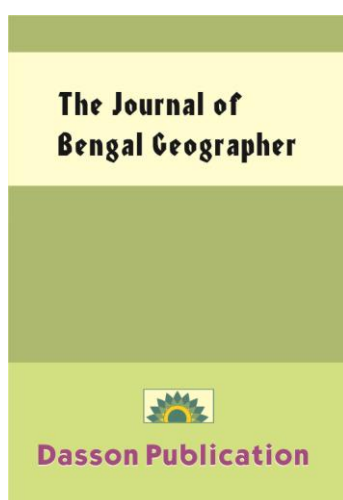


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Pattern and differential of literacy in Western Maharashtra: A Geographical analysis

Dr. Govindrao Uttam Todkari

Assistant Professor

Department of Geography

Walchand College of Arts and Science

Solapur

Abstract

Literacy rate is one of the important demographic elements, which is a good measure of human progress towards modernization. Literacy has been defined as the ability to read and write with understanding. Indian literacy is characterized with sharp differences in between the rate of male and females; of rural and urban areas; and of various population subgroups. There are inter-regional variations in literacy rate among Western Maharashtra. The literacy variations are quite significant between male-female and rural-urban in this area. In this present paper, the western Maharashtra region is selected for analyzing these variations of literacy and differential of literacy. For this study, the secondary data are used which collected from socio-economic abstract of district. The collected data are analysed by using statistical and cartographic techniques. Such type of study represents real situation of literacy in Western Maharashtra which helps to planners, scientists and research scholars.

Keywords: 1. Differential Index, 2. Female literacy, 3. Male literacy, 4. Urban literacy, 5. Rural literacy.

Introduction

Literacy rate is one of the important demographic elements, which is a good measure of human progress towards modernization. (R. S. Patil) Literacy reflects the socio-economic and cultural set up of a nation, ethnic group or community. Literacy is essential not only for eradication of poverty, but also for mental insulation for cultivating peaceful and friendly international relations and for permitting the free play of demographic process as well. (V.R. Rathod) It is essential for social reconstruction, improvement in quality of life and preparation of manpower for rapid development. Education inculcates new ideas for betterment of the society in particular and nation in general. The high literacy rate is one of the very significantly qualitative indicators of social development associated to the economic development. (C.K. Jain)

Literacy has been defined as the ability to read and write with understanding. Literacy is defined as the ability to read, write and least a simple message in any language. (Hassan, 2005). According to Chandna, a person is literate if he/she can both read and write in any language. In India, the literacy rate is calculated excluding 0-6 age group of population. Indian literacy is characterized with sharp differences in between the rate of male and females; of rural and urban areas; and of various population subgroups. The Indian literacy rate are influenced by the factors of the cast based social structure, largely farm based economy, the prejudices against the females mobility and education, general low standard of living, high cost of education, limited number of schools in countryside and continuously accelerated rate of population growth which adds a large number of illiterate children to the country's population every year. These factors are varying tahsil to tahsil in western Maharashtra, however the spatial literacy distribution is uneven and the rural-urban and male-female differential also varied in study region.

Objectives

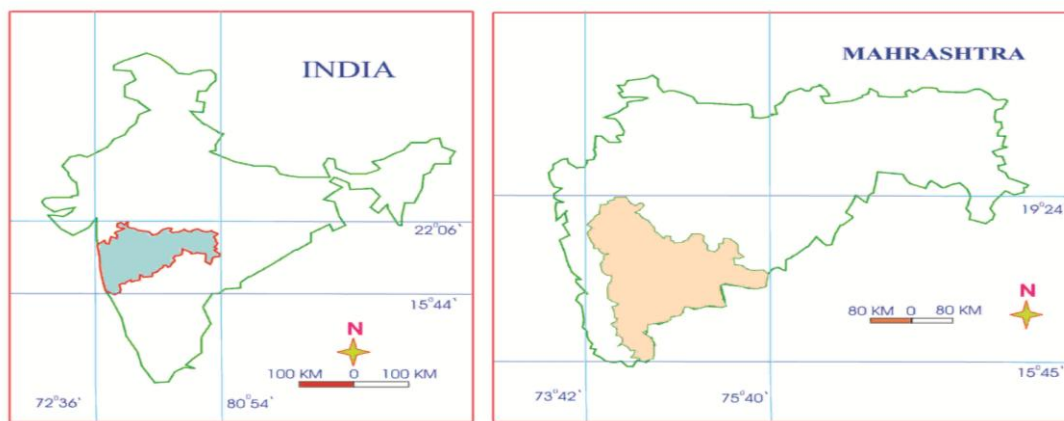
The major objectives of present study are followings:

1. To analysis the spatial pattern of literacy in Western Maharashtra.
2. To asses the spatial variation in literacy among the male-female and rural-urban in western Maharashtra.
3. To measure the differential index among male-female and rural-urban literacy.

Study area

The Western Maharashtra is selected as study area. It comprises of 58 tahsils of five districts viz. Kolhapur, Pune, Satara, Sangli and Solapur district. It located from 15°45' north to 19°24' North latitudes and 73°19' East to 76°15' East longitudes. It covers an area about 57235 sq. km and it occupies 18.52 per cent total area of the Maharashtra. Krishna and Bhima river drains a large area of the central and south-eastern part of the western Maharashtra plateau through its tributaries. The soil of the district is origin from volcanic Deccan Trap. It varies from light brown to black in colour and lesser in quality. Climate of the region is generally semi-arid type expect during the monsoon season. According to 2001 census, the population of Western Maharashtra was 38, 55,383. Agriculture is main occupation of the people in the district and the share of agriculture land is 62.28 percent to total geographical area.

**Location Map
Western Maharashtra**



Database and Methodology

Present study mostly relies on the secondary data collected through District socio-economic abstract of Solapur District, Sangli District, Satara District, Kolhapur District and Pune District in 2011. For the present investigation, District is selected as in general and tahsils in particular. The collected data are analyzed by statistical and cartographic techniques. In order to calculate the differential the following formula is used.

1. Male- Female Differential Index

$$\text{MFDI} = \frac{\text{MLR} - \text{FLR}}{\text{TLR}}$$

Where - MFDI = Male- Female Differential Index

MLR = Male Literacy Rate

FLR = Female Literacy Rate

TLR = Total Literacy Rate

2. Urban-Rural Differential Index

$$\text{URDI} = \frac{\text{ULR} - \text{RLR}}{\text{TIR}}$$

Where - MFDI = Urban - Rural Differential Index

ULR = Urban Literacy Rate

RLR = Rural Literacy Rate

TLR = Total Literacy Rate

Explanation

The Western Maharashtra is well developed part or region of Maharashtra state which consist five districts i.e. Kolhapur, Satara, Sangli, Solapur and Pune District. This region is divided in 58 tahsils. The average literacy of region is 65.92 percent to total population. There are areal variations in general literacy, male, female, rural and urban literacy.

General literacy rate

The general literacy study varies from 60.74 to 87.65 percent in study region. The highest general literacy is observed in Palus tahsil (87.65 %) and lowest in Bawada tahsil (60.74 %).

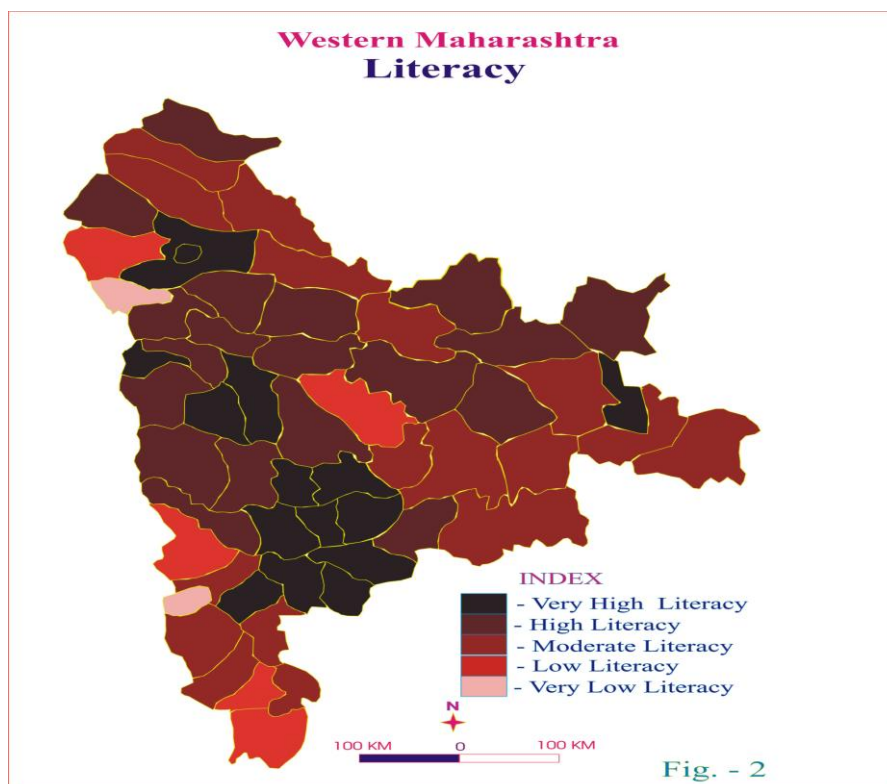
Table -1: Western maharashtra: Variation of general literacy (2011)

Sr	Literacy Rate	No. of tahsils	Name of tahsils
1	Very High (Above 80%)	15	Palus, Miraj, Pune City, Walwa, Satara City, Tasgaon, Haveli, Khanapur, Karveer, North Solapur, Kadegaon, Koregaon, Mahabaleshwar, Hatkanangale, Shirol
2	High (75-80%)	19	Shirala, Wai, Khandala, Barshi, Karad, Kavatemahankal, Pandharpur, Madha, Malshiras, Purandar, Khatav, Jawli, Mohol, Maval, Karmala, Phaltan, Baramati, Bhore, Junnar
3	Medium (70-75%)	17	Panhala, Ambegaon, Daund, South Solapur, Kagal, Atpadi, Sangola, Shirur, Bhudargad, Khed, Patan, Mangalwedha, Gadhinglaj, Jat, Radhanagari, Indapur, Akkalkot
4	Low	05	Ajara, Man, Mulsi, Shahuwadi, Chandgad

	(65-70%)		
5	Very low (Below 65%)	02	Velhe, Bavada

Source: 1. Compiled by researcher
2. District socio-economic abstract

The table 1 reveals that the general literacy of region divided in to five categories. The very high (above 80 %) literacy is in 15 tahsils of study region. The 19 tahsils of study region has recorded 75 to 80 percent of literacy and 17 tahsils in has lies in medium literacy. The low (65 to 70 %) literacy of region has observed in five tahsils i.e. Ajara, Man, Mulsi, Shahuwadi, and Chandgad tahsils. The very low (below 65 %) literacy is found in only two tahsils and this tahsils are Velhe and Bavada tahsils. This tahsils lies in Western Ghats, heavy rainfall and economic backwardness. (Table-1 & fig. 1)



Male literacy rate

The male literacy is influenced by migration, agriculture and industrialization, and unfavorable physical situation. The male literacy of region is observed 86.36 percent in 2011. The highest male literacy is found in Palus tahsil (94.06 %) and lowest in Bavada tahsil (75.29 %).

Table -2; Western maharashtra: Variation of male literacy (2011)

Sr	Literacy Rate	No. of tahsils	Name of tahsils
1	Very High (above 92)	05	Palus, Walwa, Tasgaon, Miraj, Satara City,
2	High (88-92)	16	Khanapur, Pune City, Mahabaleshwar, Karveer, Shirala, North Solapur, Kadegaon, Haveli, Koregaon, Wai, Jaoli, Shirol, Hatkanangale, Khandala, Karad, Barshi
3	Medium (84-88)	21	Kavatemahankal, Purandar, Khatav, Bhor, Pandharpur, Patan, Junnar, Panhala, Bhudargad, Ambegaon, Madha, Malshiras, Maval, Kagal,

			Radhanagari, Phaltan, Mohol, Baramati, Karmala, South Solapur, Khed
4	Low (80-84)	13	Gadhinglaj, Shirur, Atpadi, Daund, Sangola, Ajara, Indapur, Akkalkot, Mangalwedha, Jat, Shahuwadi, Chandgad, Man,
5	Very low (Below 80)	03	Mulsi, Velhe, Bavada

Source: 1. Compiled by researcher
2. District socio-Economic abstract

The analysis reveals that the very high (above 92 %) literacy is observed in five tahsils (Palus, Walwa, Tasgaon, Miraj, Satara City,) of study region and 16 tahsils has been high literacy in western Maharashtra. (table 2) The medium (84 to 88 %) literacy is depicted in 21 tahsils and low (80 to 84 %) literacy in 13 tahsils of study region shows in table and figure. The very low literacy (below 80 %) has found in Mulsi, Velhe and Bavada tahsil.

Female literacy rate

Female constitute about half the total population of any society, therefore, any discrimination against them in the form of status or prejudices also tells upon the literacy rate of such societies. There is a positive correlation between the status granted to the woman and literacy rate. The female literacy rate is low compare to male literacy. It is happen due to the females are not allowed much mobility, they remain confined to four walls of the house, low status of women in society, a paucity of female teachers in school, absence of schools in home village, poor family background, a system of early marriage, etc. The western Maharashtra female literacy is 65.92 percent to total female population. The high female literacy is observed in Palus tahsil (80.90 %) and low in Bawada tahsil (46.01%).

Table -3; Western maharashtra: Variation of female literacy (2011)

Sr	Literacy Rate	No. of tahsils	Name of tahsils
1	Very High (above 74)	10	Palus, Pune City, Miraj, Walwa, Satara City, Tasgaon, Haveli, North Solapur, Khanapur, Karveer
2	High (67-74)	15	Kadegaon, Koregaon, Wai, Hatkanangale, Shirol, Khandala, Barshi, Mahabaleshwar, Shirala, Pandharpur, Kavatemahankal, Karad, Madha, Malshiras, Khatav
3	Medium (60-67)	20	Purandar, Mohol, Karmala, Phaltan, Jawli, Baramati, Maval, Bhore, Junnar, Daund, Atpadi, Sangola, South Solapur, Mangalwedha, Ambegaon, Shirur, Jat, Panhala, Kagal, Gadhinglaj
4	Low (53-60)	11	Khed, Indapur, Bhudargad, Patan, Akkalkot, Man, Ajara, Radhanagari, Mulsi, Shahuwadi, Chandgad
5	Very low (Below 53)	02	Velhe, Bavada

Source: 1. Compiled by researcher
2. District socio-economic abstract

The table -3 and Fig. 3 reveals that the spatial pattern of female literacy in study region. The very high (above 74 %) is observed in urban region. These tahsils are Palus, Pune City, Miraj, Walwa, Satara City, Tasgaon, Haveli, North Solapur, Khanapur, and Karveer. The low (60 to 67 %) female literacy are found in Khed, Indapur, Bhudargad, Patan, Akkalkot, Man, Ajara, Radhanagari, Mulsi, Shahuwadi and Chandgad tahsils. The very low (below 53 %) female literacy

is in Velhe and Bavada. The remaining part of western Maharashtra female literacy is moderate high and the share of total female population is between 60 to 74 percent.

Urban literacy

Urban literacy is substantially higher compared to rural literacy among the male and female in whole study region. There are tahsilwise disparities in rural and urban literacy due to the urban centers have better infrastructure as far as the educational facilities are concerned. In western Maharashtra urban literacy is 84.82 percent to total urban population. The highest urban literacy is observed in Panhala tahsil (92.92 %) and lowest in Mulshi tahsil (65.40 %).

Table -4; Western maharashtra: Variation of urban literacy (2011)

Sr	Literacy Rate	No. of tahsils	Name of tahsils
1	Very High (above 85)	24	Panhala, Tasgaon, Shahuwadi, Madha, Satara City, Khanapur, Mahabaleshwar, Patan, Karveer, Miraj, Pandharpur, Walwa, Bhor, Junnar, Karmala, Wai, Gadhinglaj, Pune City, Barshi, Karad, Haveli, Khed, Maval, Ajara
2	High (80-85)	15	Malshiras, Daund, Purandar, Phaltan, Baramati. Khandala, North Solapur, Sangola, Shirol, Hatkanangale, Shirur, Koregaon, Mangalwedha, Ambegaon, Kagal
3	Medium (75-80)	01	Indapur
4	Low (70-75)	02	Akkalkot, Man
5	Very low (Below 70)	01	Mulsi
6	No Urban Area	15	Palus, Kadegaon, Shirala, Kavatemahankal, Khatav, Mohol, Jawli, Atpadi, South Solapur, Jat, Bhudargad, Radhanagari, Chandgad, Velhe, Bavada

Source: 1. Compiled by researcher
2. District socio-Economic abstract

Table no 4 indicate that the very high literacy rate among urban population is covers by 24 tahsils. The high level of urbanization improved educational facilities as well as growth of agro based industry reflected in the above tahsils. In this tahsils high proportion of population is engaged into the secondary and tertiary activities for which education or literacy was necessary. Followed by high literacy rate is observed in 15 tahsils and moderate literacy rate in only Indapur tahsil. The low (70 to 75 percent) urban literacy is in Akkalkot and Man tahsils and very low (below 70 percent) literacy is in Mulshi tahsil. There was lack of essential educational facilities. These urban centers having rural character and people out migrated for education purpose.

Rural literacy

The rural agrarian economy has little scope in social and economic functional value in respect of the education. There is a wide disparity in literacy between Scheduled Caste and total population, because of different level of socio-economic development. The rural literacy is 74.87 percent to total rural population in study region. The highest rural literacy is observed in Palus tahsil (87.65 %) and lowest in Velhe tahsil (62.30 %).

Table -5: Western maharashtra: Variation of rural literacy (2011)

Sr	Literacy Rate	No. of tahsils	Name of tahsils
1	Very High (above 82)	04	Palus , Walwa, Tasgaon, Miraj,
2	High (77-82)	12	Satara City, Kadegaon, Koregaon, Khanapur, Shirala, Khandala, Shirol, Kavatemahankal, Wai, Karad, Hatkanangale, Khatav
3	Medium (72-77)	25	Madha, Jawli, Malshiras, Mahabaleshwar, Barshi, Mohol, Haveli, North Solapur , Pandharpur, Purandar, Karveer, Karmala, Junnar, Phaltan, Baramati, Panhala, Bhor, South Solapur, Ambegaon, Atpadi, Bhudargad, Kagal, Shirur, Daund, Sangola
4	Low (67-72)	13	Jat, Patan, Radhanagari, Mangalwedha, Indapur, Khed, Gadhinglaj, Bavada, Akkalkot, Maval, Man, Mulsi, Ajara
5	Very low (Below 67)	03	Chandgad, Shahuwadi, Velhe
6	No Rural Area	01	Pune City

Source: 1. Compiled by researcher
2. District socio-economic abstract

Table 5 shows that tahsil wise literacy rate among the rural population in the study period. The very high literacy rate category of rural population covered by Palus, Walwa, Tasgaon and Miraj tahsils. This tahsils has cultivated commercial crops (sugarcane, grape) as well as also developed agro-based industries and the availability of educational facilities with in easy access with recent developments of means of transportation and communications. The very low rural literacy is observed in Chandgad, Shahuwadi and Velhe tahsils. This tahsils mostly lies in the ranges of western ghat and experiences heavy rainfall, minimum agricultural productivity, due to this these tahsils tormented by economic backwardness and this economic backwardness was pushing literate population towards nearby urban areas for their economic survival. This factor directly affected the literacy rate. Remain tahsils of study region having 67 to 82 percent literacy in rural population and these are shown in table 5 and fig.

Male female differential index

The male female differential in literacy is observed to the appalling poverty in economy and low degree of occupational participation among females. The females are often required to participate in domestic chores. Since literacy has little functional utility for the females under such socio-economic circumstances, therefore, it suffers a set back. (Chandna, 2010). Recent years, the male female differential in literacy has been changed in traditional societies. There has been a conspicuous decline in the gap between male female literacy because of increasing educational facilities in country side, increasing female teachers, the increasing social awakening and increasing male literacy have stimulated female literacy.

Table -6; Western maharashtra: Male female differential index (2011)

Sr	Male Female Differential	No. of tahsils	Name of tahsils
1	High (above 0.34)	09	Bavada, Velhe, Chandgad, Radhanagari, Shahuwadi, Patan, Mulsi, Ajara, Bhudargad
2	Medium (0.17- 0.34)	43	Panhala, Kagal, Khed, Gadhinglaj, Man, Ambegaon, Akkalkot, Jawli, Junnar, Bhore, Indapur, South Solapur, Shirur, Atpadi, Daund, Sangola, Jat, Maval, Shirala, Mahabaleshwar, Purandar, Phaltan, Baramati, Mangalwedha, Khatav, Karad, Mohol, Karmala, Khandala, Shirol, Wai, Hatkanangale, Koregaon, Malshiras, Barshi, Pandharpur, Kadegaon, Khanapur, Tasgaon, Karveer, Satara City, North Solapur, Haveli
3	low (Below 0.17)	06	Walwa, Palus, Miraj, Pune City, Kavatemahankal, Madha

Source: 1. Compiled by researcher
2. District socio-Economic abstract

Table no 6 and fig. no 6 reveals that there are large regional variation in the context of male female differential index in literacy. The average male female differential index is 0.26 in study region. The high (above 0.34) male female differential index is pronounced in Bavada tahsil (0.48) followed by Velhe (0.45), Chandgad (0.41), Sahauwadi and Radhanagari (0.40) tahsils. The main reasons are these tahsils lies in hilly region, so very low female literacy, no industrialization, agriculturally backward, low status of women, etc. However, the lowest male female differential index are recorded in Kavatemahankal and Madha tahsil (0.01).

Urban rural differential index

The urban-rural differential in literacy emanates from the differences in the type of economy, degree of concentration of educational institutions, status granted to the females, and migratory pattern of the two areas. The rural urban differential in literacy has been narrowing down largely due to the opening up of a large number of schools in countryside, development of transport network, and also due to the increasing socio-economic awaking among the rural masses.

Table -7; Western maharashtra: urban rural differential index (2011)

Sr	Urban Rural Differential	No. of tahsils	Name of tahsils
1	High (above 0.22)	05	Shahuwadi, Ajara, Panhala, Gadhinglaj, Patan
2	Medium (0.11- 0.22)	21	Khed, Maval, Bhore, Junnar, Daund, Sangola, Karmala, Mahabaleshwar, Mangalwedha, Pandharpur, Karveer, Madha, Shirur, Phaltan, Baramati, Kagal, Ambegaon, Indapur, Purandar, Barshi, Haveli
3	low (Below 0.11)	16	Karad, Wai, Malshiras, Khanapur, Satara City, North Solapur, Hatkanangale, Tasgaon, Akkalkot, Khandala, Miraj, Shirol, Mulsi, Man, Walwa, Koregaon

Source: 1. Compiled by researcher
2. District socio-Economic abstract

The average urban rural differential index analysed in the study region is 0.13 point. This differential index is highly pronounced in Shahuwadi Tahsil (0.34) followed by Ajara (0.26), Panalha (0.25) , Gadhinglaj (0.24), Patan tahsils (0.23) also depicted high rural urban differential index in the literacy. The moderate (0.11 to 0.22) differential index has been found in 21 tahsil of western Maharashtra. The low (below 0.11) differential index is measured in 16 tahsil of study region and lowest in Koregaon (0.01) followed by Walwa (0.02), Man and Mulasi tahsils (0.04).

Conclusion

The study clearly indicates that there are regional disparities in respect of literacy rate in rural-urban and male-female as well as tahsilwise. The physical and socio-economic factors are affecting on literacy rate in western Maharashtra. The average literacy of region is 65.92 percent to total population. The highest general literacy is observed in Palus tahsil (87.65 %) and lowest in Bawada tahsil (60.74 %). The male literacy of region is observed 86.36 percent in 2011. The highest male literacy is found in Palus tahsil (94.06 %) and lowest in Bavada tahsil (75.29 %). The urban literacy is 84.82 percent to total urban population. The highest urban literacy is observed in Panhala tahsil (92.92 %) and lowest in Mulshi tahsil (65.40 %). The rural literacy is 74.87 percent to total rural population in study region. The highest rural literacy is observed in Palus tahsil (87.65 %) and lowest in Velhe tahsil (62.30 %). The average male female differential index is 0.26 in study region. The highest male female differential index is pronounced in Bavada tahsil (0.48) and lowest in Kavatemahankal and Madha tahsil (0.01). The average urban rural differential index analysed in the study region is 0.13 point. This differential index is highest pronounced in Shahuwadi Tahsil (0.34) and lowest in Koregaon (0.01).

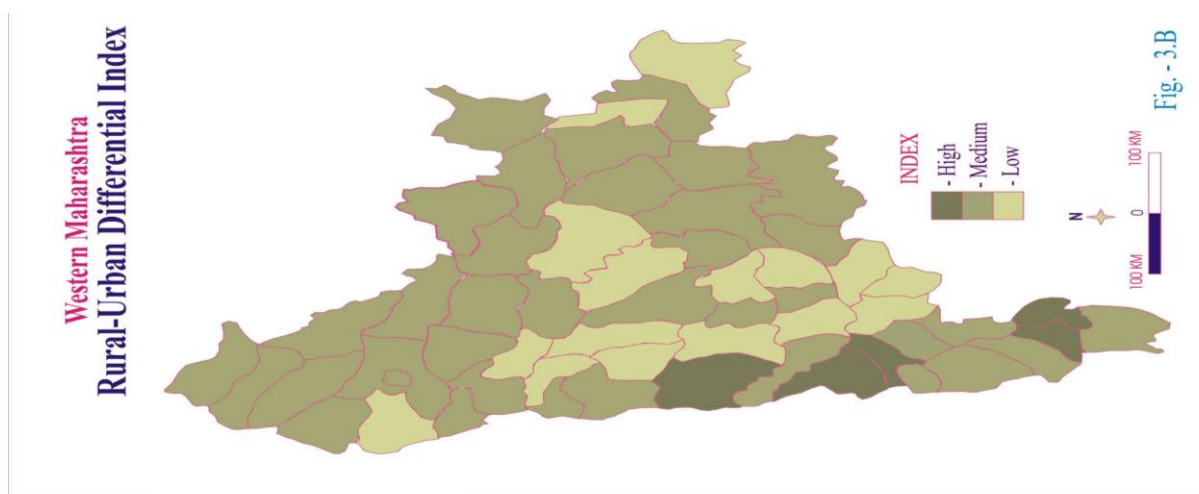


Fig. - 3.B

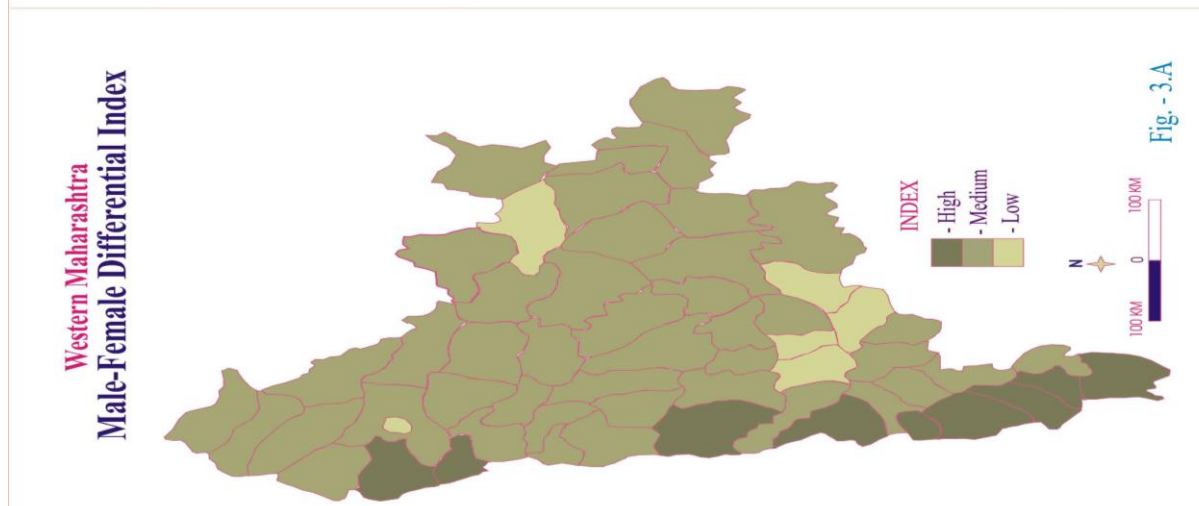


Fig. - 3.A

References

1. B.S. Vasudeva Rao and P. Viswanadha Gupta: *Low female literacy: factors and strategies*, *Australian Journal of Adult Learning* Volume 46, Number 1, April 2006, Pp-85-91.
2. G. U. Todkari (2012): *A Geographical study of literacy pattern in Solapur District of Maharashtra*, *World Research Journal of Geoinformatics*, ISSN:2278-7003 & EISSN-2278-7011, Volume 1, Issue 1, Pp- 05-07. Bhutani, S. (1997): "Spatial Patterns of Change in Indian Sex Ratio: 1981 – 1991", *Asian Profile*, vol. 25, No. 2, pp. 157 – 168
3. Chandna, R. C. (1986): *Population Geography – Concept, Determinants and Patterns*, Kalyani Publishers, New Delhi.
4. Chandna, R. C. (2006): *Population Geography - Concepts, Determinants, and Patterns*, Kalayani Publishers, New Delhi.
5. Chandna, R. C. & Sidhu, M. S. (1980): "Introduction of Population Geography", New Delhi, p78.
6. Clarke, J. I. (1960): "Rural and Urban Sex Ratio in England and Wales", *Tij Descriptor, Economic and Social Geographic*, p.29.
7. Franklin, S. H. (1956): "The Pattern of Sex Ratio in New Zealand", *Economic Geography*, Vol. 32, p. 168.
8. Ghosh, B. N. (1985): *Fundamentals of Population Geography*, Sterling Publishers Pvt. Ltd., New Delhi, p.97
9. Gill, M.S. (2000): "Sex Ratio Differentials in Northwest India", *Population Geography*, vol 22, Nos. 1 & 2, pp. 71 – 86.
10. Gosal, G.S. (1961): "Regionalism of Sex Composition of India's Population", *Rural Sociology*, vol. 26, No. 4, pp. 123 – 137.
11. Gupta, H.S. (1996): "Sex Preference and Fertility in Haryana", *Population Geography*, vol. 18, Nos 1 & 2, pp. 37 – 46.
12. Sangwan, S. And Sangwan, R. S. (2002): "Spatial Patterns of Rural – Urban Differentials in Sex Ratio of India", *Population Geography*, vol. 24, Nos. 1 & 2, pp. 47 – 58.
13. Sharma, J. C. (1966): *Sex Composition of the Urban Population in Rajasthan*", *Geographical Review of India*, vol. 28.
14. Sharma, P. R. (1978): "Spatio-Temporal Patterns of Population Growth and Distribution – A Regional Analysis", *The Deccan Geographer*, Vol. XVI, NO.1, p.373
15. Shryock, H. S. (1976): *The Methods and Materials in Demography*, Academic Press, New York.
16. Singh, R. N. and Chaturvedi, R. B. (1983): "Dynamics of Population in Bundelkhand Region: A Case Study", *Journal of Association of Population Geographers, India*.
17. Trewartha, G. T. (1953): "A Case for Population Geography", *Annals of association of American Geographers*, Vol. 43, Pp71-97
18. Trewartha, G. T. (1969): *A Geography of Population: World Patterns*, John Wiley and Sons, Inc. New York, P.114
19. R. C. Chandna (2011): *Geography of Population*, Kalyani Publisher, New Delhi. Pp-333-360.
20. R.S. Patil (2010): *Literacy pattern in Maharashtra: A district wise analysis of 2001 censuses*, *Sodh Samiksha and Mulyakan*, ISSN-0974-2832, Vol. II, Issue-13 Pp-58-60.