable to access good housing and civic amenities due to low income. Besides absolute shortage congestion and obsolescence, damage due to vagaries of nature such as flood, cyclone, earthquake as well as incidence of violence has added to the problem of housing shortage. The Indira Awaas Yojana is flagship scheme of the Ministry of Rural Development, to provide houses to below the poverty line families in the rural areas. From this scheme development of social condition because this scheme provided houses to below poverty line people in rural areas. In this section, role of IAY in rural development has been explained. The basic roe of Indira Awaas Yojana discussed as following.

Working for BPL families in rural areas:

The Indira Awaas Yojana is working for economically and socially background families in rural areas. Basically, this scheme to provide free houses to the people from scheduled cast, scheduled tribes and free bonded labours and also those who are below poverty line in the rural area. But due to increasing of Indira Awaas Yojana Scope and importance any not change objective included in other community they are below poverty line families besides handicapped and widows etc. For this reason this scheme incessantly working of rural development. Construed house for BPL Families under IAY has been present in the following table.

Table No. 1, Constructed house for BPL Families under IAY (in Lakhs)

year	india	maharashtra	% Share of Maharashtra
2002-03	1549000	54408	3.51
2003-04	1361000	69669	5.12
2004-05	1521000	69572	4.57
2005-06	1552000	70336	4.53
2006-07	1498000	72766	4.86
2007-08	1992000	125413	6.3

2008-09	2134000	113945	5.34
2009-10	3386000	205862	6.08
2010-11	2715000	158027	5.82
2011-12	2417000	153185	6.34
2012-13	2185000	145764	6.67
2013-14	1562000	128135	8.2
2014-15	829000	100870	12.17
2015-16	609036	105063	17.25
2016-17	2118379	196611	9.28
2017-18	3458430	106103	3.06

Source: Ministry of Rural Development in India, annual report-20017-18 and Economic survey of Maharashtra.2017-18. The above table No.1 shows that the constructed houses for BPL families under IAY. From the above table it can be seen that the number of construction of houses has been increased year by year. In the year, 2002 - 03, the total number of houses in India was 15, 49,000 out of which only 3.51% share of houses constructed in Maharashtra. In the year, 2017 – 18 the total numbers of houses in India were 3458430 out of which 3.06 percent share of house constructed in Maharashtra. The table shows that in the year of 2015 -16 total numbers of houses in India were 609036 out of which 17.25 percent share of constructed houses in Maharashtra. In general it can be seen that the number of constructed house has been increased in Maharashtra.

Financial Assistance for housing in rural areas:

This housing scheme through free houses to below poverty line people in rural area for this reason the Government provide fund to beneficiaries of IndiraAwaasYojana. Funding of Indira AwaasYojana is shared between the Government of India and the State Government in the ration of 75: 25. However, in the case of North Eastern States and Sikkim, it is in the ratio of 90:10. In the case of Union Territories, the entire funds under this scheme are provided by the Government of India only. Expenditure of house under IAY has been presented in the following table.

Table No 2, Comparative Expenditure of Houses under IAY in India & Maharashtra. (Rs. in crore)

Year	India	Maharashtra	% Share Of Maharashtra
2002-03	279496	18229	6.52
2003-04	258010	19428	7.53
2004-05	326209	18737	5.74
2005-06	365409	20045	5.49
2006-07	425342	24183	5.69
2007-08	546454	36321	6.65
2008-09	834834	48774	5.84
2009-10	1329236	125001	9.4
2010-11	1346573	109102	8.1
2011-12	1292633	99716	7.71
2012-13	1217725	111155	9.13
2013-14	1027888	134097	13.05
2014-15	954648	136800	14.33
2015-16	528224	123547	23.38
2016-17	464531	245876	50.74
2017-18	4345859	142204	32.72

Source: Ministry of Rural Development in India, annual report 20017-18and Economic survey of Maharashtra 20017 -18

From the above table No.2 shows that the financial assistance as well as expenditure of per house provided to beneficiary under the IAY. In the year 2002-03, Rs. 18,239 crore financial assistance provided by Government of Maharashtra for constructing houses under IAY, which is increased Rs. 1422048crore in the year 2017-18. The central Government provided financial assistance for the constructing of houses is Rs. 279496 Crore in 2002 - 03 which increased up to Rs. 4345859 crore in the year 2017-18. However, central as

well as state government provides financial assistance time to time to beneficiary under IAY Scheme. So strong and standard construct houses by beneficiary.

Facilities provided by IAY:

For all houses, construction of toilets under Nirmal Bharat Abhiyan (NBA) is mandatory. Last installment under IAY will be released only after construction of house along with toilet. Potable drinking water should be provided to all beneficiaries by covering the state and central Government programmes relating to drinking water. IAY beneficiaries can get the benefits available under Rajiv Gandhi Vidyutikaran Yojana (RGGVY), Janashree and Aam Admi Bima Yojana and Differential Rate of Interest (DRI) scheme etc.

Development of Infrastructure in Rural areas:

Indira Awaas Yojana is an important part of infrastructure in rural areas. Infrastructure assets are the physical structures and networks used to provide essential services to a society. Infrastructure can be split into two categories, physical such as transport, utilities and communications, which can be provided efficiently by private agents and social which consists of assets and services like health, sanitation, drinking water, housing and education. Housing is a vital social infrastructure for any society. Rural housing (IAY) is an important element of rural development. Rural housing (IAY) is one of the six components of Bharat Nirman Programme. The IAY is flagship scheme of the Ministry of Rural Development to provide houses to below poverty line families in the rural areas. The rural housing (IAY) is to promote sustainable and inclusive growth of rural areas in India through multi-pronged strategy for eradication of poverty by increasing livelihood opportunities, providing social safety net and developing infrastructure for growth and improvement of quality of life of rural India.

Employment Generation:

Employment generation has been one of the most important objectives Indian planning. The problem of employment is closely interlinked with the eradication of poverty. Unemployment is the main cause of poverty in India. 1) In the rural economy dependent on agricultural, there are prolonged periods when no work is available for the agricultural workers. The resultant under employment stunts the economic growth of rural areas. It also causes periodic distress migration out of rural areas which brings more misery to the households than benefit to the economic has been conceived in this context as a right based wage employment programme implemented in rural areas.

Conclusions

The present research paper has been made an attempt to analyze; the role of IAY in rural development in India has been explained. Rural development is a part of development of country. Rural development therefore, takes into account factors other than economic growth. It provides Education, health facilities, housing, facilities infrastructural facilities in rural areas, employment generation, and an attack on poverty. To achieve these objective it become necessary to take into account all these factors and formulate a strategy to develop rural societies, strategies and planning play an important role in furthering rural development, since it is a long term process. The emphasis of rural housing should be more and more on inclusiveness and quality improvement. Housing is fundamental human need; it is a basic requirement for human survival as well as for a decent life. So, the aim of the scheme is to develop housing for the below poverty line people and rural development.

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Sustainable Development Priorities and Strategies in India: A Descriptive Review

Auti Sharad K¹ Dr. Wagh Rajesh V² Dr. Ranyewale S.K³

¹Assistant Professor, Arts, Commerce and Science College, Sonai, Tal- Newasa, Dist- Ahmednagar

²Associate Professor and HOD, Department of Geography, Arts, Commerce and Science College, Sonai, Tal- Newasa, Dist- Ahmednagar.

³Assistant Professor and HOD, Department of Geography, Arts, Commerce and Science College, Dehane, Tal- Khed, Dist- Pune.

Abstract:

Development plays an important role in economic development today. Sustainable development refers to that process of economic development which meets the needs of present generation without compromising the ability of future generation to meet their needs. The present study attempts to understand the sustainable development in Indian perspective. In the present article descriptive study of The UN in India will support the implementation of the National Health Policy and the recently- launched Ayushman Bharat - National Health Protection Scheme, and its priorities for achieving Universal Health Coverage. The present paper is a little bit attempts to understand and explore priorities issues and problems in the context sustainable development in India. It is difficult to collect the necessary and adequate data on this topic particularly concerning India because its diversity in physical, social, religious and economic aspects. But it is a fact that sustainable development should be given top priority in economic policy of India. There is a lot of scope in undertaking through and wide research on the present issues with reference to India in the post reform period through research.

Keywords: *Sustainable, Development, Priorities, Strategies.*

Introduction:

Sustainable development is the process of economic progression and development which meets the current need of the society without compromising the ability of future generation needs. Sustainable development today is related in the context of environment. It is multi-disciplinary and multi-dimensional concept, which related with environment degradation, allocation and utilisation of natural resources. Research is concluded by Choudhuri, S. (2019) who identifying the Sustainable Development Goals of gender equality, reduction in inequality, peace and justice, and responsible consumption and production as the most promising niches for future research in the area of sustainable development initiatives in India. Dodh et.al (2013) attempted to highlight the importance of Corporate Social Responsibility as a tool to ensure greater participation of business entrepreneurs toward protecting the natural eco-system and enhancing the quality of life while undertaking a developmental activity. The study will also elucidate the theoretical and practical contribution of Corporate Social Responsibility toward achieving the goal of sustainable development in India. A toxic-free future can only be achieved if the goal of environmental sustainability, clean production, improved health and democratic decision making for the entire human race are at the core of policy making (Pandit, 2020).

Sustainable Development Priorities:

Poverty and Urbanisation:

In India income poverty is decline at rapidly over the past two decades. Between 1994-2012, the proportion of below poverty line fell from 45% to 22%. Growth of cities has been beneficial for poverty reduction in the country. Urbanisation is responsible for about 80% of the total fall of countries poverty. Much of poverty concentrated in rural part of country and low income states viz. Bihar, Madhya Pradesh, Chhattisgarh and Jharkhand. While bringing economic growth, rapid urban growth brought enormous challenges, most noticeably the demand-supply gap of housing, services and infrastructure.

Expected Results:

Strengthened institutional framework to ensure sustainable urbanisation with delivery of basic services of health and social, particularly to the urban poor and slum dwellers.

Strategies:

- To improve access to poor, marginalised and vulnerable communities to information, legal entitlements, knowledge and opportunities.
- To strengthening partnership with private sector, local and international organisation, and research organisation to ensure that the poor communities gain better market access and benefits from sustained earning enhanced income and to provide affordable, innovative development solutions.

Health, Water and Sanitation:

Despite major health gain, India faces high burden of communicable and non-communicable diseases. Overall cardiovascular diseases and diabetes, chronic obstructive pulmonary diseases, substance disorders, mental disorders among the leading non-communicable diseases in the country. More than million deaths registered due to use of high rates of tobacco, smoking and substance abuse, including narcotics' and alcohol. Diseases from poor water and sanitation largely responsible for about 60% of the environmental health burden in the country, so there is urgent need to improve the health system of country.

Expected Results:

The UN in India will support the implementation of the National Health Policy and the recently-launched Ayushman Bharat - National Health Protection Scheme, and its priorities for achieving Universal Health Coverage: (1) strengthening governance for health, (2) increasing investments in public health; (3) improving primary healthcare and integrated service delivery; (4) improving quality of care; (5) prioritizing work at the state / district level to address health in-equities (6) aligning provision of care to emerging epidemiological reality; (7) foster accountability and community participation.

Strategies:

- To Support the exchange of global health innovations, including research, development, the manufacturing of quality vaccines, pharmaceuticals, medical devices.

Education and Employability

Despite Government emphasis on quality, equity and access, in education, challenges persist for children belonging to marginalised and disadvantaged communities.

Expected Results:

Government programmes will be strengthened to expand early childhood care and education, improve teaching and learning practices, including life skills education.

- Supporting care providers and advocates at the community level to demand inclusive, quality education.

Strategies:

- To Support innovative solutions: Promote flexible learning for vulnerable groups of communities who have been denied access to learning.
- To promote a higher education network framework that incorporates international experiences, standards and facilities to vulnerable groups.

Nutrition and food security:

India has done well to expand food production and build up adequate safety stocks of food grains. About 70% of rural Indian households, agriculture, including livestock, still remain the principal source of livelihood. Levels of under-nutrition among children have come down over the past few decades. Women are particularly disadvantaged due to their unequal nutritional and health status. Productivity in agriculture is central to food security, but new challenges are emerging: Government has identified good pathways to improve agricultural productivity, it isn't clear that these will provide sufficient benefits to the marginal and small farmers working on rain-fed areas of the country who dominate Indian agriculture.

Expected Results:

- Increased farm incomes and diversified food baskets for small and marginal farming households, Improved household access to food through enhanced livelihoods and purchasing power.
- Strengthened market linkages for farm producer

Strategies:

- Increase effectiveness of monitoring, evaluation and knowledge management systems, for informing policy, programme, advocacy, vulnerability analysis and research for nutrition and food security.

Climate Change, Clean Energy and Disaster Resilience:

Environmental degradation, climate change and disasters, and ineffective waste and chemical management have different and disproportionate impacts on the lives of women and children. Climate change is likely to increase migration and displacement and negatively affect livelihoods.

Expected Results:

Increased use of renewable energy, including through solar and wind power and new technology

Strategies:

- To increase the awareness of Government and other stakeholders about climate and disaster and poor air quality related risks.

Skilling, Entrepreneurship, and Job Creation:

There is not enough decent and productive jobs have been created. Economic growths over the past two decades in India have not been accompanied by the creation of enough jobs.

Women's participation in the workforce remains low. Social norms, discrimination, and violence continue to impact how and where women can work.

Expected Results:

Improved quality and delivery of employment and skills training programme.

Strategies:

- Support innovative solutions: models of skilled jobs and enterprises in emerging and employment-intensive sectors, such as financial services, infrastructure, green technology, housing, roads, and energy.

Gender Equality and Youth Development:

Women's economic empowerment is central to the national priority of inclusive economic growth and the success of the nation-building initiatives. Women and children are among some of the most vulnerable and marginalised groups in Indian society.

Expected Results:

Increased protection of children and women from all forms of violence, abuse, and exploitation, including domestic violence, trafficking, and sexual and other types of exploitation

Strategies:

- To generate evidence to promote better reporting, monitoring and assessment of policies, schemes meant to benefit women, and poor and marginalised groups.
- To increase awareness among women about their legal rights and how to engage with law enforcement agencies and established grievance mechanisms.

Conclusion:

Sustainable development is a multi-dimensional and interdisciplinary aspect very essential and significance. Its economic perspective in general and environmental economics approach in particular has a special importance. In the sustainable economic development government has given priorities to some poor and marginalised sectors. The United Nations Sustainable Development Framework (UNSDF) was developed in partnership with the NITI Aayog, the nodal partner from the Government of India, and is designed to align to national development priorities, with areas where the UN in India holds a comparative advantage. The United Nations Sustainable Development Framework (UNSDF) was prepared in an inclusive manner through collaboration and consultation with the national government, state governments, other governmental body's civil society, the private sector, academics, and stakeholders. It will be beneficial for future growth and development of sustainability in the country.

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Geographical Analysis of Rate of Land in Ahmednagar City, Maharashtra, India

Dr. Sharad A. Borude

Assistant Professor, PG, Dept. of Geography, Ahmednagar College, Ahmednagar,

Abstract:

The concept of land value developed by Von Thunen has been formally applied in the urban context by Alonso William (1946). Analysis of land value given by Alonso was based on the concept of economic and location rent, and generated a series of land use zones from the intersections of different bid-rent curves. There are three tests of a "good" piece of land: its location, its location, and its location. Location of a land parcel is important in influencing its value, which is to say, the greater the distance from center lower the land values E.F. Brigham (1965). Higher valued land associated with the location and land use type, especially commercial land use. High land values and commercial land use are the characteristics of CBD area. In this research an attempt is made to analyze land value of Ahmednagar city with the help of Annual Statement Rate (ASR) are commonly known as Ready Reckoner secondary data of 2020-2021 and analyze impact of urbanization on the spatial change in land values in city.

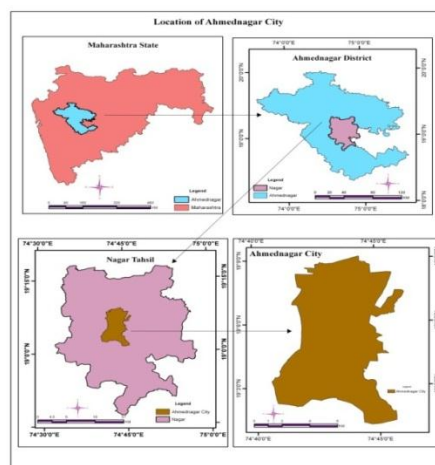
Key words: Land value, Land use, Ready Reckoner, Urbanization.

Introduction:

Research on changes in urban land values in developing nations like India involves a variety of data from different sources. In India the land price data are available at the Tahsil office (land registration office) with a breakup to the level of survey numbers or colonies and villages located within and around the city limits. There are two main data sources at the land registration office which provides the land price information. The first main source comprises confidential records or unpublished data and contain basic details of individual property transactions that have taken place in the city over a period of time. Access to this first level of information cannot be obtained easily in a reasonable time so this source is not considered for research purposes. The second data source is open or public records which is published and contains city wide estimated land prices. The main purpose of this information is to minimize the under valuation of landed property in the registration office and to raise the revenues. The fixing of these prices at city level is largely contingent upon changes in land and revenue policies over a period of time. The rate is the minimum market price of land expressed in terms of Rupees per unit of land. It is determined on the basis of a sub set of example land prices as informed by the property developers, colonizers, open market sale deed and rates of urban development and housing authorities in the state. The Annual Statement Rate which in Marathi is known as "Bazaar Mulyankan Takta" is determined on an annual basis by the State Government differs from locality to locality in a particular state such as Urban Area, Influence Area and Rural Area. ASR rates are determined District, Taluka, and Village wise in jurisdiction governed by the local bodies such as Municipal Corporation, Municipal Council, Cantonment Board, Nagar Panchayat and Gram Panchayat (Stamp duty).

Study Area:

The study area of Ahmednagar city is situated between 19° 01' 11" North to 19° 09' 4.7" North latitudes 74° 40' 37.52" East to 74° 46' 8.28" East longitudes. Ahmednagar city is only city in district and it is located in the central part of the Deccan plateau, in the upper 'Sina river' basin. This research covers an area of 80.21 sq. km. based on boundary of Ahmednagar city on 01st January 2011 decided by Town Planning Department of Ahmednagar Corporation.



Map 1: Location of Study Area

1. Aims and objectives

The main aim and objectives of the research paper are outlined in the following lines.

- a) To study spatial variation in urban land values of Ahmednagar city.
- b) To assess the impact of distance from core on land value of Ahmednagar city.
- c) To assess the impact of urbanization on land value of Ahmednagar city.
- d) To apply model of urban land value to Ahmednagar city.

Methodology:

This research is purely depending on secondary sources of data. For fulfill the aim of research accurate maps are required to analysis the impact of urbanization on urban land value. Initially, survey number wise base maps of three divisions of Ahmednagar city i.e. Inner, Outer and Extended areas are digitized. With the help of survey numbers wise ready reckoner data of land value for 2020-2021, Choropleth map of Ahmednagar city are prepare for Inner, Outer and Extended area separately. Land values (in Rs. /sq. meter) for each survey number are plotted on the maps and impact of urbanization on urban land values of Ahmednagar city is analyzed, also an attempt is made to prepare 'Hindered percent land value area' of Ahmednagar City.

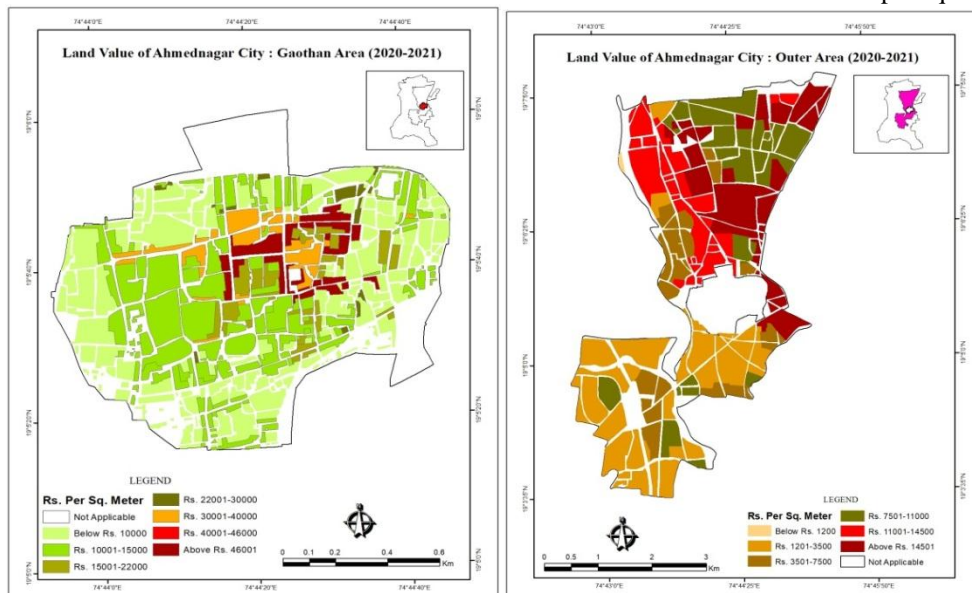
Change in Urban Land Values:

Relative location with respect to other activities influences land values in specific area. There are, of course, physical influences on land values as well, although there are spatial implications to the effect of these. The physical constraint on use of an urban land parcel can be modified or overcome so the limiting effect of the constraint is lessened. This will depend, to a great degree, on the spatial setting of the parcel and the nature of the market for urban land R M Northam (1975).

Inner / Gaonthan area:

The higher valued land associated with the location and land use type, especially commercial land use. High land values and commercial land use are the characteristics of CBD area. In Ahmednagar city these characteristics are found in core area of old city Gaonthan. Highest land value in Ahmednagar city is recorded in Gaonthan area of city which is Rs. 61580 per sq. meter at new Cloth Bazaar road. Commercial core of Gaonthan area i.e. New Cloth bazaar lane, Navi path lane, old Cloth Bazaar, Ghas Lane, Gunj Bazaar and Dal Mandai lane are areas having land value Rs. / 46001 per sq. meter. In city Gaonthan, northern side of Chitale road and both sides of road near Choupati Karanja, area between Neta Subhas chowk to cloth market lane and area between Gunj bazaar and Dal Mandai denoted land value between Rs. 40001 to 46000 per sq. meter. Land values between Rs. 30001 to 40000 per sq. meter are recorded in Mangalwar bazaar lane, small area near mutton market and in small pocket of Daware lane near Collector office.

Residential area between Cloth market to Navi path, near Manik chowk, area between Dal Mandai to Gunj bazaar and residential area of Ramchandra khunt land value observed between Rs. 22001 to 30001 per sq. meter. To the north of Station road of Gaonthan land values are between Rs.15001 to 22000 per sq. meter.



Source: Computed by researcher from Revenue ready reckoner data of land values.

Map: 2, 3: Land value of Gaonthan and Outer area 2020-2021.

Large area between Nevi peath to Court lane, southern area of commercial core of Gaonthan and north western part of Gaonthan area, land value ranges between Rs. 10001 to 15000 per sq. meter. Remaining peripheral residential part of Gaonthan land vale ranges below Rs.10000 per sq. meter.

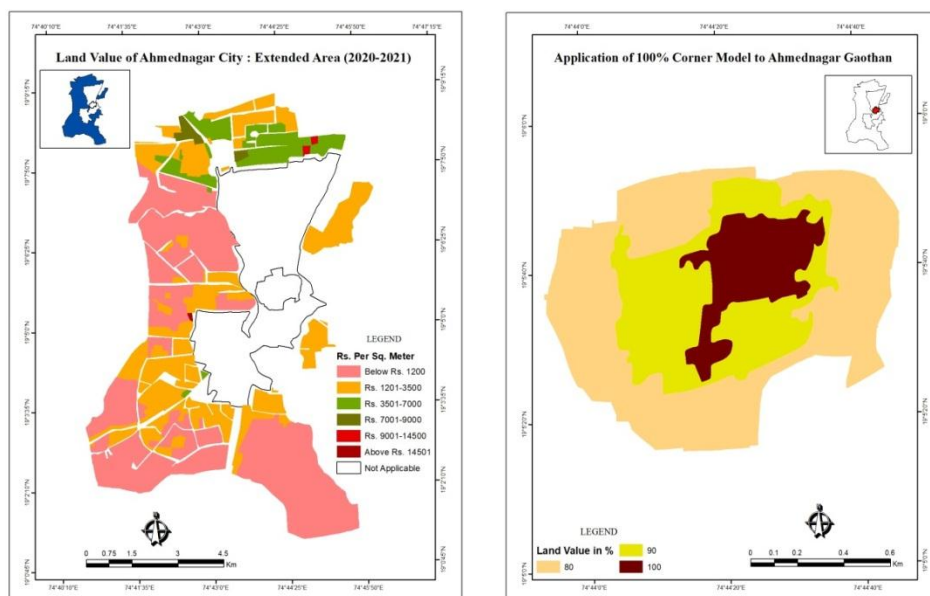
Outer area:

Distance from city center, approach of roads, availability of water, proximity from river Seena and nature of soil and availability of civic amenities are the factors affecting on land values in outer area.

Land values of Outer area are observed to be range between Rs. 510 to 20270 per sq. meter. Lowest land values below Rs.1200 per sq. meter are found in Agarkar mala and Sanjay nagar area. Land values between Rs. 1201 to 3500 per sq. meter are found in area around railway station, south and south western part of Gaonthan area. Land values between Rs. 3501 to 7500 per sq. meter are found to the east of Gaonthan and railway station and Balkashram road. Small patches to the south of Gaonthan, area around Tarakpur Bus stand denoted land value between Rs. 7501 to 11000 per sq. meter. North of Gaonthan i.e. Sarjepura area, area around Manmad road and Bolhegaon Phata denoted land value between Rs. 11001 -14500 per sq. meter. Highest land value above Rs.14501 per sq. meter is denoted by the standard residential plus commercial areas include survey numbers to the east of Gaonthan, areas between Manmad road to Gulmohar road i.e. Tarakpur, Miskin mala, Kustadham road, Bhistbag naka etc.

Extended area:

Land values of Extended area varies between Rs. 500 to 15000 per sq. meter. Larger area of Bolhegaon, Nalegaon, western Kedgaon and south Burudgaon denoted land values below Rs. 1200 per sq. meter. Roadside area of Nalegaon, Kedgaon Burudgaon, Bhingar, Bolhegaon phata and north Tapovan shows land value between Rs.1201 to 3500 per sq. meter. Part lies in proximity of Tapovan road and old Bolhegaon Road denoted land value above between Rs. 3501 to 7000 per sq. meter. Small pocket on Manmad road at Nagapur show land value above Rs.7001 per sq. meter.



Source: Computed by researcher from Revenue ready reckoner data of land value
 Map: 4: Land value in Extended area 2020-21. Map: 6 : Hundred percent location in city

Hundred Percent Corner:

In a spatial location of urban land parcels, in a spatial context the site or location of highest land value is often referred to as the "hundred percent corner" or the "hundred percent location" or the "peak land value intersection" by R L Nelson (1969). If the term hundred percent corner is used it may refer to the highest value land parcel of those surrounding the intersection of two major streets. If the term hundred percent location is used, it may refer to the average value per sq. meter of the land parcel surrounding the intersection of highest land values. Most often the point of maximum land value occurs adjacent to a major street intersection in the CBD, R M Northam (1975). The model of hundred percent location or "peak land value intersection" is applicable to Ahmednagar city Gaonthan. Central part of Gaonthan area around cloth market, Ghas lane, Navi path and Chitale road shows hundred percent or peak land values. No any other part of city shows high land value than this part of core area of city. Highest land value above Rs. 45000 per sq. meter and central location i.e. CBD are two important characteristics of this peak land value area of Ahmednagar city. Around this area of hundred percent land values, the land values decreases gradually and are called Ninety percent land value area and peripheral part of walled Gaonthan of city shows land values of Eighty percent.

Land value analysis:

The associated pattern of land values has three main elements of which first, in accordance with the original theoretical formulation, land values generally decrease as one move away from the city center. Second, there are ridges of higher valued land associated with both the ring roads and radials. Third, there are local peaks of higher land value that are coincidental with the intersections of the major traffic arteries. M. Cadwallader (1985). All these three phenomena are applicable to Ahmednagar city. Land use change is product of urbanization and it rapidly increases land value in areas of change in land use, land cover.

Observations and Conclusion:

The observations of research on land value analysis of Ahmednagar city are as bellow.

- 1) Land values are decreases very rapidly from core to peripheral part of city in all direction with increase in distance.
- 2) Land values are less in area to the western part of river Seena.
- 3) Western part of city agricultural land use denotes low land values of city.
- 4) Road junctions and approach of main road are the areas of high land values in city.
- 5) Ahmednagar city rapidly growing to the northern part and land values are also high in this part of the city.
- 6) Extended areas of urban sprawl of city denoted considerable increase in land values which is result of urban growth in this part of city.
- 7) The model of hundred percent location or "peak land value intersection" is applicable to Ahmednagar city Gaonthan area.

From the research it is clear that areas of new growth of city specially, road junctions, areas with potentials of change from residential to commercial land use are the areas of high land values. It is also concluded that land values are not increasing rapidly in developed area but they are increasing rapidly in developing areas and in the areas of most potential for developing in coming future

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QR Code Technology in Academic Libraries: Local to Global

Mrs. Pritam Vikas Maral¹ Dr. S. B. Telke²

¹Research Scholar – SRTMUN

²Phd Guide- SRTMUN

Abstract :

QR code is two-dimensional barcode which was introduced in the year 1994 by the Denso wave - Toyota Motors subsidiary. QR is a short form of quick response code. Many libraries are providing quick access to their resources through this technology. it is very much beneficial to both the library professionals as well as well as library users.this paper reviews the present status of application of the QR code technology in academic libraries at National as well as International level.

Keywords : QR code , Academic Libraries, Library Services, Library Resources

Introduction :

Quick Response Code technology is widely used technology in all areas of world, and libraries are also not exception to it. Many libraries are providing quick access to their resources through this technology. it is very much beneficial to both the library professionals as well as well as library users. QR code Technology is just like barcode Technology, only the difference is QR code stores large amount of information than barcode and Store data horizontally as well as vertically in it. QR code is two-dimensional barcode which was introduced in the year 1994 by the Denso wave - Toyota Motors subsidiary. this code is comprising many black and white square dots which stores numeric, alphanumeric, byte, binary and Kanji data. QR is a short form of quick response code. initially this trademark was design for one of the automotive industry in Japan, but over a period of time it became popular outside of this industry and now this tool became part of everyone's life. QR code stores maximum 7089 characters in numeric form, 4296 characters in alphanumeric forms, Binary (8 bits) max., 2953 bytes, Kanji max. 1817 characters. its reading capability is of 360 degree. due to the high storage capacity QR code require less space than barcode. QR code contain data vertically as well as horizontally.

Need of the study:

today's libraries are digital in nature and ready to accept the new technology to serve their clients. QR code Technology play important role to reach their users in short period of time.

Objective of the study:

to review the present status of application of the QR code technology in academic libraries at National as well as International level

Elements of QR code :

1. **Finding pattern** : it shows the position of QR code which detected all the angles and directions
2. **timing pattern** : it is alternative sequence of black and white pattern arranged in vertically and horizontally
3. **alignment pattern** : it is pattern made for correcting the distortion of QR code.
4. **Cell** : the encoded data stored in data area are called Cell. Data in binary system is converted in black and white cells.
5. **Quiet zone** - it is a margin space which makes easier way to symbol from among image by sensor.

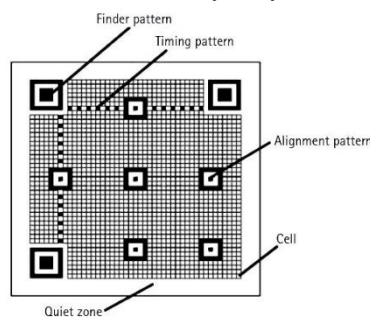


Figure 1.

QR code generator websites / software and QR Code Reader app.

QR code for any information can be generated very easily by following a simple process. there are many free QR code generator available on the web in both form i.e. static / dynamic.

websites name	Mobile application for decoding QR code data
1. Kavya	1.i- nigma
2. qr-code-generator.com	2.QR reader
3. Nokia barcode reader	3.Barcode Scanner

4. NeoReader.	4. QR ky
5. Beaconstek's QR code solution (9.8 / 10)	5. QR Droid
7 QR code monkey (8110)	6. KasperSky's QR reader and scanner
8. Scanova (7.4 / 10)	7. Neo reader Barcode Scanner
9. GOQR (5/10)	
10. QR stuff (4110)	

Types of QR code

There are two types of QR codes

1. Static
2. Dynamic

static is the one which once generated then we cannot change it. Whereas Dynamic is one which is editable. We can change the information according to our need over a period of time.

Depends on the description there are various types of QR code

1. **QR Code model 1 and model 2** – this is original QR code having capacity of 1167 numerals. Coding with its maximum version being 14 (73x73) modulus while model 2 is upgrade version of model 1 having 7089 numerals capacity with maximum version 40 (177 x177) models.
2. **micro QR code**- this code is printed on small space than before having storage capacity of 35 numerals having only one position detection pattern.
3. **IQR code** - it is matrix type to decode which allow easy reading of its position. it can hold large amount of data than traditional QR code. it requires high storage capacity, size reduction, use of rectangular modules Height restoration capacity are some features of it.
4. **SQRC** - this is a special QR code, because it has reading restriction function. The aim behind to develop this code is to store private information or to manage companies internal information. Basically, it is a single QR code which carries both public and private information or data using Cryptography method. the main difference of SQRC over a traditional QR code is any device can read same information to generator QR code. Whereas is SQRC hide the private information and provide cryptographic key to hiding information
5. **Frame QR code** - this code are came with "Canvas area" having flexibility of shapes you can use any letter or image insert in this Canvas area. it can widely used for promotional purposes.

QR code Applicable Areas in Libraries.

As we know QR code can be used in every part of social as well as academic life. Libraries are not remain far behind to use this technology hence today's modern libraries are providing their users many services with the help of such type of new technology. Since QR code is boom for the academic industry our librarian use this technology for rendering library services and resources.

- a. library Opac
- b. linking of print with digital content
- c. reference service
- d. library tour
- e. library blog
- f. library exhibition
- g. Wi-Fi networks
- h. subject list
- i. bibliographic data
- j. institutional repositories
- k. online surveys

Use of QR code in Libraries: Local to Global

Global scenario

1. **Bath University library**- This library offering catalogue to their users in QR code format which includes the call number of books as well as location of the book.
2. **UPV (Universitat politecnica de valencia) library in Spain**- they give QR code access to their mobile website to promote library blog including document downloading facility. they also promote their best practises through QR code.
3. **Harold B lee library at brigham young University** - this library used QR code for audio tour, marketing of library services, reserving study room for group study and on the spot reservations.
4. **UC Irvine library** - this library deals with pilot project with QR code in the stacking area. library users of this library get their book with the use of QR code within a fraction of second.

Indian scenario

1. **KRRC library- Knowledge Resource and Relay Centre (Central Library) of AIKTC Campus, Navi Mumbai** –

As KRRC library having wide range of textbooks, monographs, journals at National and international level, research journals etc. to reach these collection towards every user of library the library apply QR code on their collection and try to enhance the library experience for their users. Library apply QR code to its Wi-Fi networks, Web Opac, new arrivals, question papers, print journals connecting to its online websites, Databases, web supplements, CD ROM access and many more. This library is utilising QR code at maximum level.

2. **PUMBA Library (Pune University Department of MBA)** - this library subscribes numbers of Management journals in both print as well as online format. They paste QR code on their print journal, after scanning it user directly reached towards its online version. Pune University "Vidyapeeth Geet" is encoded in QR code and pasted on every department of University, which is really a new experience and experiment created by Pumba library. University is really appreciated this project. They also provide YouTube links of many books, comprises of authors information in video format, which is also an exciting experience for management student.
3. **PSKCD Library (prof. Sambhajirao Kadam college, Deur, Satara)-**
This Library use QR code Technology for giving library services to staff as well as students. They provide library feedback form, library app, membership forms, book requisition, ask librarian service, college prospectus, dbt scholarship, syllabus, digital payments of libraries with the help of QR code technology. Overall, this library gives access in variety of areas like student corner, staff section, e resources, online e resources, databases, online courses like Swayam mooc, social media like YouTube channel, Twitter, Telegram, Instagram and many more things. Users of this library get connected to its library 24 x 7 through QR code technology.
4. **IIT, Gandhinagar Library** - this library implemented QR code for giving variety of services like web Opac, web browser, e- resources list, bibliographic journals, digital repositories and Library website
5. **NITK central library (National Institute of Technology, Karnataka) –Surathkal**
This library use QR code Technology to offer OPAC, reference service, online resources on mobile, new arrivals, library app, ebooks registration etc.
6. **Don Bosco college central library Arunachal Pradesh** - this library is also rendering their services with the help of QR code
7. **MPTP central library (Mukesh Patel technology park library)-** this library uses QR code Technology to link their online resource sites, catalogues, OPAC.
8. **NIT central library, Rourkela (National Institute of Technology)-** since NIT library is a very old library, its collection is very huge. nowadays this library is also started using QR code for library functions like banners of workshops, training, seminars, conferences, induction programs advertisements, notices websites, URL and so on.
9. **Chhatrapati Shahu Institute of Business education and research (CSIBER) Kolhapur-** this library it started using QR code technology in their library they link their library web page with QR code

Conclusion:

QR Code is a cutting-edge library technology that allows information professionals to integrate their information which can be accessed via smart phones or similar devices. This study looks at the structure of QR codes and how they work in a user-friendly environment, a library user can easily obtain information about the collection, e-resources, library web site, and Web-OPAC. This technological code has been adopted by a number of libraries around the world in order to disseminate information. Many QR code generators are also capable of producing QR codes for library collections, library architecture, e-books, visitor cards, bookmarks, user manuals, and blogs.

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Agripreneurship: An Introduction on Employment Generation through Agricultural Entrepreneurship

Prof. Gaikwad D. S.

Head Dept of Geography, Shri Sant Damaji Mahavidyalaya, Mangalwedha

Abstract

Agripreneurship is key in this regard. Agripreneurship refers to entrepreneurship in agriculture. Entrepreneurship is a concept that encompasses transforming an idea or vision into a "new business or new venture creation, or the expansion of an existing business, by an individual, a team of individuals, or an established business". Entrepreneurship is a key factor for the survival of farming in an ever-changing and increasingly complex global economy. Farmers-entrepreneurs see their farms as a business and as a means of earning profits. Entrepreneurship is connected with finding ways and means to create and develop a profitable farm business. In this paper shown how agricultural Entrepreneurship help employment generation and the current agricultural situation in India. It can be said that with the wave of social entrepreneurship flowing across various sectors of social impact, agriculture sector is not left untouched. Govt of India and other state Govt take different policy to improve the system and hope in near future it will create a large job sector in India.

Keywords: Agripreneurship, Agricultural, entrepreneurship, employment etc.

Introduction:-

With a growing recognition of the important role of smallholder agriculture for economic growth and rural development in many countries, market-oriented agriculture appears more prominently on the agenda. Agripreneurship is key in this regard. Agripreneurship refers to entrepreneurship in agriculture. Entrepreneurship is a concept that encompasses transforming an idea or vision into a "new business or new venture creation, or the expansion of an existing business, by an individual, a team of individuals, or an established business". There are so many areas and sub-areas in agriculture. Within each area, enormous number of commodities is available. Based on the needs, agro-climatic conditions and available resources, agripreneurs can adopt some commodities and flourish on it. On other hand, there are uncounted jobless agriculture graduates looking for jobs. The agriculture production is much less in comparison to many other countries. Therefore, it becomes essential to train these jobless agriculture graduates agri-business management and also provide finance to develop their own business in agriculture. The major **opportunities** are in **agricultural** inputs, farming processes and technology, agriculture output processing and other agriculture allied sectors like dairy development, poultry, horticulture, sericulture and so on.

Literature Review:

Raju and Raju (2015) found the implication of expanding urbanization will be a decline in the rural population and to ensure the sustainability of food production, rural communities, and natural resources there is a need of rural development. Agricultural Entrepreneurship is a strategic development intervention that has the potential to accelerate the rural development process. Agricultural entrepreneurship is vital for the generation of employment in the rural areas and for promoting incomes and earnings of people.

Choudhury & Easwaran (2019) showed the common platform and unity amongst farmers regarding the prices of the product are very much important without which farmers fail to get the benefits. Societal recognition is more important in pursuing an occupation like agricultural entrepreneurship.

Sarah et. all (2015) explained the .key contextual dimensions of the agricultural sector: these are identity, family, and institutions, which provide promising opportunities for agricultural entrepreneurship.

McElwee (2006) suggests that a major challenge for the agricultural sector is to enable farmers to develop their entrepreneurial skills. It may well point to the fact that if the sector is under as much strain as many would suggest, then farmers of all types will require economic support and greater emphasis on education and training may be necessary

Objective of the study:

The primary objectives of the study are -

- 1.To Understand the meaning of Agripreneurship'
- 2.To examine the current scenario of agricultural sector in India.
- 3.To show the employment generation through agricultural sector.

Research Methodology:

The paper performs an extensive research on the basis of the data and information obtained from secondary sources. It involves the use of journal, research paper, and various reports of Govt of India website and authenticate finance website and online resources etc. for the collection of secondary data needed in the analysis.

Current Scenario Of Agricultural Sector In India

India is the second largest producer of **wheat** and **rice**, the world's major food staples. India is currently the world's second largest producer of several dry fruits, agriculture-based textile raw materials, roots and tuber crops, **pulses**, farmed fish, eggs, coconut, sugarcane and numerous vegetables. During 2018-19* crop year, food grain production is estimated at record 283.37 million tonnes. In 2019-20, Government of India is targeting

foodgrain production of 291.1 million tonnes. As of November 2019, total area sown with rabi crops in India reached 95.35 million hectares. India is the second largest fruit producer in the world. Production of horticulture crops is estimated at record 313.9 million metric tonne (MMT) in 2018-19 as per third advance estimates. Milk production in the country stood at 187.7 million tonnes in 2018-19, registering a growth of 6.5 per cent. Milk processing capacity is expected to double from 53.5 million MT to 108 million MT by 2025. Total agricultural exports from India grew at a CAGR of 14.61 per cent over FY10-19 to reach US\$ 38.54 billion in FY19. In FY20 (till November 2019) agriculture exports were US\$ 22.69 billion. The organic food segment in India is expected to grow at a CAGR of 10 per cent during the period 2016-21 and reach Rs 75,000 crore (US\$ 10.73 billion) mark by 2025 from Rs 2,700 crore (US\$ 386.32 million) in 2015. India is expected to achieve the ambitious goal of doubling farm income by 2022. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investments in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers. India is expected to be self-sufficient in pulses in the coming few years due to concerted efforts of scientists to get early-maturing varieties of pulses and the increase in minimum support price. 'Agriculture and allied' industry is further divided into several segments, namely:- horticulture and its allied sectors (including fruits and vegetables, flowers, plantation crops, spices, aromatic and medicinal plants); fisheries sector; animal husbandry and livestock; and sericulture. India's varied agro-climatic conditions are highly favourable for the growth of large number of horticultural crops, which occupy around 10 per cent of gross cropped area of the country. India is the second largest producer of fruits and vegetables in the world. It is also second largest producer of flowers after China. It is also leading producer, consumer and exporter for spices and plantation crops like tea, coffee, etc.

Entrepreneurship In Agriculture

The emergence of free market economies has led to the development of a new spirit of enterprise 'Agripreneurship' and the increased individual need for responsibility for running their own businesses. The social entrepreneurship ecosystem is on a growth path but is still very nascent in India. With the wave of social entrepreneurship flowing across various sectors of social impact, agriculture sector is not left untouched. The farmers-entrepreneurs operate in a complex but unstable and dynamic environment. They are the part of a larger collection of people including other farmers, suppliers, traders, transporters, processors and many others. Everyone is having an important role in producing products and moving them to the market through the value chain. Each one needs to be an entrepreneur and work in an integrated manner to make the whole system work better and to be more profitable in their business. Entrepreneurship is a key factor for the survival of farming in an ever-changing and increasingly complex global economy. Farmers-entrepreneurs see their farms as a business and as a means of earning profits. Entrepreneurship is connected with finding ways and means to create and develop a profitable farm business. The term entrepreneurship and agripreneurship are frequently used in the context of education and small business formation in agriculture. Dollinger (2003) has described entrepreneurship in agriculture as the creation of innovative economic organisation for the purpose of growth or gain under conditions of risk and uncertainty in agriculture.

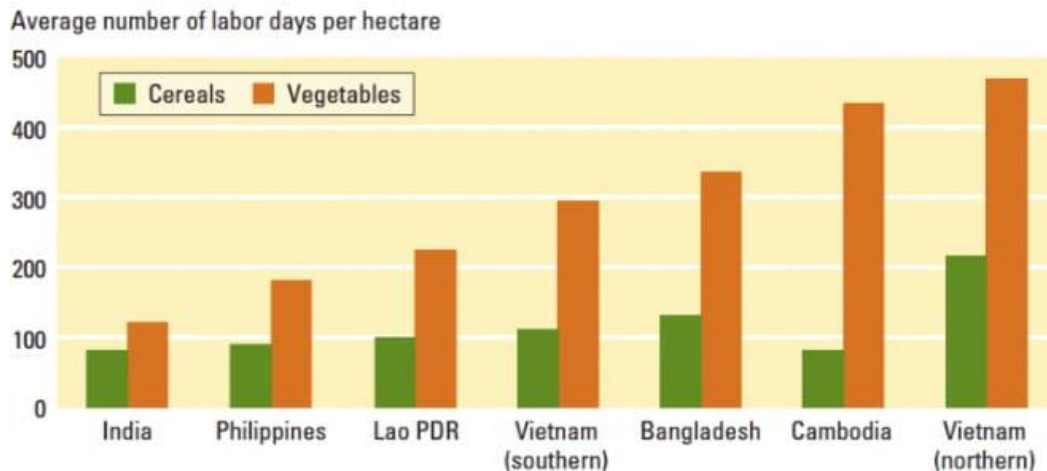
Employment Generation Through Agriculture

Firstly, food production is no longer restricted to cereals. With the demand for fruits, vegetables and dairy products increasing in urban settings and rural areas, there is significant potential to expand employment opportunities. Global vegetable production is about to reach 1.1 billion metric tons. Global milk production has already exceeded 750 million tons, and approximately 150 million households around the globe are engaged in milk production. In most developing countries, milk is produced by smallholders, and milk production contributes to household livelihoods, food security and nutrition. Milk provides relatively quick returns for small-scale producers and is an important source of cash income. In addition, aquaculture and fish production has reached 158 million tons. According to the data from 2009, total share of employed in poor countries:

- in sub-Saharan Africa recorded 50% of all employment growth
- in South Asia recorded nearly 33% of all employment growth
- in contrast, in East Asia, Latin America and the Caribbean regions agricultural employment is falling

Agriculture is the most important sector of female employment in many countries, especially in Africa and Asia. At the global level, women do share of 38%, while men about 33%. In global, labor requirements are considerably higher for vegetables than for cereals. Migration, especially by young people, poor working conditions in the sector and the growing demand for agricultural products are some of the factors that call for the adaptation and modernization of agriculture, especially in African countries with an agrarian-based economy. To improve the situation, farm workers and small farmers need to earn more for the work they perform, and better working conditions. The agricultural sector has great potential to provide an essential contribution to both employment numbers and work quality.

A sustainably growing agricultural sector can generate decisive impetus and make significant contributions to the fight against poverty. Employment in agriculture and in sectors directly connected to agriculture plays a crucial role in achieving this.



Source: Internet

Government's Reforms For Agripreneurship

The government plans to nurture agri-entrepreneurs to give an impetus to farming in the country. The spirit of government is well reflected in the budget presented by finance minister Nirmala Sitharaman, who advocated for facilitating "ease of doing business" for farmers also while calling upon all the states to allow their farmers to trade on eNAM - the national online trading platform created by government for transparent bid based trading of commodities across 585 mandis in the country. Inviting private entrepreneurship in farming and allied sector while announcing mega packages. The Essential Commodities Act will be amended to deregulate trade in cereals, edible oils, oilseeds, pulses, onion and potato, and stock limits for these will be imposed only in exceptional circumstances. A new central law will be formulated to provide barrier-free inter-state trade of farm produce and more freedom for farmers to sell directly or even online. Some of the schemes are mentioned below:

- (1) **AGRI-UDAAN Program** - In an attempt to promote innovation and entrepreneurship in agriculture, the government is launching a new AGRI-UDAAN program that will mentor startups and help them connect with potential investors
- (2) **Training Programme** - The National Institute of Agricultural Extension Management (MANAGE), Hyderabad is implementing the Scheme of Agriclincs and Agri-Business centers initiated by the Ministry of Agriculture, Government of India. The Scheme aims at supplementing existing extension network to accelerate process of technology transfer in agriculture and strengthening input supply and services. Agri-graduates and Post graduates. Diploma holders in agriculture and allied fields can set up their Agri-Clinics and Agri-Business Centers and offer professional/ consultancy extension services to farmers. The scheme enumerates availability of better methods of farming to farmers and better opportunities for self-employment to the Agricultural Graduates.
- (3) **Institutional Support for Agri-business** – RBI started in July 1982 NABARD to give full attention to the rural sector in areas of agriculture, small –scale and cottage industries and agro-based industries. Since its formation NABARD hold the responsibility of managing all the activates of the RBI pertaining to rural development and agro based activities
- (4) **Panchayatmandi (Agri-Mandi)** - The concept of selfgovernance has gone to the level of marketing ofvillage produce through village markets and fairs.The concept of Panchayat mandi is to reduce theinfluence of middlemen and traders. This is possibleonly if functioning of the District Panchayat iseffective in coordination with state marketing boardsand APMC (Agriculture produce market committee)
- (5) **State Agricultural marketing banks (SAMB)** – State agricultural marketing banks are set up to actively regulate markets for food crops and oilseed in bigger markets of towns and cities
- (6) **NCOSAMB (The national council for state marketing board)** - An agro based country like India needs training centers with modern facilities throughout the country. The government of India provides grants in aid to state to set up such training facilities. NCOSAMB is the body to coordinate the programmes of such training.
- (7) **State Trading Corporation (STC)** - The state trading corporation of India ltd is premier international trading house owned by the government of India having been set up in 1956; the corporation has developed vast expertise in handling bulk international trade international trade. In September 2018, the Cabinet Committee on Economic Affairs (CCEA) approved an Rs 5,500 crore (US\$ 820.41 million) assistance package for the sugar industry in India. In March 2018, the Government of India extended the urea subsidy to the farmers till 2020 with the aim of ensuring supply of urea at statutory controlled prices. Urea subsidy for 2018-19 is estimated at Rs.45,000 crore (US\$ 6.95 billion).

Conclusion:

Agripreneurship refers to entrepreneurship in agriculture. Entrepreneurship is a concept that encompasses transforming an idea or vision into a “new business or new venture creation, or the expansion of an existing business, by an individual, a team of individuals, or an established business”. The agriculture production is much less in comparison to many other countries. Therefore, it becomes essential to train these jobless agriculture graduates agri-business management and also provide finance to develop their own business in agriculture. The major **opportunities** are in **agricultural** inputs, farming processes and technology, agriculture output processing and other agriculture allied sectors like dairy development, poultry, horticulture, sericulture and so on. The emergence of free market economies has led to the development of a new spirit of enterprise ‘Agripreneurship’ and the increased individual need for responsibility for running their own businesses. The social entrepreneurship ecosystem is on a growth path but is still very nascent in India. With the wave of social entrepreneurship flowing across various sectors of social impact, agriculture sector is not left untouched. Govt of India and other state Govt take different policy to improve the system and hope in near future it will create a large job sector in India.

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A Rediscovery of *Harpullia arborea* (Blanco) Redlk. from Konkan and a New Record for Sindhudurg District.

Dr. Balkrishna Ganpat Gavade

Dept. of Botany, Kankavli College, Kankavli (MS), India

Abstract:

A genus *Harpullia* Roxb. (speindaceae) with 6 species has been distributed in Tropical Asia, Australia and Madagascar. *Harpullia arborea* (Blanco) Redlk. is a single species found in India reported from Assam, Chittagong, Burma, S. Andaman's and W. Peninsula. Its existence is also reported in Ceylon, Sumatra, Borneo and Java. Stocks has reported this plant from Konkan. His report has been mentioned by T. Cooke in *Flora Presidency of Bombay 1*: 268, 1902. After this there is no any report by later collectors from Konkan. So this is the first report of its own from Kavlesaad Valley of Sindhudurg district, Maharashtra after Stocks report.

Introduction:

Sindhudurg is the southernmost district of Maharashtra stretched between 15°28' to 17°30' E and 73°22.5' to 74°14' N. The average east-west distance of the district is about 64 km. and north-south length is about 84 km. It has Ratnagiri district at the north, the Arabian Sea at the west, the Goa state at the south, Kolhapur district at east and part of Belgaum district (Karnataka) at the south-east. Most of the eastern and south-eastern part of the district is covered by high hills of the, Sahyadris. This mountainous face is deeply scarred by ravines and shows step-like appearance and the higher altitude here is 1000-1100 m above mean sea level. The middle part has many flat topped hills raising to the heights of 250-300 m above mean sea level but closer to the coast the spurs hardly exceed 100-150 m. This hilly area is termed as 'Valati' and the planes near the coast is termed as 'Khalati'. The coast line is irregular due to alternative 'rocky plateaus and shallow bays and hence has limited utility. There is considerable variation in the topography, geology and climate of the district. Nearly 85% of the area is hilly. Compared to Ratnagiri district, this district has more rainfall but poor soils. A large number of wild plant species are facing threat of becoming rare, endangered and some of them are even being pushed towards extinction due to the shifting cultivation, illicit felling of trees, uncontrolled forest fires etc. were responsible for deterioration of the forest wealth. Most of the areas of Sindhudurg covered private forest than the reserve forest. These private areas have been cleared by cutting down the wild plant species for the purpose of fire wood, timber and even for agriculture purpose by locals as well as outsiders. Presently, these wild habitats have been introduced with fruit yielding plants like *Mangifera indica* Linn., *Anacardium occidentale* Linn., *Garcinia indica* Choisy, *Cocos nucifera* Linn., and *Areca catechu* Linn. under "100% subsidized Fruit Yielding Plant Plantation scheme" by Government of Maharashtra. Now-a-days few Keralian people have started shifting from Kerala to Sindhudurg for the purpose of commercial agriculture. They purchase private land on lease basis and cleared all forest on it and have planted Banana, Ananas, Rubber, Haldi, Adrak etc. As there are very few reserved forests in the district, the wild fauna is poorly represented. Various kinds of animals are becoming less and less in number due to hunting. Biotic interference due to illicit felling of trees, cattle grazing, shifting cultivation and newly introduced commercial agriculture by outsiders has destroyed vegetational wealth, rendering great damage to flora and fauna. Sindhudurg being southernmost district of Maharashtra, many species that are commonly found in evergreen forests of North Karnataka and further south up to Kerala have been collected from this district. Some of the evergreen species also appear to have reached their northernmost limit of distribution in Gaganbavada, Phonda, Amtolighat ranges in this area. Many rare and interesting plant species recorded by T. Cooke in "*The Flora of the Presidency of Bombay*" (1901-1908) are from this district. This really forms the northernmost extension of evergreen species along the Western ghats.

Methodology:

In December 25th 2020 this researcher had visited Kavalesaad valley of Sawantwadi taluka of Sindhudurg district by rappelling the 600 feet ridge from Kavelesaad point of Gele Village Organized by Sindhu Sahyadri Adventure Club, Sindhudurg for Biodiversity study of Kavalesaad valley. While walking in the valley through climbing big rocks in dried streams this researcher could come across a single, huge tall tree in fruiting condition along the banks of dried stream. At very first this researcher could identify it as *Dysoxylum binecteriferum* Hook.f, from far distance from the tree with the help of the fruits as they were bright red in colour. This researcher was unable to collect the fruiting specimen as it was a huge tree and unable to climb the area up to the location of tree. We took the photographs of the fruiting twigs and observed the morphology of leaves and fruits and come to know that the leaves are pinnately compound, the fruits were drooping, bright red, broadly reniform, compressed, broader than long and tipped with long persistent style, with this, this researcher came to know that the tree could be of *Harpullia* sp. and not of *Dysoxylum binecteriferum* Hook. f. After returning back from field referred the various floras and matched the key characters and description in the Cooke, *Flora Presidency of Bombay 1*: 268, 1902; BSI *Flora of Maharashtra Vol. 2*: 573, 2000 by N. P. Sing & S. Karthikeyan and *Flora of Maharashtra Vol. I*: 278, 1996 by M. R. Almeida, and conclude that the plant is of *Harpullia arborea* (Blanco) Redlk.

Harpullia arborea - Blanco Redlk. Sitzungsber, Math.-Phys. Cl. Koenig Bayer. Acak. Wiss. Muevehen 16: 404, 1890; Gandhi, Fl. Of Hassan Dist. 367, 1976; Almeida, Flora of Maharashtra Vol. I: 278, 1996. N. P. Sing & Karthikeyan, Flora of Maharashtra Vol. 1: 573, 2000. *Ptelea arborea* Balanco, Fl. Filip. Ed. 1, 68, 1837. *Harpullia imbricata* Thw., Enum. 56, 1858; Beddome, Fl. Sylvat. T. 158, 1871; Cooke, Fl. Pres. Bombay 1: 268, 1902. *Harpullia cupanoides* Hiern in Hook. f. Fl. Brit. Ind. 1: 692, 1875 (non Roxb., 1832); Talbot, Trees of Bombay 59, 1902; Woodrow in JBNHS 11: 272, 1897. *Streptostigma viridiflorum* Thw., Kew Journ. Bot. 6: 298, t. 9, 1854.

“*Harpuli*” A large tree with an erect straight trunk; young parts finely fulvous-pubescent. Leaves imparipinnate; rachis cylindric, 15-25 cm long, pubescent; leaflets 4-5 pairs, opposite or alternate, 8-15 by 2.5 -5 cm, oblong-lanceolate, obtusely acuminate, entire, glabrous and shining, bright light green, thin; main nerves 8-12 pairs; petiolules 3-6 mm long. Flowers 15 mm long, in lax drooping axillary panicles; pedicel long, slender, puberulous. Sepals 5, free, oblong, obtuse, fulvous-pubescent, subpersistent. Petals much exceeding the sepals, spatulate, veined and with a long claw which is pubescent within. Stamens in bisexual flowers shorter than the petals, in male flowers exerted beyond them. Ovary ovoid, hairy; style 3 or 4 times as long the ovary, much exerted; stigma oblong, usually more or less spirally twisted. Capsule inflated, broadly reniform, compressed, broader than long, about 5 - 2.5 cm, bright orange-red, 2-valved, glabrous, tipped with the long persistent style. Seeds ovoid, black, smooth, with a small disciform aril. Fl. & Fr.: December – April

Distribution: Konkan (Stocks, Law), Kavalesaad Valley-Sindhudurg (B. G. Gavade)

Conclusion:

This is the first report of this species after a report of Stocks who reported this plant from Konkan without specifying any specific locality. His report has been mentioned by T. Cooke in Flora Presidency of Bombay 1: 268, 1902 on the authority of Stocks. Almeida M. R. in his Flora of Maharashtra Vol. I: 278, 1996 mentions this species on the authority of Stocks. N. P. Sing & Karthikeyan in Flora of Maharashtra Vol. 1: 573, 2000 have mentioned as Cook’s report who mentioned it on authority of Stocks. So there is no any recent report of this plant from Konkan by later collectors. This researcher has located this species while doing plant survey of Kavalesaad valley of Sindhudurg district. As there was no any authentic report of this species by earlier and later collectors except Stocks from Konkan. So this is a rediscovery report of this species from Kavalesaad Valley of Sawantwadi taluka of Sindhudurg district in Maharashtra after a gap of 118 years and this is also a new record of this plant for Sindhudurg district after the publication of Flora Sindhudurg by Dr. B. G. Kulkarni (1988) and Flora of Sawantwadi by Dr. S. M. Almeida (1990).



***Harpullia arborea* (Blanco) Redlk.**

Acknowledgement:

I am very much grateful to Mr. Rameshwar Sawant of Sindhu Sahyadri Adventure club who organized the Biodiversity study of Kavalesaad Valley and invited me as a plant expert. I am also thankful to Sawantwadi Forest Division for the permission rendered for the Biodiversity survey of Kavalesaad valley. I sincerely thank Dr. R. B. Chougule I/C Principal, Kankavli College, Kankavli and College authority for granting me permission to attend Biodiversity survey of Kavalesaad Valley.

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Population Growth of Scheduled Caste in Sindhudurg District

Kamlesh R Kamble

Research Scholar

Abstract:

Sindhudurg district lies towards the southern end of Maharashtra coastline. Sindhudurg district has a coastline of 120 kilometers. The study of population growth is in important aspect in geography. The world is mainly divided into three parts i.e., developed, developing and under developing countries and this discrimination due to the population growth, social and economic status of the country. The population is changing day by day, changes in the population is called growth. Sometime this growth is positive or negative, if there is positive growth means population is increased, and when it is negative growth then population is decreased. In this research topic the researcher studied the scheduled caste population growth in Sindhudurg district. It is important for understand the cause of backwardness.

Key words: *Growth, Social Status, Economic Status, Population*

Introduction:

John Graunt and English Haberdasger is the father of population studies. Malthus studied the population growth and be concluded that population growth is the main cause of poverty. According to Donald J. Bogue, "demography is the study of special distribution of human populations and mathematical study of size and composition"¹

Population growth means the increase in the number of individuals in a population. Those states which having vastly population growth, they have low standard of living and those states which having low rates of population growth have high living standards.²

The demographic transition is a global phenomenon it involves human population from high death rate and birth rate. Increasing in the population is mainly depends on the birth rate, death rate and migration.³

Population is the group of same species living in the same region and same period. Population includes size, density and population growth. The concept of population growth nothing but it's a group of many population characteristics. So the study of population growth helps the researcher, scientist to understand the change in population size and growth rates.⁴

In the year 2000 UN estimates that the world population would stand at about 6.25 billion people, so the growth of population considerably slowed down during the last decade.⁶

Objective Of The Study:

1. Study of decadal variation from 1991 to 2011.
2. To describe the spatial and Geographical pattern of Scheduled Castes of Sindhudurg district.
3. Study of population growth in last three decades.
4. Compare Sindhudurg district scheduled caste population to Maharashtra SC population
5. Find out Tehsil and village wise absolute growth of scheduled caste population.
6. Find out area of high, moderate and low growth rate.

Study Region:

Sindhudurg district lies in western part of Maharashtra state. This is one of the famous tourist destinations in India. Absolute location of Sindhudurg district is 15 36' to 16 40' North latitude and 73 19' to 74 13' East longitude. The adjoining parts are Sahyadri Ghats to its East, Arabian Sea to its West, Ratnagiri district to its North and Goa state to its South. The geographical area of this district is 5200 sq.km. The district has wet and warm climate, with an average rainfall ranging from 3200 mm to 3400 mm. Average length from north to south is 280 km and width from west to east is 65 km. The occupational structure of district indicates that agriculture is the main occupation of people.

Methodology: The following material and methods used for collecting and analyzing the data for the study of growth of Scheduled Castes population in Sindhudurg district.

1. Sampling Method

For sampling some villages from Sindhudurg district are selected where the percentage of Scheduled Castes population is more than the 30 % of total population. The sample of the households has been selected on the basis of Stratified random sampling by taking different Castes groups. Percentage of the households has been selected from the each of the village according to population.

2. Household Schedule

A household schedule has been used for conducting the actual ground / field survey for collecting the primary data.

3. Statistical Analysing

To find out the growth of population and analyzing the collected data, appropriate statistical techniques such as percentages, measures of central tendency etc. have been applied.

4. Cartographic Techniques

Bar graphs, pie chart, choropleth method have been used for the result of analysis.

5. Primary And Secondary Data

The study is depending on the Primary and Secondary data. Primary data is collect after visiting the villages and secondary which is collected from books, journals, newspaper and internet.

Population Growth:

Population growth is an important aspect in population studies. When the population become increasing in two given points so it's known as population growth. In 1991 census the total population of Sindhudurg district was 8, 32,152. And in 2001 census population of Sindhudurg district was 8, 68,825. During the decade 1991 – 2001 there has been addition of 36,673. In 2011 Sindhudurg district population was 8, 49,651. In the decade 2001- 2011 there has been decreased rate of population which is -19174. The decadal growth rate is 4.40 % during 1991-2001 and -2.20 % during 2001-2011.

Table, SINDHUDURG DISTRICT, GROWTH OF TOTAL POPULATION (1991-2011)

Year	Total Population	Decadal Variation			Growth in %		
		1991-2001	2001-2011	2011-2021	1991-2001	2001-2011	2011-2021
1991	8,32,152	36,673	-19174		4.40	-2.20	
2001	8,68,825						
2011	8,49,651						

Source – Calculated from district Census handbook, Sindhudurg 1991, 2001, 2011

Scheduled Caste Population Growth:

According to 1991 census the scheduled caste population in Maharashtra state was 11, 23,814, which is constituted 11.09 % of the total population of the state. As per 2001 census, the Scheduled Caste Population in Maharashtra is 9,88,1656 persons, which is 10.20 % of the total population of the state. In 2011 the scheduled caste population is increased which is registered as 1, 32, 75,898 persons and proportion to the total population of Maharashtra state is 11.81 percent, which is higher than last two decade. In 1991 census Scheduled Caste Population of Sindhudurg district was 42,435 persons, in these population 20,183 males and 22,252 are females. The proportion to total population of Sindhudurg district was 5.10 %. In 2001 Scheduled Caste Population in Sindhudurg district was 38,536, which is 4.43 % of total district population. It consist 18,446 male and 20,090 females. So in compare between 1991 and 2001 Sindhudurg district Scheduled Caste Population is decreased as 3899, it is observed that the decadal growth rate of Scheduled Caste population during 1991-2001 is -9.18 percent. In 1991-2001 periods the male Scheduled Caste Population growth rate was – 8.60 percent and female growth rate was -9.71 percent. It indicates that male and female population is decreased in 2001.

In 2011 total scheduled cast population in Sindhudurg district was 55,586, which consist 26,830 male and 28,756 females and comprises 6.54 % to the total Sindhudurg district population, in compare to 2001 and 2011 population is increased by 17,050 persons. It is also observed that in this period the decadal growth rate is 44.24 percent. In 2001-2011 periods the male Scheduled Caste Population growth rate was 45.45 percent and female growth rate was 43.13 percent. It indicates that female growth rate is lower than the male growth rate

Conclusion:

In the decade 1991 to 2001 there is negative type of growth rate. As per Constitution amendment (Scheduled Castes) Order 1990, the Hindu, the Sikh and the Buddhist were placed on the same footing with regard to the recognition of the Scheduled Castes. Migration, fertility and mortality rates are also the other component of population change, for study the comparative picture in the study area, the various tehsils in the Sindhudurg district can be divided into high growth rate, moderate growth rate and low growth rate in following manners. In the decade 1991- 2001 the population of scheduled caste is declined but compare to previous decade the scheduled caste population during the decade 2001- 2011 is increased. There is very high growth rate in all tehsils. Devgad is very high growth rate i.e. 168 % and Dodamarg is less growth rate i.e. 1.54 %. There are disparities between all tehsils of the study region in the growth rate of scheduled caste population. Within the district there are significant changes in the rates of population growth of scheduled caste population in various tehsils. The tehsils of this region can be divided into following groups.

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SWOT Analysis and Academic Libraries: Current perspective

Mrs. Raykar Durga Dr. Sontakke Shivaji

Abstract

In this paper SWOT Analysis and its relation to academic libraries are discussed. This study is a qualitative and descriptive study on SWOT. SWOT Analysis will be examined from a historical, theoretical, and time frame perspective as an efficient situation analysis tool that is used in marketing, public relations, advertising, and any other area that requires strategic planning. SWOT Analysis is a method of analyzing the 'strengths,' 'weaknesses,' 'opportunities,' and 'threats' that are present in an entity, a strategy, a project, an individual, or a business operation. Here the attempt is to describe What is SWOT Analysis, how to do SWOT Analysis, Its limitations and alternatives, and finally its relation with academic libraries with the help of related literature, etc.

Keywords: *SWOT Analysis, Academic Libraries, Strategic Planning*

Introduction

The majority of all sectors today participate in strategic planning. Strategic planning is a method of assisting all sectors. By assisting throughout the distribution of resources to accomplish goals, an institution may become more efficient. It's a component for successful management. It is, in other words, a component of strategic management. Strategic planning is, in reality, necessary for effective strategic management.

The research, decisions, and behaviour that an institution makes in order to build and maintain competitive advantages are referred to as strategic management. The strategic management method consists of a series of evaluations and decisions that can help an institution to select a "right plan," or one that creates competitive advantages.

Vision is the starting point. A vision of the future is a depiction of what might happen in the future. It is a description of an institution wants to achieve future position. Task will be the next step in the strategic management process. The long-term purpose of an institution is its mission. Mission statements define what an institution aspires to be in the long run as well as what it wants to avoid in the short term. The third step in the strategic management process is to set goals.

The external and internal review phases of the strategic management process, also known as SWOT. An Institution can identify the critical challenges and opportunities in its own environment by performing an external review. It also considers how competition is likely to evolve in this setting, as well as the consequences of that evolution for the challenges and opportunities that an organisation faces. Internal analysis helps an institution to determine its organisational strengths and weaknesses, while external analysis focuses on the environmental challenges and opportunities that an institution faces. It also aids an institution in determining which of its resources and capabilities are most valuable.

Objectives

1. To introduce SWOT Analysis
2. To review the status of Academic libraries
3. To identify SWOT of different Academic libraries

What is SWOT Analysis?

SWOT Stands for Strengths, Weaknesses, Opportunities and Threats. SWOT Analysis used to get best advantage and to reduce the chances of failure by understanding what are lacking and eliminating hazards.

This strategy is based on a business environmental study, which compares the company's strengths and weaknesses to opportunities and challenges in the market environment (external or market analysis) (internal or company analysis). It's achieved with the support of a SWOT matrix, which can aid in the development of strategies for maximizing current opportunities and identifying and containing potential threats in real time.

How to do SWOT Analysis?

SWOT Analysis can be done through its following matrix.

- 1.1. Strengths:
 - What do you do well?
 - What unique resources you can draw on?
 - What do others see as your Strengths?
- 1.2. Weaknesses:
 - What could you improve?
 - What do you have fewer resources than others?
 - What are others likely to see as Weakness?
- 1.3. Opportunities:
 - What opportunities are open to you?
 - What trends could you take advantages of?
 - How can you turn your strengths into your opportunities?
- 1.4. Threats:
 - What threats could harm you?
 - What is your competition doing?

What threats do your weaknesses expose to you?

Limitations and Alternatives of SWOT Analysis:

When conducting a SWOT analysis, keep in mind that it is just one step in the overall business planning process. To make decisions regarding complex issues, you'll usually need to conduct more in-depth analysis and research.

Remember that a SWOT analysis only considers issues that can be classified as a strength, weakness, opportunity, or threat. As a result, using a SWOT analysis to address uncertain or two-sided variables, such as factors which can be either a strength or a weakness or both, is difficult.

Limitations: It's possible that a SWOT analysis is limited because it:

- a. Things aren't prioritized
- b. Does not have alternatives or alternate options
- c. Can generate a lot of ideas but not help you choose the right one
- d. Can generate a large amount of data, but not all of it is useful.

2 Alternatives:

- a. SCORE Analysis (Strengths, Opportunities, Aspirations, Results)
- b. NOISE Analysis (Needs, Opportunities, Improvements, Strengths, Exceptions)
- c. Improvement Venn Diagram
- d. Feedback from users
- e. Quarterly meetings to discussed progress

The SWOT review, on the other hand, has flaws. First and foremost, it necessitates extensive study because you would need a great deal of knowledge about your business and its market climate. Furthermore, both the selection of the evaluated categories as well as the subsequent assessment and weighting are subjective, which may lead to findings that are skewed. Keep in mind that the SWOT review outlines the current situation and allows you to derive future changes and interventions, but it does not constitute strategic planning in and of itself.

SWOT Analysis in Academic Libraries:

Jagtar Singh & Trishanjit Kaur (2009) discussed in their paper that academic libraries future is in our hand. Author discussed knowledge paradigm, present and future scenario, strategic response etc. In knowledge paradigm author wrote about NKC (National Knowledge Commission). NKC focused on access to knowledge, knowledge-concepts, knowledge-creation, knowledge application and development of better services means expansion, excellence and inclusion but it expect support from library. In present scenario regulatory bodies like UGC, AICTE, DTE formed for capacity building but without libraries it is not possible. Lack of good infrastructure is the weakest point in capacity building. ICT is the opportunity and challenge for libraries means paradigm shift from traditional to digital or virtual. Shared subscription, library consortia, institutional repositories, and open access archives are the outcome of our strategic response therefore SWOT Analysis and Gap Analysis are important factors. Generation, acquisition, processing, storage, dissemination, and use of knowledge and information are stages of information life cycle. Collection management, knowledge organization, digital preservation, online searching, content management, knowledge management, and promotion of library are the challenges. Finally author conclude knowledge base, pertinent skills and proactive positive mind set are essential factors for future academic libraries.

P.K. Suresh Kumar (2012) examined in their paper marketing of information products and services is an integral part of administrate. In knowledge paradigm author wrote about NKC (National Knowledge Commission). Access to knowledge, knowledge-concepts, knowledge-creation, knowledge application and development of better services are important factors in knowledge paradigm. Expansion, excellence and inclusion focused by NKC but need support of libraries. In present scenario library infrastructure is the weakness of libraries so libraries should build up their capacity. ICT is opportunity and Challenge in front of libraries. Shared subscription, library consortia, institutional repositories, and open access archives are the challenges therefore SWOT Analysis and Gap Analysis of libraries is important. knowledge base, pertinent skills and proactive positive mind set are the essential components of a competent library. finally author conclude with our future library must be a hybrid library which must be user- centred and expert-assisted.

Kumar, P. K. S. (2012) describe in their paper about objective analysis of SWOT Analysis of four university libraries in Kerala named Kerala University Library (KUL), Mahatma Gandhi University Library (MGUL), Cochin University of Science and Technology Library (CUSATL) and CH Mohammed Koya Library of University of Calicut (CHMKL). Author studied Strengths and weakness in terms of the collection, staff strength, qualification of the staff and infrastructure. Also, author studied Strength and Weakness taken from the Chief of Each Library. Author studied SWOT on the ranking bases and found strengths like Experienced and qualified staff, Geographical position, Collection, Special Collections, Funds, Infrastructure, Membership, IT facilities, Information Products/Services Customer Care, etc. Weakness identified like Shortage of staff, Insufficient Investment, Space problem, Lack of infrastructure, Absence of Librarian, etc. Author discussed separately of each library. Opportunities and threats discussed by author Commonly new academic initiatives,

new sources of funds, Cooperation and Consortium, Technology, etc. Author conclude with all libraries has positive opinion towards marketing but no one library have specific funds for marketing of information products and services.

Miteshkumar Pandya (2012) represent in their paper about cloud computing and its use in library. With the help of SWOT Analysis author discussed advantages and disadvantages. Cloud computing (in context of library) means internet based soft copy of resources and managed by third person. Author describe application, storage and connectivity are main parts of it. Also, author discussed special features of cloud computing like Elasticity and Scalability, Multi-tenancy, Energy consumption, Reliability, Security, Consumption based billing, Data Management, Managing Cloud Activities, Self Service Model, etc. Ex Libris, Polaris Library Systems, Dura Cloud, etc. are Service providers of Cloud computing for libraries. Cost effective, Flexible and innovative, Round the clock access, Simplified Cost and Consumption Model, Enterprise Grade Services and Management, Faster Provisioning of Systems and Applications, Simplicity of Integration, Highly Secured Infrastructure, Compliant Facilities and Processes, Flexible and resilient in disaster recovery, reduces hardware and maintenance cost, etc. are strengths and opportunities of cloud computing-based libraries. Risk or data loss, Failure in compliance, Constant connectivity required, Dependency, Quality problems with cloud service provider, Time and Budget Constraints, etc. are weakness and threats found. Author conclude with in future the use of cloud base libraries may increase.

N.A, Hazidah and N.N, Edzan (2012) put on display the strategies used in marketing and promoting the University of Malaya Library (UML) effectively. The SWOT Analysis is used to generate strategies and actions. Identification of SWOTs is essential because subsequent steps in the process of planning for achieving the selected objective may be derived from SWOTs. Author also gave information on UML (University of Malaya Library) and explained why promotion is crucial by giving other authors' views. Collection, seating capacity, location, New technology such as QR code for mobile access, SMS, qualified staff, etc. Are strengths. Out-dated structures, Limited parking area, etc. Weakness. Different types of training and educating users program, active participation in research, Interlibrary loan and document delivery services, Library publications, outreach program, Introducing different reading areas for different purposes, etc. are opportunities. High subscription, lack of responsibility of borrow material, etc. are threats. Finally, author concluded with existence of resources, facilities and services that exceed users' expectations, it goes to show that the Library has effectively promoted its services.

Dharmaraj K. Veer and Santosh D. Kadam (2014) emphasizes in their paper on different facets of SWOT Analysis in context of libraries. To know the strengths of libraries should list out the positive things. To know weakness libraries should list out harmful things. To know opportunities in front of libraries, libraries should list out helpful things. To know threats in front of libraries, libraries should list out obstacles. Author selected engineering college libraries in this study. Author suggested ways & Means for quality services and facilities for engineering college libraries specially for Marathwada region. Qualified librarians, IT knowledge, training programmes, Separate Reference Section, good collection, proper administration, e-services, etc. are strengths. Lack of uniformity, lack of independent Library Building, Inadequate Technological Facilities, Finance, Not accredited by NBA, etc. are weakness. independent Library building, technological facilities, OPAC, Web-OPAC, e-consortia, Accreditation from, user Education, etc. are opportunities. Inadequate Library Finance, High Subscription rates of e-consortia, Increasing costs of publications, etc. are threats. Finally author conclude with SWOT Analysis lead automatically to useful changes in the structure or functioning of libraries.

V. Kadam (2017) exposed in his study about barcode-based library management systems. It's a case study. In this study, author chooses a library of Dr.BATU, Lonere. Also, the researcher used SWOT analysis for getting the actual picture after implementation of bar code. While studying researcher found Strengths like Mini tag size, Negligible data entry error rate, Low-cost tags, Low operating cost, Speedy check-in and check-out process, No queuing up at check out/check-in counters, Save time of the borrower and the staff, High-speed data entry, Supported by many suppliers, Reduces staff daily routine work, Improves efficiency of the management, proves information availability, Improves the image of the organization, Better for even Small business, Bar-coding facilities stock verification of books and journals, Simple process for stock verification, etc. Weakness like high cost of Scanner, Printer and overhead due to cost tags per volume, Unlike RFID (Radio Frequency Identification), it has no theft detection function, Scanning problems due to physically damaged label, CCD Scanner problems, Selecting the distance between the bar code and the CCD Scanner, Tallying borrower's signature every time at the circulation counter, Compare to successor technology like RFID, defective labels always lead to wrong/no reading of data, Laminated barcode library identity card are required, Less capacity, etc. Opportunities like prospect for development, Extending library opening hours, Implementation of this system in other departments of University e.g. student section, Account section, Starting new small Bookshop in the library, etc. Treats like Loss of employee jobs, Choose RFID or Barcode.

Pengfei Ji, Xiaozhu Zou and Zhi Li (2017) presented in their paper about Patent information service strategies of university libraries with the help of SWOT Analysis. University libraries have a lot of literature, comprehensive professional knowledge, enough funds for equipment, scientific research environment, etc.

which are important for patent information services means strengths. difficult to understand the details of patent technology, lack of market awareness, most, lack of professional training system, etc. are weaknesses. According to the principle of complementarity SO strategy, WO strategy, ST strategy and WT strategy are four countermeasure strategies. Author listed Integration of existing resources, Carry out a variety of promotional activities, Increase the degree of opening to the society under SO strategy. Establishing a patent information management system, Improve the quality and ability of librarians listed under WO Strategy. Establish patent database, Library cooperation with patent agency listed under ST strategy. Improving consciousness, increasing investment, improving rules and regulations, training professionals in libraries, novel and authoritative services listed under WT strategy.

Darandale, A. G. (2017) submitted in their paper National Digital Libraries SWOT. Author gave some examples of Digital Libraries like Nalanda Digital Library, Vidyanidhi Digital Library, ERNET, Indian Institute of Science, Banglore, Kalasampada, Electronic Thesis and Dissertation Digital Library, INFLIBNET, Librarian's Digital Library, Raman research Institute, National Library of India. The aim of this study is to find strengths and opportunities in comparison with other digital repositories. The advantages and disadvantages described by the author in this article are as follows: wider dissemination of information, global visibility, single location content, professional visibility, Open access, global search service, etc. Educational material from primary to post-graduation, more than 60 types of teaching resources, availability in more than 70 languages, Variety of reading material-video lectures, global classical books, journal articles, thesis and audio books, Free of charge and easy to register, Android mobile phone app availability, etc. are strengths. Not produce its own data, Sometimes time consuming, Current issues not available soon, Browsing start with Hindi, English and Bengali language, sometimes printing limitations, full text access sometimes required permissions, etc. are Weakness. Information access with democratic nature, without personal bias, info from worldwide, etc. are opportunities. Electricity, internet, may decrease the print format reading, etc. are threats.

Xiaofang Qiu (2017) discussed SWOT Analysis of private College libraries and its development strategy. Library works according to changes and requirements of the market, establishing a solid foundation for the development of skills, flexible and efficient management system, determine the features of libraries according to teachers, school funds, cultural and economic development in the place where the school locates, etc. are strengths of libraries. Development unstable, especially the teaching body, lacking mental preparation for the massive investment, the books and reference materials are insufficient. And the space in the library is narrow to develop further, etc. are Weakness. The national policies provide broad space for the development of private higher education, train academic, research-oriented and design talents, etc. are opportunities. Parents misunderstanding about education, faces fierce competition, etc. are a great threat. Author also suggested development Strategies like Expand Financing Channels to Guarantee, A Stable Capital Source Integrity Is Important to Create A Good Reputation of Libraries, The Government and the Society Support the Development.

Anna Kaushik (2018) gave aims to conduct a SWOT analysis of massive open online courses (MOOCs) in library and information science in order to identify and understand different insights and best practices. This paper is a review paper. Author put different opinion of different authors from a different point of view like SWOT Analysis of MOOCs library is useful to know professional needs & their potential, SWOT helps to note lack these tools to develop competencies and skills in library, SWOT analysis of MOOCs in connection to observe it is helpful to improve medical education or not, reputation was one of the main factors to engage in MOOC activities, etc. after study author found MOOCs provide great flexibility and reliable platform to upgrade their knowledge, it is helpful in promoting information literacy, etc, are the strength of MOOC. Drop rates of learners, lack of authority and quality, High development time and cost, Copyright issues, Language and cultural differences, etc. are weaknesses. Building reputation through networking, free access and Building professional development, etc. are opportunities. Fair use, Return on investment, Disruption in online and traditional courses, Sustainability, etc. are threats.

Kadeeja Banu C V and Nusrath N (2018) analysed in their paper Farook College Library on the bases of SWOT and with the help of questionnaire and interviews. This library is one of the best libraries in the state of Kerala. From Questionnaire author realised basic facilities such as circulation counter, space, reading table and chairs, OPAC, drinking water, toilet also textbooks, reference books, newspapers, general periodicals, subject journals, books for competitive exams and question papers needed by users of such library. Also total analysis shows that users need services such as display of new arrivals, issue and return, newspaper clipping services, digital library, personalised information service, reprographic service, translation service and online information service, assistance of staffs, orientation programs. College library building construction, good collection, wide range of electronic resources, DDC classification, Koha software for house-keeping operation, many services, etc. are strengths of Farook College Library.

Roseline Bawack (2019) put forward in their paper about knowledge management in academic libraries with the help of SWOT. Misunderstanding of the concept of KM, lack of knowledge sharing culture, reluctance

of librarians to embrace change, lack of skilled and competent staff, lack of incentives for innovation and knowledge sharing, lack of commitment by management, lack of motivation for collaboration are the main reasons behind this study. Author used surveys, questionnaires, observation, focus groups and interviews with students, library staff and others. Hybrid and robust collection, electronic resources, qualified and competent library staff, presence of adequate state-of-the-art technologies and tools to drive KM processes, fluid communication, knowledge sharing culture, membership in a library consortium, cooperation ties with other university libraries and networking to share resources are strengths found. The weaknesses of a library includes lack of qualified, competent and adequate personnel, lack of digital and electronic resources, lack of digital space, lack of communication with management, inadequate and obsolete technologies and infrastructure. technological developments, changes in the external environment and operational changes may be opportunities or threats. giving formal training programs and demonstration on how to use selected library software to staff, open access movement, digitization of library collections, building and managing institutional repositories, availability of internet and effective usage by staff and students, library website, users' needs etc. opportunities found.

Conclusion:

The lot of studies examining the SWOT approach reveals that relying solely on SWOT in strategic planning is inadequate. According to academic studies on the topic, the efficacy of SWOT can be enhanced by combining qualitative and quantitative techniques. A variety of academics have introduced new analytical approaches to use in conjunction with SWOT analysis, and others have suggested alternative methodologies. Although there has been a huge amount of academic research on SWOT, little attention has been paid to understanding the method's historical emergence, benefits, and limitations. This article aims to reveal a simple understanding of the methodology, as well as recent methodological changes. SWOT studies of academic libraries may help for further progress of the libraries.

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Lessons From Covid-19 Pandemic And Its Impact on Human Life

Prof. Mohammed Nawaz¹ Dr. S. N. Venkatesh²

¹Assistant Professor, Department of PG Studies, RBANM'S FGC, Bengaluru City University Bengaluru, Karnataka

²Principal, Seshadripuram First Grade College, Bengaluru City University, Yelahanka New Town, Bengaluru, Karnataka

Abstract

Uncertainties are part of every human because we are living under risky environment. Spread of corona virus disease has shaken the entire world and has made impact on every part of the world from human to business to animals to all the creatures, there may not be any aspect which has not affected from corona virus. Covid-19 has led to a dramatic influence on human life and has created an unimaginable challenge to public health and food. Human life largely influences with political, economical and social factors and this covid-19 pandemic has made a major impact on every external and internal environment. Every human is interdependent as one individual cannot succeed without the cooperation of others. The economic and social disruption caused by pandemic is devastating millions of people who lost employment and fell in to poverty. Hard times of our lives tend to teach us a lesson and there is no bigger hard time of this generation than Covid-19 pandemic and these learned lessons have also made an impact on human values, hence this paper is an attempt to understand the lessons from Covid-19 pandemic and also its impact on human life.

Key words: Environment, Employment, Poverty, Social disruption.

Introduction

Covid-19 is the infectious disease caused by the recently discovered corona virus. This virus and disease were unknown before the outbreak began in Wuhan, China in November 2019. Covid-19 is now a global pandemic affecting almost all the countries. This pandemic forced the entire world to enforce lockdown in spite of the lockdown virus spread throughout the world and turns the beautiful cities in to ghost towns, people had to be confined to their homes, factories had to be closed and the economy took a huge hit. This has made a significant impact on every sector and has impacted every segment of life like commercial establishment, education, economy, religion, transport, tourism, employment, entertainment, food security, sports, etc.

The world economy has seen its greatest fall ever, Covid-19 has largely impacted the growth of almost every nation and responsible for fall in GDP and it has made an impact on every human life. The Covid-19 pandemic highlights the worldwide danger of arrogance and ignorance of mutual understanding and togetherness and it teaches a lesson that we all are living under one umbrella and what happens to one will very definitely reaches everyone. The corona virus disease pandemic is of a scale most people alive today have never seen. Lockdowns and curfews to contain the spread of the virus impacted the way children learn, the way their families earn a living, and how safe they feel in their homes and communities. This pandemic has taught some important lessons to everyone.

Objectives

- 1) To understand the lessons learned during Covid-19 Pandemic.
- 2) To know the impact of these lessons on Human.

Scope

The study covers only the aspects of understating the various lessons learned during Covid-19 Pandemic and its impact on human values.

Methodology

The study is theoretical and conceptual in nature and based on secondary data. The data is obtained from articles, Journals, news papers and internet sources.

Lessons from Covid-19 Pandemic

1. The needs and wants are only of necessities such as food, cloth and shelter and little of comforts such as medicines, entertainment and the humans don't always needs luxuries to survive.
2. The biggest strength in overcoming the challenges lies in cooperation and support of all. Nationally we face national challenges and globally we face global challenges.
3. No matter whether a person is owner, entrepreneur or an unemployed, you need a strong financial safety and there must always be a part of income which needs to be saved for future uncertainties and pandemics like Covid-19.
4. Environment and climatic conditions also influences our life as these two factors had made an impact on immunity of human lives which is the need of pandemic to avoid and overcome the virus.
5. Humans must try to find employment in the same place where they are born and brought up because moving to faraway places and being separated from dependent and family may create psychological issues and may influence the health.
6. Noting is important than human life, many believes that business and economic functioning is necessary but this pandemic has given an assurance that life may go on even if there is shut down of activities and lockdown of nation.

7. The pandemic teaches that world may be very large on map but not large enough to create problems for all and one's sufferings may easily reaches everyone.
8. Being clean and hygiene protects the human life from any disease and virus as we were asked to wash hands regularly and use sanitizers and the humans will continue to ensure clean and hygiene in the longer run.
9. There are some sectors which has greater influence on human life and protects both economy and life of every individual and these sectors are medical and Banking as entire world was forced to lockdown but these two sectors had worked as if there is normal. And medical industry worked even harder to protect and save millions of lives and banking sector ensured that there will be a proper flow of funds to every corner of the economy.
10. Humans had made many relations at work place, friends and even strangers but this pandemic have taught a lesson that family always comes first during hard times of our lives and no matter how difficult the life seems but family always stands with us.
11. We have always learned that prevention is better than cure and this pandemic have also taught a lesson that precaution is better that sufferings and the entire humanity joined hands in ensuring safety measures and ensures possible efforts in overcoming challenges.
12. The biggest lesson from this pandemic is that essential workers are real heroes. When all sectors had shut down and stopped activities but doctors, health care professionals, police force had doubled up their efforts and services to protect every human and this pandemic ensured the recognition they deserved and the sacrifices they have made during this pandemic will be remembered for ever.
13. Pandemic have made human realised that health is always wealth because human had managed to spend the pandemic days without earning and saving much but found peace by ensuring health precautions.
14. Once in a life time threat such as Covid-19 pandemic needs the national and even international coordination to overcome these challenges. We learned it as entire world was putting efforts in research and development on possible treatment of this virus.
15. Every nation needs to be prepared for every challenge and for this importance and huge investment needs to be made in science and collaboration with the experts in the field of health care needs to be enhanced.
16. There is always a possibility of being flexible in life styles of human because with the outbreak of Covid-19 pandemic, every individual adjusted with the new life style, new education, work environment, distanced social meetings.
17. Unhealthy population is at most risk and must have serious precautions about do's and don'ts but healthy population also tend to fall sick during this pandemic.
18. The emotional strength comes from the cooperation and support which we get from family members. The humans were too busy earning the man made money but this pandemic has taught that kindness and gratitude are the greatest strengths of a human.
19. The balance of life is important part of every human. Every person had much stress in the pre Covid-19 period but this pandemic has taught that stress can be managed even by working from remote places if we can just try to live with safety measures.
20. Intolerable suffering of millions of migrant workers during a pandemic is very painful and there should be a separate and plans to protect weaker section of society.

Impact of Covid-19 Pandemic

- 1) Mobility and movement is important requirement of life and this pandemic has influenced majorly on movement of every individual and major population had psychological and emotional issues as they stayed far away from families.
- 2) Religious and spirituality is the biggest strength of every human and being connected with religious places always makes life easy and more peaceful but this pandemic made humans being away from religious places and reduced focus on spirituality.
- 3) The level of psychological effects as anxiety, depression and stress has increased due to rapid rise in death, isolation and quarantine.
- 4) Low income, daily wage earners and below poverty line population found very difficult to fulfil even necessities as these group of population doesn't have much sources of income and largely earns and spends daily and pandemic has deeply impacted these group.
- 5) Fear is a very harmful factor and this pandemic made people suffer more due to fear of virus. Many humans who were suffering from minor disease were not in a position to visit the health centres and this led to death of many in spite of suffering from minor diseases.

Conclusion

Pandemic tends to teach valuable lessons and there is no bigger pandemic than Covid-19 in this century. Every individual, business, Government and creatures had some or other impact due to this pandemic. And humans are the biggest stakeholder of this globe and rightly human are the biggest impacted creatures. The lockdown has made us realise the importance of appreciating the things that really matters and people that we take for granted, but what it has taught us is the spirit of togetherness and giving a helping to others and helping where one can. It has come to show us that money and material things are not as important as human life and

caring for each other in times of need; it has shown how much greatness can come from working together and what it can do for a nation and community just by giving a helping where it is needed and wanted.

It has made some positive impact and negative impact as well. Many have understood the importance of being hygiene, healthy, what needs to be done, what needs to be avoided and on the negative side, many have lost their family members, few have lost jobs, financial scarcity have led to sufferings of millions. As we say that every challenge brings some good and bad. This pandemic is a lesson for humanity to be cautious about health, Food, Income, savings in the future.

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Spatio-Temporal Analysis of Development of Ghulewadi Towns in Ahmednagar District Using Remote Sensing and GIS Techniques

Dr. Dilip G. Mane¹ Mr. Thigale Sushil Deepak²

¹Head and Research Guide, Swami Vivekanand Mahaviyalaya, Shirur Taj, Maharashtra

²Research Student, Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra

Abstract

Word 'Development' is synonym to word improvement or positive change. 'Trend of Development' means the improvement took in the social, cultural or economic aspects and the physical development of settlement with respect to time and region. Development is not equal and static in the world, but it changes time to time and region to region with respect to natural resources, human resources and economic factors. Present study has focused decadal physical growth of Ghulewadi town in Ahmednagar District. The purpose of this paper is to identify how the development has taken place in the town with respect to time. Present study is based on secondary data. For this research satellite images are collected with distinguishable period with same season, which we can able to find out difference in temporal land use. Using Remote Sensing and GIS software techniques results are analyzed with satellite images supervise classification method.

Key Words: Development, Remote Sensing and GIS, Change detection, Georeferencing,

Introduction:

Anthropogenic activities are maximally concentrated over the urban area, therefore the land use and land cover change is dynamic phenomenon in urban region. Word 'Development' is synonym to word improvement or positive change. 'Trend of Development' means the improvement or positive growth has taken place in the social, cultural, economic or physical expansion of the settlement with respect to time. Horizontal physical growth is one of the major indicators to find out the development of the region. For this purpose land use change detection method has used. Land use means land occupied by human infrastructure and land use change detection means with respect to time changes occurred in human infrastructure.

Study Region:

For present study purpose Ghulewadi town is selected. Ghulewadi town is one of the major old settlements in Ahmednagar District. Physically Ghulewadi town has bounded from all sites by the Harishchandra Bala Ghat Ranges a spur of Sahyadri mountain chain. Ghulewadi town is situated at 900 m from mean sea level at Longitude of 74° 35" E and Latitude of 18° 30" N. It is located at left bank of Pravara river which originated 35 Km away from the town. Ghulewadi town is 110 Km away from Pune and 270 Km from Mumbai at South direction.

Aims and Objectives:

Major objective of present study is to find out the horizontal physical growth of towns in a particular decade.

- To find out land use change detection of towns
- To find the direction of physical growth
- Analyze the statistical values

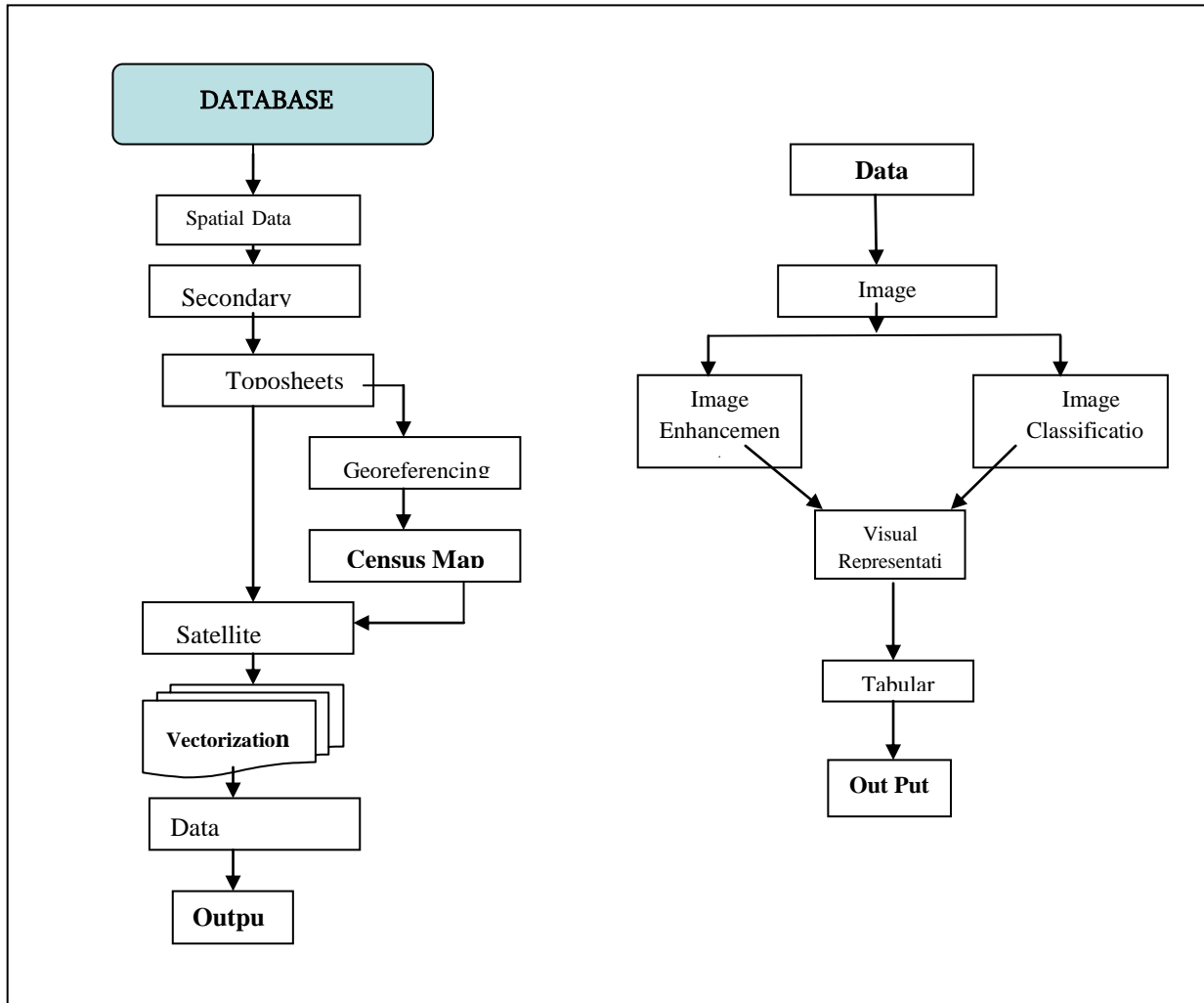
Data & Methodology:

Present study totally based on the secondary spatial data (Raster data). Some of the spatial information has collected from Survey of India (SOI), National Remote sensing Center (NRSC) some of the information has collected from Census of India.

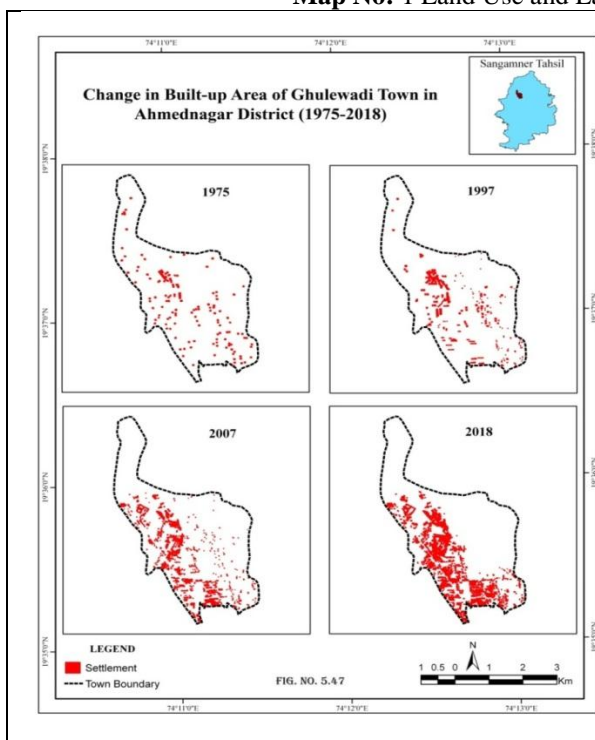
- **Data:-** 1. Toposheets (SOI) 2. LISS III and LISS IV Satellite Image (NRSC) 3. Open source LANDSAT Image (2011) 4. Tahsil maps with Village and Town Boundary (Census of India)
- **Software Used:-** 1. ESRI product ARC GIS (9.3 version) 2. Licca Geosystem Erdas (9.2 version)

A) Methodology:

For present study with the help of ERDAS 9.2 software Toposheets are georeferenced and the basic settlement information has collected through digitization with the help of Arc GIS 9.3 software. Georeferencing means assigning coordinate System or projection system to any analog information with the help of some known reference point. On the basis of georeferenced Toposheets the satellite images are georeferenced (ERDAS 9.2 software). After Georeferencing the Image Enhancement process are run over satellite images. Image Enhancement means the increasing visual interpretability of satellite image. After Image Enhancement with the help of ERDAS 9.2 software first Signature file generated and on the basis of signature file supervise classification process are run over satellite images. Signature files are records the average DN values (Digital Number Values) of the pixels in single clusters. A cluster means the selecting the bunch of pixels with the help of AOI (Area of Interest). Area of Interest means simply delineating the area of our interest or area of our study interest. After image classification accuracy assessment of classified image has done. Classified images (Raster) are open in Arc GIS 9.3 software and through the vectorization processes all data has convert into vector data format. Vector data has comes in polygon form through which the calculation of land use for each component becomes very simple. Lastly with the help of Arc GIS 9.3 final output maps are generated.



Map No: 1 Land Use and Land Cover of Ghulewadi Town (1



Data Analysis of Ghulewadi Town:

After generation of database the major work of image classification has started. There are two different ways to classify satellite images the first is unsupervised classification and another is supervised classification. In Supervised Image classification user has define own cluster or AOI on the basis of his knowledge. In present study supervised classification method has adopted to classify the satellite images to find out the physical growth of town. The output maps through the Toposheet, satellite images are shows as follows.

Interpretation:

Through above classified images it is clear that there are major changes have occurred in the horizontal physical development of the town. Comparative analysis between 1997 and 2007 shows specific trend of development towards the northward direction of the town. In 1997 to 2007 shows trend of development not only towards north but it also shows the overall development has taken place around the peripheral region of the town.

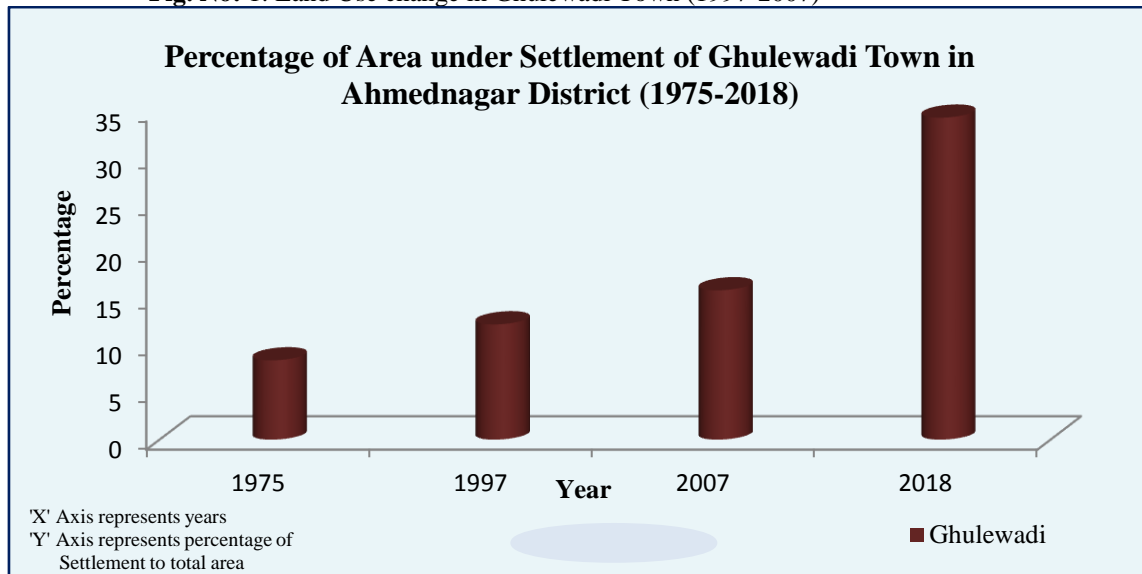
Source: SOI Toposheet 1975, IRS 1C/1D image 1997 and 2007, Google Earth Image 2018

Table No. 1: Percentage of Area and Settlement
 Growth of Ghulewadi in Ahmednagar District (1975-2018)

Sr. No	Percentage/Sett. Growth	1975	1997	2007	2018
01	Built-up Area (sq. km.)	02.54	03.70	04.79	10.33
02	Percentage	08.46	12.30	15.94	34.33
03	Settlement Growth		1975-1997	1997-2007	2007-2018
			31.19	22.78	53.57

Source: Classified Satellite Image

Fig. No: 1: Land Use change in Ghulewadi Town (1997-2007)



Source: Classified Satellite Image

Interpretation:

From above graph it is clear that the growth of settlement is from 2007 to 2018 is shows the major change in settlement and vegetation cover. The values are changed from 4.79 percent to 10.33 percent of settlement; it simply means the 10 percent area is comes under the new built up land. Through this it is clear that trend of development has started in Ghulewadi town is from 1997. Through the map of growth of town it is clear that the growth of town is Tri modal or in three the growth is towards north, south west and east direction.

Conclusion:

From above research it is clear that since 1975-2018 there are major changes has occurred in physical growth of Ghulewadi town. In 1975-1997 the settlement growth was 31.19, it becomes 22.78 and sudden hike has observed in 2007-2018 with 53.57 percent of built up, from which it is clear that the development of town is accelerated and it right time to proper town planning of Ghulewadi. Otherwise no one can stop haphazard growth of town towards north, south west and east direction.

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A Historical Study of Mahishasur Mardini at Pendur in Malvan Taluka

Dr. Maroti Poma Chavan

Kankavali College, Kankavali. Dist. Sindhudurg (M.S.)

The Sahyadri range, which runs parallel to the west coast of India, is called the 'Konkan Coastal Region'. Due to the Sahyadri Mountains spreading from south to North of Maharashtra, the natural division 'Konkan' was formed. The Sahyadri is the backbone of Maharashtra.¹ The region between the Arabian Sea to the west of Maharashtra and the Sahyadri Mountains to the east has been known as 'Aparanta' or 'Konkan'² since ancient times. A total of 11 Jain caves are found. Pendur is located 20 km from Sindhudurg (Oros) district. and 31 km from Kankavali city. It is located at a distance of 6 km from Kankavali to Malvan roads. The regional extension of Pendur village is 16° 04" north latitude to 73° 37" east longitude.³ A Mahishasur Mardini sculpture is found in a total of 20 sculptural remains under a Peepul tree at a distance in Pendur. The Konkan region was being annexed by Emperor Ashoka.⁴ It is mentioned in a carved inscription at Nalasopara. In ancient texts, Konkan has been mentioned since the 4th century B.C. King Krishna of the Rashtrakuta dynasty first conquered South Konkan and annexed it to his kingdom and appointed Sanfulla, the founder of the Shilahar branch of South Konkan, as the administrator of the province.⁵ The history of this branch is made available by three engraved inscriptions, 'Pattankudi' copperplate of the year 988 A.D. and 'Balipattan' copperplate of 1010 A.D.⁶ The Dhammiyaras of this dynasty conquered the South Konkan region adjacent to Goa and moved their capital to Kharepatan for administrative convenience. Pendur is located 66 km from Kharepatan, the capital of Shilahar. At a distance, there are a large number of temples and sculptural remains of the Shilahar family.

Objectives

Pendur in Malvan taluka is predominantly Jain and is famous for its ancient Ravalnath temple and Vetoba temple. The ancient relics of this area are mainly from the Southern Shilahar period. The predominance of Hindu, Jain, Shaivism, Vaishnavism, Shakta and Ganapathi religions and sects is felt in this area from the mention of the remains available here. Therefore, the study of the sculptures available here today is important for research.

1. To bring to light the heritage of historical development of Pendur in ancient times.
2. To study the female life of the time on the basis of the sculpture of Mahishasur Mardini .
3. To notice the various changes in the Saptamatika of the Shaivism sects in Hinduism.
4. To create awareness about sculptures and relics that witness social life.

Hypothesis

1. The ancient relics available at Pendur date back to the South Shilahar period.
2. Jain, Shaivite and Shakti sects are predominant in the area of Pendur.
3. The idol of Mahishasur Mardini is a testament to the art of sculpture.
4. The idol of Mahishasur Mardini is a symbol of the religion, society and women's life of that time.

Methods of research

For the present research, the information has been clarified by surveying the historical relics at Pendur and discussing with the senior citizens. This place is a collection of cultural traditions that still exist locally. After measuring and surveying the Mahishasur Mardini sculptures, photographs, maps and tables have been attached where necessary. Survey methods, direct observations, questionnaires, interviews and reference research methods have been used for the present writing. Also, the available literary tools and material evidence for the present writing have been evaluated.

Research tools

Primary and secondary tools have been used for the historical study of the subject presented. In the primary instrument, the sculptures of Mahishasur Mardini are based on the Shiva Purana and Devi Bhagavata Purana for the sculptural ornaments, weapons, seats, vehicles, garments, crowns and related stories. Apart from this, it is based on archeological reports, journals, gazetteers and dictionaries, history research journals and various articles and lastly a comprehensive list of reference books is given.

Mahishasur Mardini

The idol of Mahishasur Mardini at Pendur is placed on the ground. The sculptor has created this sculpture according to sculpture. Stone is a very good medium in terms of durability and its subject of examination from the point of view of geology is handled beautifully in the Naradiya Samhita.⁷ between 765 and 1024 A.D., the South Shilahar dynasty ruled at Kharepatan. Archaeological remains at Pendur indicate that a large number of

sculptures were made at this place during the reign of the Shilahar kings, which led to the spread of Shaivism, Shakti and Ganapathi sects. Shailaputri, Bramhacharini, Chitraghanta, Kushmanda, Skandamata, Katyayani, Kalratri, Mahagauri and Siddhida are the nine forms of the famous Mahishasur Mardini.⁸ In it, the goddess who destroys or defeats Mahishasura is called 'Durga' or 'Mahishasuramardini'.⁹ 'Mahishasura' was an asura (demon). He was drunk, rude and lustful. His father's name was Rambha. He was the king of demons. He loved the buffalo that lived in the water. Her mother's name was Mahishi. Rambha is the Mughal Mahishasur who was born from Mahishi to the palace of fire. Therefore, Mahishasura could take the form of buffalo or human whenever he wanted. The Sanskrit word 'Mahish' means buffalo.¹⁰ He worshiped Brahma and attained above them that no god or demon could possess him. He became very angry and started harassing the gods. He grabbed Indrapada. So the gods created the fort which is considered to be a form of Parvati. The goddess is also called 'Mahishasur Mardini' as it was performed by Goddess Durga.

'Bhagwati, O Shitikanthakutumbini Bhurikutumbini Bhurikrute.

Jai Jai is Mahishasur Mardini Ramyakpardini Shailsute.¹¹ Mahishasura had a large army and he sent to fight the goddess. The goddess defeated and killed all of them. After that, Mahishasura took many forms and started a great war with the Goddess. This war lasted for nine days. Eventually the goddess beheaded him in battle. Such information appears in the book 'Saptashati'.¹² The idol of Mahishasur Mardini found at Pendur is 32 inches long and 16 inches wide. The best stone is used for this idol. It is noticed that the sculpture is broken in three places. The cracks in the sculpture are clearly visible. The nearby stone at Pendur may have been used for making idols. According to sculptural scriptures, it is customary to show the severed head of a buffalo.¹³ Of course, this sculpture is the only important sculpture that shows the condition of the buffalo before it was slaughtered. This idol is quadrangular and the goddess has placed her left foot on the back of the buffalo.

1. Weapons

Weapons are the weapons shown in the sculptor's hand. Weapons like Vajra, Sword, Conch, Shield, Trishul, Ankush, Dhunashya Bana, Pash, Chakra, Arsa Dhvaj, Shakti, Akshamala, Danda, Padma, Ghanta, Panpatra, Parshu etc. Objects can be seen in different images.¹⁴ Mahishasur Mardini was created by many deities and she has received different weapons in her hands. Mahishasur Mardini has a total of four arms, with a conch in the upper left hand and a trident-ax in the right hand. It is customary to show the conch shell as a weapon in the male form and rarely in the female form.¹⁵ The trident is the weapon of Shiva, the male form and the trident in the hands of the lion goddess is shown in the center. She presses her left hand on the lower side of the goddess, puts her left foot on it, and throws it on the ground, while the sword in her right hand is inserted into the buffalo's neck.

2. Vehicles

Mahishasur Mardini's vehicle is a lion, which she got from the Himalayas.¹⁶ In this sculpture, a lion is shown near the left foot. In the initial sculpture, the lion was not obligatory, it was just standing nearby, but it can be seen with its paws facing the licks of the buffalo. The sculptors have beautifully shown that he took the form of many animals and human beings.

3. The crown

The practice of depicting crowns of different deities as separate deities became the norm. The crowns worn by human beings are called "Mukutpurush".¹⁸ Mahishasur Mardini wears a trophy crown on his head. The size of the crown in this statue is 6 inches long and 3 inches wide. It has a cone-shaped crown with three rounded peaks at the top. The apex of the statue is slightly sloping at the base of the head, and the sculptors have devoted their lives to embellishing it. It also has a triangular shape on all three sides. The radiance behind the head of this idol, the effect of the shape of the leaves is clearly felt in the posterior part.

4. Asana

The idol of Mahishasur Mardini is of 'Alidh' type of seat. In this asana, the idol is shown vertically and the left foot is shown on the back of the buffalo. This idol shows the goddess pressing her left foot on the buffalo's back. Mahishasur Mardini's left leg is seen in the form of a triangular seat. She is holding the trident of the upper right hand on the neck of the buffalo. The most ancient form is that of the demon goddess, who rises in the form of a buffalo, by pressing on his back and covering his neck.¹⁹ The goddess in this idol is eager to kill the buffalo.

5. Ornament

The use of ornaments on the hands, feet, ears, nose, head and neck has been prevalent since ancient times, as in the case of "Rup pahta Lochani". The ornaments depicted in this sculpture reveal the radiant primordial power and primordial power of the woman. The woman is a symbol of the invisible power of the deity. When you look at a woman wearing ornaments, reverence is created. The ears of this goddess are in the shape of a lamb and the earlobe is embedded in the ear hole. The necklace of beads around the neck is worn. Each of the four wrists of the idol has two bracelets on each side, and the side of the idol looks like a ring. Also, both the legs of this goddess are shown one on the lower part and one on the lower part of the knee. In this idol, the waist belt is clearly visible.

6. Clothing

In the garment, the goddess has a necklace like a necklace around her neck and a necklace of beads hanging from her waist. The right leg is in a straight line and the left leg is in a triangular position. The forest is adorned on both sides with a rhythmic cut. Soga (Muktadam or Urudam) is hanging up to the mouth of the buffalo in the midline of both legs. Beaded necklaces are clearly visible on the waistband. This idol is adorned with earrings, necklaces, beaded necklaces and cut ornaments.²⁰

The goddess is an adult and her shoulders are round and her face is clear and her eyes are wide open. The wide breasts of this pearl are similar to those of an adult female. The anger and seriousness on her face is consistent with the role she has taken on. Aesthetics, attractiveness is evident from this sculpture.

Research findings

The Shakta sect has its influence in this area through Mahishasur Mardini at Pendur. These sculptures belong to the Dakshina Shilahar family. The statue must have been made in the 9th century. The sculptural remains at Pendur seem to have been destroyed over time. Even today, the original form of the idol is on the verge of disappearing. There are cracks in this sculpture.

1. From the sculptures available at Pendur, the artistic, cultural traditions and transitions of the society of that time are important from the point of view of sculpture. 2. Sculptures reveal the costumes, hairstyles, customs, social life, femininity of the time. 3. The Mahishasur Mardini sculptures at Pendur have fallen into disrepair and are a great historical heritage of the South Shilahar period in the Konkan. 4. The available sculptures at Pendur need to be preserved. Although this work belongs to the Archaeological Survey of India, it must be done by the citizens of the respective villages. Public participation is important for this.

Research recommendations

1. The civic and archeological department of the village should make efforts to preserve and nurture the temples and historical relics available at the local level. 2. Arrangements should be made to place the sculptures in a suitable local place to stop the fall. 3. Sculptures should not be dumped in rivers, wells and other places. It should be collected. 4. In case of demolition of sculptural remains, the sculpture should be repaired and installed at a suitable place without being used as a stone in construction or handed over to the Archaeological Department. 5. The Department of Archeology and other historians should conduct research on the weapons and ornaments of the sculptures available at Pendur. 6. The original existence should not be destroyed by painting and burying the locally available historical sculptures. Let them remain as they are and protect and preserve them. Such an appeal should be made. 7. To keep the available sculptural relics at Pendur in a safe place, the government should construct a historic hall and building in Sindhudurg district.

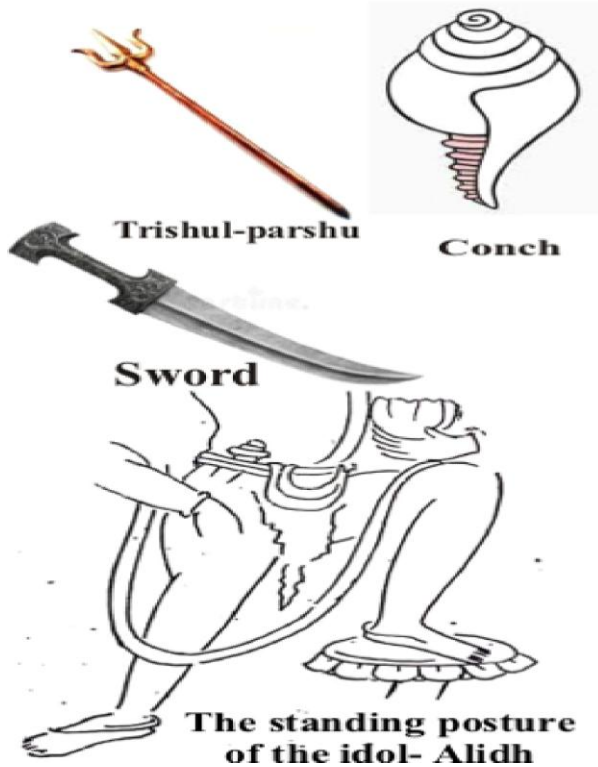
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"Geographical location of Pendur in Malvan taluka"



Statue of Mahishasur Mardini at Pendur

The 'Gully-nization' in Indian Desi Rap Videos The usage of 'Gully' in the rap video of Indian Desi Rapper after the release of "Mere Gully Mein" rap song.

Dr. Yatindra Ingle

Usha Pravin Gandhi College of Arts Science and Commerce

Abstract

Through a film's success comes the storyline's impact on the audience's social settings (Kim, 2018). Similarly, the Bollywood film 'Gully Boy' attracted an audience who began adhering to the film's cult of 'Hip-Hop' and creating rap videos. These rap videos all had one thing in common: the 'Gully' atmosphere. The aim of this analysis is to examine the use of 'Gully' as the setting for a rap video and the adaptation of the video to the culture and context of Indian rappers.

Introduction

Gully Boy (2019), directed by Zoya Akhtar, is essentially the story of Mumbai-based rappers Divine and Naezy. It features a cover version of a Divine and Naezy music video that borrows from the visual style of the "real." Gully Boy is inextricably linked to the mainstream culture and the concept of legitimacy. In the other hand, it alludes to an imagined space in which individuals can openly interact with embodied performances of their cultural capital. Thus, Gully Boy's repurposing of Divine and Naezy's music video, as well as his appropriation of songs by many other rappers, allows for an examination of both the backgrounds and politics that threaten seeping out through the cracks of such an articulation, as well as the spaces and communities created through this phenomenon (Kulkarni, 2020). Hip-hop came into the mainstream because of GullyBoy's commercial and critical success, which were overlooked. One year after GullyBoy's debut, Giselle, who had given praise to Singh's performance, criticized the implications of hip-main stream in mainstream movies. It caused Bollywood filmmakers and media to become aware of India's underground Hip-Hop resources, resulting in a surge in film production there (Cardozo, 2019). This dissertation examines the mechanisms and logics by which Rap has found its way into different and international economic markets, questioning and expanding the Rap "canon" identifies the number of forces that have supported or impeded Rap's growth It additionally explores the emergence of spatial communication in Rap and Hip-Hop. It highlights spatial considerations and elevating locations to their prominence in the genre. Other hip media, such as music videos, "ghetto" music, and cinema, are researched for their role in the propagation of the cultural values of Hip-Hop (Foreman, 1997). *Gully Boy* showcases the different worlds Murad inhabits: the slums where he lives; the underground hip-hop and rap scene where he realises his ambitions (Bhattacharya, 2019). Gully Boy (2019), directed by Zoya Akhtar, demonstrates the reflexive use of artificially created sets and media formats such as music videos, animated histories, and reality television to initiate an articulated form of cartography. In Gully Boy, Murad Sheikh (Ranveer Singh), a young man from Dharavi, aspires to be a rapper. The story is based on the lives of real-life rappers Naezy and Divine, who have contributed to the soundtrack. The team decided to capture Murad's life, complete with his claustrophobic home, narrow alleys, exposed electric cables, dilapidated homes, tangled markets, and a sea of people visible at all hours of the day. This collection included Murad's residence and the congested streets. In a sequence in which Murad and his coach, MC Sher, film a music video (Meri Gully Mein), we see how the camerawork and editing work in tandem with the action of the bodies as the pair express their feelings (Mazumdar, 2019). Not just hiphop music, but the film seemed to introduce the 'Gully' of Mumbai, which has been cinematographed in rap songs, spawning the 'Gully Rap' video atmosphere of Indian Hip Hop. The researcher analyzes five rap songs released after the release of the gully boy film, focusing on the videos and the use of gullies as performing spaces in the videos.

Research Methodology

Literature Review

The Hood Comes First explores the fact that rap music and hip-hop are addressing the social and spatial separation of urban communities as a part of urban culture. Murray Forman explores all musical articulations of the terms "ghetto," and "inner-city," in addition to other musical outlets such as radio, film, and the 'hood. Forman explores the dynamics of race, academic, organizational, and "youthful" perspectives. Race, ethnicity, and national origin are redefined, which leads to the development of the "the 'hood," an economic and cultural segment that have become central to hip-hop ideologies. It further explores the mechanisms of hip hop that enable it to be disseminated to foreign markets in music and culture industries (Forman, 2002)

It defines the influence of mainstream culture in two different ways on rap artists. It addresses the way in which this context being successful can blend with the ordinary, and how you can focus on the exceptional as well. Also, Mr. Carter proposes to think of hip-hop as a political, as well as well as an ethical necessity, bringing attention to marginalized communities and locations like the "neighborhood" (David Sköld, 2007)

This research explores the post-revolutionary position of Tunisia's social structure. Prior to the revolution, the introduction of the Ben Ali dictatorship, Tunisia's culture was mostly driven by the middle class; now, that it has ended, people in the country community discern different lifestyles, language choices, spending habits, and beliefs have resurfaced. The official story ostracized neighborhoods, while the unofficial bias increased them. Following the uprising, some of the hip-hop communities began to sing about their tough situations and conditions while glorifying the streets where they came from. Due to the unclear social narratives in Tunisia, hip-hop artists found fresh respect for the country's most downtrodden industries. And at the same time, by telling the hoods' stories, real life can become a narrator in Tunisia Reimagining social narratives did not improve the conditions of deprived children's lives (Barone, 2019). Murray Forman demonstrates convincingly in the 'Hood Comes First: Race, Space, and Place in Rap and Hip-Hop, where he examines the articulation of this triad in rap and hip-hop discourse, how rap music and satellite cultural practices and expressive productions (breakdancing, graffiti) are the products of a complex sociohistorical process. By focusing on rap and hip-hop's emphasis on what Forman refers to as the "extreme local," a refinement of the spatial scale that corresponds to French theorist Jean François Lyotard's (xvii) postmodern shift from master narrative / grande histoire to micro narrative / petite histoire, Forman illuminates the recurrence of place references in rap lyrics and videos. For example, his treatment of Will Smith's video "Freakin' it" demonstrates how the production is replete with references to Philadelphia's cultural environment (its basketball team, architectural landmarks) designed to draw viewers' attention to the scenery and urban geography that serve as the rapper's "home".

Using earlier scholarly observations on rap and hip-hop (Stewart, 2005) and the work of cultural theorists (Appadura, 1990), Forman examines the geocultural and spatial origins of the genre's developmental trajectory and analyzes the evolution of a distinctive spatial discourse within rap from an appropriately theoretically conceived angle. He illustrates, for example, how rap records grappling with socio-political problems or spatially focused topics (growing up in impoverished communities, drug-related issues...), which came to be known as "message rap," "knowledge rap," or "fact rap," was indebted to Grandmaster Flash and the Furious Five's 1982 album "The Message," which moved rap music toward incisive analytical material. Forman examines the connotations and implications of discursively constructed "space-myths" associated with a "ghettocentric" sensibility, such as "inner city," "ghetto," and "hood," and demonstrates how they epitomize "ghettocentric" selves, supported by Stuart Hall and Paul Gilroy's examination of the reactionary and neoliberal discursive project that criminalizes a segment of African-American youth. At the heart of Forman's review is a thorough examination of the various milestones in the development of rap music as an enterprise, from its origins to the breakout effort that elevated it to a mass audience through a phase Elizabeth Blair refers to as "transfunctionalism," which is associated with a dilution of its distinct cultural aesthetic. By providing insightful perspectives that complement current research on the history of this genre, such as William Eric Perkins' *Droppin' Science* (Perkins, 1996), Mark Costello and David Foster Wallace's (Costello, 1990) *Signifying Rappers*, and Jon Michael Spencer's (Spencer, 1991) *The Emergency of Black and the Emergence of Rap*, Forman demonstrates his experience in communication research. As a result, he examines the role of the hip-hop press and hip-hop cinema in the music's mass media dissemination in a novel way. (Murray Forman, 2004)

Research Methodology

The researcher examined five rap video songs and their settings, including filming locations, that were released after the release of the *Gully Boy* film. These songs were chosen based on their viewership on the social media site YouTube, which exceeds ten thousand. The viewership here demonstrates the rap video's scope and success. To analyze these videos, the content analysis approach was used.

Findings

While analyzing the videos, it was found that there had been similarities in the setting and background of the rap video songs of artists when compared with the title track of *Gully Boy* Movie "Mere gully mein". The way the movie's rap song had been cinematographed in the same way the upcoming rappers are doing.

● The 'Gully'



The song "Mere gully mein" begins with Murad (Ranveer Singh) and MC Sher (Siddhant Chaturvedi) marching and rapping alongside the gully.

The song "Mere gully mein" begins with Murad (Ranveer Singh) and MC Sher (Siddhant Chaturvedi) marching and rapping alongside the gully.

● WHAT OTHER RAP VIDEOS HAVE AS THEIR OPENING SHOT?



The same phenomenon has been observed in other rap video tracks. In his rap video for the song "Mere Bhailog," rapper 3star Sid uses a similar setting in which he holds a music boombox and steps through the gullies and begins to rap.

The same can be seen in Avvruti's song "Naya Zamana," where the rappers play alongside dancers in the gullies.



The same phenomenon has been observed in other rap video tracks. In his rap video for the song "Mere Bhailog," rapper 3star Sid uses a similar setting in which he holds a music boombox and steps through the gullies and begins to rap.

● THE ASPECT OF BELONGINGNESS TO "GULLY" IN THE STUDY




The rapper Kaam Bhari's song "White Collar" features a large hoarding of the gully's names and stands alongside rapping at a fish market in the rap video. Visually, this fish market is heavily inhabited with slums and gullies.

The same can be seen in Avvruti's song "Naya Zamana," where the rappers play alongside dancers in the gullies. The rapper Kaam Bhari's song "White Collar" features a large hoarding of the gully's names and stands alongside rapping at a fish market in the rap video. Visually, this fish market is heavily inhabited with slums and gullies. Additionally, the whole song is set against a backdrop of gullies and the people who live in them. These characters in the song reflect the ghetto, specifically the inhabitants of the gully. Similarly, in 3star Sid's album, he is surrounded by the gully's locales and becomes a part of the song as a whole. Similarly, in another single,


"Vishay Hard," Sid is seen representing the hood through visual elements of the gully, much like the movie song.

● HOW DID THE RAP VIDEOS POTRAY THE PEOPLE OF GULLY?



The same has been visualized in Kaam Bhari's song wherein he has been showing the people of the Gully dancing with him.


Similarly, in 3star Sid's album, he is surrounded by the gully's locales and becomes a part of the song as a whole. Similarly, in another single, "Vishay Hard," Sid is seen representing the hood through visual elements of the gully, much like the movie song.



The same is true for Avruti's and Kaam Bhari's other rap video tracks.


MC Sher is also seen tapping and walking along small gullies in another scene from the music video. The three video songs are eerily similar.

● WHAT OTHER RAP VIDEOS HAVE AS THEIR OPENING SHOT?



The same can be seen in Avvruti's song "Naya Zamana," where the rappers play alongside dancers in the gullies.

The same phenomenon has been observed in other rap video tracks. In his rap video for the song "Mere Bhailog," rapper 3star Sid uses a similar setting in which he holds a music boombox and steps through the gullies and begins to rap.



The film song also has a cinematic element in which the actors climb up gullies and sing, as seen in Sid's "Vishay Hard" song.. The backdrop of "Mere Gully Mein" depicts a slum or underdeveloped city, which serves as their depiction of the term "gully" in all three rap videos analyzed by the researcher. The people in the background of the film song either represent the gully or are depicted as its inhabitants. The rap videos we examined do the same thing and adhere to the video's format.

● WHAT IS THE GULLY BACKDROP SETTING IN THE RAP VIDEO?



SIMILARLY, IN BETWEEN THE FILM'S SONGS, THE ACTORS HAVE BEEN SEEN POSING IN THE GULLY SETTING, AND AAVRUTI'S RAP VIDEO FEATURES THE SAME IMAGES.

THE BACKDROP OF "MERE GULLY MEIN" DEPICTS A SLUM OR UNDERDEVELOPED CITY, WHICH SERVES AS THEIR DEPICTION OF THE TERM "GULLY"



Similarly, in between the film's songs, the actors have been seen posing in the gully setting, and Aavruti's rap video features the same images.

Conclusion and observation

Thus, as Forman examined the connotations and implications of discursively constructed "space-myths" associated with a "ghettocentric" sensibility, such as "inner city", "ghetto", and "hood", and demonstrates how they epitomize "ghettocentric" sensibility (Forman, 2002) the movie songs to the rap videos of other rap artists reveals that the Gully Boy film's title track Mere Gully Mein has adapted the performance space, and their songs often reflect their 'hoods,' which are the gully's they reside in or wish to depict, similar to the film songs' cinematography.

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1. Internate Sources

Economic Development in India: A Review

Dr. S. G. Gavade

Assistant Professor, Department of Economics, Raje Ramrao Mahavidyalaya, Jath, District Sangli

Introduction:

Economic development is related to an increase in output coupled with improvement in the social and political welfare of people within a country. Indian economy is expanding since independence. There is a need of accelerating development reap benefits of globalisation. With changing dynamics in global economy and technological advancement there is need of emphasising on various policy initiatives. Reforms are required from all sectors of the economy. Present paper emphasises on the economic development in India with special reference to agriculture, industry, financial and other sectors. It reviews economic development in India.

Development in India

Sustainable development initiatives in India are vital in India's development. The SDGs of gender equality, reduction in inequality, peace and justice, and responsible consumption and production are important. Globalization accelerates economic growth in India. Acceleration in capitalization and inflation, as a proxy for aggregate demand, are positively linked to economic growth in India (Kandil et al., 2017). India has to achieve advantages of globalisation to accelerated economic development. Urbanisation is another vital factor in socio-economic development. Urbanization is positively related with the level of socio-economic development and negatively related with the rate of growth of urban population (Markandey, 1992). There is a dynamic co-relationship among industrial sector contribution and agricultural sector contribution and economic development. In the long run, one percent change in industrial sector contribution causes an increase of 3.42 percent in the economic growth and an increase of 1.12 percent in the primary sector contribution, while in the short run industrial and service sector contributions showed significant impact on economic development and agriculture sector. The changing composition of sector contribution is going to be an important activity for the policymakers to monitor and control where the technology and integration of sectors play a significant role in economic development (Solanki et al., 2020). In Northern and Central regions of India the level of industrial development does not significantly influence the agricultural and overall socio-economic development while agricultural development influences overall socio-economic development (Ohlan, 2013). Socio-economic development and its challenges with suggestions have been studied with following points.

Industrial Sector

Overall, the small industry sector has done quite well and has enabled the country to achieve considerable industrial growth and diversification. Small scale industries are less capital intensive and suit the Indian economic environment with scarce resources and large population base (Uma, 2013). An economy is composed of produces using the structure of a wide range of enterprises like agriculture, service, building, fabricating, and so on. These enterprises give such a significant number of advantages to the economy, for example, work age, production of goods and services, equivalent salary conveyance in the entire economy. Service segment contributes 60% of the Indian GDP while agriculture gives around 14% of GDP (Elizabethrani, 2019). Industries contribute in economic development of India. Industrialisation is an effective means for solving the problems of economic and social progress in developing countries of the world. Gunwar Myrdal has rightly described the relationship of industrialization to economic development (Uma, 2013). Entrepreneurship is indispensable to accelerate the industrial growth. Small and Medium enterprises are an effective means for the development of entrepreneurship. This sector is a only solution to the problems of poverty, insecurity, unemployment, over population in the modern world (Uma, 2013). Domestic investment, foreign capital along with economic growth have a significant impact on economic development in India in long run. It suggests that the national developmental policy of India should focus on the productive utilization of both domestic and foreign capital along with it should give emphasis on effective transformation of growth benefits towards development process (Sahoo & Sethi, 2017).

Agricultural Sector Development

The Indian agricultural sector accounts for 13.9% of India's gross domestic product (GDP) and employs just a little less than 54.6% of the country's workforce (Wagh & Dongre, 2016). Agriculture plays a central role in the economic development of a country. There are various challenges that affect the Indian economy such as food security, soil quality deterioration, water scarcity, lack of proper food storage structures, land degradation etc. Recent pandemic situation has affected the agricultural sectors, will leads to the major changes in the future, which needs to be discussed and planned to meet the future requirements (Selvan et al., 2021). The Indian agriculture witnessed a major technological breakthrough with the Green Revolution during 1970s. The food grain production grew substantially and the country led its way to self-sufficiency. It was a watershed moment for the Indian agricultural sector (Kumar, 2019). In the context of climate change, micro-irrigation (MI; drip and sprinkler systems) has the potential to address problems like water scarcity and emission of greenhouse gases from agriculture. Despite heavy investments, MI coverage is less than 15% of the potential (Suresh & Samuel, 2020). This may leads to agricultural development in India.

Population and Demographic Dividend

Population is a significant resource of any economy. Population plays an important role in economic growth, development and social inclusion (Chaurasia, 2019). India has demographic dividend which can be used for economic development. In the context of human development in India there is significant increase in educational attainment in India in the period 2001-2011 across the three levels of education ? primary, secondary, and higher and skill-providing education. It is interesting to observe a quantum increase in persons acquiring higher and skill based education. It is emphasised that higher education and skills are important in improving the economic performance of the States of India (Kamdar, 2017).

Rural Infrastructure and Development

Improved physical and social infrastructure and livelihood opportunities in rural areas enhance agricultural productivity and output, improve literacy and life expectancy, and reduce poverty and infant mortality. Despite several public initiatives for infrastructure development in rural India, facilities continue to be poor and progress has been mostly unsatisfactory with differential performance across states. The government should prioritise additional investments in electricity, roads, irrigation, housing and telecommunications to enhance overall well-being (Ghosh, 2017).

Tourism sector

The importance of tourism as an instrument for revenue generation, employment creation and fostering economic growth is well established across the globe. Globally, tourism has been recognised as the largest service sector in terms of revenue generation and foreign exchange earnings. The sector also plays a crucial role in attaining the macroeconomic goal of growth with equity (Mishra & Verma, 2017). Tourism has become the world's third-largest export industry after fuels and chemicals, and ahead of food and automotive products. From last few years, there has been a great surge in international tourism, culminates to 7% share of World's total exports in 2016 (Rasool et al., 2021). Tourism, economic growth and financial development are cointegrated. It is shown that the inbound tourism spurs economic growth in India both in long-run and short-run. There is presence of a long-run one-way Granger-causation running from tourism to economic growth. It is suggested that policies for attracting more international tourists should be promoted (Ohlan, 2017). The tourism has the potential to positively influence the sustainable development of the country. Therefore, it is imperative to chalk out appropriate plans and policies for promoting tourism as a means of achieving sustainable development and unending peace (Mishra & Verma, 2017).

Financial Sector

There is a robust long-run relationship between financial development, economic growth, inequality and poverty. Financial development and economic growth help in poverty reduction in India, whereas income inequality and inflation aggravate poverty. It is recommended that policies geared toward increasing financial development and economic growth should be adopted to reduce the high level of poverty and inequality currently prevailing in India (Sehrawat & Giri, 2018). Banks have always played an important position in the country's economy. They play a decisive role in the development of the industry and trade. They are acting not only as the custodian of the wealth of the country but also as resources of the country, which are necessary for the economic development of a nation. The total numbers of branches of commercial banks are more than 50,000 and the regional rural banks are approximately 8,000 covering 280 districts in the country (Kalpana & Vasantaha Rao, 2017). Commercial banks are providing finance to all sectors of the economy including agriculture, industry, MSMEs, service and trade etc. Commercial banks are the most effective way to generate the credit flow of money in markets. There is acute shortage of capital in India. The banks can play an important role in promoting capital formation, in controlling speculation in maintaining a balance between requirements and availabilities and in direct physical resources into desired channels. Commercial banks play an important and active role in the economic development of a country, if the banking system in a country is effective, efficient and disciplined; it brings about a rapid growth in the various sectors of the economy (Saini & Sindhu, 2014).

Financial Inclusion and SHGs

One of the many alternative strategies for attaining inclusive growth is through developing an inclusive financial system. Financial inclusion is instrumental to facilitate economic transaction, manage day-to-day resources, protect against vulnerability, improve quality of life, make productivity-enhancing investments and leverage assets (Choudhury, 2018). According to Choudhari (2018) in the Indian agricultural scenario, financial inclusion is faced by various impediments. Poverty in India may be reduced by financial inclusion and financial accessibility to the poor. For a fast growing economy financial sector development may have far-reaching implications for inclusive growth (Sehrawat & Giri, 2016).

Adequate micro financing to the SHGs and developing entrepreneurship among its members may help in achieving several targets like poverty alleviation, women empowerment, employment generation, homogeneous development etc. If planned properly, the SHGs can become an instrument for all round and all-inclusive development of India or any other similarly placed developing country (Pant, 2021). According to Pant (2021) SHGs may also play an import role in the endeavour of India to become a five trillion economy, to achieve self-sustainability and to attain the Sustainable Development Goals (Pant, 2021). Thousands of the poor

and the marginalized population in India are building their lives, their families and their society through Self help groups . Self-help Groups have been playing considerable role in training of Swarozgaris, infrastructure development, marketing and technology support, communication level of members, self confidence among members, change in family violence, frequency of interaction with outsiders, change in the saving pattern of SHG members, change in the cumulative saving pattern of SHG members per month, involvement in politics, achieving social harmony, achieving social justice, involvement in community action, sustainable quality and accountability, equity within SHGs, defaults and recoveries, and sustainability -financial value (Sundaram, 2012).

Information and Communication Technology

The improvement of economic activity can be brought by improving capacity in terms of enhancing access to information, while also the technical nature of economic activities required that the knowledge of users are constantly updated which can be achieved through their enhanced information seeking behavior by the use of ICTs. Moreover, use of ICTs lead to innovation which further lead to the enhancement of economic growth and human resource development ("Role of Information and Communication Technology in Economic Development of India," 2019). Many ICT-based initiatives have taken place over the last decade and some positive effects have resulted. However, the beneficiaries are almost always not the poorest or most disadvantaged groups, it is hard to scale up initiatives to have effects throughout India, and the need for attitudinal and institutional change remains a fundamental problem. It is argued that ICTs should not be seen as 'silver bullets' for development but neither are they irrelevant. Rather, they are potentially important contributors towards development in India but only through their integration in wider sociotechnical interventions (Walsham, 2010).

Conclusion:

In the era of globalisation, comprehensive multi sector government initiatives are requires by the government. This is the need of the time. Present policy initiatives are inadequate for development goals of India. Therefore emphasise should be given on effectiveness of policy options. Growth is expected from not only industry and service sector but also social sector. Emphasise should be given on rural development and removing regional inequalities.

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The Unutilized Front- A Case Study of Chapatali Village- Alipurduar, West Bengal

Arunima Bhattacharya

Assistant Professor, Department of Geography, Vidyasagar College for Women Kolkata

Abstract

Women education and participation is vital for economic development because it can directly influence on entrepreneurship, productivity growth and then increases employment opportunities and women empowerment. This paper analyses the education and work participation of women in Chapatali village of Alipurduar District, West Bengal. The paper harps on the underutilization of the female workforce and the measures to direct them towards empowerment and the overall economic development of the region.

Keywords: *women empowerment, workforce, economic development, growth, human resource.*

Introduction

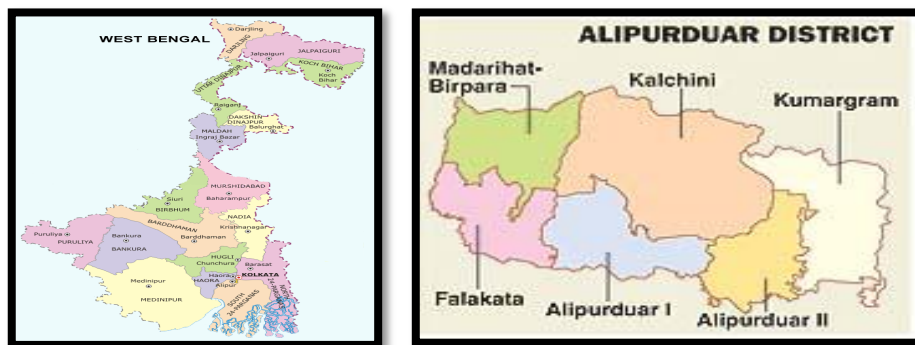
Human capital is the most crucial productive resource that can provide a long-lasting advantage to a country. Human Capital, in most of the times, is used in accordance with human resource. In 1910s and 1920s workers were seen as a potential resource and thus the term human resource evoked. Human resources play an important part in developing and making a country. Women education and participation is vital for economic development because it can directly influence on entrepreneurship, productivity growth and then increases employment opportunities and women empowerment. However, being a poverty-striven and rural based economy, there are several problems faced by the inhabitants which is reflected in the low work participation of rural women. This paper analyses the education and work participation of women in Chapatali village of Alipurduar District, West Bengal. This also highlights the human resources being underutilized and the measures to revert them back to economic development.

Rationale of the Study

Women empowerment has been the most talked about topic of the present century. The overall development of living conditions of women of our country can truly be sought for if small steps are taken towards evoking the consciousness of women of the innumerable rural areas of our country.

Study Area

Situated on the east bank of the Kaljani river on the foothills of the Himalayas, the study area is located in the Dooars region is known for its forest, wildlife, timber and scenic beauty, since the colonial period. The study area is Chapatali village mouza (J L No-43) in Parorpar gram panchayat in Alipurduar I block of Alipurduar District in the state of West Bengal, India.



Objective:

The main objectives of the study are:

- to study the socio economic and cultural landscape of the region,
- to examine the present levels of development and
- the measures to utilize women workforce appropriately for further development.

Methodology:

This consisted of collection of both primary and secondary information on physical and socio-economic aspect from Chapatali village in Parorpar gram panchayat. The primary data was collected between January and March, 2018 by the method of random sampling. Secondary data was also collected from Census and other books and journals relating to the area under study. The data gathered has been analysed with the help of representative maps and various cartographic techniques.

Analysis of Data

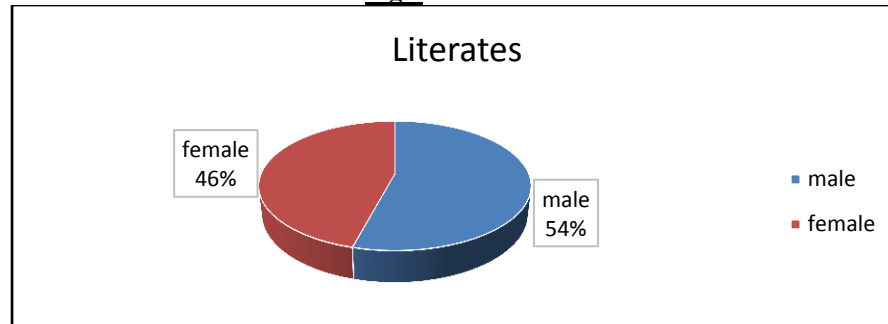
The study area Chapatali village has a total population of 950 of which 518 is the male population and 432 is the female population. The total number of households in the village is 225 of which we have surveyed 194 households that covers nearly 86% of the area. This can be supposed to give a clear picture of the society over the study area.

Table 1: Number of Literates

	Male	Female
Literates	350 (74%)	296 (78%)
Illiterates	123 (26%)	85(22%)
Total	473	381

Source: Primary Data collected at site

Fig 1



Source: Primary Data collected at site

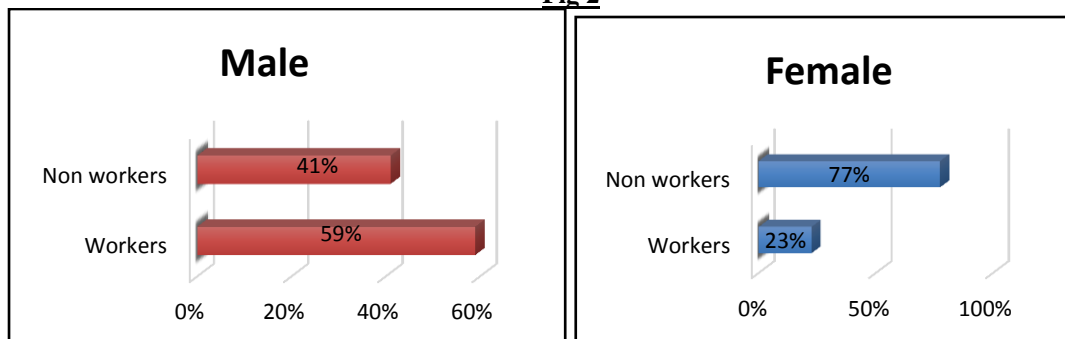
Education leads to participation in the labour force which is a strong indicator of women empowerment. The total male literates are 74% while the total female literates are 78% out of their respective total female and male population. The institutions present here does not seem to be sufficient for the population. Women have to move out for higher education. The social and religious taboos are still prevalent in these societies which add up in the low level of higher education in women. Thus, it is difficult for women to move out of the village and go to the city for further education. So, the level of education in the higher levels is really low. On the socio-economic front, the picture the village presents in nearly gloomy. The economic structure and women workforce computations needed to highlight on the work participation and type of occupation of the female residents over there.

Table 2: Distribution of Working Population

	Male	Female
Workers	279(59%)	86(23%)
Non workers	194(41%)	295(77%)

Source: Primary Data collected at site

Fig 2



Source: Primary Data collected at site

There is a great disparity in the working population of the village. As evident from the table, the percentage of non-worker female is 77% which is very high. This signifies that the female population is only confined to household chores. This negligibly contributes to the economic development of the region.

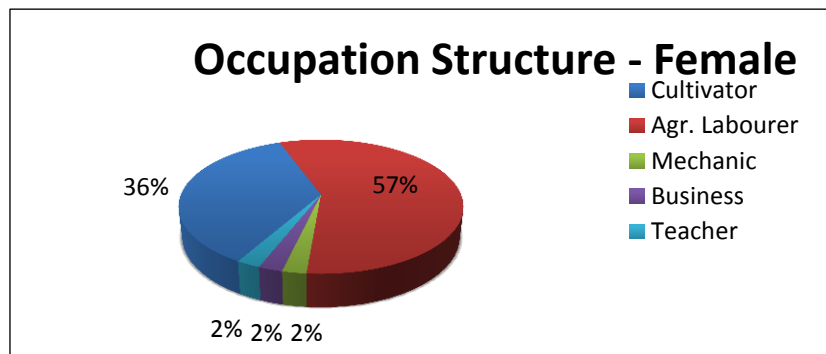
Table 3: Occupation Structure-Female

Occupation Type	Females Engaged
Cultivator	31(36%)
Agricultural Labourer	49(57%)
Mechanic	2(2%)

Business	2(2%)
Teacher	2(2%)
Total	86

Source: Primary Data collected at site

Fig 3



Source: Primary Data collected at site

Out of the total female working population about 90% are engaged in cultivation including the agricultural labourers, cultivators and marginal workers. This signifies that the economy is mostly agrarian. Other services do not show a prominent site. This suggests the spread of education among the newer generation and a tendency to move out of the eternal occupation has not been the case here. The highest percentage of population is engaged as agricultural labourers which signify that the poor mass does not possess a land of their own. But overall, the participation of women workers is feeble.

Discussion

The above tables and the graphs show that the women work force in the village is very low despite the stable age sex composition. The number of women in the village is quite equal to the number of men. But their participation in work is not that good. A huge amount of human resource remains unutilized. Women get married younger than men do. Safety of women travelling alone is a major concern here – the schools and colleges being located far away from the village. Therefore, the topmost reasons for low education levels are lack of interest in studies, economic condition of the parents, migration of family and to help the family in domestic work. Rural women do have opportunities to serve the service sectors in urban areas. But the lack of decent housing, safety measures, lack of transportation at proper times are some major hindrances that bind them back to their native places. The primary survey showed that a feeling of guilt or selfishness is observed in the attitudes of some women when they put their career interests first. However, while the women tend to be excluded from the village decision-making process by traditional male leaders, there is also inequality among the women themselves.

Recommendations

There are certain measures that can be undertaken to change the village scenario-

- The lack of access to higher education has put women in the back foot. The establishment of proper educational institutions for the villagers to attain higher education is pretty much needed.
- Accessibility is a major constraint here. The most common form of transport here is cycle owned by each and every family. However, women are debarred from using them in public.
- Community awareness services and workshops should be organised to make them participate in the economic activities that count.
- Proper and regular monitoring of literacy and employment programmes must be done.

Conclusion

The gender disparity has become a hurdle in the economic development of the village. A large part of the human resource remains unutilised in the village as females do not generate any income; they are confined to household activities. Entrenched hierarchical social division, and the lack of correlation between educational attainments and job opportunities are the greatest hindrances which strongly influences the economy of the region. Proper corrective measures can create a large and growing labour force, which is expected to deliver spin-offs in terms of growth and prosperity through a number of routes. Utilizing the resource of women work force is a silver bullet for empowering women and has tremendous multiplying effects for families, communities, and societies as a whole.

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Study of Butterfly Diversity of Belapur Forest, Cbd-Belapur, Thane, Maharashtra, India.

Utkarsha Chavan¹, Umesh Avadootha², Sudhir Metkari³ and Sana Khan¹

¹Department of Zoology, Bhavan's Hazarimal Somani College of Arts & Science, Mumbai, India; email:

²Department of Science, Bombay Scottish School, Mumbai, India.

³Mayakka Gold Refinery, Zaveri Bazar, Mumbai, India.

Abstract:

Belapur Forest region (19°02'15.10"N & 72°02'32.65"E) of CBD-Belapur, District Thane, Maharashtra, India has rich faunal diversity, which primarily includes insects, arachnids, amphibians, reptiles, birds and mammals. Butterflies along with their aesthetic presence and natural pollinators are one of the best indicators of environmental richness. 57 species representing 49 genera of 5 families of butterflies have been recorded. Family Lycaenidae has maximum number of species with 19 species and Nymphalidae has 17 species. Lycaenidae butterflies act as indicator species, with fairly rich environmental conditions in the area. Most of the flora of the area is favourable for Lycaenidae, Nymphalidae and Pieridae to thrive. However, butterflies which are dependent on some species of the plants found in this area have not been recorded in the present study.

Keywords: *Butterflies, Diversity, Hesperidae, Lycaenidae, Nymphalidae, Papilionidae, Pieridae.*

Introduction:

Butterflies are one of the most conspicuous and colourful insects (Van Swaay, & Warren, 2012) and all species have been given protection under Indian Wildlife Protection Act from Schedule 1 to 4 (Kunte, 2008). These insects are excellent natural pollinators (Gupta & Mondal, 2005) and are regarded as eco-indicators as they are very sensitive to climatic and environmental changes (Gilbert & Singer, 1975, Rosario, 2006, Subhashini & Antoney, 2020). Each region represents a particular indicator species which demonstrates climate change, habitat disruption, forests, woodland, grassland, wetland, etc., (Maes & Dyck, 2005). Despite their sensitivity towards environmental changes there are certain drawbacks for butterflies as ecological indicators as they are mobile and respond to climatic changes very easily (Shaikh & Chavan, 2017). Butterfly diversity is more at lower elevations than the higher elevations (Lien, 2013, Arya et al, 2020).

Methods and Materials:

The present study area Belapur Forest region (19°02'15.10"N & 72°02'32.65"E) of CBD-Belapur, District Thane, Maharashtra, India (Fig 1) was surveyed for butterfly diversity in between 10 a.m. to 3 p.m. The study area comprises vegetation of semi-deciduous forest, perennial water body, perennial streams running through forest, and gourd and rice cultivations by locals. Species were recorded and photographed (Olympus SP-550UZ, Canon 1200D, Nikon Coolpix P 900) whenever possible without moving or disturbing the butterflies (Fig. 2). Butterfly identification was done by using field guides namely A Guide to the Butterflies of Western Ghats (India) by Milind Bhakare and Hemant Ogale (2018), The Book of Indian Butterflies by Isaac Kehimkar (2014) and Butterflies of Mumbai by Nelson Rodrigues (2013).

Observations:

The study area of Belapur forest comprises semi-deciduous vegetation along with cultivated plants by locals. 69 plant species consisting of large trees, shrubs, herbs, climbers, perennial plants, and paddy and gourd cultivation, etc., were identified. 53 species of these plants represented as either food plants or host plants for various butterfly species. Butterflies of five families namely Hesperidae, Lycaenidae, Nymphalidae, Papilionidae and Pieridae were observed. A total of 49 genera and 57 species were recorded (Table2). Family Lycaenidae was represented by 18 genera 19 species, Family Nymphalidae 16 genera 17 species, Family Pieridae 10 genera 13 species, Family Papilionidae 3 genera 4 species and Family Hesperidae 2 genera 4 species. In the current study family Lycaenidae has maximum number of species with 19 species followed by Nymphalidae with 17 species. The butterflies were found near water body (W), perennial streams of forests (S), cultivations (C) and on forest vegetation (V). Pierids and Lycaenids were found to be mud-puddling near water. Nymphalids were mostly seen flying on vegetation of the forest or on cultivations of locals. Pieridae and Hesperidae butterflies were found on both vegetation and near water. Butterflies belonging to Papilionidae and Lycaenidae were observed mostly near water – streams and perennial water body. Some Lycaenids were also found on shrubs of forest vegetation.

Discussion:

Belapur forest has semi-deciduous vegetation. According to Vu et al, 2015, butterfly species richness is highest in forests and lowest in agricultural lands. However, in Belapur forest 4 species of family Nymphalidae were exclusively found on local cultivations. An area has its butterfly population depending on the availability of factors such as food, open space, water, light, temperature, breeze, etc., (Rosario, 2006). In this study area, 53 out of 69 species of identified flora are either food plants or host plants for various butterfly species. Out of these, 43 plant species are food or host plants for the butterfly species found in this study (Table 2); although 10 plant species represent food or host plants for butterfly species, these butterfly species have not been recorded in the present study (Dwari & Mondal, 2015, Bhakare & Ogale, 2018, Nitin & Kunte, 2021). Butterflies act as ecological indicators and help in evaluating the health and sustainability of the environment (Paoletti, 1999,

Griffis et al, 1999, Shaikh & Chavan, 2017). According to Brown & Freitas, (2000) Lycaenidae and Hesperidae are the best predictors of the total faunal richness as these families are very sensitive to environmental changes. Most of the vegetation found in the study area is favourable for family Lycaenidae – 19 plant species out of the 43 plant species act as food or host plants, explaining the species richness of family Lycaenidae. 17 and 14 plant species serve as food or host plants for family Nymphalidae (17 butterfly species) and family Pieridae (13 butterfly species) respectively (Thangjam et al, 2018).

Conclusion:

Based on the results obtained from the study on butterfly diversity in the area, species of **Lycaenidae** family were found to be maximum in number among all the families, followed by families Nymphalidae and Pieridae respectively. Further research needs to be carried out as certain butterfly species have not been recorded in this study, however, the plant species which play a role as their food or host plants have been identified in this area.

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Fig. 1: Location Map to show Study Area of Belapur Forest

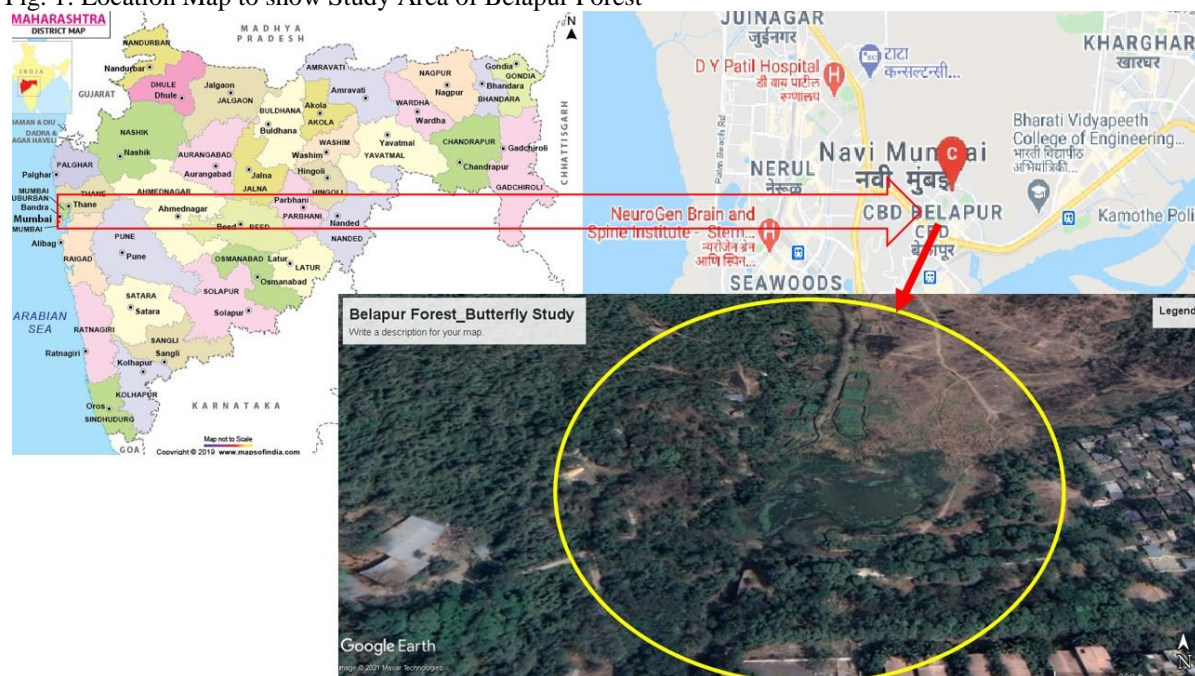


Table 1: Butterfly Species found in Belapur Forest Area

	Common Name	Scientific Name	Family	Habitat
1	Common Crow	<i>Euploea core</i> (Cramer, 1780)	Nymphalidae	S, V
2	Apefly	<i>Spalgis epeus</i> (Westwood, 1851)	Lycaenidae	V
3	Pointed Ciliate Blue	<i>Anthene lycaenina</i> (Felder, 1868)	Lycaenidae	S, W
4	Pea blue	<i>Lampides boeticus</i> (Linnaeus, 1767)	Lycaenidae	S, W
5	Common hedge blue	<i>Acytolepis puspa</i> (Horsfield, 1828)	Lycaenidae	V, C
6	Gram Blue	<i>Euchrysops cnejus</i> (Fabricius, 1798)	Lycaenidae	S
7	Pale Grass Blue	<i>Pseudozizeeria maha</i> (Kollar, 1848)	Lycaenidae	S
8	Tiny Grass Blue	<i>Zizula hylax</i> (Fabricius 1775)	Lycaenidae	S
9	Zebra Blue	<i>Leptotes plinius</i> (Fabricius 1793)	Lycaenidae	W, C
10	Large Oak Blue	<i>Arhopala amantes</i> (Hewitson, 1862)	Lycaenidae	S
11	Forget Me Not	<i>Catochrysops strabo</i> (Fabricius, 1793)	Lycaenidae	S
12	Pointed Line Blue	<i>Ionolyce helicon</i> (C. Felder, 1860)	Lycaenidae	S
13	Purple Leaf Blue	<i>Amblypodia anita</i> (Hewitson, 1962)	Lycaenidae	S
14	Common Pierrot	<i>Castalius rosimon</i> (Fabricius, 1775)	Lycaenidae	W, C
15	Striped (Rounded) pierrot	<i>Tarucus nara</i> (Kollar, 1848)	Lycaenidae	W, C
16	Common Cerulean	<i>Jamidus celeno</i> (Cramer, 1775)	Lycaenidae	S, V
17	Dark Cerulean	<i>Jamidus bochus</i> (Cramer, 1775)	Lycaenidae	S, V

18	Plain Hedge Blue	<i>Celastrina lavendularis</i> (Moore, 1877)	Lycaenidae	S
19	Dingy Line blue	<i>Pretelaea dana</i> (de Nicéville, 1884)	Lycaenidae	S
20	Tailless line blue	<i>Prosotas dubiosa</i> (Semper, 1879)	Lycaenidae	S
21	Common Sailor	<i>Neptis hylas</i> (Linnaeus, 1758)	Nymphalidae	V
22	Common Castor	<i>Ariadne merione</i> (Cramer, 1777)	Nymphalidae	S, V
23	Angled Castor	<i>Ariadne ariadne</i> (Linnaeus, 1763)	Nymphalidae	S, V
24	Tawny Rajah	<i>Charaxes psaphon</i> (Westwood 1847)	Nymphalidae	S, V
25	Common Nawab	<i>Polyura athamas</i> (Drury, 1773)	Nymphalidae	S, V
26	Peacock Pansy	<i>Junonia almana</i> (Linnaeus, 1758)	Nymphalidae	V
27	Lemon Pansy	<i>Junonia lemonias</i> (Linnaeus, 1758)	Nymphalidae	V
28	Chocolate Pansy	<i>Junonia iphita</i> (Cramer, 1779)	Nymphalidae	V
29	Grey Pansy	<i>Junonia atlites</i> (Linnaeus, 1763)	Nymphalidae	V
30	Blue Tiger	<i>Tirumala limniace</i> (Cramer, 1775)	Nymphalidae	V, C
31	Dark Blue Tiger	<i>Tirumala septentrionis</i> (Butler 1874)	Nymphalidae	V, C
32	Plain Tiger	<i>Danaus chrysippus</i> (Linnaeus, 1758)	Nymphalidae	C
33	Striped Tiger	<i>Danaus genutia</i> (Cramer, 1779)	Nymphalidae	C
34	Commander	<i>Moduza procris</i> (Cramer 1777)	Nymphalidae	C
35	Baronet	<i>Symphaedra nais</i> (Farster 1771)	Nymphalidae	C
36	Common Leopard	<i>Phalanta phalantha</i> (Drury, 1773)	Nymphalidae	S, V
37	Psyche	<i>Leptosia nina</i> (Fabricius, 1793)	Pieridae	S, W, V
38	Jezebel	<i>Delias eucharis</i> (Drury 1772)	Pieridae	S, V
39	Yellow Orange Tip	<i>Ixias pyrene</i> (Linnaeus 1764)	Pieridae	S, V
40	Great Orange Tip	<i>Ixias marianne</i> (Cramer, 1779)	Pieridae	S, V
41	Plain orange Tip	<i>Colotis aurora</i> (Cramer 1780)	Pieridae	S, W, V
42	Cabbage White	<i>Pieris canidia</i> (Linnaeus, 1758)	Pieridae	V
43	Common Emigrant	<i>Catopsilia pomona</i> (Fabricius, 1775)	Pieridae	S, W, V
44	Mottled Emigrant	<i>Catopsilia pyranthe</i> (Linnaeus, 1758)	Pieridae	S, W, V
45	Common Gull	<i>Cepora nerissa</i> (Fabricius, 1775)	Pieridae	S, W, V
46	Striped Albatross	<i>Appias libythea</i> (Fabricius, 1775)	Pieridae	V
47	Indian Albatross	<i>Appias wardii</i> (Moore, 1884)	Pieridae	V
48	Common Wanderer	<i>Pareronia hippia</i> (Fabricius, 1787)	Pieridae	V
49	Common Grass Yellow	<i>Eurema hecabe</i> (Linnaeus, 1758)	Pieridae	V
50	Common Mormon	<i>Papilio polytes</i> (Linnaeus, 1758)	Papilionidae	V
51	Lime	<i>Papilio demoleus</i> (Linnaeus, 1758)	Papilionidae	V
52	Common Rose	<i>Pachliopta aristolochiae</i> (Fabricius, 1775)	Papilionidae	V, C
53	Tailed Jay	<i>Graphium agamemnon</i> (Linnaeus, 1758)	Papilionidae	V, C
54	Rice Swift	<i>Borbo cinnara</i> (Wallace, 1866)	Hesperiidae	V, C
55	Bevan's Swift	<i>Borbo bevani</i> Moore, 1878)	Hesperiidae	V, C
56	Common Small Flat	<i>Sarangesa dasahara</i> (Moore, 1866)	Hesperiidae	V, C
57	Spotted small flat	<i>Sarangesa purendra</i> (Moore, 1882)	Hesperiidae	S

Table 2: Butterfly Species on recorded plants

	Common name	Scientific name	Butterfly Species	Family
1	Cutch Tree	<i>Acacia catechu</i>	Nawab, Tawny Rajah	Nymphalidae

2	Custard apple	<i>Annona squamosa</i>	Tailed Jay	Papilionidae
3	Bidi Leaf tree	<i>Bauhinia racemosa</i>	Common Emigrant	Pieridae
4	Little tree plant	<i>Biophytum sensitivum</i>	Psyche	Pieridae
5	Red Silk Cotton Tree	<i>Bombax ceiba</i>	Common Sailor	Nymphalidae
6	Spinous Kino Tree	<i>Bridelia retusa</i>	Common Hedge blue	Lycaenidae
7	Flame of Forest	<i>Butea monosperma</i>	Dark Cerulean, Common Cerulean, Pea Blue, Gram Blue, Common Emigrant, Jezebel	Lycaenidae, Pieridae
8	Butea	<i>Butea sp.</i>	Dark cerulean, Pea Blue	Lycaenidae
9	Indian cadaba	<i>Cadaba fruticosa</i>	Common gull, Commander	Pieridae, Nymphalidae
10	April fool plant	<i>Calliandra sp.</i>	Common Grass Yellow	Pieridae
11	Giant Milkweed	<i>Calotropis procera</i>	Blue Tiger, Plain Tiger	Nymphalidae
12	Wild Caper Bush	<i>Capparis sepiaria</i>	White Orange Tip, Yellow Orange Tip, Psyche	Pieridae
13	Candle Cassia	<i>Cassia alata</i>	Common Emigrant, Common Grass Yellow	Pieridae
14	Golden Shower tree	<i>Cassia fistula</i>	Mottled Emigrant, Common Emigrant, Common Grass Yellow	Pieridae
15	Wild Sienna	<i>Cassia tora</i>	Common Emigrant, Common Grass Yellow	Pieridae
16	Silver Spiked Cockscomb	<i>Celosia argentia</i>	Striped Tiger	Nymphalidae
17	Hairy Ceropegia	<i>Ceropegia hirsuta</i>	Striped Tiger	Nymphalidae
18	Forest Flytrap	<i>Ceropegia vincaefolia</i>	Striped Tiger	Nymphalidae
19	Creeping Hemp	<i>Crotalaria filipes</i>	Dark cerulean, Pea Blue	Lycaenidae
20	Sal-leaved Desmodium	<i>Desmodium gangeticum</i>	Forget Me Not	Lycaenidae
21	Banyan tree	<i>Ficus benghalensis</i>	Common Crow	Nymphalidae
22	Indian Fig tree	<i>Ficus racemosa</i>	Common Crow	Nymphalidae
23	Sacred Fig or Peepal	<i>Ficus religiosa</i>	Common Crow	Nymphalidae
24	Wild hop	<i>Flemingia strobilifera</i>	Forget Me Not	Lycaenidae
25	Screw fruit bush	<i>Helicteres isora</i>	Common Sailor	Nymphalidae
26	Hill Hemp Bhendy or Wild Hibiscus	<i>Hibiscus hispidissimus</i>	Plain Tiger	Nymphalidae
27	Shoeflower or Chinese rose	<i>Hibiscus rosasinensis</i>	Plain Tiger	Nymphalidae
28	Marsh Barbell	<i>Hygrophila schulli</i>	Chocolate Pansy, Tiny Grass blue	Nymphalidae, Lycaenidae
29	Lantana sp.	<i>Lantana camara</i>	Tiny Grass Blue	Lycaenidae
30	Mango tree	<i>Mangifera indica</i>	Apefly	Lycaenidae
31	Touch-Me-Not	<i>Mimosa pudica</i>	Tailless Line Blue, Zebra Blue	Lycaenidae
32	Candy Corn Plant	<i>Moullava spicata</i>	Pointed Ciliate Blue, Common Grass Yellow	Lycaenidae, Pieridae
33	South Asian Olax	<i>Olax imbricata</i>	Purple Leaf Blue	Lycaenidae
34	Rice	<i>Oryza sativa</i>	Pea Blue	Lycaenidae
35	Common Sorrel	<i>Oxalis corniculata</i>	Pale Grass Blue	Lycaenidae
36	Sesame	<i>Sesamum indicum</i>	Lemon Pansy, Striped Pierrot, Lime, Common Mormon, Common Gull, Mottled Emigrant	Lycaenidae, Pieridae, Nymphalidae
37	Sensitive Smithia	<i>Smithia sensitiva</i>	Common Grass Yellow	Pieridae
38	Jamun	<i>Syzygium cumini</i>	Large Oakblue	Lycaenidae

39	Tamarind	<i>Tamarindus indicus</i>	Tawny Rajah, Nawab	Nymphalidae
40	Indian Almond	<i>Terminalia catappa</i>	Dingy Line Blue, Large Oakblue	Lycaenidae
41	Caeserweed	<i>Urena lobata</i>	Common Sailor	Nymphalidae
42	Wild gram	<i>Vigna trilobata</i>	Gram blue	Lycaenidae
43	Buck-thorn spiny shrub	<i>Ziziphus sp</i>	Lime, Striped Pierrot, Common Pierrot	Lycaenidae, Pieridae

Fig 2: Photomontage of some of the butterflies found in Belapur Forest



Photocredits: Utkarsha Chavan

Women Empowerment in India: Issues and Challenges

Dr. Sarala A. Arbole

Head Department of Sociology, Dr. Ghali College, Gadhinglaj

Abstract:

The present research paper is an attempt to analyze the status of women empowerment in India and highlights the Issues and Challenges of Women Empowerment. The study is based on purely from secondary sources. The study reveals that women of India are relatively disempowered and they enjoy somewhat lower status than that of men in spite of many efforts undertaken by Government. It is found that acceptance of unequal gender norms by women are still prevailing in the society. Gender gap exists regarding access to education and employment. Household decision making power and freedom of movement of women vary considerably with their age, education and employment status. Women Empowerment is the vital instrument to expand women's ability to have resources and to make strategic life choices. Empowerment of women is essentially the process of upliftment of economic, social and political status of women, the traditionally underprivileged ones, in the society. The study concludes by an observation that access to education and employment are only the enabling factors to empowerment, achievement towards the goal, however, depends largely on the attitude of the people towards gender equality.

Key Words: *Women Empowerment, Education, Health, Socio-Economic Status. Crimes against women, India.*

Introduction:

This question of woman's rights was a world question, and as old as the human race. In all ages, woman has regarded by man as inferior, and had robbed of the rights, with which God had endowed her, in common with every human being. Women are the victims of social, political, religious, and economic subordination and deprivation in Indian society. Also they are treated unequally and cannot participate in democratic activities equally with men. Democracy becomes meaningless and paralyzed unless fifty per cent of its population participates in the democratic decision making processes and joins in the economic, social, and political activities. Therefore, to make democracy sustainable it is necessary that both women and men should take part in the development activities. Empowerment of women is essentially the process of upliftment of economic, social and political status of women, the traditionally underprivileged ones, in the society. It is the process of guarding them against all forms of violence. Women empowerment involves the building up of a society, a political environment, wherein women can breathe without the fear of oppression, exploitation, apprehension, discrimination and the general feeling of persecution which goes with being a woman in a traditionally male dominated structure.

Objectives Of The Study:

1. To understand the concept of Women Empowerment.
2. To know the need of Women Empowerment.
3. To assess the Awareness of Women Empowerment in India.
4. To analyze the Factors influencing the Economic Empowerment of Women.
5. To give useful Suggestions.

Research Methodology:

This paper is basically descriptive and analytical in nature. In this paper an attempt has been taken to analyze the empowerment of in India. The data used in it is purely from secondary sources according to the need of this study.

The Concept Of Women Empowerment:

Global empowerment of women is a new concept. Since the second half of the twentieth century, the issue of women's empowerment has gained importance among scholars of universities, and in national and international platforms. But the concept was not deeply ingrained into the governments' policies and programs until the declaration of the 'Women's Decade' in 1975. Though the Indian Government endowed franchise to all its citizens irrespective of caste, creed, sex, and colour immediately after Independence, it was confined mainly in papers while the majority of women were essentially powerless until the last decade of previous century. Considering their low socio-economic position, scholars, bureaucrats, and governments have begun to pay considerable attention in empowering women. In the Western societies, the women have got equal right and status with men in all walks of life. But gender disabilities and discriminations are found in India even today. The paradoxical situation has such that she was sometimes concerned as Goddess and at other times merely as slave.

Need Of Women Empowerment: Reflecting into the "Vedas Purana" of Indian culture, women is being worshiped such as LAXMI MAA, goddess of wealth; SARSWATI MAA, for wisdom; DURGA MAA for power. The status of women in India particularly in rural areas needs to address the issue of empowering women. Women constitute almost half of the population, perform nearly 2/3 of its work hours, receive 1/10th of the world's income and own less than 1/ 100th the world property. Among the world's 900 million illiterate people, women out number men two to one. 70% of people living in poverty are women. Lower sex ratio i.e.

933, The existing studies show that the women are relatively less healthy than men though belong to same class. They constitute less than 1/7th of the administrators and managers in developing countries. Only 10% seats in World Parliament and 6% in National Cabinet are held by women.

Crimes Against Women In India:

Acid throwing: A Thomas Reuters Foundation survey says that India is the fourth most dangerous place in the world for women to live in. In India, acid attacks on women who dared to refuse a man's proposal of marriage or asked for a divorce are a form of revenge. Acid is cheap, easily available, and the quickest way to destroy a woman's life. The number of acid attacks have been rising.

Child marriage: According to UNICEF's "State of the World's Children-2009" report, 47% of India's women aged 20–24 were married before the legal age of 18, rising to 56% in rural areas. The report also showed that 40% of the world's child marriages occur in India.

Domestic violence: Many studies have reported about the prevalence of the violence and have taken a criminal-justice approach, but most women refuse to report it. These women are guaranteed constitutional justice, dignity and equality but continue to refuse based on their sociocultural contexts. As the women refuse to speak of the violence and need help, they are also not receiving the proper treatment.

Dowry: In 2011, the National Crime Records Bureau reported 8,618 dowry deaths. Unofficial estimates claim the figures are at least three times as high. Female infanticide and sex-selective abortion Female infanticide (killing of girl infants) is still prevalent in some rural areas. Sometimes this is infanticide by neglect, for example families may not spend money on critical medicines or withhold care from a sick girl. Continuing abuse of the dowry tradition has been one of the main reasons for sex-selective abortions and female infanticides in India.

Honor killings: people marrying without their family's acceptance, and sometimes for marrying outside their caste or religion. Haryana is notorious for incidents of honour killings, In 2010, the Supreme Court of India issued notice in regard to honor killings to the states of Punjab, Haryana, Bihar, Uttar Pradesh, Rajasthan, Jharkhand, Himachal Pradesh and Madhya Pradesh.

Rape: New Delhi has the highest rate of rape-reports among Indian cities. Sources show that rape cases in India have doubled in every four to five years.

Sexual harassment: The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act came into force in December 2013, to prevent Harassment of women at workplace. A study by Action Aid UK found that 80% of women in India had experienced sexual harassment ranging from unwanted comments, being groped or assaulted. Many incidents go unreported as the victims fear being shunned by their families.

Women Empowerment Schemes:

- Beti Bachao Beti Padhao Scheme
- Women Helpline Scheme
- UJJAWALA : A Comprehensive Scheme for Prevention of trafficking and Rescue,
- Rehabilitation and Re-integration of Victims of Trafficking and Commercial Sexual Exploitation
- Working Women Hostel
- Rajiv Gandhi National Creche Scheme For the Children of Working Mothers
- Ministry approves new projects under Ujjawala Scheme and continues existing projects
- SWADHAR Greh (A Scheme for Women in Difficult Circumstances)
- Revision under IGMSY in Accordance with National Food Security Act, 2013 in XIIth Plan
- Support to Training and Employment Programme for Women (STEP)
- Nari Shakti Puraskar
- Awardees of Stree Shakti Puruskar, 2014 & Awardees of Nari Shakti Puruskar
- Awardees of Rajya Mahila Samman & Zila Mahila Samman
- Archived Maternity Benefit Programme
- Mahila police Volunteers

Women empowerment took place by the various ways. Some of the important types are given below.

Social Empowerment: Social empowerment is understood as the process of developing a sense of autonomy and self-confidence, and acting individually and collectively to change social relationships and the institutions and discourses that exclude poor people and keep them in poverty. Poor people's empowerment, and their ability to hold others to account, is strongly influenced by their individual assets (such as land, housing, livestock, savings) and capabilities of all types: human (such as good health and education), social (such as social belonging, a sense of identity, leadership relations) and psychological (self-esteem, self-confidence, the ability to imagine and aspire to a better future). Also important are people's collective assets and capabilities, such as voice, organisation, representation and identity.

Educational Empowerment: Education is the key factor for women empowerment, prosperity, development and welfare. Discrimination of women from womb to tomb is well known. There is continued inequality and vulnerability of women in all sectors and women oppressed in all spheres of life, they need to be empowered in

all walk of life. In order to fight against the socially constructed gender biases, women have to swim against the system that requires more strength. Such strength comes from the process of empowerment and empowerment will come from the education.

Economic Empowerment: Poverty is considered the greatest threat to peace in the world, and eradication of poverty should be a national goal as important as the eradication of illiteracy. Due to this, women are exploited as domestic helps.

Health and Safety: The health and safety concerns of women are paramount for the wellbeing of a country and is an important factor in gauging the empowerment of women in a country. However there are alarming concerns where maternal healthcare is concerned.

Psychological Empowerment: Through psychological empowerment women not only transgress the traditional and patriarchal taboos and social obligations, they also transform their selves and subjectivities. When women join educational institutions, political parties or decision-making bodies; hold white color jobs, take decisions and travel different places; occupy land and wealth they feel psychologically powered and build their self-confidence, recognize their self-worth and take control of their own income and body. This joining in any institution and occupation gives them opportunities to see and to know more of the world than those who have stayed behind at home. "This personal growth and exploration has given them self-respect, pride, maturity, and resiliency as they have exerted their independence away from home"

Findings of The Study

- ❖ Globalization, Liberalization and other Socio - Economic forces have given some respite to a large proportion of the population. However, there are still quite a few areas where women empowerment in India is largely lacking.
- ❖ There needs to be a sea – change in the mind set of the people in the country. Not just the women themselves, but the men have to wake up to wake up to a world that is moving towards equality and equity. It is better that this is embraced earlier than later for our own good.
- ❖ There are several Government programmes and NGOs in the Country, there is still a wide gap that exists between those under protection and those not.
- ❖ Empowerment of Women could only be achieved if their education, economic and social status is improved. This could be possible only by adopting definite social and economic policies with a view of total development of women and to make them realize that they have the potential to be strong human beings.
- ❖ In order to create a sustainable world, we must begin to Empower Women.

Suggestions:

- ❖ The first and foremost priority should be given to the education of women, which is the grassroots problem. Hence, education for women has to be paid special attention.
- ❖ Women should be allowed to work and should be provided enough safety and support to work along with proper wages.
- ❖ Strict implementation of Government rules and fifty percentage of political representation for women .

Conclusion:

Women empowerment is a debatable subject. At earlier time they were getting equal status with men. But they had faced some difficulties during post-Vedic and epic ages. Many a time they were treated as slave. From early twenty century (national movement) their statuses have been changed slowly and gradually. In this regard, we my mentioned the name of the British people. After then, independence of India, the constitutional makers and national leaders strongly demand equal social position of women with men. Today we have seen the women occupied the respectable positions in all walks of the fields. Yet, they have not absolutely free some discrimination and harassment of the society. A few number of women have been able to establish their potentialities. Therefore, each and every should be careful to promote the women statuses.

The Empowerment of Women has become one of the most important concerns of 21st century not only at national level but also at the international level. Government initiatives alone would not be sufficient to achieve this goal. Society must take initiative to create a climate in which there is no gender discrimination and women have full opportunities of self-decision making and participating in social, political and economic life of the country with a sense of equality. Thus, the attainment in the field of income / employment and in educational front, the scenario of women empowerment seems to be comparatively poor. The need of the hour is to identify those loopholes or limitations which are observing the realization of empowerment of women and this initiative must be started from the women folk itself as well as more importantly policy initiative taken by the state and society. Women represent half the world's population and gender inequality exists in every nation on the planet. Until women are given the same opportunities that men are, entire societies will be destined to perform below their true potentials. The greatest need of the hour is change of social attitude to women.

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Issues and Challenges for Management: in the Context of Employee in Bihar State Power Holding Company Limited

Ritu Prasad

Research Scholar, Management, UGC-NET, Magadh University, Bodh Gaya

Abstract

The research work will highlight the issues and challenges for management in the context of employees in Bihar State Power holding Company limited. The constant need to ensure work force is up-to-date on the latest trends, knowledge and skills is a big challenge facing manager today, skills are constancy becoming outdated, as a manager it's important that you constantly nurture knowledge and inspire growth in yours teams. When employees are regularly refreshing and learning new skills, they will be ready to face any challenges that may come their way. This can also be a great way to help increase staff retention as employees can be that their progression and knowledge is being invested in progression and knowledge is being invested in. This will ensure that you hear about any concerns before they turn into bigger issues of the employees in Bihar State Power holding Company limited.

Key Words: *Issues, Challenges, skills, Knowledge, Management, employees.*

Introduction

Bihar state electricity board has nearly 1700 officers and 14,850 employees. The debated capacity comes to just 530 MW. The Bihar state electricity board was unbounded on 2 August 2011. Power Finance Corporation was the main consultant finance corporation was the main consultant for Bihar state electricity restricting. The Bihar State Power holding company limited formerly Bihar State Electricity Board. The installed electricity generation capacity in Bihar was 6384.88 MW as of April 2020. There are newer projects under construction when will take total electricity generation capacity in Bihar to moth than 12000 MW.

Objective of the Study

The following objectives for the study are below:

1. To be study regarding the issues and challenges for management.
2. To be study the role of employees in Bihar State of Power holding company limited.
3. To be study of electricity supply and distribution among the areas of the district.

Bihar State Electricity Board

Bihar State electricity board formally started functioning as 5 companies on November, 2012 and name of the Company and their business is mentioned table: 1

Table: 1
Company functioning and their Business

Name of the Company	Business
Bihar state power generation company limited	Generation
Bihar state power transmission company limited	Transmission
North Bihar Power Distribution company limited	Distribution
South Bihar Power Distribution Company Limited	Distribution
Bihar State Power holding company limited	Apex holding company

Source: Bihar state Electricity Board, Patna

Percapita Consumption of Electricity In Bihar

In this regard, the statement showing per capita consumption of electricity (year wise 2005 to 2016) mentioned on the table: 2

Table : 2
Year wise Per capita consumption of electricity in Bihar unit_kwh

Year	Bihar (Unit-KWW)
2005	48.94
2006	75.44
2007	75.44
2008	88.79
2009	93.98
2010	105.8
2011	104.568
2012	122

2013	133
2014	144.27
2015	203
2016	258

Source: State Electricity Board Bihar, Patna

Above table 2 deals with the per capita consumption of electricity in Bihar. According to above data below the 50 i.e. about 48.94 unit, kwh in 2005 and more than 5 times increase in the year 2016 in per capita consumption on electricity 258 unit-kwh in Bihar.

Employees motivated and challenged

Employees in the Bihar state power holding company limited having the different type of workers. One of the most valuable skills you can have as a small business manager is the ability to engage and challenge the people you employ, When you have the right team and manage them well, the result is a workforce characterized by outstanding performance and growth on the other hand, failure to motivate employees can lead to an unwelcome turnover and generally lead your business in a constant state of Bihar.

In this regard, 5 ways to keep employees motivated and challenged are -

- Provide consistent feedback
- Communicate problems and issues affecting the company
- Ask for suggestions and solutions
- Whenever possible, let employees define their duties
- Don't take advantage of employees.

Conclusion

The role of management is very important regarding their issues and challenges. Their work is very hard and proper guidance for the employees of the Bihar state electricity board, Patna. When employees are regularly refreshed and learning new skills, they will be ready to face any challenges that may come their way. Other hand, communicate problems and issues.

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Social Accounting : A Coming of Age

Shaikh Sabiha Khatoon Akhtar¹ Dr. Kadrekar Prakash²

¹PhD Student, Swami Ramanand Teerth Marathwada University Nanded

²Research Guide, Swami Ramanand Teerth Marathwada University Nanded

Abstract

Every human Being has the tendency to show his best face to the camera, the real one and the hypothetical one. Companies are no exceptions; they are the extended versions of the human mind. The role that companies play in the society is based on the same concept of 'Smile you are on camera'. All want to be known as good people to deal with, good people to stay with and work with. This attribute is one of the oldest and at the same time it encompasses most current debates of practitioners and academicians. In a globalization context, private sector activities affect simultaneously the social, the environmental and the economic spheres. It has a major impact on their brand recognition, their market capitalization, their balance sheets and much more, creating a way to structure their Values, their mission and their identity. This paper helps to understand the importance of social accounting in the future of world growth.

Keywords : Social Accounting, Globalization, Capitalization, values, Mission and Identity.

Introduction:

The last 50 years have witnessed a revolutionary change in the world's business environment. This has necessitated business to realign their objectives and goals from historical objective or basic objective of profit or wealth maximization to social objectives. Before we move on the topic let us understand the meaning of society. A society is a group of all human relations bound by spiritual material, cultural, economic, commercial and social activities. Society provides the common link between activities and human needs by binding people in to a constant continuity. It is the sources of power that unites people. Culture on the other hand is the set of external manifestation that arise from common motives and concepts in a society. It is the environment in which people live. It becomes part of the input of society and remains a closed system. Business, it is created by society. The success of business depends on society since goods and services of business are ultimately consumed by society. Business is an integral part of the society and the social system in which it functions. It influences other elements of the society which in turn affect business. It is a sub-system of social system. A business activity cannot isolate itself from the rest of the society. It is recognized as an economic activity, strongly affected by economical, social and legal environments. A society's legal system, its political and governmental regulations, consumer's attitudes and public opinions can exert both positive and negative influences on a business. The relationship of business to society is expressed in terms of system concepts. It is a means of understanding the dynamic of interaction of business with other parts of the society. Every action that business takes is related to the external world around it and everything which occurs externally in turn related to business. It helps society to understand the mission of the business better. Business needs to maintain equilibrium both internally and externally, which tends to be affected by the dynamic changes in both business and society. The concept of survival of the fittest in the competitive business environment demands what is now refined and popularly known as social responsibility. The old forgotten ideology of giving back to the society what it got from it has emerged as the concept of social responsibility. An organization is a corporate citizen. It is a part of society. It interacts with different agencies of society and with society as a whole. A business organization has to deal with many agencies like government agencies, shareholders, suppliers, consumers, financiers, banks, employees, employees' family, distributors etc. If the organization does the minimum that is expected if it form the stakeholders, then it is fulfilling its business obligations. But, if the organization, on its own initiative or in response to an explicit need from the stakeholders does certain activities then it could be said to be fulfilling certain social responsibility obligations.

Review Of Literature

Social accounting has been defined by various authors. Selvi (2007) defined social accounting as a way of demonstrating the extent to which an organization is meeting its stated social and ethical goals. Wood and Sangster (2002) relate social accounting on how to report upon the application of social policies adopted by organization and upon how they have impacted upon the organization and the environment. Alexander and Britton (2000) postulates that social responsibility accounting is the reporting of those costs and benefits which may or may not be quantifiable in money terms arising from economic activities and substantially borne or received by the community as large or particular group not holding a direct relationship with the reporting entity. Selvi (2007) states that social accounting is a process whereby organization may monitor and evaluate its report honestly on its achievements and failing to improve its performance through more informed planning and better management. He went further to describe the process of social accounting which is as follows:

- Internal data collection and analysis procedure accounting.
- An independent audit of the result (Auditing)
- A mechanism for disseminating the outcome more widely (reporting)

Objective:

The objective of this paper is to know the concept of social responsibility accounting and how it is benefitted to the society.

Methodology:

Data is collected through secondary source from various reference books, research papers and internet.

Meaning:

Social accounting is a way of demonstrating the extent to which an organization is meeting its stated social or ethical goals. It has become a great unifying force of modern society. The concept is relatively new and is growing in recognition and sophistication within large corporations, consultancies and voluntary organizations alike as it becomes one of the foundations of good practice in corporate social responsibility. If larger companies are using a social accounting methodology to assess their social impact, the question sensibly arises as to whether this is something that can be usefully adopted by those seeking to assess the impact of enterprise development activities. Social accounting as an approach began developing in UK in the early 1970s when the Public Interest Research Group established Social Audit Ltd. The organization carried out and publicized investigations into the operations of large public companies without necessarily gaining their permission or cooperation. Globalization has brought with it a wider realization that companies do not operate in isolation but can have marked impacts on the environment and people at local, national and global levels. This has led to an increasing awareness of CSR, and business success measuring the business not only in its financial performance but its social and environmental impact as well. Social accounting has a great importance in modern era. All accounting transactions have a two fold effects namely debit (Dr) and credit (Cr) popularly known as double entry system of accounting. Social accounting too has the same effects but in a different dimension. It traces the effects of changes within the organization and society and on the economy as well. In recent times, there has been a tremendous growth of quantitative techniques which are now an important tool of economic analysis and planning. It attempts to depict statistically these inter-relationships between various sectors of the economy. When we talk about social accounting, social auditing comes automatically in our mind. Social auditing is a process that enables an organization to assess and demonstrates its social economic and environmental benefits and limitations. It is a way of measuring the extent to which an organization lives up to shared the values and objectives it has committed itself to. It provides an assessment of the impact of an organization's non financial objectives through systematic and regular monitoring of its performance and the views of its stakeholders. It requires the involvement of stakeholders who may include employees, clients, volunteers, funders, contractors and suppliers etc interested in the organization. Stakeholders are defined as those persons or organizations who have an interest or who have invested resources in the organization. It is generated by the organizations themselves and the people directly involved in them. A person or panel of people external to the organization undertakes verification of the social audit's accuracy and objectivity. A social audit can complement an organization's annual financial audit by providing clear and succinct information on performance against social objectives. The result can be fed into the organization's strategic review and planning process to improve overall performance and social impact. It has been shown to increase accountability of the organization to its stakeholders and to enhance democratic practice. In addition to serving as a management tool, social audits can be used for marketing, promoting and advocacy purposes. The methodology of social auditing could be tailored to ensure baseline and comparable information as produced by society.

Advantages of social audit

- Social accounts which have been audited by an independent social audit panel will have credibility.
- The information from such audited accounts can be used powerfully to demonstrate not only what the organization has done but also how it intends to improve.
- Publishing the social accounts allows all stakeholders who benefit from it, who do the work, who pay for it and who work in partnership with it to understand the true nature of the added-value it achieves.
- This is a social balance sheet so that all stakeholders can decide for themselves whether to use, work for, support or invest in the organization.
- Through the production of audited social accounts, the organization can fulfill its accountability to its stakeholders.

Basic requirements of social accounting

- Agree on the indicators which will allow performance to be assessed
- Identify what existing records and data can be used
- Decide what new or additional data will be collected and how
- Agree on how and when to consult which stakeholders and about what
- Organize the resources needed to carry out social book keeping and the stakeholders consultation
- Produce a social accounting plan and time table
- Implement the plan and monitor progress

Benefits of social accounts

- **Assessment**

Social accounting not impact assessment. It provides a comprehensive and systematic framework, for accounting, auditing and reporting against and organization's social objectives. It encourages any organization to take impact assessment more seriously. It motivates the management information system to be developed and embedded in the organization to provide ongoing monitoring and learning from programme activities. It spurs on the integration of social objectives into strategic planning. The reporting of the social accounts, especially if done annually focuses the mind on the travel of impact assessment that has been carried out during the year.

- **Use of participatory methods**

Social accounting provides an ideal way to combine participatory methods of indicator setting with ongoing qualitative data collection. The emphasis is an identifying and engaging with key stakeholders. Developing social accounting process within an organization involves commitment to ongoing stakeholders dialogue, and development of a management information system based on indicators of social impact.

- **Scope of management**

It is important to note that social accounting has an organizational, rather than project level scope. Thus the stakeholders judge an organization on their overall perception rather than a narrow view of project success or failure. The issues of social accounting, as with impact assessment, are the levels at which stakeholders dialogue can be carried out by the organization. Enterprise development activities typically involve chains of interrelated interventions.

- **Transparency**

Fundamental to social accounting is the concept of accountability aided through increased transparency. Few of the established methods of evaluating project or programme success include transparency of results as a primary concern. Social accounting adds a level of accountability to what are sometimes perceived as unaccountable NGOs. Many suggest that it offers an interesting way of bringing wider accountability to donor-funded or NGOs led projects in the enterprise sector and beyond.

- **Compliance or improvement**

One of the most positive features of social accounting is that it encourages change within the organization. Earlier, social audit involved an external organization making assessment of social performance and providing a report on the company. This method did not tend to change the way business operated in the way the self directed assessments are carried out in the same way imposed externally leading to limited ownership of the results by the organization assessed. Social accounting tends to foster an improvement and so should lead to ownership and ongoing improvement in the organization.

Conclusion

In the corporate world genuine social accounting has been one of the first major stepping stones in improvements in corporate social responsibility. For many corporate that embark have been made to go beyond financial measurement and understand the social (and often environmental) impact that the organization has on its stakeholders. Thus, such exercises are viewed as a good step forward towards social impact assessment.

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Potable of Cold Spring: A Case Study of Taked (Igatpuri)

Dr. Ganesh M. Gangurde¹ Dr. Ravindra S. Deore²

MGV's MSG Arts, Science & Commerce College Malegaon Camp (Nashik)
Principal, MGV's Arts, Commerce & Science College Vinchur Dalvi (Nashik)

Abstract:

This research paper is giving emphasis on the geographical aspects of Taked cold spring and its potability. Which is located in Igatpuri tahsil of Nashik district in Maharashtra state. The study area is a part of sahyadri hills at the entire of the districts plateau region created by Volcanic Formation. Its location is on bank of Kadva River. Our observation is said that one liter water came out after every minute. with the experimental analysis investigation shows that the water of this cold spring is potable with the findings of laboratory analysis.

Key Words: Temperature, potable, geology spring, parameter.

Introduction:

H₂O is scientific name of water. "Air" is the most essential part for all living things. Every human body needs minimum 66% water for surviving. If you drink 8 glass of water daily you can reduced the risk of colane cancer by 45%, Bladder cancer by 50% and breast cancer by 55%. According to our Report "Water" is essential part in life and so I took this cold spring subject for study. Basically geology is the function of science and the main mechanism of "cold water fountain" according to the geologists Geography and Geology are the main branches of studying the Earth and its formation. Geomorphologic processes are generally complex and reflect interrelationship among the variable such as, climate, geology, soils, and vegetation. Occurrence and movement of ground water depends on many factors like physiographic, drainage, geology structure and hydrology.

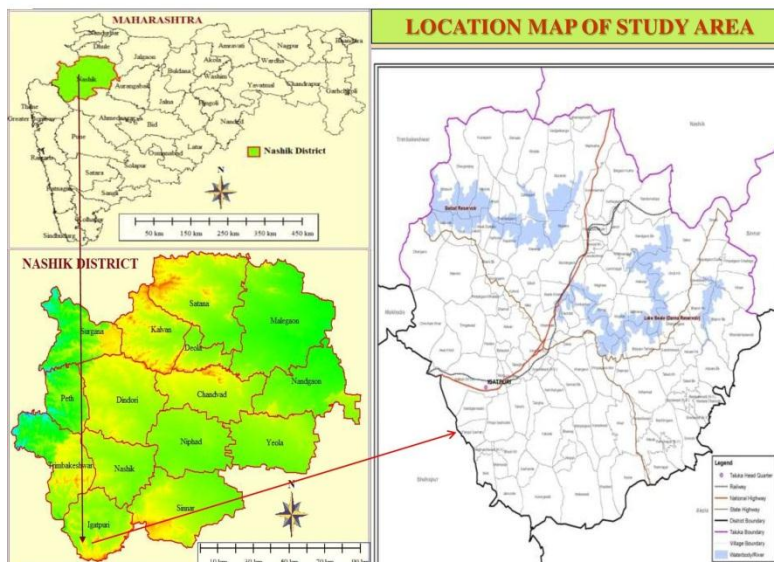
Aims And Objectives:

- i. To find out the Potability of cold spring water
- ii. To find out Quality, Utility and purity of cold spring water.
- iii. To study the possibility of developing the tourist centre

HYPOTHESIS:

Taked Cold spring water is potable, while it is useful to local community.

GEOGRAPHICAL LOCATION OF STUDY AREA:



The Taked cold spring is located near Taked village in Igatpuri tahsil of Nashik district. The Taked cold spring located on the bank of Kadva River. It is very hilly and terrain region. The Taked cold spring west direction of Nashik city. It extent from 19° 30'12" N to 19° 45'14" N latitude & 73° 45'00" E to 74° 00'03" E longitude.

RELIEF:

The study area is a part of sahyadri hills of to the south West of Igatpuri district. The area is characterized by hilly terrain and shows reared nature in terms of relief. It exhibits moderate to high relief. Thus the elevation ranges is from 640 meters. The heights decreasing Cold Springs towards

surrounding area. The slope increases the south west area. The Cold Spring area surrounding the impervious rock.

Geology:

The great trap region of the Deccan covers the whole district it is entirely of volcanic formation. The volcanic portion consists of compact, stratified basalts and earthy trap. The basalts are the most conspicuous geological feature. To the west they lie in flat-topped ranges, separated by valleys. Trending from west to east. In some Flow the basalt is columnar and then it weather into the fantastic shapes. The formation at the base of the traps is chiefly amygdaloidal, containing quartz in vertical viens, crystals and zeolitic minerals, the basalt is an either fine textured or it is coarse and nodular.

Drainage Pattern:

Taked Cold Spring located in Kadva river basin. This all study area locates also West side and sahyadrian ranges, therefore rainfall more than 200 cm. Kadva River is parlnear river origin and hills of

sahyadri. Kadva River flowing east to west direction. Hence, easy to say slope in area is also east to west. Taked Cold Spring located left bank of Kadva river basin.

DATABASE AND METHODOLOGY:-

Database

The primary and secondary data have been utilized for present research work. The whole research is a concern with the Taked Cold Spring of the study region. The data of cold spring water sample have been taken from the location of study area. The present study took to consider the opinion of water Testing Laboratory. The methodology is adopted to fulfill the objectives of the present study, which can be divided into two major components viz. fieldwork and laboratory components. In the fieldwork component collecting primary and secondary data from water testing Laboratory and personal visits to case study location for intensive field survey.

Methodology

The present research work follows the water testing Laboratory, a statistical technique of water sample the process, analyzes and outputs in the form of result maps and diagrams. The information and data is collected surveying. Spring water sample are collected from Taked cold profiles Instructed by geological survey of India. The water sample of spring water tested at "Hydrological project water quality laboratory Level II Nashik". The total 35 parameters are analyzed in the laboratory test .for the geographical information of spring.

Discharge Of Spring Water

The Researcher observation is said that one liter water came out after every minute and in the month of October 2020. For concluding this result we use the bucket and One liter measuring Jar. Frequently we do this experiment and found the ratio of water of discharging is 1 lit/Min. Temperature data of spring water – centigrade, Fahrenheit is collected by researcher by personal visits.

WATER TESTING LABORATORY REPORT

SR. NO.	PARAMETERS	TAKED	DESIRABLE LIMITS	PERMISSIBLE LIMITS	UNITS
1	Colour	Clear	Colorless	-	-
2	Odour	Odourfree	Unobjectionable	-	-
3	Temperature	24.2	-	-	0 C
4	pH	8.02	6.5	8.5	-
5	Electrical Conductivity	470	-	-	
6	Suspended Solids	20	-	-	mg/L
7	Dissolved Solids	420	500	2000	mg/L
8	Total Solids	440	-	-	mg/L
9	Turbidity	1.1	5	10	N.T.U.
10	Alkalinity (as CaCO3)	156	200	600	mg/L
11	Carbonates (as CaCO3)	1.5	-	-	mg/L
12	Bicarbonates (as CaCO3)	154.4	-	-	mg/L
13	Chlorides (as Cl)	14.89	250	1000	mg/L
14	Sulphates (as SO4)	4.40	200	400	mg/L
15	Fluoride (as F)	0.28	1	1.5	mg/L
16	Calcium (as Ca)	72.14	75	200	mg/L
17	Total Hardness (as CaCO3)	284	300	600	mg/L
18	Sodium (as Na)	30.9	-	-	mg/L
19	Potassium (as K)	0.545	-	-	mg/L
20	Nitrite (as NO2-N)	0.084	-	-	mg/L
21	Nitrate (as NO3-K)	2.14	45	100	mg/L
22	Ammonia (as NH3-N)	0.037	0.001	0.002	mg/L
23	Kjeldahl nitrogen (as N)	0.27	-	-	mg/L
24	Orthophosphorous (as O-PO4 as P)	0.25	-	-	mg/L
25	Total Phosphorus(as P-TOT)	0.5	-	-	mg/L
26	Chlorophyll -- A	0.01	-	-	mg/L
27	Biochemical Oxygen Demand (3 days at 27 C)	1.6	-	-	mg/L
28	Chemical Oxygen Demand	8.22	-	-	mg/L
29	Dissolved Oxygen	6.4	-	-	mg/L

30	Boron (as B)	ND	1	5	mg/L
31	Aluminum (as Al)	0.047	0.03	0.2	mg/L
32	Iron (as Fe)	0.7	0.3	1	mg/L
33	Manganese (as Mn)	0.28	0.1	0.3	mg/L
34	Silica (as SiO ₂)	3.8	-	-	mg/L
35	Total Coli forms (M.P.N.)	90.10	10	0	MPN/100ml
36	Fecal Coli forms (M.P.N.)	11.10	0	0	MPN/100ml
37	Total Coli forms (Mem.)	50.10	10	0	TCC/100ml
38	Fecal Coli forms (Mem.)	9.10	0	0	FCC/100ml

(Tabulated by Researcher)

N.D. =Not Detectable,

M.P.N. =Most Probable number,

NTU=Nephelo Turbidity Units,

TCC=Total Coli forms Colonies,

FCC=Faecal Coli forms Colonies

Results & Conclusion

- i. This **pH value (8.02)** is desirable and Permissible so that water is useful for drink.
- ii. This water **turbidity is 1.1mg /L turbidity** of desirable water is 5mg/L and permissible water is 10 mg/L. therefore water is potable.
- iii. This flow of water is continuous.
- iv. The temperature **of cold spring is 24.2°C** therefore thermal water is always from the populated area.
- v. The **dissolved solids in this water are 440 mg/L** so that it is an excellent for drink.
- vi. The total **hardness in this water 284 mg/L less**. Hence this water is potable for drink.
- vii. "Taked cold spring" is located in the plain region and surrounded by number of villages therefore local people utilized for drinking, and other purpose.

Suggestions:

- i. It is recommitted that the permission of development and other direct uses that is tourist resources centre may be exported.
- ii. The discharge water may be used for direct the present it uses that is green house, cultivation, food industries and tourist attraction.
- iii. It can be developed for the purpose of tourist centre Place.

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A Spatio-Temporal Analysis of Fertiliser Consumption in Kolhapur District (Maharashtra) (1990-91 and 2019-20)

Mr. Tejas Jaykar¹ Dr. S. D. Shine² Dr. S. N. Patil³

¹Research Student, Department of Geography, Shivaji University, Kolhapur and Assistant Professor,

Department of Geography, Kankavli College, Kankavli, Sindhudurg

²Professor, Department of Geography, Shivaji University, Kolhapur.

³Associate Professor, Department of Geography, Kankavli College, Kankavli, Sindhudurg.

Abstract

Fertilizers have been measured as an essential input to Indian agriculture for meeting the food grain needs of the rising population of the country. India is the second largest consumer of fertilizer in the world after china, consuming about 26.5 million tonnes. Soil fertility is the quality of a soil that enables it to provide compounds in adequate amounts and proper balance to promote growth of plants when other factors (such as light, moisture, temperature and soil structure) are favorable. The chemical fertilizers increased agricultural production of the region. In Kolhapur district, fertilizer is an important part of agricultural technology. This region impressive growth in food production has been principally due to widespread use of HYV seeds, fertilizer and irrigation technology. In view of this, present investigation aims to analyze spatio-temporal analysis of fertilizers consumption in Kolhapur district of Maharashtra during 1990-91 to 2019-20 periods.

Key word: Fertilizer, Index of fertilizer consumption, Production.

Introduction

Fertilizers have been measured as an essential input to Indian agriculture for meeting the food grain needs of the rising population of the country. India is the second largest consumer of fertilizer in the world after china, consuming about 26.5 million tonnes. A fertilizer can be defined as a 'Mined or manufactured material containing one or more essential plant nutrients in immediately or potentially available forms in commercially valuable amounts' (Dr.H.L.S.Tandon, 1995). Soil fertility is the quality of a soil that enables it to provide compounds in adequate amounts and proper balance to promote growth of plants when other factors (such as light, moisture, temperature and soil structure) are favorable. The chemical fertilizers increased agricultural production of the region. In Kolhapur district, fertilizer is an important part of agricultural technology. This region impressive growth in food production has been principally due to widespread use of HYV seeds, fertilizer and irrigation technology. The period during the last 30 years has witnessed considerably increase in the use of fertilizers as the key factor for increasing agricultural production. In the present study analyze spatio-temporal analysis of concentration of fertilizers consumption in Kolhapur district of Maharashtra during 1990-91 to 2019-20 periods.

Study area

Kolhapur district is situated in the southern part of Maharashtra state. The district lies between 15° 43' N to 17° 17' N latitude and 73° 40' E and 74° 42' E longitude. The study area (Kolhapur district) includes 12 tehsil, specifically Shahuwadi, Panahala, Hatkangale, Shirol, Karvir, Gaganbawada, Radhanagri, Kagal, Bhudhargad, Gadhingalaj, Ajara and Chandgad. The study area is surrounded by four districts such as the Sangli district in the north, Belgaum district of Karnataka state in the east and south, Ratnagiri and Sindhudurg districts in the west. The district stretches 160 km between south to north and 60 km between east to west. The natural boundary between Kolhapur and Sangli district is the Sahyadri spread in the west and Warna River in the north. The area is 390 to 600 meters high from the mean sea level. The Krishna, Warana, Panchaganga, Dudhganga, Vedganga, and Hiranyakashi are the major rivers of Kolhapur district. The Krishna and Panchaganga River has two main river basins in the region. The region recorded as annual maximum temperature is 28°C, and the annual minimum temperature is 20°C. The region receives 1900 mm average annual rainfall. In the study region, west to east rainfall proportion is decreasing. The crop like Kharif and rabbi is cultivated in medium black and deep black soils, which are the main soil types in the region. The district's total geographical area is 7685 sq.km, which constitutes around 2.50 percent of the state total geographical area and twenty-fourth ranks in terms of area. According to 2011 census, the district has 23 towns and 1216 villages, 21 of which are uninhabited, with a total population of 387 and 6001. Besides, the region consists of 340.04 sq.km is urban (4.42 percent), and 7344.96 sq.km is rural (95.57 percent) area out of 12 tehsils. According to 2011 census, the total population is 3876001 out of 2645992 populations living in rural (68.26 percent), and 1230009 populations live in urban (31.73 percent) areas. The population density and literacy of the Kolhapur district are 500.34 people per sq.km and 82.90 percent, respectively (Census, 2011).

Objectives

This paper aims to examine the spatio-temporal analysis of fertilizers consumption in Kolhapur district of Maharashtra (1990-91 to 2019-20).

Data Base and Methodology:

The present study is based on secondary data. Data was collected from the Census of India, District Census Handbook of Kolhapur district, Census Abstract of Maharashtra State and Socio-economic Review and Statistical Abstract of Kolhapur district. Tahsil is considered as a basic unit of investigation. For spatio-temporal

analysis of fertilizers consumption the period of 30 years i.e. 1990-91 to 2019-20 is selected. The modified formula of M.G. Jadhav and S. D. Shinde (1979) is used to calculate concentration index values of fertilizer consumption per unit area. Computed fertilizers consumption was categorized in three groups namely high, moderate and low. This fertilizers consumption groups are represented in table and graph.

Spatio-Temporal analysis of Concentration of Fertilizers Consumption

It is observed that, the consumption of fertilizer in the Kolhapur district is also increased more during the study period. The area under commercial crops like sugarcane, Banana, fruits and vegetable is increased. There are marked regional variations in the consumption of fertilizers. The spatial analysis therefore, has been attempted here at tahsil level for the year 1990-91 to 2019-20. The modified formula of M.G. Jadhav and S. D. Shinde (1979) is used to calculate concentration index values of fertilizer consumption per unit area. The concentration of fertilizer consumption is calculated with the following formula.

$$I_{fe} = [R_f / D_f] \times 100$$

Where,

I_{fe} = Index of fertilizer consumption.

R_f = Kg per hectare Fertilizer consumption in the revenue block.

D_f = Kg per hectare fertilizer consumption in the region (District).

It is revealed from table 1, spatio-temporal analysis of fertilizers consumption in Kolhapur district. Concentration of fertilizers consumption is classifying in to the following three categories.

1. High Concentration of fertilizers consumption (above 200 Kg/hectare)
2. Moderate Concentration of fertilizers consumption (100-200 Kg/hectare)
3. Low Concentration of fertilizers consumption (Below 100 Kg/hectare)

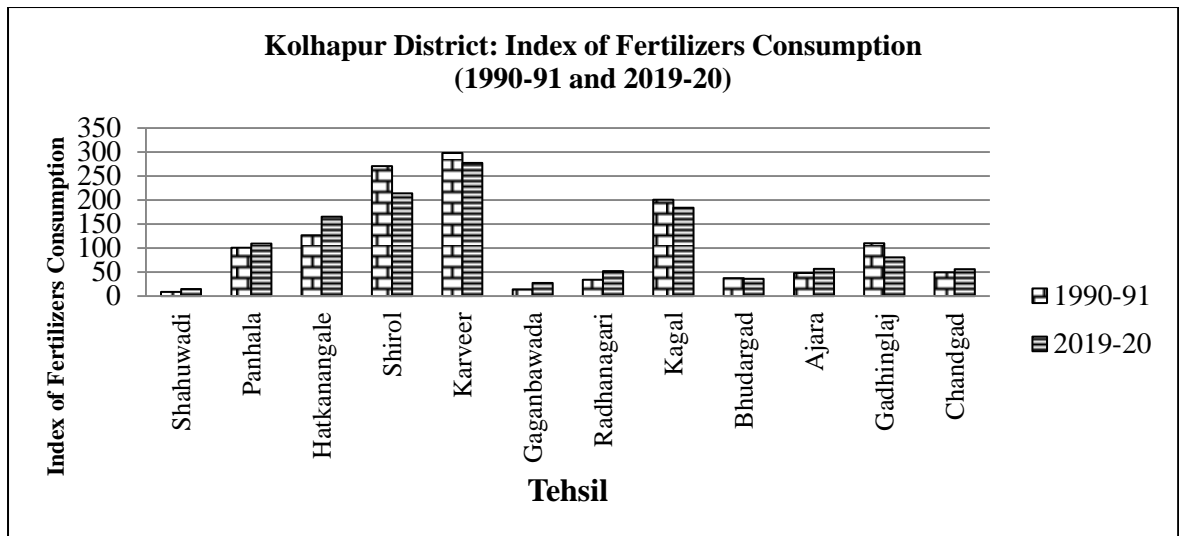
The result shows that, higher the index higher will be the concentration of fertilizer consumption.

Tehsil	1990-91	2019-20
Shahuwadi	8.81	14.88
Panhala	100.78	109.2
Hatkanangale	126.96	165.6
Shirol	270.82	214
Karveer	298.07	277.6
Gaganbawada	14.03	27.5
Radhanagari	33.8	52.2
Kagal	200.61	184.3
Bhudargad	37.1	36.13
Ajara	48.1	56.57
Gadhinglaj	109.8	80.67
Chandgad	49.42	56.29
	100	100

Source: Based on Socio-economic Abstract of Kolhapur district (1990-91 and 2019-20)

1. High Concentration of fertilizers consumption (Above 200 Kg/hectare)

The analysis reveals that, this categories comprises high concentration of fertilizers consumption. During 1990-91, Karveer, Kagal and Shirol tehsil has come under this category and in 2019-20, Karveer and Shirol tehsil has identified in this category. The study region is characterized by perennial water for irrigation, fertile alluvial soil, dominance of sugarcane cultivation and village level network of co-operative societies. As a result these this zone possess high level of fertilizer consumption.



Source: Based on Socio-economic Abstract of Kolhapur district (1990-91 and 2019-20)

2. Moderate Concentration of fertilizers consumption (100-200 Kg/hectare)

The tehsils like Panhala, Hatkanangale and Gadhinglaj are represent moderate level of fertilizer consumption in district during 1990-91. In 2019-20, Panhala, Hatkanangale and Kagal tehsil has observed in this category. It means that index value increased during the investigation. This zone characterized by development in irrigation, increased number of well and tube well irrigation and co-operative societies are plays important role for promoting use of fertilizers.

3. Low Concentration of fertilizers consumption (Below 100 Kg/hectare)

The below 100 Kg/hectare fertilizers consumption has notified in Shahuwadi, Gaganbawada, Radhanagri, Bhudargad, Ajara and Chandgad tehsil during 1990-91 and in 2019-20, Shahuwadi, Gaganbawada, Radhanagri, Bhudargad, Ajara, Gadhingla and Chandgad tehsil has included in low level of fertilizers consumption. Because, lack of irrigation facilities, poor financial conditions of farmers and uncertain rainfall conditions. The lowest consumption of fertilizers is found in in Shahuwadi tahsil.

Conclusion

The above observation clearly indicates that the, increased use of concentration of fertilizers consumption in Kolhapur district. The high concentration found in area of high irrigation facilities. The lowest concentration of fertilizer consumption is observed in the unavailable irrigation facilities and uncertain rainfall conditions. The increasing trend towards of fertilizer consumption is directly affected on fertility status of soil and human health. Finally we are promoting about aware of fertilizer consumption and leading to sustainable agriculture development all farmers motivated to organic farming in study area.

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Multiculturalism in Chetan Bhagat's 2 States: The Story of My Marriage

Mr. Nagesh Sambhaji Gaikwad

Assistant Professor, Department of English, Chh. Shivaji Night College, Solapur

Abstract:

India is a country of different cultures. Unity in diversity is the biggest mantra that makes India flourishing its age old customs and conventions for centuries together. The system followed by people. Sometimes rigid and touch but it lead to strengthen the practices for the better prospective of the next generations. As far as my idea, which I want to throw light o the select novel is concerned. The protagonist of the novel and his companion lead to a close observation on two things. One is on the culture of North and rest is south. These two are well represented by the novelist excellently portraying two major characters. The south Indian Tamil and other North Indian Delhi. The novel throwing light on the cultural differences between these two cultures of the same nation. The novelist glanced into the characters to discuss these differences in the form of a debate introducing some other things.

Key Words: Multiculturalism, Tradition, Culture, North India and South India

Introduction: Chetan Bhagat is one of the Most Popular Indian English novelists in English Literature. He has portrayed young dynamic and modern Indian youth and their culture, trying hard to make themselves successful in their lives. He is gifted with an extraordinary ability to deal with various aspects of human life. His novels deal with different postcolonial perspectives from culture issues. India is well known for its varied cultural heritage. It is known for the lively and traditionally performed variety of marriages in his novel. It draws our attention to cultural differences in diverse India. He truly Captures the spirit of Modern Culture. Multiculturalism is a study of the multiple cultures. The word culture is derived from Latin word root 'colere' which means to inhabit, to cultivate or to honour. It refers to the capability of human beings to classify and inhibit the various experiences to encode and imbibe them meaningfully. The term multiculturalism and cultural studies, socio-political, religious and so on. The people in this novel both old generation and young generation have a multi-cultural background. This provides ample scope to make a studied comment on multiculturalism.

The present novel 2 states is one of the best sellers of Chetan Bhagat. Firstly because the writer admits that this is the imaginative reconstruction of his own life and secondly it touches the sentiments of young generation. Both the factors make this work even more authentic and magnify his popularity among his fans. He also maintains the ascendancy of creativity over biographical exposure. He himself has magnanimously dedicated this novel to his in-laws and also avers in the acknowledgement to 2 States. It is an outcome of his personally lived experiences. Chetan Bhagat's novel 2 States concentrates on how to a particular phenomenon, the concept of love related to matters of culture and society with its customs. The novel 2 States deals with the cross-cultural encounters complimenting the different experiences and imbibing them meaningfully. 2 States the title itself by showcases axis people of the 2 States coming into convergence. It brilliantly explores the encounter of 2 States, Punjab and Tamil Nadu. India is secular country. Its varied culture and heritage has paved way for the exchange of cultures since the Ancient Period. Chetan Bhagat born in Punjab in the most Independent era, culture and diversity has been the in the blood of Chetan Bhagat which has influenced him to write about the cultural diversity. The novel deals with the cross-cultural encounter complimenting the different experiences and imbibing them meaningfully. The title itself showcases axis people of the two states coming to its convergence. It is brilliantly explores the encounter of two states, Punjab and Tamilnadu.

Many scholars define it accordingly the terms multiculturalism and cultural studies, socio-political, religious studies, media studies etc. The people in this novel both the younger and older generation have multicultural background. This provides huge scope to make a study on multiculturalism. 2 States is love story of a Punjab Krish Malhotra and Tamil Girl Ananya Swaminathan in her own style. Many families go through this condition in India. They are deeply in love and want to get married. It is an awesome journey from rasgolla to buffet dinner. The novel has four different time spans.

The novel deals with a complex human relationship. It portrays how the cultural differences can create problem in the matrimonial alliances and how the hard the couple has to fight against the destiny to be in the wed-lock. Krish and Ananya have to make an extra effort to turn their dream into reality. Therefore we find love shinning admist darkness and despire. Shakespeare once said that 'The path of true love never runs smooth and this very true in the case of Krish and Ananya. It is basically cross culture tries to bring together such relatively un related areas as cultural anthropology which means social and cultural similarities and differences.

This novel begins in the IIM Ahmadabad mess ball, where Krish Punjab boy and Girl Ananya from Chennai quarrelling with the mess staff about the food. They become good friends within a few days and decide to study together every night. In the meantime, they become romantically involved. They both get jobs and have serious plans for their wedding. At first Krish tries to convince his girlfriend Ananya's parents and at last convinces them by helping Ananya's father to do his first Power Point presentation. Her brother, Manju, by giving him tuition and later convinces her mother by asking her to sing in a concert organized by Krish'off city at Citibank. The mother is convinced as her biggest dream of singing at a big concert comes true. Then try to convince Krish's .But the problem in Krish's mother relatives who don't quite like this. They say that Krish

should not marry a Tamilian but end up agreeing with him, when Ananya tries to help one of Krish's cousins to get married and successfully does it.

Krish had hatred against his father. He never shares his feeling and doesn't share a harmonious bonding with him. Now as they have convinced both their parents, they now try to introduce each other. They go to Goa. But this dream of their ends as Ananya's parents finds something fishy between Krish's mom and him. Ananya's family end up deciding that Krish and Ananya will not marry each other. Krish starts to become workaholic and starts living badly. But, at last Krish father who was like an enemy for Krish, helps Krish and Ananya to get married as he convinces Ananya's family as well. Now Krish realizes his Dad's love for him. They really work very hard to convince each other's parents and finally make it. It is narrated in the first person narration.

Both the lovers with intention to getting their families with, decide to invite their parents for the convocation ceremony as it is very necessary in India that parents must approve your love relationship. In this novel cultural anthropology takes places in this novel by mixing up of two cultures. We are introduced with Krish's mother and Ananya's parents. Krish's father does not come for it because the relationship of Krish with his father is very tense. The light friction between Ananya's mother and Krish's mother get started in the ceremony itself and the dream of the lovers to get married shatters. There came a twist in the tale is, they want to marry with their parent's consent rather than choosing the easy way of eloping.

Intercaste marriages are still a taboo in India and let alone a interstate marriage of a Punjab and Chennai. Both of them are decided to get married each other. The cultural divide in occasional hindrances and at one point of time due to cultural differences. We imagine villages have grown into towns, towns into cities and cities into metropolises. We seem to be slaves to tradition that have long lost out on logic. Our so called modernity hasn't erased ingrained ideologies. The caste system was abolished years ago, people in India still follow it blindly.

We are outwardly modern but inwardly we still live in the past. He highlights the two different cultural diversities. Chetan Bhagat assures the fact that it is possible. Krish and Ananya met in the canteen for the first time and eventually over a few days of combines study, fell in love. Life is great for them until their families meet each other. It takes some time. They may not be able to convince their families to support their marriage.

They have diversities in their language. Customs, rituals. A wedding in India is a complex affair that involves more than just the bride and groom. It includes every member of both the families. Chetan Bagat's 2 States is the author's personal account of the challenges that he and his wife faced in convincing their families members to agree to their love marriage. In this novel Bhagat exposes the backward mentality of Indians, nuances of regions and religion and religious and how intercaste marriage are still seen as a social stigma. In India love marriage scenarios especially when they have to be sanctioned by the couple's families present a more complex scenario.

As Indian society is not liberal for mixed marriages between different castes. Religion or geographies, this book takes us through the love and opposition from parents and relatives. It is also give a message that love and marriage is a bonding between two souls and not about what the society perceives of it. They think of the greater complexities of Indian culture as are compares India to the world around.

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The Role of Krantiguru Lahuji Salve in the Education of Untouchable Societies

Dr. Raj Bhujangrao Taderao

Department of History Arts & Commerce College, Phondaghat Dist. Sindhudurg-416601

The 19th century is considered to be the century of social and religious reforms in the history of India. Especially due to the British policy, reformist ideas were emerging in the youth of Maharashtra. The board of social reformers that was formed to carry out these reforms in the Pune area. In it, Lahuji Salve has to be mentioned first. Because in Indian society, untouchables and women were forbidden to get education. As a result, the condition of both women and the untouchables was deplorable. The condition of women, especially in the untouchable society, was one of slavery. But during the British rule, the doors of education were opened for the lower castes and the untouchables, which helped in the social expansion of education. But according to the infiltration theory put forward by the British, education was limited to the upper castes without reaching the general public. During this time some Christian missionaries taught. But this education did not reach the lower castes and untouchables. At this time, for the first time, Mahatma Jotirao Phule gave priority to the education of girls. Lahuji Salve also plays an important role in this work.

The British rule in India had brought about a lot of changes. In such a situation, Lahuji Salve had taken up the cause of education for the overall development of Indian women and untouchables. But they were finding it difficult to do so. At that time, Jotirao Phule was the only option in front of Lahuji Salve. Because Jotirao Phule, a well-educated and progressive thinker, was taking lessons in wrestling and military education under the tutelage of Lahuji Salve.¹ On this occasion, Lahuji Salve told Jotirao Phule that due to lack of education in Indian women and untouchable society, ignorance and superstition are deeply ingrained. So education is the only way to get rid of this ignorance. ' So we should take the initiative for this work Thus Lahuji Salve not only inspired Jotirao Phule for women's education but promised to co-operate with all of them and similarly traveled all over Pune and helped Jotirao Phule to set up schools for women's education in the early days.

Mahatma Jotirao Phule started a girl's school in August, 1948 at Taty Bhide's mansion in Pune. This is the first school set up by a native for the education of a girl. The school started with the admission of four Brahmins and two Bahujan girls. For this, Lahuji Salve, Sadashivrao Gowande and Sakharam Paranjape were instrumental. Later, Lahuji Salve drew Jotirao Phule's attention to the education of the untouchable community. Accordingly, a school for untouchable boys and girls was established in 1852. Education is very important for the overall development of untouchable brothers like Indian women. Lahuji Salve was aware of this. Therefore, he drew Jotirao Phule's attention to the education of the untouchables and strongly supported his educational work.²

Untouchables should have the right to education. For this, Lahuji Salve encouraged Mahatma Jotirao Phule and brought educational awareness in the untouchable society. Became a broadcaster of the school of untouchability founded by Jotirao Phule, he promoted women's education. Similarly, there was a question of space for an untouchable school. At this time, Lahuji Salve took the initiative by giving space for the first school in his training in Pune. Therefore, for the first few days, the school of untouchables was filled with the training of Lahuji Salve. Some hardworking people in Pune had opposed the educational and social work of Jotirao Phule. At this time, Lahuji Salve took the news of the educational opponents and also encouraged the teachers of Jotirao Phule's school for educational work. Collected donations to get financial help for the school established by Jotirao Phule.³ Adult education was started by starting night school in his training so that untouchable brothers could learn the alphabet. At this time, teachers in the upper caste community were indifferent about teaching untouchables. Because the pressure of Karmat Sanatani people in Pune had increased on him. At this time, Jotirao Phule, in collaboration with Lahuji Salve, took up the responsibility of educating untouchable boys and girls. Lahuji Salve's contribution was significant. Ganu Shivji Mang & Dhuraji Appaji Chambhar Lahuji disciple who took adult education in this training with his help was responsible for educating Untouchable boys and girls of Lahuji Salve.

The untouchable humanity was on the verge of death due to the oppression of eternity. The self-esteem required for one's own upliftment was not alive in the untouchable society. It is not our destiny to live and get education due to the prevailing norms, due to the intense racist violence of the upper castes and the crazy understanding of pre-existing sins and virtues. With such a feeling, there was a terrible depression in the untouchable society at that time. But due to the egalitarian role of the British and the abolition of untouchability by Lahuji Salve and Jotirao Phule, the untouchables began to understand the importance of education. How

important it is for Jotirao Phule to educate the untouchables. He said this from time to time and established many schools for it. "People were reluctant to send their children to school," says Phule. But how Lahuji bin Raghu Raut Mang and Ranba Mahar have benefited from education.⁴ We explained this to our caste and prepared to send their children to school.' Because Shudras have not had the right to education in India for thousands of years. Atishudra's condition was very bad. The untouchables were in a state of water scarcity, hunger for food, no one to draw near to, no one to give them water, no good business to share, sweeping, clearing dirt, dragging dead cattle, eating stale and leftover food. Teaching knowledge in such a class was considered a great sin. Then Jotirao Phule decided to improve the society from scratch. Not only did he talk, but he started schools in Mahar, Mang, Chambar and Dhed. Never before had there been an attempt to teach Shudra Atishudra. Jotirao Phule started the school in an untouchable area and Lahuji Salve and Ranba Mahar provided valuable assistance. But Jotirao's cooperation was not taken into account. Some of Jotirao's colleagues were also members of the Mahar-Mang School Committee. Jotirao's thoughts in this regard were published in the issue of Jnanodaya dated 15 December 1853. When Jotirao established schools for Mahar, Mang, Chambar and Dhed children. At this time, parents were initially trying to send their children to school. But Lahuji Salve created self-esteem in the untouchable community by stating the benefits of education. And protected them from the warriors in his training. Similarly, Jotirao Phule and Savitribai Phule were being persecuted by Karmat Sanatan. The school was threatened with closure. Savitribai had to endure this grief while going to school from home every day. At this time, Lahuji Salve stood firmly behind the Phule couple.

After Mahatma Jotirao Phule started school for untouchability, Lahuji Salve and Ranba Gaikwad worked to bring boys and girls to school. The whole focus was on the success of the education movement in the Bahujan Samaj. Lahuji Salve is the untouchable community from which he came forward. Seeing the condition of the Mang, Mahar Dhed and Chambar community, Lahujina felt very bad. Because the children of Mahar, Mang and Charmakar were walking around all day. Similarly, girls did not have the right to education and boys could not go to the schools of all religions started by Jotirao Phule. Therefore, Lahuji Salve and Jotirao Phule were made aware of their educational work and suggested to start a special school for the untouchables in the untouchable neighborhood. Accordingly, Jotirao Phule started the first school for untouchables in 1952. But this time, some hard-working people in Pune felt bad and threatened to close the school. In the same way, the government's ploy is to drown your business by sending your children to school in untouchable neighborhoods. Don't leave your business and send your children to school. ' As a result, many people would take their children out of school and keep them at home due to threats and harassment from the upper class.⁵

Our untouchable brothers should be educated, their fears should be lessened. For this, Lahuji Salve accompanied Ranba Gaikwad in his training to the untouchables and enlightened the untouchables.⁶ He told them the benefits of education. Similarly, Lahuji warned the untouchable parents that the welfare of your child as well as your untouchables will be ensured through education. Jotirao Phule has started a school for the welfare of his brothers. So there is no need to be afraid of anyone's threat anymore. In this way, Phule supported his brothers in understanding the noble intentions of the couple and giving them confidence to send their children to school. A large number of children started coming to the school established by Jotirao Phule. So Jotirao Phule had to start two more schools. Lahuji Salve and Ranba Mahar became the preachers of the school and they recruited a large number of children on the school board. Lahuji Salve was a broadcaster of the school of the untouchables. His untiring efforts had greatly increased the number of students in the untouchable school. In this school, Lahuji Salve took the initiative and first sent his brother Shivji's daughter Mukta to Jotirao's school. This created a positive atmosphere for women's education in untouchable areas and untouchable girls started getting education with their enthusiasm.

Lahuji Salve emphasized the importance of education to his untouchable brothers. Lahuji Salve's niece Mukta Salve, a fourth class girl, came up with the idea of eliminating untouchability through her historical essay. Because Mukta Salve was a revolutionary person who received quality education in the school of Mahatma Phule and also in the company of Lahuji Salve. That is why Mukta started her essay with the sentence 'Mang Mahar's grief'.⁷ This shows the role of Lahuji Salve in the education of untouchables.

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'Postmodern Feminism in Sudha Murthy's Gently Falls the Bukula'

Prof .Santosh M .Akhade,

Department of English, Arts and Commerce College, Phondaghat, Dist .Sindhudurg)Maharashtra.(

Mrs .Sudha Murthy is an Indian social worker and writer have written many short stories and novel in a style so provocative depicting a realistic picture of all social issues women empowerment, identity crisis and the need for ethical value to make life meaningful.Her value based writing focuses immensely on ordinary lifestyle where in the reader can identify themselves in some characters.Her writing are embedded in Indian culture and incident are drawn from day -to -day realities events and experiences.These realities, reveals that womens are unable to speak out on over there is really deserve .Passive suffering, stoic, sacrifice family relationship, silence, social indifference negation,fear loneliness ,fear isolation, rejection, failure acceptance, individualism, loud protest, violating the social norms has remained a dormant .Women in the novel taken from the studies such as a shrimati, Mridula and Mahasweta etc .become victims under their own circumstances.At a later stage of their life they realise their potential and rebound.A women need not bind herself with the limitation and fixed ideas to please society, she has to transcend beyond and awaken herself to several other possibilities to realize her own aspirations .She has to embark on a new journey from within .All these above said thoughts loom large in the scenic portrayal of the women character depicted by Sudha Murthy .

Sudha Murthy is one of the well known female writer in Indian writing in English today writing on a dominant issue related to women in modern India in the age of globalisation .Murthy's writing is a marked by her impartial way of looking at man's relation with women and women's relation with other women's .Her four novel deals with the rider ideas aspiration of educated girls and their struggle of space in traditional Indian society .Girl stand out as a condition human being in her works.

The term 'Postmodern -feminism' is amalgamation of postmodernism, post structuralism in French feminism .It is first appeared in the work of Judith Butlers 1990 book Gender Trouble, Post modern feminism opposes feminist perspective which give single explanation for grand theory; It represents the progress of feminism .Post modern feminism has emerged in recent years and developed from the thought of Michael Foucault Simon de Beavoir,Jack Lacan and Lucy Irigary. Postmodernism feminism refuses to develop one comprehensive explanation and emphasises on plurality and multiplicity .It is used describe a reaction against contradiction and absence in feminism .The purpose of postmodern feminism is to unstable to patriarchal norms rooted in society that have lead to gender inequality .Germany Green urged women to break down the social barriers to epoch in Female Eunuch .Many women in post modern era choose their career over housework, and marriages where delete to make them economically independent .Economic independent helps many dissatisfied to live their life courageous be without any support and independently .Sudha Murthy is well known for her works How I taught my grandmother to Read and other Stories, Wise and Otherwise, Mahasweta Gently Falls the Bakula and the novella The Mother I Never Knew.

Gently Falls the Bakula portrays the drudgery life of the female protagonist, Shrimati, who seems to experience the pain from a marriage but her husband Shrikant fail to realise the sacrifice of her life .the Bakula of flowers is considered a souvenir of their love, even though it would dry up, its fragrance will be same like their love .Gently Falls the Bukula is the story about Shrikant Deshpande and Shrimati Shrikant deshpande the protagonist is a hyper intelligent girl .She was a very much of found of History subject .It helps her to have a good knowledge on Indian history and its architecture .Shrimati stand first in essay competition .Srikanth friends could not tolerate his defect so he tried to console his friend Ravi by saying "history is not great subjectreal intelligence is scoring in science . "Hence, to prove second is not correct, Shrimati attain state first rank in in S.S.L.C board examination .While hearing his rivals rank Shrikant could not tolerate, as a man he is not ready to wear his rival of female .Shrikant's mind went numb Mr Kulkarni chatter continued but Srikanth did not hear a word .Had a thunderbolt struck him or had he touch a live wire? To repay Srikanth's educational loan Shrimati plans to work for money to repay as possible.The day we send the last installment, I will stop working and pursue my studies .It doesn't matter if I am late by year .Can you please find a job for me? As

A typical Indian women's he sacrifices her intellectual longing and supports her husband as a submissive wife .Shrimati gives off her passion and ends up and dutiful wife to her husband, after marriage .By doing the approves and accept him with his good and bad .Hear the literature resembles Shrimati with the characters of Bhamati who sacrificed her whole life to support her sage husband without expecting anything from him .When everyone praises the sage achievement and fail to notice Bhamati sacrifice, the sage says as follows

'I am perfectly alright but don't you think we should have children now? We are well settled in financially . Both of us are very thirty, and thirty is late for women.' Shrikant gives all the happiness to his beloved but fails to give real happiness. A woman's life is fulfilled when she bears a child. The society expects married women to care for her home and she has to give heir to his family. A childless woman is considered a social stigma. Love and Marriage between them sustained when there is a mutual trust and respect. Shrikant's dedication towards his works made Shrimati feel lonely and also puts barriers to her desire of becoming a mother. Shrikant does not spend his time with his beloved rather he concentrates on his work even in house. Being a lonely wife gives her a necessary thought. Even though she was fascinated by the mind becoming depressed. Shrikant's love for work makes her feel lonely. Their marriage is based on a loveless life and their relationship is based on a mechanical process. There exists a reliable communication gap between them as they live under the same roof. The thirst for money and fame slowly subside his love and family attachment. As an Indian woman she is afraid of her mother-in-law about being barren. Shrimati remembered telling Shrikant a few times that his mother always bought the cheapest gifts for her, but for Rama she would buy things worth thousands! Shrikant's mother shows discrimination between her daughter and daughters-in-law. When Shrimati tells Shrikant to comfort her and is not able to understand that a gift is a measure of love in it. It shows the value of recognition towards the person.

Earlier women identified themselves in subname of wife, mother and daughter. They accept this identification willingly because they are not financially independent to lead their life individually. But now time has changed and women reject their relational identity. Now she is able to understand his honesty of this identity that is thrust upon her by society so that she may control herself as a being. The post-modern women are the women of sensibility and consciousness of opposition in the family society. They are educated and mentally strong to live their life in prosperity now women want to stand on their own feet as fully as a human being equal to man in society. By the love for husband acclimatizes her life. She can become more acquisitive and invite some of her friends to the house and Shrimati is bored by the hospitality and makes her alone. The guest insults her favourite subject which makes her burst out in emotion. Shrikant feels sorry for the inconvenience because of his wife's behaviour and insults Shrimati before the guest. And it stimulates a sense of anger and bursts out her inner feeling and Shrimati shares an affectionate relationship with her husband and it becomes very hard for her to take a decision. She decides that she would not tolerate any more humiliation being of Shrikant's wife. She realizes that her life is her own which she has to shape as well as face the events of her life. Shrimati gains the courage to leave the house where respect is no longer being served. She does not want to be in her husband's shadow with a luxurious life without self-respect. It is better to create a place in society. Instead of living discriminated, suppressed and sophisticated life she finally finds a way out of the dilemma to seek her own life. To turn out this boredom and meaningless life she decides to have a peaceful life by concentrating on her studies. "Money is one thing which really unites and mostly deceives people" Sudha Murthy.

It expresses the ferocious changes in the mind of Shrimati. Shrikant's attitude makes her decide what she wants and later she had advised him; very few you can only attain this peak in short time like him. Nothing is free of cost in this world; in achieving the position he has lost his lovable wife Shrimati. She understands that she is going to get her identification. So she decided to go to the U.S. for doing Ph.D. by doing this she tries to defeat men and breaks all the chains and norms propounded by patriarchal society on women. Now Shrikant realizes the sheer loss of Shrimati and felt before 17 years he had lost his meaningless place first rank and now the most precious Shrimati. However he tries to divert his mind to work; and he cannot stop thinking of Shrimati in their loss metaphorically symbolizes the flower 'Bakula' to bloom, wither and fall down to the ground, so does the romance and love of this couple eventually.

In this way Sudha Murthy is one of the prominent prolific writers and her works are very significant and impressive.

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Voice of Resistance: A Study of Kamala Das' Selected Poems

Mr. Vijay Prakash Ilkar

Assistant Professor, Kankavli College, Kankavli

Abstract:

Literature is an expression and a mirror of society and both walks together hand in hand to manifest the reality of society. Resistance in literature has been extensively observed from the past works to the present writings through various forms of emotions and expressions. Many of the writers are using 'Literature' as a significant tool to change and modify the social structure. Challenging norms and practices of societal constructed system are very much visible in today's global phenomenon. This paper is an attempt to study how Kamala Das reconstructs her 'feminine identity' in male-dominated society by resisting the norms set by the patriarchal system. Her feminist thoughts and resistance have deeply influenced mainly on Indian Literature in English so far. Her writings manifest her frustration and pain which led to the revolt against the man-made world. Her poetry has an almost violent voice that reveals itself through an outspoken use of languages as she explores the nuances of the personal relationship to the hegemonic masculinity in society. Das reconsiders women's status and rights by reconstructing social thoughts in contributing to the progress of change that has already started all over the world.

Keywords: resistance, feminine sensibility, patriarchy, sex

Voice of Resistance: A Study of Kamala Das' Selected Poems

One is not born a woman, but rather becomes one.

-Simone de Beauvoir (The Second Sex)

Indian history has witnessed the oppression of women at various stages and this social subjugation is also intensely depicted in the poems of Kamala Das. Kamala Das (1934-2009) is unquestionably one of the major poets in Post-Independence Literature in English. She is a bilingual writer who has written both in Malayalam and English. Being an Indian English poet and a feminist, she has greatly secured a substantial place in most of the anthologies of English literature. Her popular anthologies include *Summer in Calcutta* (1965), *The Descendants* (1967), *The Old Playhouse and Other Poems* (1973), and *Collected Poems* (1984).

Resistance, a word is used much widely in post-colonial discourse. The word 'resistance' according to Oxford's Advanced Learner's Dictionary stands for dislike of or opposition to a plan, an idea etc. Etymologically the word 'resistance' derived from the Latin word 'resistere' which refers to make a stand against or oppose something.

Kamala Das, in her autobiography 'My Story' (1976) presents her understanding of woman's position in the society and her idea of sex in women's lives after marriage. This thought of her gives us an impression about her poetry appreciation and the unique genre she engages in. There is a surprisingly rare style, tone, experimentation and radical thought process in her poetry. She has underlined the dilemma of women by resisting the confinement laid by patriarchal society of which restricts women to express their emotions and sentiments. Being a confessional poet, she has portrayed her personal emotional experiences in her poetry. Indianness is quite visible in her writings.

In her book, *This Sex Which Is Not One* Luce Irigaray the French author says, "Woman does not have a sex." Kamala Das hates conventional gender roles given to women by the patriarchal society. We find a passive tone of resentment and negation in her poem *An Introduction* where she says,

..... I wore a shirt and my
Brother's trousers, cut my hair short and ignored
My womanliness.

The words 'ignored my womanliness' evoke resistance against the rules set by male-egoist society but somehow her resistance could not get her freedom she yearned. By replacing her attire she thought of imitating the men of society but she was again forced to come back at sarees as it is the symbol of Indian woman as per society tradition.

Her disenchanted thoughts about sex and marriage life are next exploring her frustration in her own mind. She presents and laments over her helplessness in man-made world,

he drew a youth of sixteen into the
Bedroom and closed the door, He did not beat me
But my sad woman-body felt so beaten.

Kamala Das quests and desires for love is unending. Though she has already failed gaining the true love from her husband, she seeks for love which will give her freedom of choice. The boredom and wearisomeness of sex within and outside marriage is conveyed through several poems. Being a married woman she finds her true love within the periphery of the society. In *The Stone Age* she says,
When you leave, I drive my blue battered car
Along the bluer sea.

Her rejection to accept unpleasant love from her husband and her quest for true love unstops her to find a man and meets him crossing the boundaries set by the patriarchal society. Her article "Why not more than one husband?" reveals her feminine sensibility. When she observes the same man from the same patriarchal society, she remarks in *The Stone Age*,
Ask me, everybody, ask me
What he sees in me, ask me why he is called a lion,
A libertine, ask me why his hand sways like a hooded snake
Before it clasps my pubis. Ask me why like
A great tree, felled, he slumps against my breasts,
And sleeps

Her protest and anguish reveals her reaction to her mental despair and pain. Her realization of false love identifies herself again subjugated object in the society that gives her intense frustration. Throughout her life she has acknowledged only physical love and never adored real spiritual love from men including her husband and lover. Her poetry is well known for a valiant openness which is hardly found among the Indian women writers in English. This expression of openness makes her so special among other Post-colonial Indian writers in English

Her sincere effort to depict the mind-set of the society and exposed it at certain extent is quite surprising comparing to the other Indian poets writing in English. The feeling of angst, isolation, and senselessness under unembellished patriarchal supremacy often screams out frantically when she disapproves the role of a housewife in her husband's home. Das expressed her revolt against the noise of humiliation and domination very explicitly in the following lines. To quote from the poem *Of Calcutta*,

"Here in my husband's home,
I am a trained circus dog
Jumping my routine hoops each day."

Her voice seems so revolutionary when she talks about the societal norms laid on her unwillingly. She is unable to accept the 'societal woman gendered role' defying that the patriarchal society always has the reasons to pressurise women in all aspects. Unfortunately, women's choice of selecting things is also subdued by the male-gendered society. Kamala Das becomes upset due to the social set up which brings no value to women in the family and the society. She is not treated as a human being. She says that every woman is trained by her family members as well as her husband to follow up their rules. She articulates over her dilemmas and situations for all the women who have gone through the same domination. At the time of writing poems, when she selects her language of poetry 'English' i.e. colonial language, she was forced to write in mother tongue. She next expresses her rebellion in *An Introduction*,

Don't write in English, they said,
English is not your mother-tongue. Why not leave
Me alone, critics, friends, visiting cousins,
Every one of you? The language I speak
Becomes mine, its distortions, its queerness
All mine, mine alone.

Kamala das shows her suffering and challenges faced by every other woman on a daily basis in our traditional society. Das also showed power politics of the patriarchal society. Man as a dominant figure of patriarchal society can do anything as he wishes. He is not confined within any boundary set by patriarchal society. He has a freedom to expresses himself in every manner. This can be observed as a gender bias. The poet asserts her identity in the male-dominated society by identifying herself with the 'I'. The capital letter 'I' and its place in patriarchal society are unavoidable. Towards the end of *An Introduction* she declares her several roles as,

I am sinner,
I am saint. I am the beloved and the
Betrayed. I have no joys that are not yours, no

Aches which are not yours. I too call myself I.

She selected free verse to write her poetry instead of following any metrical form to show her anger and protest against this cruel male-dominated society. She has successfully acclaimed so much popularity at global stage on the equal level like American writers like Anne Sexton and Sylvia Plath.

She questions the hetero-normative institution of marriage in the Indian context to challenge the abusive and oppressive language of men, oppressors and patriarchy. Her treatment of sexual love and a depiction of the human body show frankness in her poetry. Raising questions unconventionally against convention of society was quite orthodox to readers. She naturally call over a war against the norms of the social set-up where she born. She voices the pains and pressures of a distinctive Indian woman who is suffering behind the thick veil of conservative traditions and customs. She asserts that women, including her, are victims of sexual humiliation under the male domination. Her works nurture a ray of anticipation in the hearts of women suppressed under male supremacy. Kamala Das expresses her judgment and experiences frankly. Her works are characterised by high level of sincerity and integrity.

Hence, her frank and strait forward examination over female soul makes an inerasable impression in this particular genre. To put it briefly, suffering and humiliation are undeniably the dominating themes in her poetry. Women's exploitation in a male leading society is the major part of her poetry.

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Women Entrepreneurship in India :Problems and Perspectives

Dr .Agnes John Kharat

MGV's Arts, Science & Commerce College Surgana, College Road, Surgana, District Nashik

Abstract

Unfavorable conditions have lead towards low development of women entrepreneurship in India . According to the "Female Entrepreneurship Index Report", 2015 compiled by Global Entrepreneurship Development Institute, India ranked 70 with a low score of 25.3 among 77 countries studied .India lags behind even African countries .According to the Global Entrepreneurship Monitor Report on Women's Entrepreneurship 2016-17, India needs a lot of improvement as far as women entrepreneurial activity is concerned. With the growing awareness about entrepreneurship and the spread of education among women over the period, along with traditional kitchen extension activity business women have started to enter in the field of Engineering, Electronics and technology . Women entrepreneurs in India are confronted with wide array of challenges like Socio personal Problems, lack of finance, Shortage of raw materials, Intricate licensing Procedure, Marketing Problems, Tough competition, Lack of entrepreneurial training, Low Risk-Bearing Ability inadequate infrastructure, shortage of power, lack of advisory and business development support services, unawareness regarding existing provisions of government support, social attitude and low need for achievement also hold women back from becoming successful entrepreneur .Women are equally competent to work as business entrepreneurs .They should be provided opportunities to develop themselves .Women have inborn qualities of entrepreneur .They must not be deprived of their right to work and to achieve their ambitions .It is suggested that along with government initiatives social workers & leaders should take active part in creating awareness about gender equality and avoiding discrimination in men and women.

Keywords : Women Entrepreneurship, India, Role of Government

Introduction:

The pioneer role of women in the history of human civilization in all societies is very significant .Globally women's vital contribution in the society has ensured the stability, progress and long term development of nations .Women, particularly mothers play the largest role in decision making about family diet and consequential child health & nutrition .Women are primary caretakers of children and elders in all parts of the world especially in developing countries like India .Mothers are the first teacher of all children, who encourage them to attend school .Thus women role as the educators is undeniable for society's transition from pre-literate to literate .The average female share of the global workforce is 45.4 percent .Women's small business in rural developing communities have extended family's lifeline and laid networked economic foundation for future generation .The role of women in the urban and rural workforce has expanded exponentially in recent decades .

Agriculture plays a crucial role in the economy of developing countries, and provides the main source of food, income and employment to their rural populations .According to FAO)2000(, it has been established that the share of the agricultural population in the total populace is 67 %that agriculture accounts for 39.4 %of the GDP and that 43 %of all exports consist of agricultural goods) Neha Khanna 2014 .(Globally women comprises 43 percent of the world's agriculture labor force which rises 70 percent in some countries where 80 percent of the agricultural production comes from small farmers, most of whom are rural women .Thus women's formal and informal labor can transform a community from a relatively autonomous society to participant in the national economy .

There are various definitions of women entrepreneurs .Women entrepreneurs are woman or group of women who initiate, organize and run a business enterprise .Women who innovate, imitate or adopt a business activity are called "women entrepreneurs ."The Government of India has defined women entrepreneurs based on women's participation in equity and employment of a business enterprise .Accordingly, a women entrepreneur is defined as "an enterprise owned and controlled by women having a minimum financial interest of 51 per cent of the capital and giving at least 51 percent of the employment generated in the enterprise to women." So in nutshell, women entrepreneurs are those women who think of a business enterprise, initiate it, organize and combine the factors of production, operate the enterprise and undertake risks and handle economic uncertainty involved in running a business enterprise.

Objectives of the study :

1. To understand the women entrepreneurship in India
2. To know problems of women entrepreneurs in India
3. To suggest measures to improve the state of women entrepreneurs in India

Hypothesis of the Study:

1. There is lack of women entrepreneurship in India.
2. In modern India many women aspire for entrepreneurship.
3. Government of India & Society in general is interested in developing women entrepreneurship.

Research Methodology :

The present research article is based on extensive study of secondary data collected from various books, National & International Journals and public and private publications available on various websites and in libraries focusing on various aspects of Women Entrepreneurship.

Discussion :

Women entrepreneurship in India:

India is land of diversity where all kinds of cultural diversity are woven together with a colourful string of peace and harmony .Women constitute around half of the population in India .Still now in majority of the populations women are not treated equally, they are not given fair opportunities .Sodocultural traditions and taboos have arrested the women in the four walls of their houses making them dependent on others .Our society is still male dominated where women have disadvantageous position in the society .All these factors serve as non-conductive conditions for the emergence and development of women entrepreneurship in the country . Despite of low literacy rate among women as compared to men education has changed the situation little positively .We are still on our way towards gender equity .Unfavorable conditions have lead towards low development of women entrepreneurship in India .According to Dhameja et al) .2000(, Women's entry in business is new phenomenon in India .The ranking of India on parameter of women entrepreneurship according to the Global reports is also very dismal .According to the "Female Entrepreneurship Index Report", 2015 compiled by Global Entrepreneurship Development Institute, India ranked 70 with a low score of 25.3 among 77 countries studied .India lags behind even African countries,)Terjesen & Lloyd, 2015 .(According to the Global Entrepreneurship Monitor Report on Women's Entrepreneurship 2016-17, India needs a lot of improvement as far as women entrepreneurial activity is concerned.

If we notice history of women entrepreneurship, it is clear that women's entry in the field of business is the extension of their kitchen work of making Papad, Pickels, Masala Powders .Women entrepreneurship is more common in younger age groups in comparison to older age groups in India .Women may mainly enter in the field of business due insufficient family income, dissatisfaction with salaries, job, difficulty in finding work, a need for flexible work schedule because of family responsibilities and other elements of necessities .But there are women who deliberately choose to be entrepreneur to achieve independence, self-fulfillment, entrepreneurial drive and desire for wealth, power and social status, co-operation and support of family members and a strong network of contacts .The most prominent factor is self achievement expressed in terms of challenge which helps women to start, run their own business and turn it into a profitable venture .When a strong need for achievement could not be fulfilled through a salaried position or when there was a desire to transform a perceived opportunity into a marketable idea, then these factors work for women to start their own venture)Shewta Gaur et al .2018 .(Study reveals that though low women entrepreneurship is mainly caused by supportive conditions from male partner, government and society.

According to Patole et al) .2002(, Women entrepreneurs have diverse educational background . Majority of the women entrepreneurs belong to lower and middle income group)Vinze, M .D., 1987 (and have service oriented enterprises)Gupta, 2013 .(With the growing awareness about entrepreneurship and the spread of education among women over the period, along with traditional kitchen extension activity business women have started to enter in the field of Engineering, Electronics and technology .

Problems of women entrepreneurs in India:

Socio personal Problems :Men dominated society cannot endure the independence of the women .Wrong attitude of the society against women and lack of social and family cooperation are the fundamental barrier for women entrepreneurs in India.

Easy and affordable finance: Shortage of finance is prominent challenge by majority of women entrepreneurs)Panandikar, 1985 .(The complicated procedure of bank loans also creates lot of problems in getting the required finance.

Shortage of raw materials :The shortage of required raw materials is also one of the big problems faced by women entrepreneurs .Women entrepreneurs find it difficult to procure the required raw materials and other necessary inputs for production in sufficient quantity and quality .The prices of raw materials are quite high and fluctuate.

Intricate licensing Procedure: Complicated legal formalities of licensing and registration and exclusion from banking and financial services create obstacles for women entrepreneurs)Vinze, M .D., 1987 .(

Marketing Problems: Due to family responsibility, social barriers or illiteracy and inadequate experience women finds it difficult to market their products .

Tough competition: Women entrepreneurs have to face severe competition from organized industries and male entrepreneurs having vast experience .Many of the women enterprises have imperfect organizational set up .But they have to face severe competition from organized industries)Dr .Vijayakumar, 2013.(

Lack of entrepreneurial training: Lack of professional training is also hinders the progress of entrepreneurship among women .

Limited Mobility: Due to family responsibility, self protection instincts and social barriers women entrepreneurs cannot travel as frequently as men do for business purpose .

Low Risk-Bearing Ability: Risk bearing is an essential requisite of a successful entrepreneur. Indian women are low risk bearers due to lack of education or less education and dependability on others.

Along with this women entrepreneurs in India are confronted with wide array of challenges like inadequate infrastructure, shortage of power, lack of advisory and business development support services, unawareness regarding existing provisions of government support, social attitude and low need for achievement also hold women back from becoming successful entrepreneur.

Measures to improve the state of women entrepreneurs in India :

Role of Government to Develop Women Entrepreneurs in India : The growth and development of women entrepreneurs required to be accelerated because entrepreneurial development is not possible without the participation of women. Therefore, a congenial environment is needed to be created to enable women to participate actively in the entrepreneurial activities. There is a need of Government, non Government, promotional and regulatory agencies to come forward and play the supportive role in promoting the women entrepreneur in India. The Government of India has also formulated various training and development cum employment generations programs for the women to start their ventures.

A (Specific target group) : It was suggested to treat women as a specific target groups in all major development programs of the country.

B (Arranging training facilities) : It is also suggested in the chapter to devise and diversify vocational training facilities for women to suit their changing needs and skills.

C (Developing new equipments) : Efforts should be made to increase their efficiency and productivity through appropriate technologies, equipments and practices.

D (Marketing assistance) : It was suggested to provide the required assistance for marketing the products produced by women entrepreneurs.

E (Decision-making process) : It was also suggested to involve the women in decision-making process.

There are several institutional arrangements both at the centre and the state levels like nationalized banks, state financial corporations, state industrial corporations, district industry centres and voluntary agencies like FICCI's Ladies Organisation (FLO), National Alliance of Young Entrepreneurs (NAYE) (Which have been engaged in protecting and developing women entrepreneurs in the country).

There is need for sustainable growth of women entrepreneurs, to promote a balanced growth in the country. Startup India is government initiatives which are committed to strengthen the women entrepreneurship ecosystem, through policies and initiatives, and creation of enabling networks.

The following training schemes especially for the self employment of women are introduced by government :

- Support for Training and Employment Programme of Women (STEP).
- Development of Women and Children in Rural Areas (DWCR).
- Small Industry Service Institutes (SISIs).
- State Financial Corporations
- National Small Industries Corporations
- District Industrial Centres (DICs).

Conclusion :

The increasing presence of women as entrepreneurs will lead to the change in the demographic characteristics of business and economic growth of the country. Women entrepreneurs can generate more employment opportunities in the country. It can be concluded that women are equally competent to work as business entrepreneurs. They should be provided opportunities to develop themselves. Women have inborn qualities of entrepreneur. They must not be deprived of their right to work and to achieve their ambitions.

Recommendation and Suggestions :

1. It is suggested that social workers & leaders should take active part in creating awareness about gender equality and avoiding discrimination in men and women.
2. Ethically people should be taught to show sympathy to women business entrepreneurs and encourage them.
3. Education institutions should introduce special courses in order to enhance women entrepreneurship.

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Role of Financial Market in Global Economy

Prof .Miss Manisha Shivaji Sawant

Department of Accountancy, Kankavli College Kankavli Dist. Sindhudurg

Abstract

There exists an imbalance in the distribution of funds in every economic system. A financial market is a mechanism that facilitates the flow of funds from the area of surplus to those of deficit. A financial market is that part of the global economy which includes all financial instruments and financial institutions; these work in moving savings from savers (household and firm) to borrowers. It is the interface between firm, society and the global economy. A financial market is the market in which financial assistance is created or transferred. These include both short-term and long-term financial securities, for example, shares, debentures, bonds, loans, etc. Financial markets are broadly classified into money market, capital market, and credit market.

Introduction

Financial markets are a marketplace for financial products where buyers and sellers interact with each other. They trade financial assets like equity, bonds, mutual funds, currencies, and derivatives. The 1st stock exchange was started in 17th May 1792 in New York; the name was Wall Street. The Bombay Stock Exchange started in 1875; it is the 1st stock exchange in India. Nowadays, NASDAQ, EUROPEAN, SHANGHAI, and NEWYORK stock exchanges are popular in the world. Turnover of the global foreign exchange market increases year by year. BGN turnover in 2019 in billion US dollars is 1.95 and SAR is US dollar 12.29. Share of total world equity market value is largest of US country is near 54.5% and China 4.0%.

Definition

Financial markets refer to a marketplace where buyers and sellers participate in trade. It is a platform that provides facilities for traders to buy and sell financial instruments or securities.

Objectives

- 1 (To know concept of financial market, Types, instruments, etc.)
- 2 (To know working of market, features and role in global economy.)
- 3 (To know turnover of foreign capital market, major stock exchange.)
- 4 (To know financial market mechanism.)

Hypothesis

- 1 (Financial markets are a mechanism of flow of funds from areas of surplus to those of deficit.)
- 2 (Financial market activity, role, turnover increases year by year.)

Methodology

In the present study, use of secondary resources for evaluation of the role of world financial markets.

Significance Of the Study

This paper brings to light advantages for explaining actual popular stock market merits, demerits, types of financial markets, instruments, and working of financial markets function.

Limitation of study

This paper is limited to explaining the need and role of financial markets in the global economy but we cannot remove actual problems and limitations.

Function

- 1(Mobilization of funds, 2(Price determination of commodity 3(Provide commercial information. 4(Diversification of risks 5(Ensure liquidity 6(Save time and money 7(Provide clearing house

World rank financial instrument

Rank	Instrument	Analyses
01	EUR /USD	5702
02	Gold _USD	3563
03	DAX 30	3300
04	GBP/USD	2511

Role of financial markets

- 1 (Pooling of funds)

The savings of people are channeled properly through the financial market. The surplus is transferred from household to business organization as a result of production of better goods and services taking place. This increases the national income of the country and leads to rapid economic development.

- 2 (Employment opportunity)

Financial markets create employment opportunities either directly or indirectly, e.g., financial intermediaries like brokers, underwriters, etc.

- 3(Provide liquidity)

Liquidity means the ability to convert securities into cash. Financial markets are platforms to liquidate their investments like shares, debentures, bonds, etc.

- 4 .Encourage capital formation

Stock exchange boost the process of capital formation by mobilizing the fund from people and diverting those the industrial activities and diverting those to industrial activity.

5 .Facilitate public borrowing

Financial markets provide a platform for marketing government securities it facilitates to Government to raise public debt in form of bonds and other securities.

Problem of stock market

1 (Price manipulation 2 (Delays in settlement 3 (Dividend policy confuse the shareholders.4 (Improper financial statements.

Limitation of financial markets

1 (Inflation 2 (Specific time period 3 (Non comparable 4 (Prone to frauds 5 (Unaudited financial statement 6 (Not futuristic 7 (Error and omissions 8(Real profit hidden.

Major stock exchange

Rank	Year	Stock Exchange
01	2020	NEW YORK Stock Exchange
02	2020	NASDAQ
03	2020	TOKYO Stock Exchange
04	2020	SHANGHAI Stock Exchange

Capital Market turnover of New York stock exchange

Listed company	Year	Turnover
US \$	2018	US \$ 22.9 trillion
US \$	2019	US \$ 30.1 trillion

Capital Market turn over of BSE

Date	BSE Trade	BSE turnover)cr (
18 Nov 2020	2336924	3604.52
17 Nov 2020	2295845	4177.98
14 Nov 2020	711248	779.98

Global stock market

Name of stock market	Current Value	Change
NASDAQ	14047.50	-47.97
European markets		
FTSE	6748.86	-7.25
CAC	5786.53	0.28
DAX	14064.60	44.88
ASIAN Market		
SGX NIFTY	15282	-46.00
SHANGHAI composite	3655.09	51.60

Share of total world equity market value of countries in January 2020

Country	%of share
US	54.5%
Japan	7.7%
U.K	5%
China	4%
Australia	2.2%

Turnover of global foreign exchange market with different currencies in billion of US dollars

Currency	2010	2013	2016	2019
BGN	0.53	1.45	1.26	1.95
BHD	0.21	0.29	0.37	2.16
ARS	1.6	1.5	1.5	3.94
PEN	1.2	3.21	3.87	5.31
RON	2.91	6.61	4.82	6.47
MYR	10.94	21.28	17.96	8.9
SAR	3.22	5.42	15.15	12.21
COP	3.97	5.83	7.9	12.29
CZK	7.6	19.06	14.23	25.62

Major finding

1 (Financial market is life blood of all developing and development countries .It classifieds in capital market , Forex market ,money market ,commodity market, etc.

- 2 (Financial market collected saving and invested in industries for development of society .
- 3 (Popular stock exchange in world on date of 28 Feb 2021 is 2.78 crores Indian invested in stock market which around 2 %of the total country .
- 4 (50 %of Americans own stock.
- 5 (18 billion people invested in equity market
- 6 (Capital market turnover of New York stock exchange in 2018 US \$ 22 .9 trillion increase to US \$ 30.1 trillion in 2019.
- 7 (Capital markets of India also increase up to 3604.52 crores in 18 Nov 2020.
- 8 (Share of total world equity market value of US 54.5 %is high compare to china it just 4 %in January 2020.
- 9 (Turnover of global foreign exchange market in billion US \$ of BGN 1.95, BHD 2.16,SAR 12.21,CZK 25.62.in 2019

Suggestions

- 1 (Development world financial market give true and proper information to investors .
- 2 (To introduce fully computerized system for settlement of transactions
- 3 (To force listed companies to publish their annual report and declared true financial information.
- 4 (To control and abolish the kerbt market from premises of stock market.
- 5 (To take legal action on those companies for issue fake certificate.
- 6 (To make strict rules and regulations for development of financial markets.
- 7 (To active role by bank insurance company, other financial institutions for encouraging investment in world financial markets.
- 8 (Play initial role by government agencies for regulations and healthy financial environment.
- 9 (To encourage developing countries investors for capital market investment.

Summary

Financial markets is lifeblood of world economy .Turnover of developed countries are larger than developing countries .Popular stock exchange in world is New York stock exchange turnover in 2019 \$ 30.1 trillion . Capital markets provide fund for industrial development. Money market provide fund from 1 day to 1 year .the first stock exchange in world is New York stock exchange started in 1792 the was WALL STREET .financial markets really play important role for capital formation, providing employment opportunity, liquidity and increase standard of living of world economy.

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Nalanda University: An ideal International University of ancient world

N. R. Hedulkar

Anandibai Raorane Arts, Commerce & Science College, Vaibhavwadi, Dist: Sindhudurg-

Abstract:

The great archaeologist, Alexander Cunningham, identified the site as Nalanda University in the 1960s, and the Archaeological Survey of India started excavating the site on 1915-1916. According to preliminary information on objects and structures, Nalanda belongs to the Gupta period. The university was founded by Sakraditya (Kumaragupta I) and expanded by successive Gupta emperors like Buddhagupta, Purugupta and Narasimhagupta. For about 700 years, from the 5th to the 12th century, Nalanda was the higher-educational center of the ancient world. It followed institutional education, focusing primarily on higher education. University taught fine arts, medicine, mathematics, astronomy, politics, weapons, art and mainly ethics. Bakhtiyar Khalji, a Turkish muslim invader, destroyed the university in the early twelfth century.

Keywords: Nalanda University, Magadha, Ratnasagar, Śīlabhadra, Hiuen-tsang

Introduction: Nalanda University was the largest and the first residential international University in the world during the Buddhist period. The specific qualities of any educational institution can be determined on the basis of the date of its establishment, the state of discovery, the political situation of the time, the place and the cultural background. Considering all these things, Nalanda University deserved all those qualities that any educational institute should have. Scholarships, dedication in teaching, quality, lifestyle system, etc. were the strengths of this university. The admission process, campus, building, library, subjects taught are worth mentioning here. The present study focuses on the following topics related to the university.

Campus: The university had eight separate courtyards, ten viharas, meditation rooms, classrooms, ponds and gardens. It has a nine-storeyed library where the monks carefully copied books and documents so that each scholar could take his own collection. It has student dormitories, perhaps the first dormitory of an educational institution made for accommodation of 10,000 students at the university and 2,000 professors. Nalanda was the largest education institution in ancient India. The excavated remains show that the apartments were more spacious; the stone beds were wider and had extra cells to hold books and personal belongings.

This university was a pilgrimage destination in the first century AD. It was related to the Buddha's frequent visits. Nalanda University was an autonomous and self-reliant educational institution with adequate funding and staff. Nalanda used revenue from villages given by the king to handle the financial burden. The campus itself was much disciplined and carefully planned. All these buildings were magnificent in size and height. Everywhere there were beautiful decorative towers. The land was adorned with a deep translucent pond surrounded by blue lotuses. This place had the shade of a mango tree. The walls were made of the finest bricks with a very light yellow color and good texture, and in some places the joints between the bricks were altogether inconspicuous. Each room had a small lampstand and the other room had a place to keep books. Large sized ovens were discovered here. The university had 300 lecture halls, laboratories, libraries and public lecture halls too.

Hiuen-tsang was a Chinese student who studied at Nalanda University for ten years. According to him, there were eight large monastery and 1500 apartments. The apartments were rectangular, with one or two students living each. There were also rooms for monks. The wells in one corner of each hostel and the large space allowed for community dining. In addition there was a personal locker system. There was an up-to-date and efficient drainage system and evidence of this can be found at the excavation site. The campus was very green. Life in the monastery was very simple, spiritual, peaceful and moral.

Administration: The administration of the university was strict and disciplined. The administrative director of the university had character, qualifications and good experience and was selected by the various teams that formed by the exclusive federation. The abbot had to run the administration of the university and also control and regulate the moral, pious and spiritual life of the monastery. Nalanda's present and future was depended on them. The most senior *upajjhāyas* (professor) also took over as chief administrative officer. This professor can be considered as the modern vice-chancellors, who were the head of all monastic activities. When Hiuen-Tsang visited Nalanda in 635 A.D Śīlabhadra a Buddhist monk was the head. The monks supervised and guided the affairs of universities, educational institutions or other functions through two councils appointed for this purpose. The duties included the focus on admitting students to universities, certifying courses in various subjects, assigning work to teachers, conducting proper examinations, maintaining manuscripts and making copies of manuscripts which were in high demand in those days. The administration provided free food, clothing, and daily necessities to students and teachers.

Education: The famous pilgrim Hsuan Tsang from China came here and studied and taught for 5 years in the 7th century AD. He reported many things related to this residence. The main significance of Nalanda comes from its Buddhist learning center. At that time Nalanda University had more than 10,000 students and 3,000 teachers and staff. For about 700 years from the 5th to the 12th century, Nalanda was the center of educational and Buddhist research in the ancient world. It has been observed that an average of one hundred lectures or discussions were

held here every day. On an average the number of students per teacher was seven or eight and it must have been very convenient to give individual attention to students. There were no external students at the university. It was not only dedicated to the study of Buddhism, but also taught students fine arts, medicine, mathematics, astronomy, politics and the art of weapons and philosophy. Historians claim that Nalanda's curriculum covered both religious and secular subjects, and medicine was one of the most popular courses.

The enthusiasm of entering Nalanda shows that it was an institution of higher learning, and admission was a prestigious task and it was by no means easy. Tough oral examinations were conducted by the gatekeepers at the entrance of the university for the enthusiastic students seeking admission. The gatekeepers were experts in discussions and religious disputes. Most of the aspiring candidates, who wanted to get admission in the center, had to withdraw due to the difficult type of examination here. Candidates who were very proficient in both ancient and modern types of educational knowledge were accepted and only two to three people could become successful and others had to go back in disappointment. In addition to the teacher's formal lectures, oral lectures are also conducted through discussion and questioning. The number of such lectures was about a hundred per day and students used to take part in these lectures.

Hsuan Tsang once mentioned that colleagues often meet in Nalanda to check their intellectual capacity, to reject useless people, and to promote intellectual development. Like modern seminars and conferences, knowledgeable people from different cities used to participate in these events and one day was not enough to ask and answer in-depth questions. This also shows that Nalanda's academic qualifications are very strict, and that teachers and students are flooded all year round.

Compacted practical knowledge and the ability to learn were the hallmarks of Nalanda's research. The education conceived and understood by the custodians and professors of Nalanda do mean their overall development in intellectual, moral, spiritual and aesthetic aspects. University education included living a successful and peaceful life in society and sometimes getting a job in the royal government. The actual value of graduating from such a prestigious institution can be measured by the fact that immoral people fraudulently claim to graduate. Those who stole Nalanda's name were respected everywhere. The learned men of Nalanda were famous all over the country. They defeated many Pandits with the knowledge of other sects.

Admissions were limited for students with the required background to post graduate studies. In particular, the institution was known as a place where knowledgeable people from the country and neighboring countries would come together to resolve their doubts and master the art of dispute. The university curriculum was very rich and accepted all subjects including Buddhist and non-Buddhist. Many of these subjects were considered mandatory. Astronomy was being taught and for this purpose the university had built an observatory and a clipsidra (water clock). In particular, clipsidra was used by all Magadha people to understand the right time. The cordial relationship between the teachers and their students was truly noble. Such an ideal teacher- student relationship is unmatched in the long history of academic thought and study. High levels of ethics were set for all these students and teachers. Nalanda University was seen as a model of morality and no case of guilty had been reported during its long existence of seven centuries. The university was rich in wealth and literature as well.

Library: The Nalanda University library was located at a special place called Dharmaganj. Dharmaganj means the Mart of Religion. The university had archived manuscripts on various subjects in different languages. These three magnificent buildings were known as Ratnasagar, Ratnodadhi and Ratnaranjaka. Among them, Ratnasagar was a nine-storeyed building dedicated

to the collection of rare sacred artifacts. Manuscripts were written on a stone shelf carved out of the wall. Usually a teacher who taught a particular subject had the responsibility to store it in the library on that particular subject and he would have given proper guidance to his students. The library eventually became a huge repository of precious manuscripts. This was useful for the dissemination of knowledge, as numerous references to scholars abroad are found in these libraries, copying hundreds of manuscripts and taking them to their home countries.

Conclusion: Nalanda University was one of the oldest universities in India and in the world. This university was in the kingdom of Magadha and is in present day Bihar state. The design of the university building was a masterpiece of architectural art. The university had more than ten thousand students and more than two thousand teachers. The university attracted students from many countries around the world. Many subjects like science, medicine, astronomy, philosophy, mathematics, meditation etc. were taught in the university. There is no doubt that Nalanda University was the home of knowledge, freedom and philosophy. The university, with its extremely ideal teacher-student relationship, was also committed to setting high moral standards among students. However, in 1193 AD, the Turkish muslim invader Bakhtiyar Khilji destroyed this precious treasure full of centuries-old knowledge. Thus the ideal, knowledge-loving university and humanity were forever destroyed only by the man's lust for religion and power. During the six centuries of Nalanda existence there was nothing else quite like it.

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‘Need for Special Tourism Zone’ -With Reference to Konkani Region of Maharashtra

Dr. Kuntewad Datta U.

D. G. Tatkare College, Tal, Dist-Raigad, Maharashtra.

Introduction

Surrounded by the Sahyadri hills on the east and the Arabian sea on the west, coastal strip of Maharashtra is known as the Konkani region. Historically Konkani has been the land with dense forest cover and a landscape fringed with beautiful beaches, picturesque hamlets, paddy fields, coconut groves and mango orchards. It has seen substantial growth in tourism in the past few years. But this growth is clustered and organized. Why is it that a neighboring State like Goa and Kerala attracts huge numbers of tourists and Konkani is relatively unheard of? Where are the Konkani people falling short in turning their natural wealth into good business opportunity? To identify the exact problem of this region we had carried out a survey. Two questionnaires were prepared and people were interviewed on the basis of the survey to try and get the Complete Facts of Tourism Industry.

Research Problem- Under-development of Konkani as a tourist destination taking into consideration its huge potential.

Objective of the study-

1. To understand the problems and expectations of the tourists.
2. To find out the efforts and shortcomings of the locals.

Sample size 223 respondents

Location of sample collections:- Devegkar, Shrivardhan and Pune.

Observations

The analysis of the data certificate several issues related to the Konkani tourist Industry some of the important ones are discussed below.

Employment Generation-

As observed in the graph-1, owners themselves along with their family members run 91% of the business. Maids and servants are hired only on daily or monthly basis, during the peak season. Hence the total Number of people contributing towards the business is very low. As observed from graph 2, 53.4% of the Business employ less than 5 people. The Number of hotels charging more than RS 1000 per room per day, when employ a larger Number of people, is only about 25% of the total (Graph;3) As observed, these are mainly managed by the second generation of entrepreneurs. Since their target market is the upper class, they provide better comfort and services. Hence, though the number of business units is increasing. The total income generated is not getting distributed. The opportunities for the general public are being restricted to manual work. The supervisory and management Jobs are being restricted to the landlords this lack of opportunity for the educated crowd is leading to outflow of the local talent. Most of the young generation prefers to move to cities in search of better education and Job opportunities.

Culture

The rise of IT industry, in the past decade, led to high disposable incomes in the regions of Pune and Mumbai. The good connectivity, due to construction of Tamhini Ghat and better quality roads, resulted in Konkani becoming a favorite weekend destination. The cosmopolitan nature of these tourists, the showcasing of their wealth and their westernized culture was introduced to the Konkani people 40.9% (Graph:4) of the respondents believe that the rise in tourism is affecting the local culture to a great extent. The main reason, for nearly 60% of the local not considering tourism as a poison for their culture is that only about 100 calendar days of the year the region is engaged in tourism the tourism mainly visit on weekends and in the new year and Christmas period. The summers are very hot and humid. In the rainy season, due to heavy rains, the sea is very rough and hence the prime attraction of the region the virgin beaches is lost hence the tourist calendar gets restricted to less than 100 days leaving no major impact on the Konkani culture.

Communication within the industry –

Any tourist visiting the region interacts with all the different components of the industry. For example, it supposes a group of ten people visit Devegkar, they will stay at same hotels, utilize the transport, have food in the restaurant, buy goods from the local vendors etc. Hence the source of income for all the service provider says that they are not co-coordinating with any other parts of the tourism industry. There is complete absence of central body for regulation in the industry. The businesses exist in small independent fragments, unaware of the need for providing better integration. 47% of the population takes efforts to ensure some kind of intra industry communication, but 47.8% (graph-6) of these respondents do not have the town is small with population around say 5000. A centralized authority to control all tourism related activities would be effective the government initiative for the same contributes only 8.7% of the communication. Achieved mainly through the MTDC website and the Gram panchayats. The major reason why the contribution of the government is so low is because in the Devegkar-shrivardhan belt. only 52.27% (graph7) of the business are registered with the government the remaining 47.7% service providers do not have any license to run their business. some of the reasons for such alarmingly high percentage of illegal commercial establishment are.

- The coastal Regulation Zone policy: According to this policy no commercial establishment is allowed to function in the area soon inside the land from the high tide line. But most of the tourist prefer the proximity of their hotels to the beach. Hence there is more revenue generated in this Zone encouraging illegal establishments. Shockingly even the MTDC resort at Tarkari is located right on the beach they pay very heavy fine yet manage to make profits. Some of the town like Diveagar is very old civilizations established long before even the concept of tourism took birth. Nearly the entire town is located in area now restricted by the CRZ. Hence running bed & breakfast type of establishments. Which contribute 42.5% (graph:8) of the accommodation business, is not practical in line of the CRZ policy.
- The Registration procedures for any business are very lengthily and significant benefits from the registration with the government.
The advertisement and promotion activate, as 77.6% (graph: 9) of the tourists know about the region only through word of mouth. Internet contributes to 7.1% of the awareness activities.

Expectations and responses of the tourists:

88.5% (graph:10) of the tourists believed that there konkan trip was complete value for money. This leads to the Number of repeat customers as high as 67% (graph:11) , which signifies the fact that konkan is a preferred tourists destination. thought beaches are prime attractions for 46.9% (graph:12) of the visitors the calmness of the rural ambience also attracts a significant 32.2% of the tourists. The challenge, thus, lies in preserving the rural ambience and virginity of the beaches from the ill effects of growth in tourism.

24.4% (Graph: 13) of the tourists complained about the poor level of sanitation facilities available. 44.8% (Graph: 14) of the respondents did not feel very secure during their vacation. They were uncomfortable either on the beaches or while coming from their town to Konkan. The local transport is in poor state according to 58.2% (Graph: 15) of the respondents. Hence the percentage of people using private modes of transport is as high as 94.9% (Graph: 16).

Major Recommendations:

After understanding the expectations, potential and shortcomings of this region, the following is suggested to improve the revenues generated.

I. Extending the tourism season: Arranging special camps during the off-season will add to tourism calendar days. The types of camps favorable for this region are:

- Summer camp for kids: This camp can include yoga sessions, environmental awareness, visits to the cashew/kokam/rice flakes/ mango processing plants, social work etc. Urban parents will willingly send their children to such camps to give them a different exposure.
- Medical Tourism: Tie-ups with hospitals can ensure hospitality services to patients recovering from some disease. Konkan will be positioned as an ideal destination thanks to its peace and pollution-free climate. The special needs of the patients can be catered with the help of trained nurses and small clinics. Helicopter/speedboat services can be arranged to take care of emergencies.
- Out borne training: Nearly all the multinational companies conduct regular training programs for their employees. Konkan can prove to be an ideal host for these events.
- Mango Picking: March to May is the peak season for mangoes and the lowest turnout of tourists. Konkan produces and exports large quantities of the fruit and hence the plantations and processing plants can act as a major tourist attraction.
- Monsoon Magic: The region experiences heavy rainfall. Since beaches are perceived as the only attraction, tourists do not visit in monsoons. But the paddy fields and lush greens are a treat to the eyes. This beauty of the region is completely unexplored. Special monsoon magic tours need to be arranged for highlighting this aspect.

II. for increasing the average duration of stay: Konkan is looked upon as a weekend spot. Since not many activities are offered, the average tourist gets bored in a couple of days. Hence to increase the duration of stay, innovative attractions must be added. They are as follows:

- Kerala massage/therapy centers.
- Hydrotherapy and aromatherapy can also be introduced with setup from experts.
- Improve the food services. Regular full time hotels are the basic necessity. These hotels must be able to provide food varieties other than the ethnic ones. Though they can concentrate and specialize in the local food, some widely accepted food like breads and south Indian snacks must be provided. The hotel must maintain the rural ambience and try and add special services.
- Several kiosks should be set up in the peak season offering services like coconut water, fresh fruits and other goods. These points will also act as general enquiry points.

III. Promotion strategies: Apart from the individual promotions which are carried out by nearly 29% of the industry, the publicity of Konkan as a whole is essential and should be carried out by a central authority. These include: -

- Proper maps and guides of the region.
- Highlighting as agro-tourism.

- Special tie-ups with tour agents.
- Single website for all the towns.
- Blog advantage as it is the cheapest form of advertising.
- Every crate of mangoes which leaves the place must contain the brand Konkan.
- Introduction of brands in the locally manufactured products like pickles, papad, processed fruits etc.

IV. Development of tourist spots:

Though there are more than 15 forts in the region, they attract only 7.7%, as they are not well developed. The following developments can improve the turnout of tourists on these forts:

- Better ferry services
- Introduction of Segway's on some of the larger forts
- Sound and light shows depicting the historical importance of the region
- Proper guides

- Museum

Need For Special Tourism Zone

The sustenance of tourism development in these zones will depend on careful planning and management without hampering environmental and socio-cultural and elements. We would like to propose a Master Plan which would encompass a PPP "Public –Private Partnership" to boost the tourism sector in Konkan region. If certain zones are declared as special tourism zones (STZ), it will catapult the tourism activity and hence.

the economic state. The various improvements suggested in this study can be implemented only if the private sector expertise and funds are given healthy freedom to flourish. But the main problem in this endeavor will be that currently 86% (Graph: 17) of the locals are not ready to lease or sell their property. This is mainly because they are unaware of the returns they can expect. But on the other hand when questioned about participating in public private partnership 65.7% (Graph: 18) of them were ready. This gives a ray of hope for the entire tourism industry in the region. The exact implementation of the STZ will require further detailed study of the region.

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Growth and Changing Land-Use Pattern In In Uran, Taluka of Raigad District

Mrs. Aupama Rajkumar Kamble

Assistance Professor, Uran College of Commerce and Arts, Uran, Dist. -Raigad

Abstract

The rapid population growth in Raigad District especially Uran Taluka include the process of urbanization that have resulted into changing land-use pattern. Uran Region is one of the fastest growing region of Raigad District. Its Urban population increased from 22.2 percentage in 2001 to 43.3 percentage in 2011 (Census of Raigad District 2011). Due to growing population pressure the total Land use areas well as Construction. On the other hand, are asunder forest cover has declined from 30 percent in 1971 to 27 percent in 1991 and is expected to it declines further to 22 percent by 2011. Using various demographic and spatial analysis techniques, this paper attempts to shows the effect of population growth on land-uses Pattern. and subsequently on the regional environment. It also evaluates critically the development plan of the region. The dates it goes the study have obtained from the Mumbai Metropolitan Region Development Authority and Census of India.

Keywords: Population growth, Population density, Change Land use Pattern, Uran, Raigad..

Introduction :

The rapid growth of population is the process of urbanization have resulted in an increasing demand for land in urban settlements. A city grows not only by population but also by changes in spatial dimensions. The prime factors of increasing spatial dimension of the city are also the population growth and related requirements of urban life, such as development of transport and communication and others infrastructure facilities. The mismatch use between the supply and demand of land leads to the degradation of land. Within the existing built-up areas of cities uncontrolled growth of population and inadequate infrastructure may cause irreversible losses of cultural resources and open space. The conversion of prime agricultural land to urban use may increase costs for locating, storing and purchasing food (Bernstein:1994). The pattern of city growth and its spatial structure are determined by various historical, economic, social and ecological forces that influence urban land-use. The improper use of urban land poses serious problems in all countries simply because the supply of surplus land is limited and subject to many competing claims. Dissatisfaction with the emerging urban forms is almost universal. Therefore, proper planning of urban land-use is most essential for an orderly and efficient growth of urban area. Another affects the natural and cultural resources of the city. It may also have negative implications for the urban poor. This Paper is an attempt in this direction and focuses on Uran City. The purpose of this study is to see the population distribution and its growth trends. The study is also aimed at finding the land-use changes in Uran Taluka. In addition, it attempts to find out what kind of land has been converted into built-up area.

Sources of Data and Methodology:

The data for this study have been obtained from Secondary Source, Website, District Gazette Census of Raigad District.

Objective:

1) To study the Changing land use pattern of Uran City. 2) To Study the Changing occupational Structures

Study Region



Uran city name is derived from the Hindu goddess Uranavati. It was called Uruvan during the rule of Madhavrao I, the fourth Peshwa of the Maratha Empire. Later, the area was named Uran by the Portuguese and Ooran by the British. Many Indian dynasties have ruled the area. In early history, these included the Maurya Empire, Sātavāhana Empire, Western Kshatrapas, Vākāṭaka Empire, Chalukyas, and Yadavas. The area around Mumbai was under Portuguese and British rule in the 16th to 19th centuries. Uran was subject to the Maratha princely states in the Maharashtra. Uran was once the base of the famous Maratha Sarkhel (Admiral) Kanhoji Angre, who battled European naval interests in the 18th century. Uran is located at 18.88°N 72.94°E. Uran is at an average elevation of 21 metres (69 ft). On the tip of a peninsula, Uran

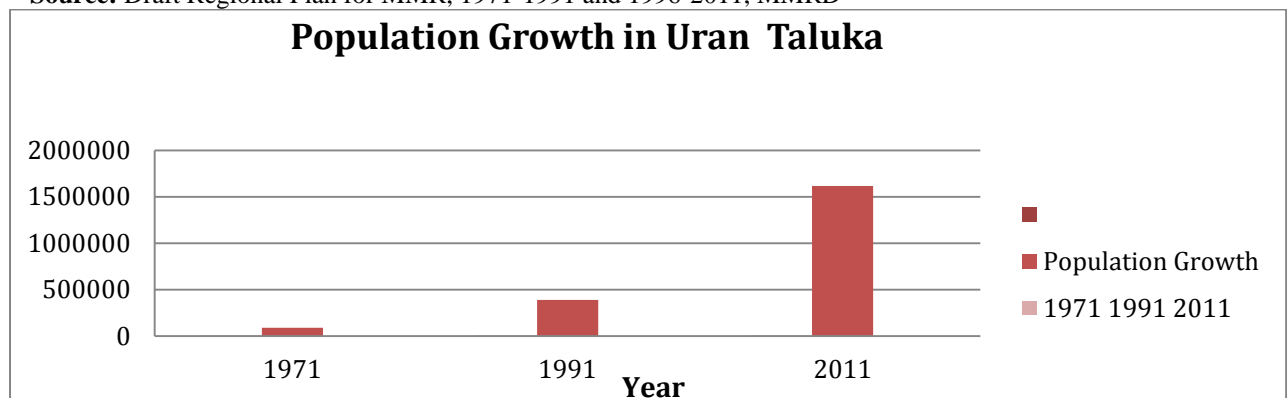
district is surrounded by sea on three sides. In the 2001 India census Uran had a population of 23,254; this had increased by the 2011 census to 30,439. Males constitute 53% of the population and females 47%. In Uran, 10–11% of the population is 6 years of age or younger. Uran's average literacy rate is also rising, from 79% in 2001 to 82% in 2011. Female literacy lags behind male literacy: male literacy was 83% in 2001 and 85% in 2011, and female literacy was 75% in 2001 and 79% in 2011. India's national literacy average is 59.5%. Using the square graph technique, area was calculated in each of the above-mentioned categories directly from the maps given in the two draft. To see what kind of land has been converted into built-up area, the land-use maps for three time periods were superimposed and areas were calculated. This also gives us some idea of land-use changes due to urban sprawl as well as population growth. To look into the relationship between population growth and land-use change.

Population Growth in Study Region:

Population distribution and density in Study Region 1971-2011

	Population			Percent of Population			Density		
	1971	1991	2011	1971	1991	2011	1971	1991	2011
Uran	91557	390114	1616751	1.2	2.7	7.3	427	1821	7548

Source: Draft Regional Plan for MMR, 1971-1991 and 1996-2011, MMRD



Source: Draft Regional Plan for MMR, 1971-1991 and 1996-2011, MMRD

In 1991, the share of population in this region has 1.2 per cent, and in 1971 has 2.7 per cent, and is expected to increase to 7.3 per cent, respectively in 2011. Very soon Uran is going to be the next most congested place after Suburbs, with a density of more than 7,500. **Population Growth in Study Region 1971-2011**

	Population Growth		Distribution of Population Growth		Annual growth Rate	
	1971-91	1991-2011	1971-91	1991-2011	1971-91	1991-2011
Uran	298557	1226637	4.4	15.7	16.3	15.7

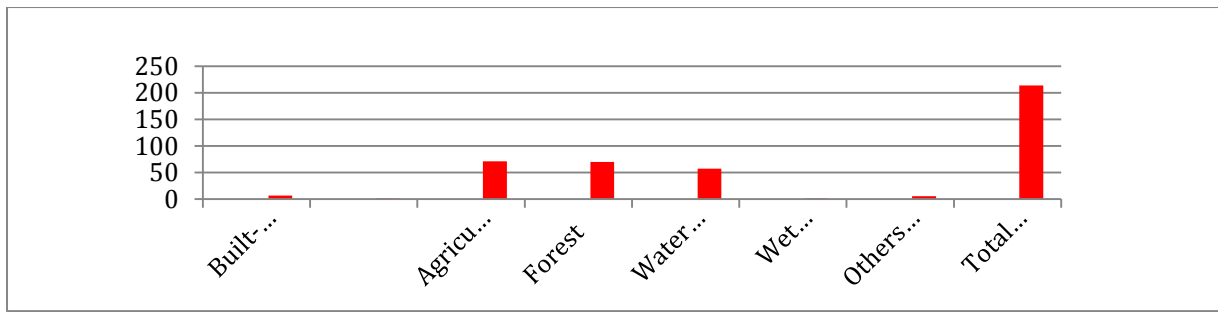
Source: Draft Regional Plan for MMR, 1971-1991 and 1996-2011, MMRDA

Presents the distribution of population growth and annual growth rate in different constituent units. The population growth rate from 4.4 per cent during 1971-91 and 1991-2011 to 15.7 per cent during. The region are growing at a dramatic rate. The annual population growth rate 16.3 per cent during 1971-91, Population has been added only in the suburban areas of Greater Mumbai compared to only 1.5 per cent in the Island city. During this period 12 per cent and 13 per cent of the additional population has gone to Thane and Kalyan. For the period 1991-2011, share of population growth is expected to decline to 43 per cent in suburbs and increase to 15 per cent in Thane and Kalyan. The overall population of the Island city is declining during this period. However, the contribution of Uran goes up in population growth from 4.4 percent in 1971-91 to 15.7 percent in 1991-2011.

Land-use distribution in Study Region in 1991 (Area in sq. km)

	Built-up	Industry	Agriculture	Forest	Water Body	Wet land	Others Total	Total Area
Uran	6.8	1.3	71.2	70.2	57.7	1.5	5.5	214.2

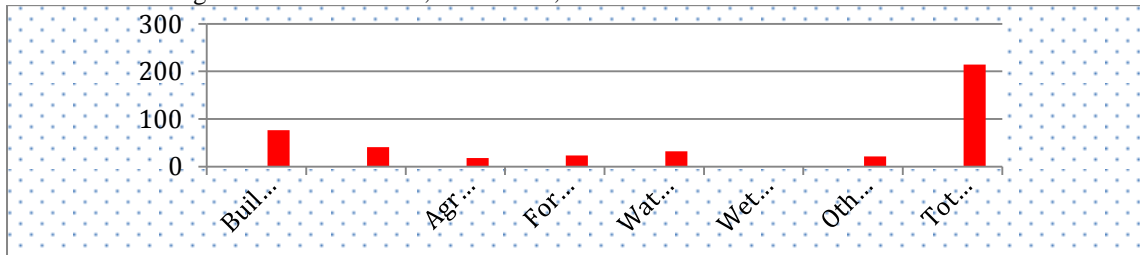
Source: Draft Regional Plan for MMR, 1971-1991, MMRDA



Source: Draft Regional Plan for MMR, 1971-1991, MMRDA

presents the land-use pattern for different regions of MMR in 1971. At that time nearly 4 per cent area of the region was used as built-up area, more than one-fourth was under forest cover and more than half was used for agricultural purposes. In the Island city three-fifths of the land was used as built-up area and 6 per cent for industrial purposes. But in the suburbs less than one-fifth area was used as built-up and 4 per cent as industrial land. In suburbs nearly two-fifths of the land was used for agricultural purposes or was under the forest cover. Built-up are ahead very small proportion (less than 3 per cent) in all the other regions. In Thane about 4 per cent area was under industrial use. In Bassain, Khalapur, Karjat and Bhiwandi one-third or more area was under forest cover. In Bhiwandi, Kalyan, Panvel, and Karjat more than three-fifths of the land was used for agricultural purposes (see figure 1).

Source: Draft Regional Plan for MMR, 1996-2011, MMRDA



Drastic Change in Occupational Structures

Changes have started taking place due to the changing ecology and the pattern of employment in the area. With more and more villagers trying to obtain employment in nearby container yards and the disdain developed by the younger generation for activities like cultivation and fishing, labour is becoming scarce. Several respondents who were passionate about farming have complained that the earlier joy of farming had got evaporated and cultivation turned into an activity for senior citizens with no secure options. While helping to thresh the rice in the fields one day, one of the members pointed out how all the members working there were over 60 years old and laughed at how cultivation is an old age activity. The younger generation had been kept away from farming, so that they could attend school and benefit from whatever opportunities were thrown up by the enforced development. However, the same younger groups that find the thought of farming distasteful. Fields are sometimes given out to sharecroppers but farmers willing to do this are becoming difficult to find. This is despite the terms of sharecropping improving for the tenant farmer. Earlier the produce would be divided into three parts. Salt production has also turned into an individual business as the salt workers. Salt constituted an important resource for farming as fertilizer and for fishing as a curing agent. Fishing in turn served as a critical source of fertilizer in upland vegetable farming with the provision of fish waste and dried fish. Salt pans also functioned as a buffer zone between the sea/creek and paddy fields by mediating water flows. Households pursued multiple economic activities that varied by season, environmental conditions in their locale and opportunities created by development activities in their vicinity from time to time. The livelihoods of upland coastal communities of western Uran in particular were shaped by food/materials requirements of Mumbai city and phases in port development. Households identified themselves as sand miners, farmers or fisher folk depending on the main source of income. Fishing communities contributed to the agricultural labour pool during the *kharif* season while the farming communities contributed to the labour pool for fishing and water transport on boats owned by members of other communities. Thus change in any one sector impacted the other and the relationships between communities. Livestock, fishing and home-brewed alcohol were supplementary sources of income in upland areas. In the last two or three centuries, sand mining provided the main source of income in villages located in estuaries, the transitional zones between land and sea, where cultivable land was scarce. Given the dependence on family and community labour in activities connected to land and sea, fairly equal participation of men and women was seen. Unemployment ranged from 3% in eastern Uran to 15% in western Uran in this period.

Uran on the other hand shows a sudden increase from five percent to 30 percent in the formal sector from the 1960s to the 1990s. This is linked to realisation of the benefits from cash incomes through employment in Grindwell Norton and absorption in NAD and ONGC in the 1970s and 1980s respectively

Conclusion

The people's response has evolved with the shifting trajectories of development in the region, and led to changing relationships to the State, the environment and each other. Population has grown very fast in the past but the growth rate shows a declining trend. The Island city, which supports one-thirds of the population, has started losing population. The three regions, which have been growing very fast, in Uran. The Uran region has experienced a dramatic growth rate of 15 per cent per year during 1991-

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The Physico Chemistry and Bacterial Diversity of Meteoritic Crater of Lonar Lake Water

Arwind M. Umrikar

Kankavli college, Kankavli

Abstract:

The alkaline Lonar crater, located in the Buldhana district of Maharashtra, India, is the only hypervelocity meteoritic impact crater in basalt rock, ranking third in the world and best preserved impact structures on the earth. The Lonar lake is natural for the accumulation and concentration of saline constituent in the lake water. The bacterial diversity in Lonar lakes which is saline and alkaline in nature was studied. The investigation for the study of bacterial diversity was investigated by using culture dependent techniques. The water sample was collected from Lonar lake. The unusual geochemistry of these lakes supports the growth of an impressive array of microorganisms that are of ecological and economic importance. Haloalkaliphilic Bacteria and Archaea belonging to all major trophic groups have been described from many soda lakes, including lakes with exceptionally high levels of heavy metals. Its key physicochemical and microbiological characteristics are highlighted in this article. The occurrence of diverse functional groups of microbes in soda lakes, suggests that these habitats harbor complex microbial food webs that interconnect various biological cycles via redox coupling. Soda lake microorganisms harbor several biotechnologically relevant enzymes and biomolecules (for example, cellulases, amylases). Finding from this study suggest that the majority of organisms specifically adapted to this soda lake environment. Bacterial diversity indicates that these prokaryotes can adapt themselves according to environmental conditions.

Introduction:

Soda lakes are naturally occurring alkaline environments; these environments typically contain high concentration of sodium carbonate or complex of this salt by evaporation (2). The cause of increase in pH of the lake water. The alkaline Lonar crater, located in the Buldhana district of Maharashtra is the only hypervelocity meteoritic impact crater in basalt rock, ranking third in the world. It is the only lake formed due to high velocity impact of meteorite. (5). The water is alkaline with 10-10.5 this high alkalinity is due to high concentration of Sodium carbonate (7). The preliminary account of bacterial diversity of Lonar Lake has been recorded (2). The diversity observed in east African soda lake shows the biotechnological potential and it shows that prokaryotes are diverse group including halophilic archae (2). Culture independent Techniques were also used to study the bacterial diversity of Lonar Lake (14). Soda lakes are the most suitable environment for the alkaliphilic bacteria. This term i.e. alkaliphile is used for microbes that grow optimally or very well at pH above 9, or most of the time between pH 10 -11, but cannot grow at neutral pH or near 6.5 pH(4). Moderately haloalkaliphilic nitrogen fixing bacteria were also studied from this hypersaline environment (12). This large impact crater has a mean diameter of 2

km (6600 feet) and a depth from the rim of 137 m (450 feet). In addition, the crater has unique flora and fauna and is filled with saline water (12). Pesticide resistance potential was studied by researchers at various concentrations of NaCl (9).

Materials and Method:

Collection of water Samples

Five Water sample were collected from different sites of the lake in sterile water container and the pH was recorded. Water sample was also observed for Temperature, DO, BOD, COD, TS and Salinity

Isolation of Microorganisms:

Micro-organisms were isolated using enrichment in Horikoshi medium I, Horikoshi Medium II (4) and Nutrient Broth at pH 10.5 by inoculating 10.0 ml of Water samples in 90 ml of Nutrient Broth in 250 ml conical flasks under shake culture condition on a rotary shaker (150-160 RPM) at an ambient temperature of $37 \pm 2^\circ\text{C}$ for 48 hours. After incubation 0.1 ml of the culture broth was inoculated to on Nutrient agar medium plates for isolation of the micro-organisms and the plates were incubated at $28 \pm 2^\circ\text{C}$ temperature for 48 h. The well isolated and differentiated colonies were transferred and maintained Nutrient agar slants for further studies. Identification of the bacterial isolates was carried out using Bergey's Manual of Systematic Bacteriology

Identification of Microorganisms:

The Isolated microorganisms are identified using biochemical characterization methods and physiological analysis as Oxidase, Catalase, Urease, Nitrate reduction, H₂S production, Lipase, Protease Cellulase, Amylase Production, Hydrolysis of Starch, Casein, Utilization of Glucose, Fructose, etc.

Result and Discussion:

The meteoritic crater of Lonar lake is unique because it has a halophilic as well as alkaliphilic conditions the salinity content is high and the pH is also 10.5, the temperature is recorded as $32.50 \text{ C} \pm 20 \text{ C}$, the main reason behind the salinity is found to be the presence of CaCO₃

The isolated microorganisms identified by culture dependent techniques these organisms are belongs to bacteria. These organisms have the potential to produce industrially important enzymes.

Table: I. Biochemical characteristic of isolates from Lonar Lake

Characters	Isolates			
	I	II	III	IV
Grams Nature	+	+	-	+
Motility	+	+	+	+
Vogus Proskauer	+	+	-	NA
Citrate	+	+	+	NA
Oxidase	+	+	+	+
Urease	-	-	-	-
Nitrate Reduction	-	+	+	+
H ₂ S Production	-	-	-	-
Catalase	+	+	+	+
Lipase	-	+		-
Protease	+	+	+	+
Cellulase	+	+	-	-
Hydrolysis of:				
Starch	+	+	-	+
Casein	+	+	+	+
Utilization of:				
Fructose	+	+	+	+
Glucose	+	+	+	+

Table 2. The physicochemical analysis of Lonar water sample

Parameter	Lonar lake Water (mg/l)
BOD	8
COD	14
DO	4
TS	3600
Salinity	6520
Temperature	32.5 ⁰ C +/- 2 ⁰ C
pH	10.5

The isolated strains when identified by culture dependent techniques these strains are found as Isolate I Bacillus sp. II- Bacillus spp., III, Pseudomonas sp and IV Halobacterium. All the bacterial strains found both alkaliphilic and halophilic. The optimum growth pH was 10.5 for all the strains.

The physicochemical analysis of Lonar lake suggest that the salinity and pH of the Lonar lake is high 10.5, and is optimum for the growth of alkaliphilic and halophilic microorganisms, further the diazotrophs are also found in hypersaline lake and some pesticide degraders were observed in the lake. It has a potential to produce industrially and biotechnologically important product like enzymes and antibiotic from the micro flora. Most of the isolates were found to be Gram + in nature and can grow at pH 10.5. The water samples were alkaline, and the CaCO₃ range is found 1350-1590 mg/l. The parameters observed for water are given in Table 2. TDS is higher when it is compared with the African soda lakes.

The primary Aim of the present study was to determine the organisms which can grow in the extreme environments, and the potential of the organism to produce the industrially important products. Most of these isolates are potentially important source of extremozymes. As these organisms can withstands the alkaline and high salt concentration and pH they can be used in the process which is carried out in such condition. Most of the organisms are Gram Positive in nature but few are Gram negative also and these gram negative organisms may be useful in studying their behavior in harsh conditions. The Medium which supports the growth is Nutrient broth with NaCl, and Horikoshi medium I and II. The present study investigates the bacterial diversity and physical and chemical nature of lake water. To know the potential and diversity of microbes in Lonar lake this study needs to extend for knowing the industrially important compound for which these organisms can be a good source.

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Empirical Study of Tourism Potential in Akole Tahsil of Ahmednagar District, Maharashtra

Rajendra S. Pawar

Department of Geography, Padmashri Vikhe Patil College of Arts, Science and Commerce, Pravaranagar

Abstract

As tourists always get attracted towards the mountain destinations, tourism as a socio-cultural and economic phenomenon can be developed a lot in the mountainous region, if planned properly. In this context, the Akole tahsil of Ahmednagar district has a great potential for tourism development. The western mountainous region of the tahsil offers many tourism products of nature with a wide ecological range and biodiversity. In addition, the socio-cultural dimension of tribes of this region is one of the major tourist attractions. With the help of primary and secondary data the paper focuses on tourism potential of the study area.

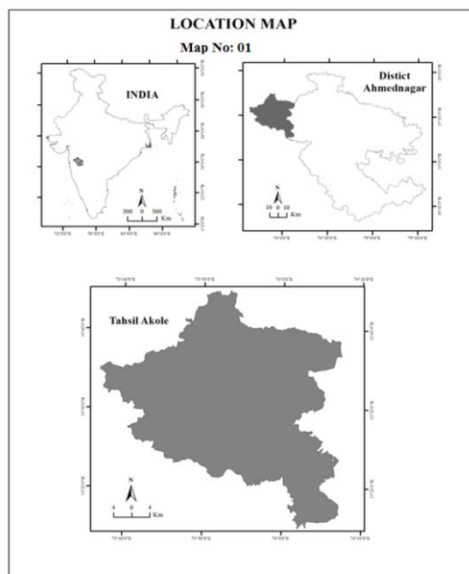
Kew Words: Tourism, Potential, Akole, Kalsubai, Bhandardara

Introduction

Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal/professional purposes (UNWTO, 2008). Lickorish and Jenkins (1997) stated that, tourism is a gathering of activities and services which brings a travel experience encompassing transportation, accommodation, eateries, shops, entertainment and hospitality services provided for persons or their groups away from home. It is an activity which cuts across congenial sectors in the economy and requires inputs of an economic, social, cultural and environmental nature. Leisure or recreation is the main purpose of tourism (Davidson, 1993). Being located in the Western Ghats region, the Akole tahsil of Ahmednagar district is characterized by vivid topographical features and scenic beauty; it offers various tourism opportunities to the visitors. The segment of north-south stretching Western Ghats, called Sahyadri in the state, has its highest peak, Kalsubai, in the tahsil. High rainfall, thick forest area with great biodiversity, pleasant climate and water reservoirs has developed various tourist locations in the tahsil. Thus, each of the tourist places in the study area has its own peculiarity. Here, tourists can choose destination according to their purpose of tourism. This fact is motivated to undertake the present study which attempts to know the tourism potential in Akole tahsil of Ahmednagar district of Maharashtra.

Objectives

1. To understand the tourism potential of tourist centers
2. To identify the challenges for tourism development.
3. To give suggestions for the tourism development in the study area.



Data Source and Methodology

Present study utilizes both, primary and secondary data. Personal discussions with the natives, tourists and officers, questionnaire schedule, field survey and interview techniques were the primary sources of information. The secondary data was obtained from the socio-economic review and district statistical abstract of Ahmednagar district. The obtained information was analyzed and presented.

Study Area

Akole Tahsil is located (Fig.1) at the western margin of Ahmednagar district. Geographically the tahsil is extended between $19^{\circ}15'12''$ N and $19^{\circ}45'06''$ North latitudes and $73^{\circ}37'00''$ E and $74^{\circ}07'21''$ East longitudes. In the west, there lies the district of Thane, in the north there is Nashik district while the Pune district lies in the south of it.

Fig. 1 Location Map of Akole Tahsil

Out of 1,505.08 km² area of the tahsil, in all 65.59 percent area is covered by agriculture and 27.7 % area is under forest while the remaining area is used for other purposes. The north south

trenching Western Ghats ranges lies in the western part of the district. Thus, the western part of the study area has become more rugged. The geomorphic characteristics in the western part of the tahsil are very complex. Volcanic eruption is the main cause of rock formation in this area. Thus, the main type of rock found in the region is basalt. The area is also characterized by limestone, red bole, sand stones, shale's, clay and a thin layer of black soils at some places. In the western part the westward slope of the area is steep while in the east, the eastward slope is gentle. Mula and Pravara are the main rivers of the study area. Climate of the tahsil is hot and dry except during the period of south west monsoon. The tahsil is identified as a tribal tahsil of the district. During 2011 the population of the tahsil was 2,91,950 (GoM, 2014).

Potential Tourist Places

Amruteshwar Temple

Amruteshwar, an ancient temple of lord Shiva is a major religious attraction of the tahsil. It is located in the base village of Ratangad fort, Ratanwadi. The temple is one of the oldest structures made up of black stone. It has a sanctum where sculptures of god and goddesses are carved out of the stone. Near temple there is a constructed water tank. There are two *sabhamandaps* in the temple. The sanctum (*garbhagriha*) is located between these *sabhamandaps*. The temple of Amruteshwar is not affected by attacks of foreigners and natural hazards. Tourists can reach Amruteshwar by road via Bhandardara.

Wilson Dam and Umbrella Fall

Built in 1910, on river Pravara, the Wilson Dam is one of the brilliant outcomes of excellence in engineering. The main purpose behind construction of this dam was to avail water for irrigation in the downstream area. However, today the dam site has become one of the major tourist attractions in the tahsil. The garden developed at the base of this dam is full of thick vegetation. Boating and fishing facilities at this site attracts the tourists.

Umbrella waterfall is one of the amazingly beautiful attractions at Bhandardara dam site. This water fall do not appears during whole of the year. It appears in rainy season and whenever the dam releases water. Tourists can spend time near this waterfall.

Kalsubai Peak

The Kalsubai Mountain Peak (1,646 mt. above MSL), a major attraction for trekking and popular amongst the devotees of Kalsubai, is the highest peak in the state. It is also known as Everest of Maharashtra. As this mountain peak is surrounded by a thick forest, wild life enthusiasts are also interested in this tourist attraction. During historical period, this peak has served as a watch tower for the rulers of this region. Celebration of the nine night festival called *Navaratri* is one of the major attractions of this place. Devotees from the nearby area visit this place during *Navaratri* and celebrate the festival.

Randha Fall

Randha fall is one of the magnificent tourist attractions of the study area. It cascade from a height of 170 ft. and makes a beautiful scene during rainy season.

Agasti Rishi Ashram

Agasti Rishi Ashram, one of the popular holy places in the tahsil is located on the left bank of river Pravara near Akole, the tahsil headquarter. It is believed that, Sage Agastya offered an arrow to lord Shri Ram at this place during his visit to the Ashram. There is a Ram Kund lying near this place. The Ashram is about 40 km from Bhandardara and is connected by road. The temple at this place is spacious and clean.

Harichhandra Gad

This is one of the historical tourist destinations and a most challenging trekking location in the study area. An escarpment, called Konkan Kada is the main attraction of this place. It offers a scenic view of Konkan region of Maharashtra. During rainy season, one can enjoy the experience of walking through clouds here.

Ghatghar

Ghatghar, a tiny village located near Western Ghats escarpment, called Konkan Kada, is one of the major places of tourists' interests. This is a tribal village where tourists can observe the tribal culture and have a look at Plains of Konkan lying at the foot of the escarpment. At Ghatghar, tourists can enjoy the scenic beauty of greenery around and can enjoy sunset. During rainy and winter seasons, the area around Ghatghar is covered with clouds. Thus, here tourists can have an experience of walking through clouds.

Ratangad Fort

Surrounded by beautiful natural scenery, the fort of Ratangad is about 400 years old. It was captured by the Maratha king Shri. Chhatrapati Shivaji Maharaj where he used to rest and spends his leisure time. Several trekking sites are located near this fort from where tourists may observe the magnificent view of valleys lying in the Western Ghats. Two caves located on top of the fort provide places for accommodation. The fort of Ratangad is about 22 km from Bhandardara and is connected by road passing through lush green forest and tribal villages.

Sandhan Valley

Sandhan Valley, called as Valley of Shadow or Valley of Suspense is one of the special geomorphic attractions found near village Samrad. Trekking at this valley gives a combined experience of adventure activities like rock climbing, descending and sliding.

Bhandardara Hill Station

Bhandardara hill station is situated at 19° 5' north latitudes and 73° 45' east longitudes. It is characterized by scenic beauty and lush green mountain region. This place is 185 km from Mumbai, 65km from Nashik, 190 km from Pune and 126 km from Shirdi. This hill station is accessible by road. The nearest railway station to Bhandardara is Igatpuri. It is located on Mumbai-Delhi central railway route and Mumbai-Agra national highway.

Major Challenges

As most of the study area is covered by the ranges of Sahyadri, the transportation network in this area is not much developed. The hilly area limits the expansion of settlements thus; the accommodation facilities in the area are rarely developed. There is a shortage of electricity supply. Frequent power cuts disturb the daily routine of life. Though this is the high rainfall receiving area, during summer it suffers from the scarcity of water. There is a poor sanitation arrangement in the hilly area. Environmental pollution, strong competition due to different options for tourists, untrained manpower, acute problem of land use, and stress on infrastructure, transport and services are some of the challenges.

Suggestions

A masterful blend of community, industry and stakeholders should take initiatives to plan the tourist destination, while, the execution of these plans and policies can be done with the help of central and state government. Developing appropriate infrastructure, support system and efficient transportation network, accommodation facilities, new tourist attractions, providing excellent visitor's information services, celebrating festivals and events and encouragement for ecotourism, adventure tourism, and sports tourism, wild life tourism is needed.

Conclusion

The Mountainous area of the tahsil will offer a favorable condition for outdoor recreation and tourism, if explored systematically. It has also been observed that the nearness of mountainous area to the metropolitan cities like Mumbai can attract large number of tourists which helps in economic development of the natives. The variety of options at this destination is one of the major pull factors help in strengthening the tourism activity. The culture of tribal's in the study area is one of the special tourist attractions. However, in present scenario, only few destinations are developed in the Akole tahsil. Now the time has come to recognize those centers. Tourism can play an important role in the socio-economic development of the study area. A sustainable developmental plan of remote destinations can be of some help in the tourism development of the area. All the possible types of tourism are needed to be promoted.

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Syncretism and Inter-Culturalism: Hindu Elements in Christian Traditions of Goa

Dr. Varsha V. Kamat

Professor, Department of History, P. E. S's Ravi S. Naik College of Arts and Science, Farmagudi, Ponda, Goa

Abstract

Syncretism signifies the combination of different forms of belief or practice in multiple religious assumptions, as also unification of different religious denominations, schools of thought and religious practices. Inter-culturalism and blending of different religious traditions in the vast parts of the world have given rise to trans-cultural syncretism. In the present era of increasing cultural condensation, syncretism is a prevailing event and need of the hour.

The Portuguese missionaries came to India along with their traders and subsequently, conquered Goa in 1510. The different missionary orders that descended over Goa, like the Franciscans, Dominicans, Augustinians and the Jesuits, soon began converting the local people to Christianity. The process of evangelisation was taken to the peak with the introduction of the Inquisition or a religious court to root out heresy. The Provincial Councils appointed under its aegis, combining the strength of the regime and the Church, then began systematic annihilation of the Hindu faith by destroying the temples, desecrating the images and forcing large scale conversions. Unlike the British in rest of India, the Portuguese regime back Home and in Goa, supported the Church, to not only force upon natives, a foreign religion but also to accept the culture of the colonial masters by passing laws, forbidding the converts to follow their age old customs and traditions, attire and lifestyle at the pain of death.

This paper is an attempt to reveal how the new converts among the masses of Goa held on tenaciously to their age old customs and traditions, which they now assimilated in their new faith, blending and homogenising the two faiths, over four and half centuries of colonial rule and post liberation. This syncretism has been the main pillar of Goa's communal harmony and peaceful coexistence between the two major communities i.e. the Hindus and the Christians.

Key words

Syncretism, Inter-culturalism, Homogenisation, Portuguese, Missionaries, Christian Traditions of Goa.

Introduction

Syncretism exists not only as a vibrant tradition but also as a coherent cultural reality in different parts of India. A country with diverse ethnicities and religions, there are traditions and belief systems, which are essentially based on a particular system of faith and worship. There are also syncretistic conventions and synthetically evolved belief systems which are based on combination of diverse religious traditions. People often adhere to multiple religious traditions without necessarily drawing boundaries between them, even though they may affirm their overt allegiance to one religion. Such syncretistic religious practices, however, demonstrate regional variability. It may also be argued that few religions are wholly immune from some degree of syncretism. However, Judaism, Christianity, Islam, Hinduism and Buddhism from their beginning combined many different religious ideas and rituals.¹

Religious syncretism may occur on account of culture-contact or as a result of social protest or sectarian-reformist movement. Inter-culturalism and blending of different religious traditions have given rise to trans-cultural syncretism. Syncretism as an important constituent of multi-cultural mainstream, offers an opportunity to reinforce greater cultural homogenisation. During the colonial rule, Goan masses assimilated traditional modes of cultural synthesis and religious syncretism, which were fundamental sources of social and religious tolerance witnessed in the Goan society for centuries.

During the 451-years' rule in the Old Conquests (territories captured by the Portuguese in the early half of the 16th century) and in their about 184-years' sway in the New Conquests (territories captured in the late 18th century), the Portuguese attempted to transform Goa into a totally Christian land with the help of the notorious Holy office of the Goa Inquisition, which lasted over 245 years.² They also tried to deculturalise Goans by forcing them to adopt not only the religion, but by imposing a culture of their own, which was in total contrast to the Indian culture- infused by a tradition dating back thousands of years. They crippled the power of self-assertion by promoting alcoholism in society with a view to deriving economic benefits for themselves and tried to alienate Goans from motherland India and forced them to depend fully on the colonial rulers.

Methodology

The methodology used in the preparation of this paper is by way of interviews, field work and literature survey. The author herself, born immediately after the liberation (1961) of Goa and brought up in a catholic dominated village in Salcete taluka of South Goa, which was in the hands of the Jesuits for evangelisation over almost two centuries and has undergone the worst form of religious and cultural annihilation of the native faith. Hence, is well conversant with the socio-cultural aspects of the village community and their syncretic lifestyles. The foregoing narrative symbolises the typical Goan Christian village folks of 60s and 70s, showcasing their true Goan identity, free from colonial yoke but not yet infected by the technologically driven contemporary society of declining value system. Interviews with the persons from Christian Gauda community, the simple village folks of the Old Conquests (territories which bore the brunt of the Inquisition) and the Christians of New

Conquests (where promise of religious freedom was given to the natives in which majority Hindu temples were relocated), has been very useful in the collection of present data. Reference work and literature survey involving the Goa State Central Library, Pissurlencar Collection and Kundaikar Collection in Goa University Library and Municipal Library in Margao have been very useful in compiling the primary data on the topic under reference.

Inter-culturalism and Syncretism in Goan Context

Goan Historian Fr. John Correia-Afonso, described the Goan Christians, a clear product of a highly selective process of acculturation, maintaining their identity and to a degree their cultural distinctiveness and integrity to combine in them, the Indo-Hindu and Luso-Christian cultural legacy, thereby indicating their inter-culturalism. Whereas Bakibab alias Balkrishna Bhagwant Borkar, the celebrated Goan Poet and writer attributed the influence of four basic institutions namely home, family, village community and family deity, to model and stabilize the Goan Hindu society, which also adopted fine modes of western living and grafted on its ethos, the good taste and good sense peculiar to Latin culture, brought in by the Portuguese.³ The pre-Portuguese Goan society was a Hindu society and the chief institution of this society was the caste. Though the Portuguese succeeded in transforming the converts and the Catholic society to Western ways, there was a sustained effort to preserve some component of their core culture and maintain the traditional caste system of the Hindus even after hundreds of years of their conversion to Christianity. In fact, in Christianity, there is no place for caste and neither does promote it. As the conversions in the Goan society were effected on a mass scale, the castes of the pre-Portuguese Goan society got transferred to the Christian converts.⁴ The Christian Brahmans (the erstwhile Hindu Gaud Saraswat Brahman converts) continued to maintain their superiority and exclusiveness and maintained an endogamous group and resisted exo-group marriages. They along with the Chaddos, who came next in the hierarchy, held power and enjoyed all the limelight during the colonial period as well. The rest, collectively came under the caste Sudir (Sudras) and comprised several social divisions, roughly sixteen, based on their linkage to their original occupations, though the respective occupations were no longer followed by a great majority.⁵ Although, there were no restrictions on social discourse, a self-imposed restriction on inter-group marriages prevailed among them. Though the Portuguese missionaries established the Inquisition to get rid of the various rites and ceremonies which the new convert continued to practice, their socio-cultural heritage could not be transformed all of a sudden. It took them several years to rid themselves of the beliefs and values they cherished before their conversion to Christianity. Even today, it can be seen that some sections of the population still performing some of the Hindu rites and ceremonies, while practicing their religion.

As the customs and usages pertaining to the caste could not be broken with impunity, the Catholics in Goa continued with their strong affinity towards the caste system even after their conversion in the new religion. This was evident specifically in the presence of an exclusive Brahman caste among the Christians and it was this class, which was far ahead of the elite Hindus in almost all fields of education, journalism and other professions, besides government jobs especially in the Old Conquest areas. With their brilliance they achieved the uncommon fame. This class enjoyed a westernised type of social life in the fifties.⁶

Cultural syncretism among the Christian masses

There was a tradition among certain Catholic families to visit Hindu temples, in search of divine blessing called *prasad*.⁷ The temple of Mangueshi in Ponda taluka accorded first preference for Catholics from Cortalim in South Goa for such blessings, as they were believed to be the original *Mahajans* (male custodian of a temple), as the deity was translocated at Mangueshi after the temple was destroyed by the Portuguese in 1567 during the Inquisition). Similarly, the Shantadurga Cuncolekarin temple at Fatorpa, near Cuncolim (Salcete) and the Damodar temple at Jambavli, were and are still popular pre-conversion deities among the Catholics of South Goa. Similarly, their house warming ceremony was solemnized in the presence of the parish priest, who blessed the premises with anointed water followed by a *ladainha* or prayers. Likewise, certain rituals during the marriage as well, were allied to those of the Hindus. For example, a month before the wedding, the Catholic bride wore glass bangles, locally termed as *chudo*, like the Hindu brides, the only difference being that in the former, it was of multiple colours, whereas with the Hindus only green bangles were worn till a few days after the wedding. On the previous day of marriage, the Hindus anoint the bride and the groom with *haldi* or turmeric, the Christians of Goa do the same ceremony but replacing *haldi* with coconut juice. The bride's mother still gave her daughter a 'Mangalsutra' as part of the wedding jewels. In the matter of attire, the rural Christian women were more resistant to change than their men folk and refused to completely give up their traditional dress. Though the men took to European attire with far more ease than their women, who generally declined to give up the Indian dress.⁸

With regard to the folk beliefs, omens and superstitions, the Catholic masses show Hindu influences, which they inherited from the earlier culture before their conversion to Christianity. A few examples will demonstrate how despite the best efforts of the Portuguese Church during the colonial period, the local culture and beliefs remained ingrained in the converts. The masses residing in villages had blind faith in the supernatural powers of the protector spirits like Devchaar and in ghadis or mantriks (Shaman). Devchaar was a male supernatural protector spirit, especially at the night time, usually residing on a marked tree in the outskirts

of village. The Goan Catholic masses were quite conscious and careful with respect to the existence of Devchaar as a friendly spirit and kept it in good mood by arranging his favourite offerings namely *sur-ront* i.e. toddy and thick bread (*bhaakri*) made of wheat flour, coconut and jiggery for the progress and fulfilment of their wishes or for the annihilation of enemies.⁹ Despite several decrees issued against such practices by the Portuguese government, the village people did not have the inclination to abandon them, as they were more afraid of the unknown spirits in the village than the known Portuguese priests and soldiers.

Like the Hindu masses, Christian folk too believed that the eerie call of an owl, considered an evil omen, was the emissary of sickness or death. The cry of a fox or hyena or the wail of a dog heard in the dead of night was also believed to be a bad omen. After hearing it, the people would sit up and pray to ward off the evil. A crow cawing on a window or outside the door was supposed to bring good tidings either in the form of a letter by the morning post or a guest to the household. The crow has been the most popular and endearing creature in Goan society for both Hindus and Christians from childhood to adulthood. A married daughter must not take a cat or a broom from her father's house into her new house, if she hopes to be happy. After the Angelus bell has tolled and the oil lamp lit at *amori* (dusk), no house would lend or receive anything, especially money or salt. Married daughters were sent home for their first confinement; on the journey, the expectant mother must not look back, or like 'Lot's wife' (from Old Testament in the Bible), some misfortune will befall her. At the boundary of every new village she enters, relatives who accompany her throw a sour lime, betel nut and betel leaves. There was also a belief in the 'evil eye' or locally called *dist* and most commonly expressed in children by having black band tied around their neck and wrist in order to escape from envious and harmful eyes. There was also a way to relieve of the 'evil eye' and thus *dist* was 'removed' by offering three dry red chillies, salt and a piece of alum to the fire, after taking them round the affected person's body in clock-wise and anti-clock wise direction. This, usually done on Wednesdays and Sundays after the sunset or dusk, is a practice, which persists even today among the Hindus and some Muslim families of Goa.¹⁰ It was customary among the Goan Christian aristocracy to donate property or make endowments to the Church or institutions on their deathbed to perpetuate one's memory in the absence of legal heirs or for the elevation of one's soul. To sell such properties in later times for profit or in times of need was perceived as sinful, which provoked retribution or *maldição / penção* or a curse on the buyer's family. Village life in Goa abounds with stories told of such 'haunted' houses and *penção* lands, which brought upon its owners bad luck, premature deaths and diseases. These stories were generally believed by all.¹¹

It should be noted that the fear over the misfortunes of *tickli*, a girl born after three male siblings was prevalent even among the Catholics in Goa. Likewise, they also shared the Hindu belief regarding the adverse effects of an eclipse on pregnant women. Similarly, like the Hindus,¹² the Catholic masses also believed that the fate of the child was written on the 6th night after birth and observed it by keeping a night long vigil among friends and well-wishers with arranging a feast on the occasion.

In Goan Hindu traditions, it is interesting to note that the Seven Mother-goddesses or *Saptamatrikas*, namely Brahmi, Maheshwari, Kaumari, Vaishnavi, Varahi, Indrani and Chamunda, assume the names of Morjai (Morji, Pednem), Lairai (Shirgão, Bicholim), Kelbai (Mulgão, Bicholim), Mahamaya (Mayem, Bicholim), Anjadipa (Anjadiv Island), Mirabai or Our Lady of Milagres (Miracles) of Mapuça, who is believed to have got converted to Christianity, but is worshipped with equal reverence along with her other sister deities. The Christian Confraternity of Our Lady of Milagres Church, till date, reverently sends Flowers to her elder sister, goddess Lairai on the day of her *jatra*, which is reciprocated by her in gifting a certain amount of oil to light the lamp to the latter, on the day of her feast in Mapuça, a prominent city in the Bardes taluka of North Goa. The seventh one is Shitalai, who went to *paataal* (underground or in invisible form), in Mormugão.¹³

Conclusion

The attempt of the Portuguese colonists and the Roman Catholic Church to wipe off the Indian culture from the native converts through legal and coercive methods totally failed in Goa even after four and half centuries of colonial rule. Catholic masses in Goa live a multi-cultural, syncretic life, practicing their Hindu or pre-conversion customs and traditions, homogenising them with their new faith to which they are very fervent. Though, at the turn of the 20th century, the Catholic upper class in general were in tune with the European masters, well settled in the imperialistic set-up and accrued benefits from it, the Catholic masses, exposed to less modernity and educational facilities lived connected to their glorious cultural past though within the framework of their new religious practices. It was in their way of life, that one could still witness authentic indigenous culture, traditions and ethos, which they had preserved over a period of time albeit in camouflage over their fears of the clergy. This syncretism nurtured by the Goan masses as against the total lusitanization of the elites preserved the 'Goa Indica' image contrary to 'Goa Dourada' outlook.¹⁴

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12. Of the other prevailing superstitions and beliefs, the most prominent one was that a new born child's fate was written on the sixth night after its birth. It was also believed that the Goddess Satee or Satgrai (a vulgar appellation of Goddess Durga) considered to be mischievous, wrote the fate of the child on its forehead on the sixth night. People held the firm belief that this goddess had to be pleased, so that she blessed the child with a good fortune or fate. For the lower strata of Hindu society, this was a great occasion to be celebrated with relatives and friends.
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Modern Trends in Islamic Studies as an Academic Discipline

Dr. A. K. Ampotti¹, Dr. Hassan J², Dr. Manu T³

¹Associate Professor, Dept. of Islamic Studies, University of Kerala, Kariavattom Campus- 695581, Kerala,
Email: ampottibharanikkavu@gmail.com, Mobile: 9495231737.

²Guest Lecturer, West Asian Studies, University of Kerala, Kariavattom Campus- 695581, Kerala, Email:
hassankallara@gmail.com, Mobile: 9747648310.

³Assistant Professor, Dept. of Islamic Studies, University of Kerala, Kariavattom Campus- 695581, Kerala,
Email: manuhockey@gmail.com, Mobile: 9446333871.

Abstract

Islamic Studies as an academic discipline is the contemporary approach of studying Islam. Civilization, culture, history, Islamic philosophy, Gender studies, Islamic Economics and Finance, and Human Rights, to name a few, come under this study. It analyses the role of Islam and its culture in the present world by using an inter-disciplinary approach. Its origin can be traced back to the contact and interface between Islam and the West. This paper aims to highlight the evolution of Islamic studies as a distinct academic discipline. This has broadened its scope in that it addresses the emerging global problems the humans, particularly the Muslims, face.

Introduction

Islamic studies as an academic discipline is the current approach of studying Islam. It comprises such fields as civilization, religion, philosophy, culture, gender studies, economics, banking and finances, human right, and so on. It also means the attempt of some of the Muslim intellectuals to come to terms with modernity. With scientific and technological development, the old approaches to Islamic Studies had to be discarded, and a more objective study had to be put in its place. A big change came in the aftermath of September 11, 2011. Islam's involvement in the terrorist attacks of the day, whether real or perceived, catapulted the religion into a spotlight as never before. Interest in the study of Islam increased manifold, and Islamicists became the major players in the discussions and discourses which characterized the post 9/11 era. This has rendered the academic study of Islam more insular and apologetic.

The post 9/11 period saw the publication of a profusion of works dealing with the life and times of Muhammad. Most of these works concentrate on bringing out the relevance of Muhammad to the contemporary world rather than in engaging in deconstruction and reconstruction of the early centuries of Islam. They are not particularly interested in the methodological problems associated with the portrayal of what can be called a historical Muhammad. To top it all, they make use of later sources as eye-witness accounts and do so under the guise of objectivity. The fact of the matter is that major sources for understanding him are the Quran and the hadiths, a body of literature dealing with the sayings and deeds of Muhammad. But the problem is that here again, there are numerous scholars who doubt how historically useful and accurate the hadiths are. Apart from this, in various Greek, Syriac, Armenian, and Hebrew sources, it is possible to find many accounts of Muhammad. In spite of all this, it is well-nigh impossible to create a historically authentic biography of Muhammad.

Western scholars have made strenuous and continuous efforts to study Islam and Muslims. When the western civilization embarked on extending its domain all over the world, it confronted the Islamic civilization, which offered stiff resistance. The westerners had no choice but to study Islam and Muslim culture to enable them to control and subjugate the Muslims. Orientalism was the result of this. Orientalism, chiefly expounded by Edward Said, dominated the approach to the study of Islam by the west in the first half of the twentieth century. The post-world war II period saw the reconceptualization of the methods to be used for the study of non-western societies, leading to the displacement of orientalism by what came to be called the "area studies." This led to some prominent Muslim scholars becoming part and parcel of the academic institutions in the west. This gave rise to a radical change in the approach of the west towards the study of Islam and its culture. This saw a shift from theological studies to religious studies.

In the Muslim world, Islamic studies became an independent University discipline, thanks to the intellectual and reformative spirit which characterized the Muslim society in the modern world. It is true that there are divergent approaches towards Islam even amongst the Muslims, and this has not stood in the way of them making remarkable inroads in the field of education. This kind of breakthrough they achieved by providing in the curriculum a great degree of academic freedom. The second half of the eighteenth century saw the growth of such concepts like democracy and free thought, thanks to the growth of science and technology at a rapid pace. This called into question the traditional institutions, and it was an age of reason rather than one of faith. This led to the categorization of Muslim education institutions into two: one sticking fast to theological aspects and the other based on reason and logic.

This led to the Muslims trying to overcome these challenges, and the Islamic Studies developed an approach of blending the past and the present. Numerous academic institutions and Universities come into being akin to modern institutions in the west. The University of Aligarh, Dacca, and the various Universities in Malaysia, Tehran, Nigeria, etc., epitomizes these changes. Of late, there emerged the theory of post-modernism,

and it has found echoes in the academic field worldwide, particularly in the west, and this also influenced the Islamic studies a great deal. Also, now interdisciplinarity has become an important aspect of academic study, so much so that even literary criticism and anthropology have been used for the study of Islam. Now such branches as gender studies and Islamic Economics and Banking form part of Islamic Studies around the world. Another important point to be noted is that the Muslim world is not a separate entity but part of the emerging arena of global history. After 9/11, interest in Islamic studies as an academic discipline has increased tremendously in Europe and America. This is exemplified by the increase in the number of articles and books in the last decade.

Conclusion

Islamic Studies as an academic discipline has undergone drastic changes over the times. In the past, such studies exhibited a paucity of critical thinking and self-reflection. They suffered from a woeful lack of objectivity. Now it is commonly accepted that for Islamic Studies to flourish, a plethora of approaches and methodology must be used. Of late, it has brought into its fold such varied fields as philosophy, gender studies, human rights, economics, banking, and finance. Thus it has turned out to be interdisciplinary, which is definitely a far cry from what passed for Islamic Studies in the past. The post 9/11 period saw a mushrooming of interest in Islamic Studies, which manifested itself in an increase in the number of books and articles on Islamic Studies.

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Age-Sex Structure of Katkari- A Tribal Community of Pen Tahsil of Raigad District of Maharashtra

(Based on the minor Research Project funded by University of Mumbai)

Prof. Dr. Arun Muralidhar Patil.

*Pen Education Society's Bhausaheb Nene College,
Pen, Tal- Pen, Dist-Raigad, University of Mumbai, Maharashtra, India*

Abstract

Age-sex structure is known as major demographic processes while other elements are studied within their preview. Now a day's the no. of females per 1000 males is decreasing in many parts of India. It also varies with Religion to religion and community to community. This paper is devoted mainly to a discussion of the "Age-sex structure of Katkari- A Tribal community of Pen Tahsil of Raigad district of Maharashtra

Introduction

Katkari and Thakar are the major tribal communities found in Raigad district of Maharashtra. They live in small wadis or settlement located in hilly, Mountainous and isolated part, far long from the main settlement or Main roads. The tribe of Katkari is found in the hilly parts of Pen, Karjat, Khalapur, Panvel, and Sudhagad tahsil of Raigad district.

Need and Significance of the study.

Katkari Community is economically, educationally and socially backward as they live in hilly and isolated part of Pen tahsil. Their occupations are still very primitive and forest based. Even though there are many facilities and upliftment programs for the overall development of tribal society from government as well as NGOs still they are struggling hard for survival. So it is a need to study critically and find out the solutions for the problems or barriers in the development of tribal's.

Rationale:-

1. There are lots of development programs from govt. and NGO's are going on for them, still they are poor.
2. Katkari and Thakar are the major tribal communities found in Raigad district of Maharashtra. They live in small wadis or settlement located in hilly, Mountainous and isolated part, far long from the main settlement or main roads.
3. **Objectives of the Research**
4. To analyze and compare the Age –Sex structure of Katkari community of Raigad district of Maharashtra.
5. To analyze and compare the Sex Ratio and Child Sex Ratio of Katkari community of Raigad district of Maharashtra.
6. To compare the above aspects with the average data of Raigad. District, Maharashtra and India.
7. To suggest remedial measures on demographic problems by critically studying and analyzing these problem, for the healthy development of the community.

Research Hypothesis

Age-sex structure of the Katkari community is different from the average status of Age-sex structure of Raigad district, Maharashtra state and nation.

Scope of the study-

1. The geographical area of the study has been limited only to Pen Tahsil of Raigad District.
2. The relevant data was collected from selected 13 villages of Katkari community of Pen Tahsil of Raigad District.
3. The focus of the study is mainly on Age-sex structure of the Katkari community.

Research methodology-

As it is a micro-regional analysis it is desirable to work it out with smaller geographical units. Hence villages were considered and the study has been computed on village basis and sometime an average of 13 villages. The data for the present study is collected from primary as well as secondary sources.

The primary data related to age and sex is collected from household survey from the selected Katkari Wadi's of the studied area, through the scheduled cum questionnaire method. The total numbers of households are 252.

Secondary data

Secondary data for this study has been collected from Census reports, Gazetteers of Raigad District, Panchayat Samiti Reports. Books, Journals etc

Data Analysis

Age Composition of Population

Age is an important variable in measuring potential school population, potential manpower, and future population projections. Age is also an important variable in the studies pertaining to mortality, fertility and other demographic characteristics, like dependency ratio etc.

Comparative Age Group Wise % of Population

Sr. No.	Age Group	Katkari Community 2019	Maharashtra 2011	India 2011
1.	0-14	23.73	26.70	27.87
2.	15-59	65.21	63.40	63.10
3.	60 +	11.05	9.90	8.98
4.	15-49	58.11	55.50	55.50

*Census of India 2011

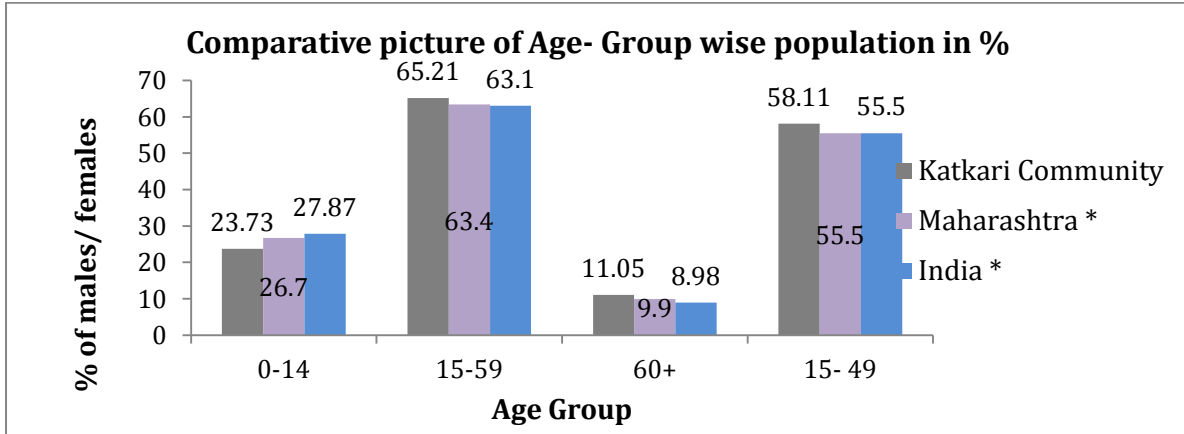


Fig. No. 1.1: Comparative Age Group wise % of Population

The above graph reveals that:-

1. Proportion of Child population is comparatively less in Katkari; it means birth rate of Katkari is low as compared to State and National averages.
2. Proportion of old population is also more in Katkari, it means that life expectancy of Katkari is little more as compare to State and National averages.
3. Proportion of young population is equal to State and National averages.

Age-Sex Pyramid of Population of Katkari Community

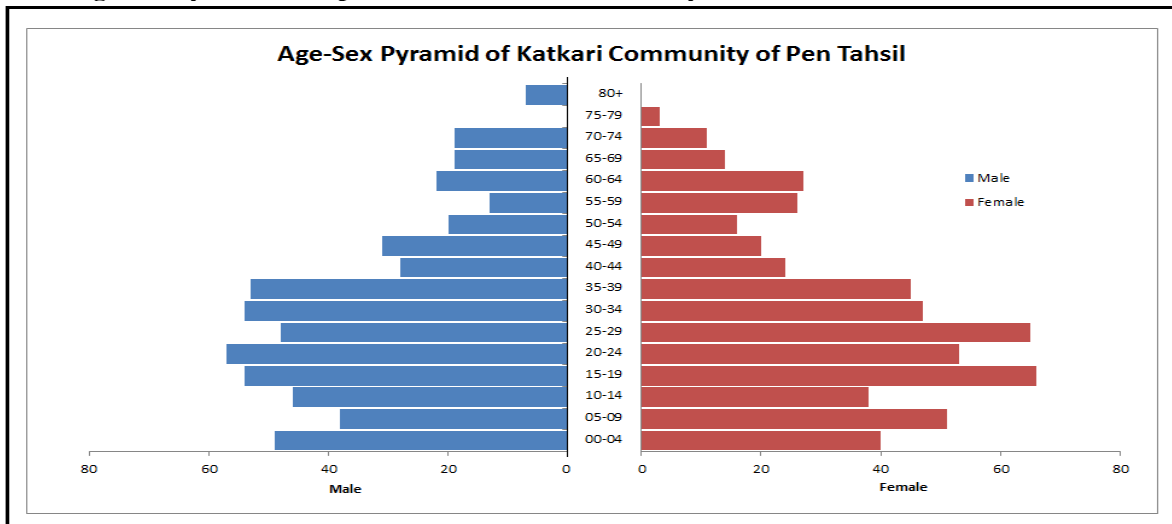


Fig. No. 4.2: Comparative picture of male and female population

The above graph reveals that:-

1. Base of the pyramid is narrow, because of decreasing birth rate as compared to the past.
2. Population in middle age group (15 to 40 ages) is comparatively more in Katkari and in subsequent age groups it decreases; it means that the birth rate was more in past.
3. Population of old age group is considerable; it means the survival rate of Katkari is significant.

Sex Composition Of Katkari

The sex ratio is an index of economic prevailing in an area and is useful tool for regional analysis. The profound effect of the proportion of the two sexes upon the demographic elements like population growth, marriage rates, occupational structure,

The numerical measurement of sex composition of a population is often expressed in terms of sex ratio. In India the sex ratio is calculated in terms of number of females per thousand males.

Comparative Figures of sex ratio

1) Katkari community	978
2) Raigad District *	959
3) Maharashtra *	929
4) India *	940

* Census of India 2011

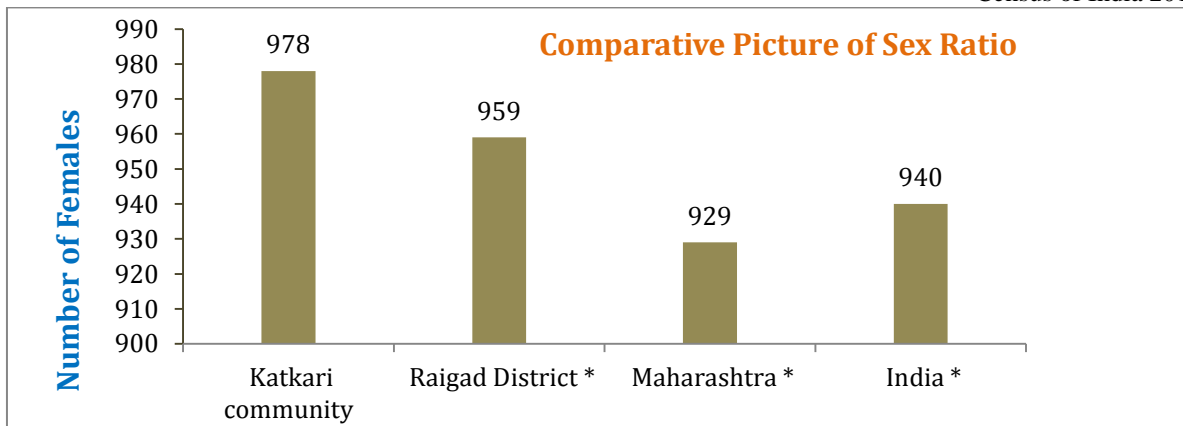


Fig. No. 1.3: Comparative Figures of sex ratio

The above graph reveals that:-

- ❖ Sex ratio in Katkari community is highest i.e.978, as compare to average of Raigad district, Maharashtra and India.
- ❖ This is due to the more female birth rate, and may be due to a strong wish to have a son after birth of three daughters also. So there is son after three or four daughters in some families.
- ❖ This is also due to the comparative satisfactory life expectancy of female.

CHILD SEX RATIO

Child sex ratio is calculated as per the normal sex ratio, only difference is that the population of males and Females below 6 years is considered to calculate the child sex ratio.

$$\text{Child Sex Ratio} = \frac{\text{Total no. of Female between 0--6 yrs}}{\text{Total no. of male between 0---6 yrs}} \times 1000$$

Comparative Figures of Child Sex Ratio –

1) Katkari community (2019)	946
2) Raigad District 2011 *	935
3) Maharashtra 2011 *	894
4) India 2011 *	919

* Source: Census of India 2011

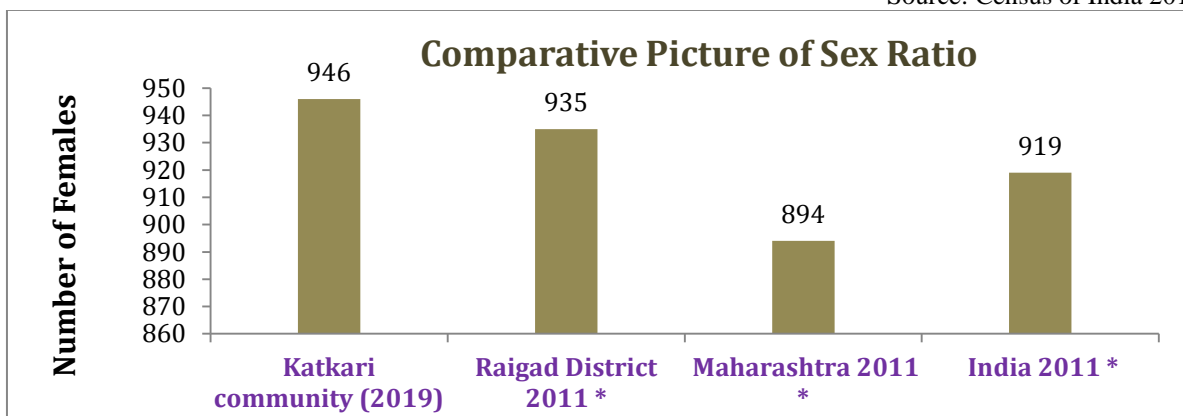


Fig. No. 4.4: Comparative figures of Child sex ratio

The above graph reveals that:-

1. Child Sex ratio in Katkari community is highest than state and national average.
2. This is due to the more female birth rate, in some families and may be due to a strong wish to have a son. So there is son after three or four daughters in some families.

Conclusion

1. Proportion of Child population is comparatively less in Katkari; it means child death rate of Katkari is more as compare to State and National averages
2. Sex ratio in Katkari community is highest i.e.978, as compare to average of Raigad district, Maharashtra and India.
3. This is due to the more female birth rate or may be female survival rate is more
4. And it may be due to a strong wish to have a son after birth of three daughters. So there is son after three or four daughters in some families.

Recommendations

There should be continuous or periodic monitoring and feedback mechanism developed by the government for tribal community.

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The Role Of Infrastructure Facilities In Structural Changes Of Agriculture Development In Karnataka State

Dr.(Smt). Sunanda. I. Kittali

Assistant Professor, Dept. of Geography, Rani Parvati Devi (RPD) Arts and Commerce College, Tilakawadi, Belgavi, Karnataka State, India

Abstract:

The focus of World Development Report on infrastructure during 2002 was an important step towards underscoring its basic necessity in the process of economic growth in developing countries. It has been emphasized that infrastructure is the best conduit of development. However, the fact is alleviated due to other mounting pressures in the process of development. This happens mainly due to the intrinsic and indirect role that infrastructure plays in the process. To that extent even the academic studies on development process rarely underscored infrastructure as a major determinant of the process. It is only in the recent past that, this lacuna is identified strongly by the academicians and infrastructure. In this paper attempt has been made to analyzed the role of infrastructure in agricultural development in the districts of Karnataka state. Keeping in view the researcher has made an attempt to the basic premises of infrastructure as major determinant of agricultural development. The study underscores the prime role of infrastructure in the development process in India as well as in Karnataka. It also helps to find out the regions and the districts lagging in terms of development of infrastructure and points out the lacunae. The study also set the tone to find out the Regional Disparities in Karnataka.

Key Words: *Infrastructure, Structural Changes, Agriculture, Development, Facilities.*

Introduction:

The 2002 World Development Report focus on infrastructure, was an important step towards underscoring its basic necessity in the process of economic growth in developing countries. Now it realized that, urgent need to improve the agriculture infrastructure in achieving economic growth at faster rate, the Government of India as well as the Karnataka State Governments have ventured into making heavy investment in agricultural infrastructure especially from the Fifth Five-Year Plan onwards. The agricultural infrastructure includes all of the basic services, facilities, equipment and institutions needed for the economic growth and efficient functioning of the food and fiber markets. Infrastructure investment demands a strong commitment to the cooperative extension system that enhances production, marketing, food safety, nutrition, natural resource conservation and all other functions of different agencies concerned with agricultural infrastructure. The major focus of infrastructural investment has been on irrigation, transportation, electric power, agricultural markets, etc. and these not only contributed to the agricultural growth at the macro level but also reduce the wide disparity between different regions in terms of agricultural growth.

Study Area:

Karnataka state has a geographical area of about 1, 91,791 sq. kms. (8th rank in India). It accounts for 5.83 percent of the total area of the country (32.88 lakh sq.km) and located in the south-western part. It lies between the 11° 31' to 18° 45' northern latitudes and the 74° 12' to 78° 40' eastern longitudes. The state is divided into 30 districts. Physiographically Karnataka state is divided into 4 distinct regions (coastal plain, hilly range, eastern plateau and Cotton growing soil track of northeast). Out of the total geographical area (19.18 million hectares) of Karnataka state 13.44 million hectares of land is used for agriculture purpose, of this only 2.94 million hectares were brought under irrigation, remaining 11.03 million hectares of land is under rainfed area.

Objectives: The following are the major objectives of the present study:

(a) To identify the suitable components of infrastructure for measuring agricultural development in the Karnataka state. (b) To analyse the level of development of various agriculture infrastructural indicators across different districts in Karnataka.

Data Base And Methodology:

The secondary data have been collected from various published reports at district level regarding agricultural development and major infrastructural variables. For the analysis of agricultural infrastructure development in Karnataka state is used the **correlation coefficient and multivariate analysis / factor score analysis** to study the linkage between the infrastructural facilities and the regional imbalance. For this, researcher has identified 15 indicators for classifying the different agriculture infrastructure development regions.

Status Of Agriculture Infrastructural Development:

The district-wise analysis of agricultural infrastructural facilities in Karnataka State is attempted through the inter-district disparities in the agricultural sector. For carrying out this analysis, selected fifteen indicators concerned to the agriculture infrastructural facilities, mentioned below:

X₁. No. of Regulated Agricultural Markets in each district. X₂. Agricultural Credit Per capita Rural Population. X₃. No. of Agricultural Cooperative Societies per lakh of Rural Population. X₄. No. of Bank Branches per lakh population lending agricultural credit. X₅. Bank Advance per lakh population. X₆. No. of Farm Contact Centers. X₇. Existence of Rural Development Centers. X₈. Existence of Agricultural Research Centers. X₉. Existence of Farmers Training Centers. X₁₀. No. of Sales Outlets of Seeds, Fertilizer and Pesticides. X₁₁. No. of Telephones Used. X₁₂. Length of Rural Roads in kms. X₁₃. No. of Godowns Available for Storage the Agriculture Production X₁₄. No. of Agriculture Implements and Machinery X₁₅. No. of Soil Testing Laboratories for Analyzing Soil Capacity.

Table No.1: District-wise Different Dimensions of Agricultural Infrastructure Indicators of Karnataka State:

Sl. No	Name of the District	No. of Regulated Agricultural Markets	Agricultural Credit to Per Capita Rural Population	No. of Agricultural Cooperative Societies per lakh of Rural Population	No. of Bank Branches per lakh Population Lending Agricultural Credit	Bank Advance per lakh Population	No. of Farm Contact Centers	Existence of Rural Development Centers	Existence of Agricultural Research Centers	Existence of Farmers Training Centers	No. of Sales Outlets of Seeds, Fertilizer and Pesticides	No. of Telephones Used	Length of Rural Roads (in kms)	No. of Godowns Available for Storage the Agriculture Production	No. of Agriculture Implements and Machinery	No. of Soil Testing Laboratories for Analyzing Soil Capacity
		X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄	X ₁₅
1	Bagalkot	20	923.53	16.37	7.26	3465.40	18	1	1	1	589	64820	1190	7	851278	1
2	Bangalore	8	221.15	4.24	11.33	1194.57	16	1	1	1	548	1834726	978	46	112536	1
3	Bangalore Rural	14	291.48	10.61	5.70	1587.30	35	1	1	1	241	709658	1417	17	813629	1
4	Belgaum	43	880.86	16.71	7.75	3664.73	35	1	1	1	284	26132	2371	6	820529	1
5	Bellary	20	879.25	10.84	7.73	4077.66	27	1	1	0	531	28442	1750	8	472966	1
6	Bidar	14	815.43	14.69	6.13	4199.09	30	1	1	0	462	86775	753	6	199987	1
7	Bijapur	16	551.60	15.71	6.86	2998.78	18	1	1	1	194	38108	1349	5	823112	1
8	Chamarajnagar	7	293.71	10.29	5.91	1999.10	16	1	0	0	315	11671	927	3	186341	1
9	Chikballapur*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Chikmangalur	17	2968.43	12.54	11.50	9244.37	32	1	0	0	323	56062	1335	5	388709	1
11	Chitradurga	14	482.31	10.35	7.61	2952.55	22	0	0	1	380	99518	1439	4	504691	1
12	Dakshin Kannada	8	30.66	9.50	15.96	9850.97	17	0	0	0	209	32093	1269	4	455822	1
13	Davangere	13	986.91	13.39	6.98	3338.20	24	1	0	0	608	123337	1172	7	587139	1
14	Dharwad	17	888.87	21.47	11.16	8715.87	14	0	1	1	665	74970	2788	5	961982	1
15	Gadag	22	870.33	23.65	8.33	4000.19	11	0	0	0	263	42801	2462	7	674795	1
16	Gulbarga	29	334.34	9.66	5.44	1160.32	46	1	0	0	729	63152	2805	11	593832	1
17	Hasan	22	1024.10	11.22	9.18	4292.52	38	1	0	0	291	148364	2052	8	607549	1
18	Haveri	18	782.58	20.19	6.61	3089.83	19	1	0	0	911	38808	2080	5	624518	1
19	Kodagu	6	4501.94	14.47	20.17	1261.30	16	1	1	1	581	40107	1167	2	93588	1
20	Kolar	23	471.86	9.85	7.17	919.30	53	2	0	0	1072	54924	2371	9	539958	1
21	Koppal	17	466.94	7.94	6.03	2716.52	20	0	0	0	237	73383	1251	4	589023	1
22	Mandya	13	685.91	14.40	7.27	3195.22	31	1	1	1	206	78875	4549	4	488052	1
23	Mysore	14	774.23	11.65	8.95	6282.08	33	1	0	0	186	25339	2074	8	776641	1
24	Raichur	15	638.13	7.89	5.52	2482.20	37	1	1	1	177	83978	996	6	488122	1
25	Ramanagar#	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Shimoga	19	943.12	14.40	9.33	5286.06	40	1	0	1	251	25926	1349	10	586910	1
27	Tumakur	33	330.63	10.71	7.30	1801.93	50	1	0	1	313	40339	2203	9	773410	1
28	Uttar Kannada	13	587.23	16.57	12.27	2102.57	35	2	0	1	788	119565	3344	4	242535	1
29	Udupi	8	367.15	5.76	18.3	7933.53	9	0	0	0	729	56679	700	4	221409	1
30	Yadagiri@	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Values		17.1481	851.5807	12.7804	9.0278	3844.8948	27.4815	0.8519	0.4074	0.4815	447.5185	151057.4815	1783.0000	7.9259	536261.5926	1.0000
Std.Dev. Values		8.1746	899.0269	4.5541	3.8297	2521.7336	12.0076	0.5338	0.5007	0.5092	247.6818	360370.0489	886.4911	8.1991	241164.5991	0.0000
Karnataka		17.88	835.13	12.47	10.10	4154.18	27	1	1	1	444.18	83779	1783	5	358493	1

Note: * Chikballapur (data clubbed with its parented District Kolar), # Ramanagar (data clubbed with its parented District Bangalore Rural) and

@ Yadagiri (data clubbed with its parented District Gulbarga).

• These 03 districts are newly formed and its separate data is not available, the data is clubbed in to their parented districts.

• In X₇, X₈, X₉ and X₁₅ indicators column mentioned 1 for existence of centre and 0 for not existence of centre.

Table No.2 : Levels of Agricultural Infrastructural Development in Karnataka State.

Degree of Development	Range Values of Factor Score	No. of Districts in each Category	Name of the District in the Particular Category on the basis of their Score Value
High	1.570 to 2.066	03	Bangalore Urban, Belgaum and Bangalore Rural.
Medium	1.075 to 1.570	15	Bagalkot, Mandya, Dharwad, Uttar Kannada, Kodagu, Bijapur, Raichur, Shimoga, Bellary, Tumakur, Kolar, Chikmangalur, Haveri, Gulbarga and Bidar.
Low	0.580 to 1.075	09	Hasan, Mysore, Davangere, Chitradurga, Gadag, Dakshin Kannada, Udupi ,Koppal and Chamarajnagar.

For the present analysis it is initially assumed that all the 15 indicators influences on the agricultural development in the districts of Karnataka State in one or the other way. To show the correlation between agricultural development and 15 different types of indicators (see Table No:1) are processed through the SPSS package to obtain simple bi-variate product moment correlation coefficients to show the inter-variable relationships which are represented in the form of a matrix . It is observed from the matrix of correlation coefficients that all variables are not equally related to one another. Out of 15 indicators only 02 of them are significantly correlated at 5% level and 04 indicators are correlated at 1% level, these 06 dominant variables are; X₆. No. of Farm Contact Centers, X₁₄. No. of Agriculture Implements and Machinery, X₃. No. of Agricultural Cooperative Societies per lakh of Rural Population, X₇. Existence of Rural Development Centers, X₉. Existence of Farmers Training Centers and X₁₂. Length of Rural Roads in kms. While remaining 09 indicators are less and negative correlated to the agricultural development.

Here we have noted that, out of the 27 districts in the state, only 03 districts namely: Bangalore Urban, Bangalore Rural and Belgaum have performed high level in almost all the variables, whereas the 15 districts viz., Bagalkot, Bellary, Bidar, Bijapur, Chikmangalur, Dharwad, Gulbarga, Haveri, Kodagu, Kolar, Mandya, Raichur, Shimoga, Tumakur and Uttar Kannada have medium level of performance and 09 districts namely: Chamarajnagar, Chitradurga, Dakshin Kannada, Davangere, Gadag, Hasan, Koppal, Mysore and Udupi are having least performance in most of the variables. The situation is very worse in these 09 districts, because no infrastructural indicator performs more than 1% level significance.

Conclusions:

Though Karnataka State has achieved an impressive growth rate in the overall infrastructural development compared to other states in the country, the agricultural infrastructure development is not evenly distributed within the State. Assuming that the level of agricultural growth rate has a positive strong correlation with the overall development in general and the agricultural development in particular, the unequal distribution of infrastructure would result in regional imbalances affecting the welfare of the individuals. This provides a strong case for increasing the level of agricultural infrastructure in some of the districts that we have identified in Category-III, are lacking adequate level of infrastructure facilities. Moreover, as we have already seen in the analysis part mere existence of infrastructural indicators may not ensure agricultural growth even if we assume that there exists a strong correlation between level of infrastructure and agricultural output.

Since there is a strong empirical evidence to show that the level of infrastructure determines the economic development of a particular region, the regional disparities in the food production and employment generation that contribute to overall development can be attributed to lack of or adequacy of infrastructural development. Though Karnataka state performance in terms of many of the infrastructural indicators is relatively superior to other states, there exists lot of scope for improving the infrastructural provision in the agricultural sector so that increased food grains production could be realised in the coming years. Since the agricultural sector in the states contributes around 37 percent of the gross domestic product (GDP) and 3/4 of the rural population in the state depends on the agricultural sector, infrastructural bottlenecks can be a major constraint in alleviating the overall poverty in the state. Keeping this in mind, the state government has to continue to invest in rural infrastructural facilities. Apart from this, the government should develop necessary institutions to attract private investment in some of the areas where there is a scope for the private sector to play a role.

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A Geographical Study of Cropping Pattern in Mohol Tahsil of Solapur District

Dr. B. T. Nikam

Asst. Prof. Dept. of Geography, Sahakar Maharshi Shankarrao Mohite-Patil Mahavidyalaya, Natepute

Abstract

The present study is an attempt to analyze the agricultural land use and cropping pattern at macro level in Mohol tahsil. This study is based on secondary data collected from revenue record in both Kharip and Rabbi Crops. Agricultural production influenced by physical socio-cultural, economic technological and organizational factor. Endeavour is made to study crop combination region in Mohol tahsil of Solapur district for the year 2010-2011, this is normal year for agricultural phenomenon. With the help of weavers (1954) technique calculated crop combination. The study region cover 1408.40 hectares land and having population in 104 villages in 252526 as per 2001 Census. Mohol tahsil is located at the eastern part of Solapur district. Physiography, rainfall, soil, temperature, and drainage influences on agricultural land use pattern in this tahsil. Rainfall varies between 200 to 600 mm from east to west entire tahsil. Eight crops have been considered for crop combination analysis. These Cereals (wheat & Cotton), Fruit crops (Chikku, Graps, pomegranate) Vegetables Crops (Onion, Tomato), Flowers Crops (Rose, Mari gold, Mogara) are major crops by computing pattern and using Weavers minimum deviation crop combination in Mohol tahsil has identified eight crop combination. Such type of study represents real situation of cropping pattern in Mohol tahsil and help to planners and agricultural scientist for agricultural planning at village level.

Keywords: Agriculture, Organization, Vegetable, Crop Combination

Introduction

Agriculture happens to be the primary activity in India and dairy farming has been considered as a subsidiary occupation. Agricultural land use is the basic structural unit of natural resources. The History of Agriculture in Solapur reveals that famine is of common occurrence from ages due to inadequate and ill distributed rains. Partial and complete failure of both Kharif & Rabi crops result in famine. And as such Solapur District was identified as one of the 72 districts in India's drought prone area. It forms the basis for all biological, human economic activities. Land is an important input in agricultural sector but the yield of agricultural crops mainly depend upon fertility of land for raising different crops, cropping pattern is the central element of agricultural land use. Cropping means the proportion of area under various crops at a point of time. Bajra, Sunflower, Redgram, Groundnut, Horsegram, Mothbean & Blackgram are the major rainfed kharif crops of the district and are generally grown on medium deep and shallow soils. While rabi Jowar, Safflower, Gram are main rainfed rabi crops grown generally medium deep and deep soils. Sugarcane, Sunflower, Wheat & summer Groundnut are the major irrigated crops grown in the district.

The area under fruit & vegetable crops under irrigated condition is increasing speedily under fruit crops Ber, Pomegranate & Grape has occupied major area, while few hectares is under Mango, K. lime & Sapota and these fruits of the district have captured the national as well as international market common vegetables under irrigated are Onion, Chilli, Brinjal, Tomato, Okra, Bitter gourd, Cucumber & leafy vegetables. A little area is under flowers & is mainly Merigold, Chrysanthemum, Tuberose and Rose.

Study Area

Mohol tahsil is located at eastern part of Solapur district in the state of Maharashtra. The famous temple in this tahsil at Vadval is situated in this tahsil, near about 5 km from head quarter Mohol. Mohol is surrounded by N. Solapur to the east. Madha tahsil to the North. Pandharpur tahsil to the west. Mangalwedha tahsil to the south-west, S. Solapur tahsil to the south-east. The study region cover 1408.40 hectares land and having population in 104 villages in 252526 as per 2001 Census. Mohol tahsil is located at the eastern part of Solapur district.

Physiography, rainfall, soil, temperature, and drainage influences on agricultural land use pattern in this tahsil. Rainfall varies between 200 to 600 mm from east to west entire tahsil. The underline basalt on disintegration and decomposition brought varieties agencies had yielded three kinds of soils viz. Deep black, medium deep & shallow soils. Tahsil is provided with Neera and Man left bank canals. Similarly Sina and Bhogawati are two seasonal rivers at north side of the tahsil. The tahsil is divided in to 104 villages are as 51 Kharip and 49 villages are as Rabbi season. Including Eight centers of Revenue circle i.e. Penur, Shetphal, Begampur, Narkhed and Anagar.

The rainfall is mainly due to rain shadow area in term of amount of rainfall average receives low rainfall 230 to 330 millimeters, in north, south and eastern part of Tahsil but western part of 16 villages are totally drought prone area. Therefore these villages are mostly unirrigated. The variation in amount of rainfall & type of soil exerts influence on the cropping pattern of the study region. The major crops

namely cereals, cash crops, pulses, oil seeds, cash crops, fruit crops, vegetables, flower and fodder crops are cultivated in Mohol tahsil.

Objective

1. To study the crop ranking in the Mohol Tahsil
2. To study crop combination region in Mohol Tahsil.

Datase And Methodology

The study is based on secondary data and field observations. Circle wise crop data is obtained from village officers (Tala- thi) records and Panchayat Samities records in Mohol tahsil. Topographical maps and survey of india sheets are used for physiographical study. Landuse data collected from socio-economical abstract. Mohol tahsil solapur district, strategic research and extension plan of solapur district and district census handbook in solapur district referred to collect related information. Simple statistical method has used to compute the least sum of squared deviation and variance and lowest standard deviation and coefficient of variation analysis (weaver) for cropping in the present study.

Crop Distribution

Distribution of irrigated land among different crops is shown in table no-1. total cereals, cereals, cash crops, pulses, oil seeds, cash crops, fruit crops, vegetables, flower are impor- tant crops .

Crop Ranking

It is observed that sugarcane and cotton is the leading crops as is grown irrigated land. the next important crop is Soya- been (oilseed) another vegetable, cereals, fruits and flower- crops, fodder crops, pulses etc. grown by the study region. There is an also the no. of total villages and the area of crops of Kharip and rabbi seasons are indicating in percentage of hecters in annual information cropping data as following.

Table No 1

Sr. No.	Crops group	Name of Crops
1	Cereals	Wheat, Bajara, Jowar Maiz etc.
2	Pulses	Tur, mugh, Matati, gram etc.
3	Oilseeds	Groundnuts, Soyabin, Karadi, Jawas, etc.
4	Cash Crops	Sugar cane cotton,
5	Fruit crops	Chikku, Pomegranate, Grape, lemon, Papai, Mango, Sweet Lime etc
6	Vegetable crops	Onion, cabbage, Chilly, Bringle, tomato, Met hi, leafy vegetable, garlic etc.
7	Flowers crops	Rose, Jasmine, marigold, mogaara, zend fu etc
8	Fodder crops	Grass –dry and green, etc.

Source: Department of Agirculture Mohol

Table No. 2, Cropping Pattern in Mohol Tahsil (2010-2011)

Sr. No	Total Crops Groups	Kharip Season	Rabbi Season
1	Cereals	42.54	41.20
2	Fruit crops	16.53	15.20
3	Oilseed	10.62	11.10
4	Vegetable crops	10.03	9.17
5	Cash crops	8.40	7.76
6	Flower crops	5.06	7.28
7	Fodder crops	3.95	4.85
8	Pulses	2.87	3.16
	Total	100	100

Source: Tahsil Office Records, Mohol

Crop Combination Analysis

Recently the crop combination, analysis geographical stud- ies has gained momentum and it's important, it is increasing day by day. Combination studies are fruitful in many ways firstly, they provide an adequate understanding of an indi- vidual crop geography. secondaly, combination is in itself and

integrative reality that demand definition and distribution analysis and crop combination regions are essential for the construction of still more complex structure of different agricultural region.

According to this method for present study in weavers crop combination (Minimum Deviation Method) and calculating from kharip and Rabbi Seasons and Lowest standard Deviation and Co-efficient of variation formula was selected for this study and analysis from (2010 -2011). The least sum squared Deviation and variance and Lowest standard deviation and Coefficient of variation formula was selected for this study and analysis from (2010-2011) both (Kharip and Rabbi) seasons variance value.

Minimum Positive Deviation Weaver's Method:

Crop combination is calculated by applying Weaver's method. In 1954 J.C. Weaver has applied least standard deviation technique for computing crop combination of a region.

Conclusion

In case if ranking of crops first rank in Mohol tahsil is first crops, and cereals crops. Weavers technique has identified two crop combinations in study area. Cereals as a monoculture has found in availability of irrigation facility and oil seed as increasing day by day. All over the part of these tahsil. The attitude of farmers, the crop production, demand for market crop combination grows in good production, affects the crop pattern and its changed. Two crop combination entered fruit and cereals crops. Maiz is most important and leading crop. in all 104 villages, variance is 48.49 and 50.66 both Kharip and rabbi seasons. These crop combination appeared large scale of landlord farmers and the value is 56.92 is in Kharip and 56.97 rabbi seasons in four crop combination. Five crop combinations indicate cereals fruit crops, oilseed, vegetables crops, cash crops. Six crop combinations indicate 75.63 and 72.33 value for Kharip and rabbi season. Seven crops combination variance value in both season 85.84 and 81.83. Lastly, eight crop combination indicate value as 96.49 and 91.89 in both seasons.

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A study of E- Commerce Benefits and challenges in Indian Banking Sector

Mr. Sanjay Jagannath Kasabe

*Assistant Professor, department of the commerce, Sundarrao More Art, commerce and science college,
Poladpur-Raigad*

Abstract

Electronic commerce E-commerce has become significant means of business in the age of globalization. It has become emerging business strategy. Its most significant impact is on the sectors that are the primarily transmit information in radio and Television E-banking has been most popular due to its conveyance and flexibility. Ecommerce has become most popular because of its short span of time. All people can enjoy access, product services information with other people easy. Banking institutions face competition not only from each other but also from non-bank financial intermediaries also as from alternative sources of financing. Another strategic challenge facing banking institutions today is that the growing and changing needs and expectations of consumers in tandem with increased education levels and growing wealth. Consumers are becoming increasingly discerning and have become more involved in their financial decisions. for several consumers, electronic banking means 24-hour access to cash through an cash machine (ATM) or Direct Deposit of paychecks into checking or savings accounts. But electronic banking involves many different kinds of transactions. Electronic banking, also mentioned as electronic fund transfer (EFT), uses computer and electronic technology as a substitute for checks and other paper transactions. EFTs is initiated through devices like cards or codes that let you, or those you authorize, access your account. Many financial institutions use ATM or debit cards and personal Identification Numbers (PINs) for this purpose. Some use other kinds of debit cards like people that require, at the foremost , your signature or a scan. as an example , some use frequency identification (RFID) or other kinds of "contactless" technology that scan your information without direct contact. The federal Electronic Fund Transfer Act (EFT Act) covers electronic consumer transactions.

KEYWORDS:- Internet, E-commerce, E-Banking, E-Banking Services

Introduction

By means of Telecommunication network E- Commerce has been sharing business information maintaining business relations and conducting business transactions. It is one of the most significant tools of the Internet with the help of linked computers. E Commerce carried out business all over the world. In short E commerce means buying and selling of tools through the means of digital communications. Electronic commerce, commonly known as e-commerce is the buying and selling product and services over electronic systems such as the Internet and other computer networks. Electronic commerce drawn on such technologies as electronic funds transfer, Supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), Inventory management systems and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transactions life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices and telephones as well.

The world is changing at a staggering rate and technology is taken under consideration to be the key driver for these changes around us. An analysis of technology and its uses show that it's permeated in almost every aspect of our life. Many activities are handled electronically because of the acceptance of knowledge technology reception also as at workplace. Slowly but steadily, the Indian customer is moving towards the online banking. The ATM and thus internet transactions are becoming popular. But the customer is clear on one thing that he wants net-banking to be simple and thus the banking sector is matching its steps to the march of technology. E-banking or Online banking could also be a generic term for the delivery of banking services and products through the electronic channels just like the phone, the web, the phone etc. The concept and scope of e-banking remains evolving. It facilitates an efficient payment and accounting thereby enhancing the speed of delivery of banking services considerably

Usages of Internet in India

In August 1995, Videsh Sanchar Nigam Limited started Internet Services in India. In Nov 1998, the monopoly of BSNL has been ended and the government of India allowed private Internet Service operator. The rules regarding to ISP's. We are unusually liberal no finance and allowed unlimited number of player. According to IAMI (Internet and Mobile Association of India) that present the on line content and advertng. E- Commerce and mobile content Indian citizen use internet for number of activities.

Advantages of E-commerce

1. It helps peoples carried out business, all over the world
2. It helps to reduce the cost of various items because it can be directly sent to the buyers.
3. E-commerce is best for small household items or product.

4. E-commerce has been responsible for reducing the cost of various items because it destroyed the vast links which from between the manufacture and buyer.
5. E-commerce also helps in various ways
 - A. Reduction is buyers sorting out time
 - B. Less time spent in resolving in vices and other discrepancies
 - C. Better buyer's decisions.
- D. E-commerce helps to reduce to delivery time and labour cost incurred the following the area data entry , overtime supervision Expenses, Document preparation, reconciliation, Mail preparation, Telephone calling, credit cart etc.

E-commerce in Banking

It is an application which allowed the customers to perform any of the virtual banking function, financial function online in a secure way. It involves the internet from banking delivering product and services. According to the internet and mobile association of India (IAMAI) , E-commerce industry in India may increase with rate of 47 % . This growth increase by the continuous expansion in the online travel industry in India. The % of online travel industry is 46 % which help to increase E-commerce market today. With help of high developing online marketing. The complete E commerce of India is expected to call in future. The citizen of India showed there cures city and function to make online purchases and are activities participle in online business. This insures the success and bright future of E commerce of India.

Following are result that guarantee the victory E commerce Industries the future internet uses and population strasrties

Year	Internet users	Population
1998	1.40	1,094,870,677
1999	2.80	1,094,870,677
2000	5.50	1,094,870,677
2001	7.00	1,094,870,677
2002	16.50	1,094,870,677
2003	22.50	1,094,870,677
2004	39.20	1,094,870,677
2005	50.06,	1,112,225,812
2006	60.00	1,112,225,812
2007	72.00	1,129,667,528
2008	-----	-----
2009	81.00	1,156,897,766
2010	100.00	1,173,108,018
2011	-----	-----
2012	137.00	1,205,073,612
2013	213.33	1,252,139,100
2014	243.19	1,267,401,849
2015	302.36	1,310,152,403
2016	342.65	1,324,517,249
2017	422.2	1,338,6676,785
2018	493.96	1,352,642,280
2019	636.73	1,366,417,754
2020	696.77	1,380,004,385
2021	761.19	1,393,409,038

Service Through E Banking

1. Bill payment service- one can make payment of Electricity and telephone bill, mobile bill credit cards and insurance premium bills as each bank has tie-ups with various utilities companies, service providers and insurance companies, across the country. To pay bills, all you need to do its completes a simple one time registration for each biller. Generally bank does not charge customers for online bill payment.

2. Fund Transfer- transfer any amount from one account to another account of the same or any another bank. Customers can send money any were in India. Once you login to your account. you need to mention the payees' account number, his bank and the branch. The transfer will take place in a day or so.
3. Credit card customers- with internet banking customers cannot pay only their credit card bills online but also get a loan on their cards.
4. Shopping – With the range of all kind of product you can shop online mode, and the payment is also made conveniently through your account.
5. Railway Pass – Indian railway has tied up few banks and one can now make your railway pass for local train online. The pass will deliver to your doorstep. But it it facility to limited in urban area only
6. Recharge phone-Selecting your operator's name enters the phone numbers and amount for the recharge. Your phone can be recharged within few minutes. Also bank attached few pay apps in India.
7. Investing through Internet banking- Nowadays most leading banks offer both online banking and demat account. However if you have your demat account with independent share brokers, then you need to sigh a special form, which will link your two accounts.

Advantages of E banking

1. Time Saving-due to online banking saves times by allowing direct transaction from office, home and any place.
2. Convenience - Online Baking brings to the table of its convenience.
3. Eco friendly Process It does not consume volume of paper like conventional banking mode so it is eco friendly process.
4. Easy access – To perform online banking tasks all you need is a basic computer systems.
5. Faster Banking- online banking is a faster way of performing banking functions.
6. Other benefits –online banking has several other benefits user can shop online buy ticket etc.

Challenges of E banking

1. Need for Standardization of software, hardware and operating system accross branches
2. Required high level security
3. Uscentrilised data network is required.
4. Upgradation with technological plan

Conclusion-

The E Banking in India will have its own advantages to both the banks and the customers. As India second largest popular country and the three -forth population in rural are and there is proper need to divert the efforts in entire area city as well as villages. E-banking has become an integral a part of modern banking. This opportunities e-banking operation increases different levels of risks for banking. Banks must concentrate on their functioning to finish with other banks. The banking sector in India is undergoing major change due to competition among the private and public banks. Then the results of daily internet banking in 2021, in India, 761.19 million internet users are attached in e commerce activities. In Indian point of view internet users count more every year. This study states that online banking System provides greater reach to customers. Feedback are often obtained easily as internet is virtual in nature. Customer loyalty are often gain. Personal attention are often given by bank to customer also quality service are often served.

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Current Social Trends in Economics and Psychology

Dr. Abasaheb D Jadhav

Dept. Of Economics, Sahakarbhushan S.K.Patil College Kurundwad Tal . Shirol Dist.Kolhapur

Abstract

The teaching of pre-college economics has been widely researched for over some years with studies focused upon teacher training and improving students' understanding. Economics, while frequently acknowledged as a vital component of citizenship education in both the popular and educational press, has been a controversial and contested component of the school curriculum. Recent trends in economic education are manifestations of the perennial issues regarding economic knowledge in the education of citizens and how best to provide teachers with a fund of economic knowledge and materials.

Introduction:-

It's very beginning mainstream social psychology adopted a cognitive orientation. The central concept of the discipline was attitude, recognized on early on as indispensable for social psychology. While all social sciences use this concept, it is social psychology that clarified it, made it measurable and studied it in its own right. A second strand of concern developed under the powerful influence of the study of small groups. Group dynamics investigated the influence of leadership styles on the productivity and cohesion of groups, identified communication patterns, compared individual judgments with group decisions and conformity. In this unit we will be dealing with the application of social psychology to different settings, and the ethical issues related to social psychology. The nature of citizenship education remains a constant topic of debate in the social studies literature. Given the economic changes accompanying the collapse of the Soviet Union, as well as the perennial issue of the relationship of economic understanding and disposition to the education of citizens in a democracy, it is not surprising that this topic is receiving a lot of attention. Interest in economics as a core component of citizenship education has resurged.

Objectives :

1. To study Recent Trends in economics education .
2. To study Recent Trends in human psychology.

Research Methodology:

This paper is based on the economics education and psychology. with the help of secondary data collection. The secondary data is gathered from various published Journals, Books , Internet (websites) and other research papers.etc.

Economic Education:

Interrelated with the education of citizens is the issue of the role of economic education and the newly independent states. Democracy and capitalism require a degree of participatory decision making that was neither practiced in society nor taught in the schools of former communist countries in Central and Eastern Europe. The last five years have witnessed a number of economic education programs involving exchanges between Central and Eastern Europeans and American economics educators which have promoted teaching and learning about market-based economic systems and democratic governance.

The Global Economy :

Economic education throughout much of the 1960s and 1970s concentrated on the application of economic concepts to understanding and analyzing the economy of the United States. Beginning in the 1970s with the oil embargo, the growth of the Japanese economy, and more recently the global ecological issues and political events in Central and Eastern Europe, economic education increasingly has become concerned with international issues. Recent articles and teaching materials have focused on the Chinese, Japanese, Korean, and Latin American economies, as well as the Central and East European economic situation. International trade on a global scale is highlighted in recent publications of the National Council on Economic Education.

Content Standards :

Economic education has followed the national trend of creating content standards. Economic educators at the national and state levels have developed content standards delineating the knowledge and application skills which students should possess at various grade levels. "The Voluntary National Content Standards in Economics," developed and published by the National Council on Economic Education (NCEE), are written in the form of propositions. They include the key concepts that have traditionally served as the framework for economic education materials developed by the National Council on Economic Education. See "A Framework for Teaching Basic Economic Concepts," which provides an explanation of key economic concepts and recommendations for sequencing them within the curriculum .

Each content standard is accompanied by a rationale explaining its significance, as well as the performances of students required to demonstrate achievement of this knowledge at the 4th, 8th, and 12th grade levels. The twenty content standards embody the essential principles of economics and the essential reasoning and decision-making skills that indicate what students should be able to do with their knowledge of economics.

Use of Computer Technology In Economic Education:

The efficiency of technology holds out the prospect of improved economic education as students gain access to almost unlimited sources of data. Teachers unsure of their economic knowledge are able to almost instantly find answers to questions. Most important, when time is scarce, teachers will have access to lesson plans without having to leaf through a number of separate sources of information.etc

Population Psychology:

Population psychology concentrates on the effects of the rapid expansion of the number of humans on this planet and on efforts to control this expansion. How is it that the number of human beings has grown in this fashion? Sagan explains the mathematical phenomenon in terms of the 'Secret of the Persian Chessboard.' Legend has it that the grand vizier of Persia invented the game of chess played on a board divided into sixty-four squares. The king was pleased by this new game and he told the vizier to select whatever he wished as a reward. The clever inventor pretended to be a modest man who seemed to make only a small request. He asked the king to give him a few grains of wheat-just one grain on the first square of the board, doubling it to two grain on the second square, four grains on the third, and so on for all sixty four squares. The king thought that this was a small reward, and he was relieved that so little had been requested. What was not obvious to the king, or to most of us, is that by the time the doubling continued to the sixty fourth square, the reward would add up to 18.5 quintillion grains of wheat: about 75 billion metric tons- more than the contents of all the king's granaries. This type of astonishing growth is called exponential increase. In a similar way, when time passes arithmetically, population grows geometrically each year. The reason why exponential growth comes as a surprise is that we ordinarily think in arithmetic rather than geometric terms. Our thinking is not adapted to the percentage increments. Also, the passage of large segment of time is required for noticeable growth. Some observers argue that continued population growth is essential because it acts as an incentive, resulting in a rise in everyone's standard of living. Since continued growth of population eats away the development, an attitudinal change is required. Social psychology is important in changing attitude and enhancing sensitivity. "To bring about change, it is obviously important for psychologists to help increase the quality and quantity of sex education, to bring about changes and reduce situational constraints either to modify dispositional variables or to modify educational messages and contraceptive availability to take account of individual differences"

Environmental Psychology :

Environmental psychology is the field that deals with interaction between physical world and human behaviour. Among the environmental factors affect behaviours are environmental stress, noise, temperature, air pollution, atmospheric electricity etc. The negative effects of human actions on environment in include global warming and the ever-mounting problem of waste. Studies designed to consol littering suggest that pro-environmental behaviour can be increased by the use of prompts, rewards and legalisations.

Industrial Organisational Psychology :

It is an application of social psychology which focuses on understanding behaviours in work settings especially within the field of industries and organisations. Work related attitudes include employees' evaluation of jobs (job satisfaction) and of their organisations. Research has emphasised the determinants and the consequences of these attitudes. Work motivation is influenced by cognitive factors, the outcomes of performance, and the perception of inequity. A common problem in organisations is conflict, and psychologists have identified both organisational causes competition over scarce resources, and interpersonal causes such as stereotypes, prejudices, grudges and ineffective communication styles. Organisational conflicts can be reduced or resolved by such techniques as bargaining, super-ordinate goals and the induction of represses incompatible with anger and conflict.

Legal System and Social Psychology :

Forensic psychology has produced ample evidence that the reality of our legal system often doesn't live up to its ideals. Witnesses and defendants are influenced by interrogation procedures and media publicity. Eyewitness testimony is often inaccurate and the behaviours of attorneys and judges can influence verdict. Jurors respond in part on the basis of cognitive reinterpretation of the evidence and on emotional biases for and against specific defendants. Psychologists working in this area contribute to the social order by their research human cognitive system and communication patterns. Human cognitive

system has limits and it is affected by various things. Legal procedures depend mostly on reports and evidences by eyewitness. But the fact about human memory can be revealing: its limited capacity, constructive processes all need to be paid attention to in court hearings. Ever increasing demands of psychology in various field call for specialist help to work in these areas. As we earlier said practical demands far surpass theoretical work in social psychology. But in any ways, it is exporting its knowledge and importing various ideas from other sciences and practices.

Conclusion:

Knowledge of economics is an essential component of citizenship education. There are no panaceas to solve the problems contributing to ignorance of the subject: secondary teachers who all too frequently possess the minimum state requirements in economics; elementary teachers who commonly complete no undergraduate courses in economics; and a curriculum centered on history, political science, and geography. The recent trends in economic education, however, give reason for optimism. Not only are educators stressing the importance of economics for personal and business decisions, they also appear to be engaging in serious dialog regarding the relationship among economic systems, democratic governments, and civic education. This bodes well for the future of economics in the core of democratic citizenship education.

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Agriculture and Allied Business in India

Dr. Archana Gaikwad

Appasaheb Jedhe College, Pune

Abstract:

Agriculture plays a very important role in Indian economic system. 58% of the population is dependent on Agriculture. Agriculture is a primary business and is mainly depends on nature. After the period of Industrial and Green revolution, the agriculture has moved towards technical and sustainable ways. Before these revolutions, the agriculture was only limited to a means of livelihood. However, in modern times it has become more of a business. This change in approach towards agriculture has caused the increase in productivity. The way agriculture is being done are improving and has started becoming more and more sustainable.

Key Words: Agriculture, Allied business, Policy, revolution, fisheries, livestock, GDP

Introduction:

Indian economy is mainly agriculture-based economy. As per 2018 data, agriculture employed more than 50% of the Indian work force and contributed 17–18% to country's GDP. In 2016, agriculture and allied sectors like animal husbandry, forestry and fisheries contributed 15.4% of the GDP (gross domestic product) with about 41.49% of the workforce in 2020. Today India ranks second worldwide in farm activities. Over 58 per cent of the rural households depend on agriculture for their livelihood. Women account for more than 47% of agriculture labor and play major role in small-scale food processing sector. Although India is resource rich country, the resources are mostly underutilized or unutilized. The agriculture or even allied businesses mainly use traditional ways and the new techniques are not being used as much as it should have been compared to the other economies which have major contribution from agriculture. The per capita income is increasing however at comparatively lower rate. In this research paper we have tried to explain the Indian agriculture, it's allied businesses with their present status and it's potential.

Objective:

1. To study the current trends in agriculture in India
2. The problems in agriculture and allied businesses
3. The types of allied businesses and their present status
4. The growth potential of agriculture and it's allied business in India

Methodology

The present paper is a review paper based on the previous works of government, non-government organizations in the field of agriculture. They are sourced from books, government sites, e-contents and other secondary sources.

Discussion:

Before the mid-1960s, India relied on imports and food aid to meet domestic requirements. However, two years of severe drought in 1965 and 1966 convinced India to reform its agricultural policy and that it could not rely on foreign aid and imports for food security. India adopted significant policy reforms focused on the goal of food grain self-sufficiency. The Green revolution in India, mainly in the states of Punjab, Haryana, and western Uttar Pradesh, helped rapid growth in farm productivity and enabled India to become self-sufficient by the 1970s. By the year 1980, other states as well adopted the new ways and techniques of farming to increase the productivity. The new policy was adopted by India to move to "evolution of a production pattern in line with the demand pattern" leading to a shift in emphasis to other agricultural commodities like oilseed, fruit and vegetables. Farmers began adopting improved methods and technologies in dairying, fisheries, and livestock, and meeting the diversified food needs of a growing population.

Agricultural revolution in the 1970s and 80s increased the demand for rural labor and raised rural wages and, together with declining food prices, reduced rural poverty. However agricultural growth in the 1990s and 2000s slowed down, averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the 2000s. The slow-down in agricultural growth has become a major cause for concern. India's rice yields are one-third of China's and about half of those in Vietnam and Indonesia. The same is true for most other agricultural commodities.

There are many problems Indian agriculture faces. To name major of those are as follows,

1. The Instability due to the over dependance on Monsoon. Although the Monsoon in India is a blessing for it, it is unstable. The lower or higher than average monsoon or more rains in one area and less in another makes it difficult for agriculture. It leads to fluctuations in crop output, prices, and employment

2. There is inequality in the land holding, It is believed that large part of land in India are owned by relatively small section of the rich farmers, landlords and money-lenders, while the vast majority of farmers own very little amount of land, or no land at all.
3. Due to the growth of population and breakdown of the joint family system, there has occurred continuous sub-division of agricultural land into smaller and smaller plots. At times small farmers are forced to sell a portion of their land to repay their debt. This creates further sub-division of land. Sub-division, in turn, leads to fragmentation of holdings. When the size of holdings become smaller and smaller, cultivation becomes uneconomic. As a result, a major portion of land is not brought under the plough. Such sub-division and fragmentation make the efficient use of land virtually impossible and add to the difficulties of increasing capital equipment on the farm. All these factors account for the low productivity of Indian agriculture.
4. The conditions of most agricultural laborer in India are far from satisfactory. There is also the problem of surplus labor or disguised unemployment. This pushes the wage rates below the subsistence levels.
5. Some other major problems such as the systems and techniques of farming, the marketing of agricultural products and the indebtedness of the farmers.

While agriculture's share in India's economy has progressively declined to less than 15% due to the high growth rates of the industrial and services sectors, the sector's importance in India's economic and social fabric goes well beyond this indicator. First, nearly three-quarters of India's families depend on rural incomes. Second, most India's poor (about 70 %) are found in rural areas. And third, India's food security depends on producing cereal crops, as well as increasing its production of fruits, vegetables, and milk to meet the demands of a growing population with rising incomes. To do so, a productive, competitive, diversified, and sustainable agricultural sector will need to emerge at an accelerated pace.

The sector comprises agriculture proper, livestock and livestock products and operation of irrigation system. The economic activities included in agriculture proper are (i) growing of field crops, fruits, nuts, seeds and vegetables, (ii) management of tea, coffee and rubber plantations, (iii) agricultural and horticultural services on a fee or on contract basis such as harvesting, baling and thrashing, preparation of tobacco for marketing, pest control, spraying, pruning, picking, packing,.

Livestock and livestock products include breeding and rearing of animals and poultry besides private veterinary services, production of milk, slaughtering, preparation and dressing of meat, production of raw hides and skins, eggs, dung, raw wool, honey, and silkworm cocoons etc.

Table 1: Agricultural and Allied Sectors GDP

Period (TE=Three Year Ending)	Agriculture and Livestock (Per cent)	Livestock	Forestry	Fisheries (Per cent)	Total GDP at current prices (Rs. crore)
TE 1982-83	68.9	12.9	16.4	1.8	56027
TE 1992-93	63.9	20.5	12.6	3.0	180985
TE 2002-03	61.3	22.8	11.2	4.8	481436
TE 2012-13	63.8	22.7	9.0	4.5	1487903

(Sources and Notes: 1. Central Statistical Office (CSO): Annual Accounts for various years, Ministry of Statistics and Program Implementation, New Delhi.)

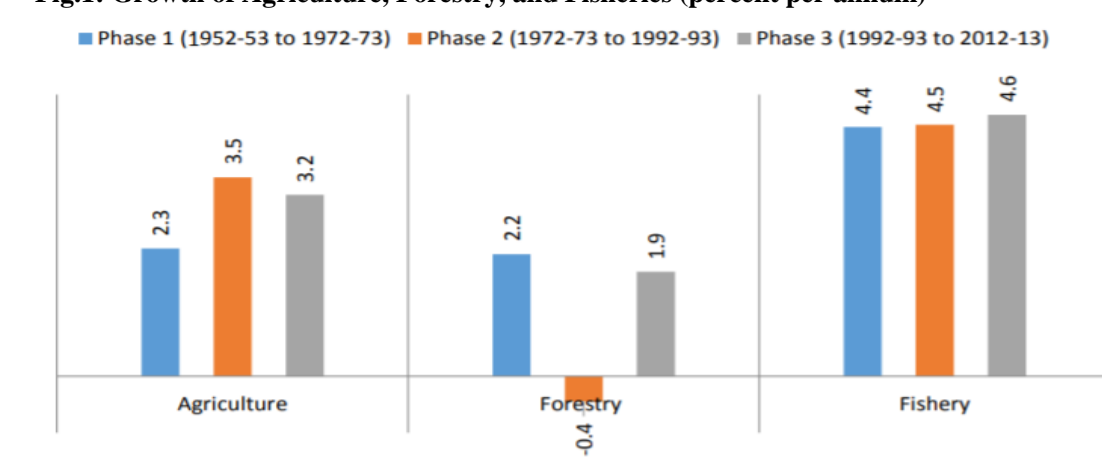
There are many initiatives already being taken by Government of India to improve the overall condition of the Agriculture and it's allied businesses in India. To list few of them,

- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** Government of India is committed to accord high priority to water security. The objective behind Pradhan Mantri Krishi Sinchai Yojana is "Har Khet ko Pani". The PMKSY shall focus on creating sources of assured irrigation and harnessing rain water at micro level through "Jal Sanchay and Jal Sinchan." And also increase water use efficiency through promotion of Micro-irrigation „Per drop More crop“.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)** : PMFBY will provide a comprehensive insurance cover against failure of the crop thus helping in stabilizing the income of the farmers and encourage them for adoption of innovative practices. The Scheme can cover all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) will be conducted being a part of the General Crop Estimation Survey (GCES). The scheme is compulsory for loanee farmer obtaining Crop Loan /KCC account for notified crops.
- **Paramparagat Krishi Vikash Yojana (PKVY)** : The government is committed to promote Organic Farming which improves soil Health and leads to better quality crops. PKVY, a new scheme to develop

organic clusters and make available chemical free inputs to farmers. This is a major initiative taken by the government to give fillip to organic production system and to allocate substantial funds separately for this purpose

- **Soil Health Management (Soil Health Cards Scheme)** : In order to promote soil Health Management, provides assistance to state governments for setting up soil testing laboratories, fertilizer testing laboratories as well as implementation of organic farming project across the across the country .
- **Neem Coated Urea** : Government of India has now made it mandatory for manufacturers to produce 100 per cent neem coated urea to discourage indiscriminate use of the urea in the country.
- **National Food Security Mission (NFSM): Pulses** : It is a centrally sponsored scheme that focuses on pulse production through utilization of rice fallows, rice bunds and intercropping of pulses with coarse cereals, oilseeds and commercial crops (sugarcane, cotton, jute).
- **National Agriculture Market (NAM)** : Agri Tech Infrastructure Fund (ATIF) is a Central Sector Scheme which envisages implementation of the National Agriculture Market by creation of a common electronic platform deployable in selected 585 regulated wholesale markets across the country.
- **National Gokul Mission** Keeping in view the urgent need to take up a specific programme for the development and conservation of indigenous bovine breeds, the “Rastriya Gokul Mission” a new initiative has been launched for the first time, with a view to conserve and develop indigenous bovine breeds in a focused manner
- **Blue Revolution (Fisheries)** : The Government at the Centre has initiated “Blue Revolution” to take forward the fishery sector as it will contribute to the betterment of livelihood of fishermen, fisher women and aquaculture fish farmers, besides providing high energy proteins for tackling protein malnutrition, healthy Omega-3 oil supplementation and creation of rural employment through ancillary industries as packaging, transportation, ice manufacturing and processing etc.

Fig.1: Growth of Agriculture, Forestry, and Fisheries (percent per annum)



(Sources and Notes: 1. Central Statistical Office (CSO): Annual Accounts for various years, Ministry of Statistics and Programme Implementation, New Delhi.)

The growth of the agriculture, forestry and fishing has been shown in the Fig. 1 in three phases. First one from 1952-53 to 1972-73. The second phase from 1972-73 till 1992-93 and third one from 1992-93 till 2012-13. Only the fisheries has shown steady growth during the three phases.

Based on a situation analysis of rural India, there are a few key issues that need attention in order to make farming viable, steady and sustainable. These are increase in productivity, better inputs, technologies, and extension support. - Remunerative prices and Market support. - Risk Mitigation. - Land rights, Land Records modernization and revisiting tenancy laws. - Livelihoods diversification through allied activities. - Second Green Revolution in the Eastern Region.

Conclusion:

India is a global agricultural powerhouse. It is the world’s largest producer of milk, pulses, and spices, and has the world’s largest cattle herd (buffaloes), as well as the largest area under wheat, rice, and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables, and tea. The country has some 195 m ha under cultivation of which some 63 percent are rainfed (roughly 125m ha) while 37 percent are irrigated (70m ha). In addition, forests cover some 65m ha

of India's land. Indian food and grocery market is the world's sixth largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 32% of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry.

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Spatio-Temporal Variations of Sex Ratio in Jalgaon District (MH) A Geographical Assessment

Mrs. Chochande Ranjana Uttamrao

*Assistant Professor, Department of Geography, B.S.S. Arts, Science & Commerce College,
Makani, Tq. Lohara, Dist. Osmanabad.*

*Corresponding Author Email: ranjanachochande@gmail.com

Abstract:

The population is all the organisms of the same group or species, which live in a particular geographical area. Population refers to a collection of humans. The sex ratio is the ratio of males to females in a population. Sex ratio is of study concerned with the accurate prediction of sex ratios in all sexual species. Gender imbalance is a disparity between males and females in a population. Sex ratio is an index of the socio-economic condition of an area. It is an important tool for regional analysis. It has a profound effect on the demographic structure in the region. it is an important feature of any Terrain. Males usually exceed females at birth. The sex ratio varies according to the age profile of the population and Sex imbalance may arise as a consequence of various factors including natural factors, exposure to pesticides and environmental contaminants, war casualties, sex-selective abortions, infanticides, aging, gendercide, etc. There is pressure for women to give birth to sons, often because of cultural preferences for male heirs. Violence against women is causing gender imbalances in many developing countries (Nicholas Kristof and Sheryl WuDunn). The female population has been declining sharply in India. Maharashtra is also facing this problem. Beed, Jalgaon, and Ahmednagar are three districts having a fewer number of females compare to the males. The imbalance of sex ratio is going to create a lot of problems such as social, political and economic. It will also increase crimes against females. The study region has been selected for jalgaon District to rapidly declining sex ratio. The less number of females is a national problem. So it is essential to study this problem at the district level.

Keywords: Sex Ratio, Abortions, Infanticides, Violence.

Study Area:

Jalgaon is one of the district of Maharashtra, this situated at the northern most border of the state. It is the part of erstwhile region of Bombay presidency. Jalgaon district lies in the north west part of Maharashtra state lying between 20⁰ and 21⁰ north latitude and 74⁰ 55' and 76⁰ 28' east longitude, is located in the Tapi river basin stretching nearly 128 kms. Along the river and varying in the breadth from 112 km. to 144 km. it covers an area of the Jalgaon district is 11,765 sq.km. Which constitute 3.82 per cent of the total area of State. Administratively it has 15 tehsils viz. Chopada, Yawal, Raver, Muktainagar, Bodwad, Bhusawal, Jalgaon, Erandol, Dharangaon, Amalner, Parola, Bhadgaon, Chalisgaon, Pachora, and Jamner.

Objective: 1. To study the Tehsil wise sex-ratio in the region.
2. To study the spatial distribution of sex ratio in Jalgaon district.

Database & Methodology:

The present study is based on secondary data. The census data of 1991 to 2011 are used. Secondary data that have collected from census records published by the Government of India. The general and geographical information of the Jalgaon district was collected by the Government Gazette & Government website of the district. To include the Tehsil wise data regarding sex ratio. The other sources have been used like socio-economic review, district statistical book journals & article.

The spatial pattern of sex Ratio in Jalgaon District:

The spatial pattern of sex ratio has Jalgaon studied and it has been observed that there is differentiation in Jalgaon district. The total rural literacy of Jalgaon district in the year 1951 was 984, similarly in 2011 the total rural literacy is 924, this means that during the research period from 1951 to 2011, there -60 is a negative decline in the overall rural literacy in the field of study. Similarly, the urban sex ratio also -17 differed from 1951 to 2011 in the research period. the total literacy of Jalgaon district in the year 1951 was 971, similarly in 2011 the total rural literacy is 925, this means that during the research period from 1951 to 2011, there -46 is a negative decline in the overall Total literacy in the field of study

Table No.1 Jalgaon District Sex Ratio 1951-2011

Year	Rural	Urban	Total
1951	984	944	971
1961	968	920	957
1971	958	917	948
1981	957	929	950
1991	948	921	940
2001	938	920	933
2011	924	927	925

Source - Census of India, District census handbook of Jalgaon District 1991 and 2011.
 Socio- Economic abstract of Jalgaon District 2011.

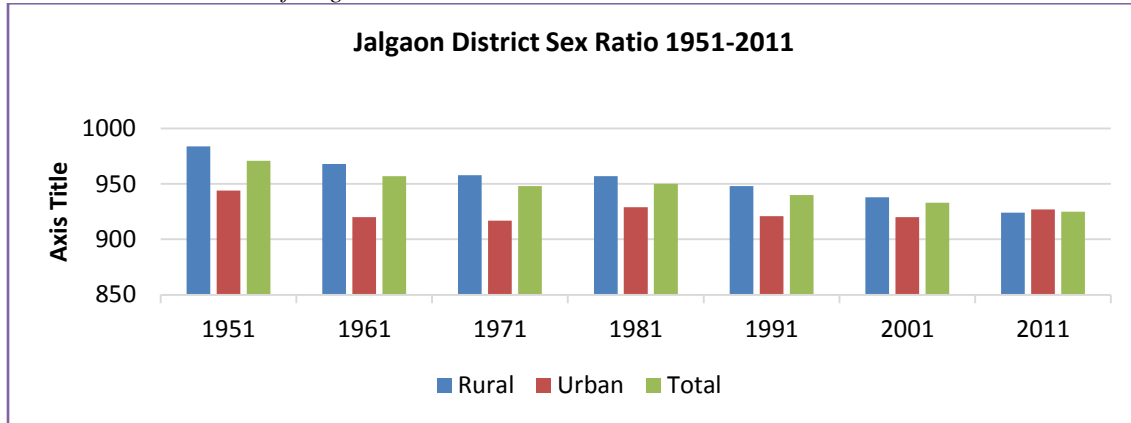
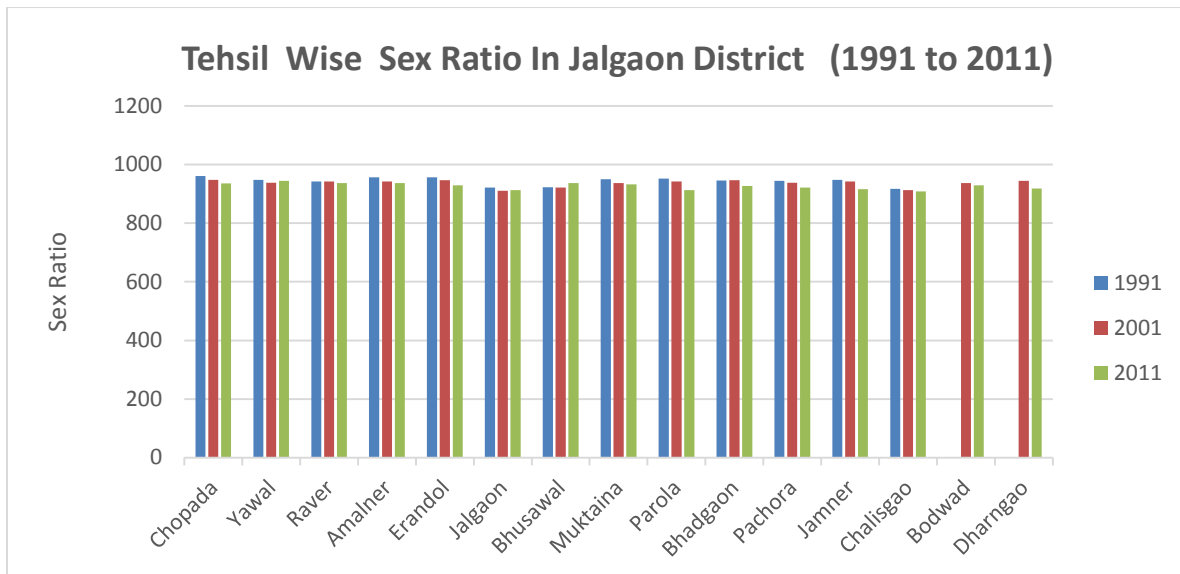


Table No.2 Tehsil Wise Sex Ratio in Jalgaon District

Jalgaon District Total Sex Ratio					
Sr.no	Tehsils	1991	2001	2011	Difference in sex ratio
1	Chopada	961	948	936	-25
2	Yawal	948	938	945	-3
3	Raver	942	942	937	-5
4	Amalner	956	942	937	-19
5	Erandol	956	947	929	-27
6	Jalgaon	922	911	913	-9
7	Bhusawal	923	922	937	14
8	Muktaina	950	937	932	-18
9	Parola	952	942	913	-39
10	Bhadgaon	946	947	927	-19
11	Pachora	944	938	922	-22
12	Jamner	948	942	916	-32
13	Chalisingao	917	913	909	-8
14	Bodwad	0	937	929	929
15	Dhargao	0	944	918	918
	District	940	933	925	-15

Source - Census of India, District census handbook of Jalgaon District 1991 and 2011. Socio- Economic abstract of Jalgaon District 2011.

According to the 1991 Census Total sex ratio of Jalgaon district was 940 females' par 1000 males if the sex ratio is less than 935 Jalgaon 922, Bhusawal 923, Chalilsgaon 917 was in this tehsils. While the total sex ratio between 935 and 970 was Chopada 961, Yawal 948, Raver 942, Amalner 956, Erandol 956, Muktainagar 950, Parola 952, Bhadgaon 946, Pachora 944, Jamner 948 it was observed in this tehsils. According to 1991 Jalgaon district has the highest tehsil wise total sex ratio was Chopada 961, also tehsil wise lowest sex ratio was observed in Chalisingaon 917.



According to the 2001 Census Total sex ratio of Jalgaon district was 933 females' par 1000 males if the sex ratio is less than 935 Jalgaon 911, Bhusawal 922, Chalisgaon 913 was in this tehsils. While the total sex ratio between 935 and 970 was Chopada 948, Yawal 938, Raver 942, Amalner 942, Erandol 947, Muktainagar 937, Parola 942, Bhadgaon 947, Pachora 938, Jamner 942, Bodwad 937, Dharngaon 944, it was observed in this tehsils. According to 2001 Jalgaon district has the highest tehsil wise total sex ratio was Chopada 948, also tehsil wise lowest sex ratio was observed in Jalgaon 911.

According to the 2011 Census Total sex ratio of jalgaon district was 925 females' par 1000 males if the sex ratio is less than 935 Erandol 929, Jalgaon 913, Muktainagar 932, Parola 913, Bhagaon 927, Pachora 922, Jamner 916, Chalisgaon 909, Bodwad 929, Dharangaon 918, was in this tehsils. While the total sex ratio between 935 and 970 was Chopada 936, Yawal 945, Raver 937, Amalner 937, Bhusawal 937, it was observed in this tehsils. According to 2011 Jalgaon district has the highest tehsil wise total sex ratio was Yawal 945, also tehsil wise lowest sex ratio was observed in Chalisgaon 909.

In 1991, the total sex ratio in Jalgaon district was 940 and in 2011 it was 925 during the research period from 1991 to 2011, there has been a negative decline of -15 in sex ratio. Also the during the research period from 1991 to 2011, the difference between the highest sex ratio in tehsil wise was observed in Bodwad 929, and the lowest sex ratio in Parola -39.

Conclusion:

During the research period from 1951 to 2011, there -60 is a negative decline in the overall rural literacy in the field of study. Similarly, the urban sex ratio also -17 differed from 1951 to 2011 in the research period. During the research period from 1951 to 2011, there -46 is a negative decline in the overall Total literacy in the field of study. According to 1991 Jalgaon district has the highest tehsil wise total sex ratio was Chopada 961, also tehsil wise lowest sex ratio was observed in Chalisgaon 917. According to 2001 Jalgaon district has the highest tehsil wise total sex ratio was Chopada 948, also tehsil wise lowest sex ratio was observed in Jalgaon 911. According to 2011 Jalgaon district has the highest tehsil wise total sex ratio was Yawal 945, also tehsil wise lowest sex ratio was observed in Chalisgaon 909. During the research period from 1991 to 2011, there has been a negative decline of -15 in sex ratio. Also the during the research period from 1991 to 2011, the difference between the highest sex ratio in tehsil wise was observed in Bodwad 929, and the lowest sex ratio in Parola -39.

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