GEOGRAPHICAL ANALYSIS

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SPATIAL PATTERN OF LITERACY IN NALGONDA DISTRICT OF TELANGANA

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Abstract

The purpose of this study is to build up capacity for developmental planning at Nalgonda district of Telangana through application of the Geo-informatics tools. The study area comprises a total of 7 settlements (Villages) has a total population of 16,767 and a total of 4,443 households (based on Field survey). This work covers part of two Mandals - Devarakonda and Chandampet. The three villages of Mynampally, Tatikole and Kacharam fall in Devarakonda Mandal. The four villages of Guntipalle, Polepalle, Gagillapuram and Mudidandla which form part of the study area fall in Chandampet Mandal. The data thus collected covers 10 variables which relate to Literacy (2001-2011). The present study area is to build a high resolution data base for a cluster of seven villages to create easy information retrieval system to serve as a Decision Support system for the planners and administrators to facilitate G Governance- specifically pertaining to Literacy. It is a demonstration of a socio-economic application of GIS. A reform of village institutions with appropriate technological inputs will help in arriving at quick decisions and help with planning and problem solving with a clear perspective.

Introduction

The present study area is intended to build a high tenacity data base for a cluster of seven villages to create easy information retrieval system to serve as a Decision Support system for the planners and administrators to facilitate G Governance-specifically pertaining to Literacy. A reform of village institutions with appropriate technological inputs will help in arriving at quick decisions and help with planning and problem solving with a clear perspective. It is a demonstration of the application of GIS to socio-economic issues.

Study area

The study area (Fig.1) is located between 78.48'25"E to 78.57'13"E and 16.31'59"N to 16.31'59". It comprises 7 villages in the most backward area of Nalgonda district of Telangana State. A majority of these villages are tribal in nature. The study area comprises a total of seven villages has a total population of 16,767 and a total of 4,443 households (based on Field survey).

This work covers part of two Mandals - Devarakonda and Chandampet. The three villages of Mynampally, Tatikole and Kacharam fall in Devarakonda Mandal. The four villages of Guntipalle, Polepalle, Gagillapuram and Mudidandla fall in Chandampet Mandal.
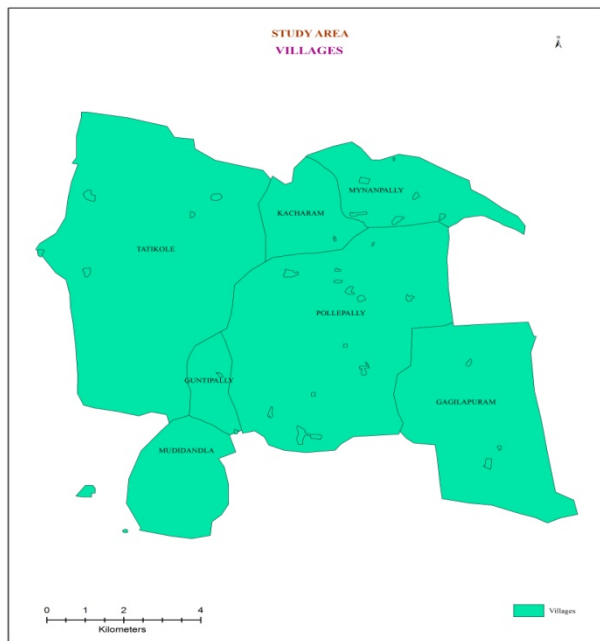
Fig. 1. Study area map

Table 1. Literacy rate Villages

VILLAGES	PERCENT		CHANGE
	2001	**2011**	**2001-2011'**
GUNTIPALLY	48.61751152	51.23339658	2.62
MUDI-DANDLA	40.37194886	42.88248337	2.51
POLEPALLY	32.64075067	44.41025641	11.77
GAGILAPU-RAM	27.50391236	39.56397427	12.06
TATIKOLE	37.38493011	44.00124649	6.62
KACHARAM	24.18397626	34.92957746	10.74
MYNAM-PALLY	41.86046512	45.85174276	3.99

found in the villages of Tatikole (37.38%), Polepally (32.64%), Mudidandla (40.37%), Mynampally (41.86%).Low literacy villages (below 29%) recorded in villages of Kacharam (24.18%), Gagilapuram (27.50%).
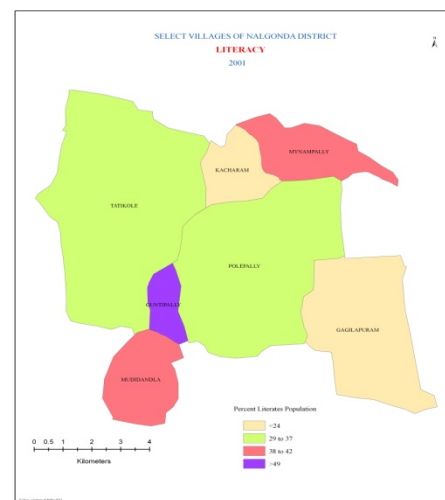

Fig. 2. Literacy

Objectives

It is intended to study the spatial pattern of literacy, male and female literacy of people in these backward villages.

Methodology

The secondary data is collected from Census of India 2001 and 2011. The data thus collected covers 10 variables which relate to spatial pattern of literacy and male and female literacy. This data is plotted and maps generated for spatial interpretation of variables and establishing correlations in space.

Findings

Spatial Pattern in Literacy

Education is one of the basic needs of the people, less educated a person is, more deprived they become economically, socially and politically. Illiteracy is thus a major obstacle to the development of a country.

Village wise Literacy in 2001

The study divides the literacy rate in three categories (Fig.2).1.High 2.Medium and 3.Low. High literacy village (above 49%) According to 2001 census the village is Guntipally (48.61%).Medium literacy villages (29-37 % 38-42%)

Village wise Literacy in 2011

According to 2011 census high literacy (above 47%) rate was recorded in Guntipally (51.23 %). Medium literacy (36-40% and 41-46%) was found in the villages of Gagilapuram (39.5%), Mudidandla (42.88%), Polepally (44.41%), Tatikole (44%), and Mynampally (45.85%). Low literacy (below 35%) rate was found in Kacharam (34.92%).

Change in Literacy rate (2001-2011)

It is observed that during 2001-2011, the villages of the study region have recorded more than 10 percent growth in Literacy. There are also the villages where means of commu-
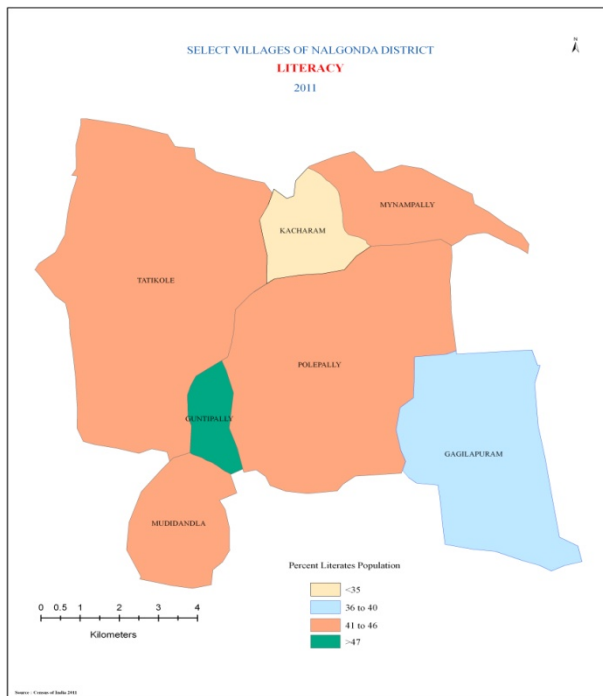
Fig. 3. Literacy

Genderwise Literacy Rate In 2001 To 2011

Change in Male Literacy (2001-2011)

hows the growth in male literacyduring 2001 to 2011. The highest growth above (14%) is observed in Gagilapuram village. It happened because of increase in educational and transport facilities. Growth of male literacy in the range of 4 to 11 percent is observed Tatikole, Mynampally, Guntipally, Kacharam and Polepally. Low literacy change is observed in Mudidandla during 2001 and 2011.

Table 2. Male Literacy (2001-2011)

VILLAGES	MALE PERCENT		CHANGE
	2001	2011	2001-2011
GUNTIPALLY	59.24171	64.20664	4.96
MUDIDANDLA	51.85771	54.9308	3.08
POLEPALLY	42.8884	54.05297	11.17
GAGILAPURAM	36.35671	50.07003	13.72
TATIKOLE	49.69677	54.00372	4.31
KACHARAM	32.48588	43.32425	10.84
MYNAMPALLY	55.21277	59.73535	4.52

nication, occupational and employment opportunities, educational facilities and socio-economic status of the people have improved. Literacy change is observed in (above 10%) Kacharam, Polepally and Gagilapuram. These villages have found an increase in the Literacy in 2011. Growth of literacy in the range of 4 to 10 percent is observed in Mynampally and Tatikole. Low literacy change is observed in Guntipally and Mudidandla during 2001 and 2011.
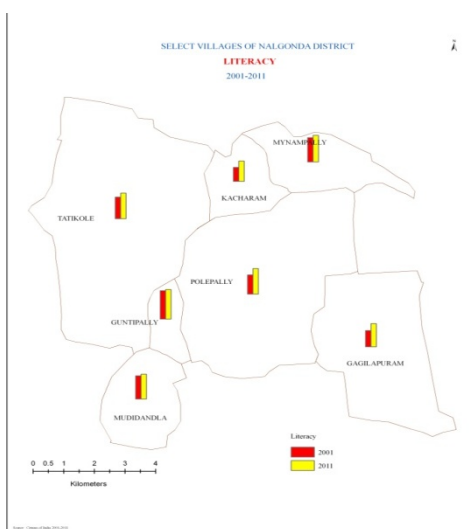
Change in Female Literacy (2001-2011)

Fig.5 observed that during 2001-2011, the villages of the study region have recorded more than 10 percent growth in Literacy. Literacy change is observed in (above 10%) Kacharam, Polepally and Gagilapuram. These villages have found an increase in the Literacy in 2011. Growth of literacy in the range of 4 to 10 percent is observed in Mynampally and Tatikole. Low literacy change is observed in Guntipally and Mudidandla during 2001 and 2011.

Literacy Differentials by Sex

There is a significant difference in literacy between male and female study region during 2001 to 2011.It is noted that literacy among females are filling behind males in all villages in study area. Differential of male and female literacy can be used to compute the differential index with reference to total literacy. This gives an idea about difference between male-female literacy. The formula used for it is given below:

$$MFDI = MLR - FLR/TLR$$

Where:
  MFDI=Male-female differential index
  MLR=Male literacy rate
  FLR=Female literacy rate
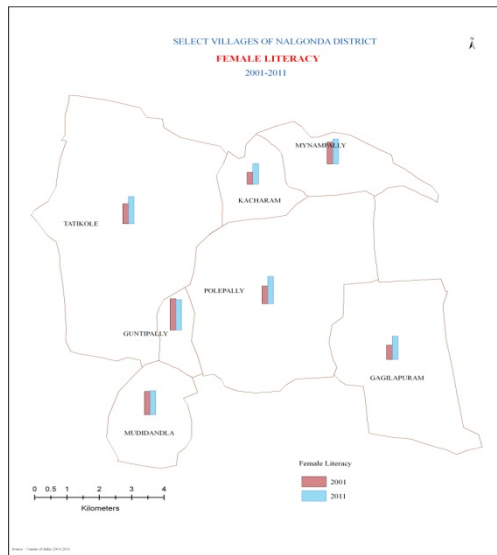 TLR=Total literacy rate

Fig. 4. Literacy

Fig. 5. Female Literacy

Male-Female Literacy Differentials (2001)

Table 3 shows that the highest male-female literacy differential index for 2001 is found in Kacharam village (0.72%). Medium male-female literacy differentials in the range of 0.5% to 0.6% are found in Mudidandla, Polepally, Gagilapuram, Tatikole and Mynampally. The low literacy differentials are found in Guntipally (0.42%).

Table 3. Male-femaleLiteracy differentials (2001)

VILLAGES	Female Literacy rate	Male Literacy rate	Total Literacy rate	Male-female differential index
GUNTIPALLY	38.56	59.24	48.61	0.42
MUDIDANDLA	29.33	51.85	40.37	0.55
POLEPALLY	21.95	42.88	32.64	0.64
GAGILAPURAM	18.16	36.35	27.50	0.66
TATIKOLE	24.77	49.69	37.38	0.66
KACHARAM	15	32.48	24.18	0.7
MYNAMPALLY	26.60	55.21	41.86	0.68

Male-female Literacy differentials (2001)

Table 4 gives the male-female literacy differential indices for various villages in 2011. Literacy had increased during 2001 and 2011 due to favourable policy of government, availability of educational and transport facilities besides increasing public awareness about girl's education. The highest increase in male-female literacy differentials (0.63%) was observed in Mynampally. Medium male-female literacy differentials in

the range of (0.5%) are found in Guntipally, Mudidandla, and Gagilapuram. The low literacy differentials are found in (0.4%) Polepally, Tatikole and Kacharam.

Table 4. Male-Female Literacy Differentials (2011)

VILLAGES	Female Literacy rate	Male Literacy rate	Total Literacy rate	Male-female differential index
GUNTIPALLY	37.5	64.20	51.23	0.52
MUDIDANDLA	30.20	54.93	42.88	0.57
POLEPALLY	34.32	54.05	44.41	0.44
GAGILAPURAM	28.61	50.07	39.56	0.54
TATIKOLE	33.91	54.00	44.00	0.45
KACHARAM	25.94	43.32	34.92	0.49
MYNAMPALLY	30.84	59.73	45.85	0.63

Conclusion

This study deals with spatial pattern of Literacy in one of the most backward areas in Nalgonda District of Telangana. Most of these villages are tribal in nature. The study area covers part of two Mandals - Devarakonda and Chandampet.

The high growth rate of literacy change is observed in (above 10%) Kacharam, Polepally, and Gagilapuram. These villages have found an increase in the Literacy in 2011. Medium Growth rate of literacy in the range of 4 to 10 percent is observed in Mynampally and Tatikole. Low literacy change is observed in Guntipally and Mudidandla during 2001 and 2011.

In 2001, the highest male-female literacy differential index value is found in Kacharam village while the lowest in Guntipally. In 2011, male-female literacy differential index was increasing due to favourable policy of Government, availability educational and transport facilities besides public awareness for increasing female literacy in the study area.

In most of the study areas, educational facilities are very poor, this situation indicates not only a negative impact on educational status in general but also a negative impact on female literacy rate of the region in particular and this position gets magnified in the absence of educational facilities as literacy of female child is a lesser priority so far as education is concerned. The empowerment of village education committees to monitor the functioning of the schools, recruitment of primary school teachers, expanding the Mid-Day meal schemes reach, and developing education project as a nodal organization to roll-out a number of education schemes. Unfortunately, the ground realities are different and most of the schemes do not reach the people. In this study area, there is an urgent need for total reform to boost the good quality of educational facilities for ensuring

developed and healthy environment.

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