

GENDER INEQUALITY IN DROUGHTPRONE RAYALASEEMA REGION IN AP: A MACRO VIEW

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Abstract: Drought is a serious problem for the government as well as rural people. It is a period of serious economic disaster resulting in acute shortage of water, lack of fodder for livestock, decline in area under different crops, and unemployment. Against this background, the purpose of this study is to study the gender differences in terms of sex ratio, literacy status in Rayalaseema Region of Andhra Pradesh. The Andhra Pradesh State, popularly known as the “rice bowl of India”, while majority of the population (62%) for their livelihood depend on agriculture related activities. The State have two distinct geographical regions, Rayalaseema and Coastal Andhra, the State covers an area of 160,204 square KMs accounting for 4.87 per cent of total area in the country, Coastal Andhra 92,906 Sq KMs (58 per cent of State area) and Rayalaseema covering an area of 67,298 Sq KMs (42 per cent of State area). Rayalaseema region, comprising of Kadapa, Kurnool, Anantapur and Chittoor, lies in the rain shadow zone of Western Ghats. Consequently, this area receives very low rainfall during the South West and the North East monsoons as well. The rainfall of 365.8 mm of the Khariff period in Rayalaseema is still distributed and undependable. It is utterly inadequate even to raise the dry crops like groundnut or jowar. It is suggested that concerted and sustained efforts coupled with social welfare measures are imperative to improve the standards and quality of health and literacy status of rural women in the district which would in turn improve the overall development of the nation.

Key Words: Drought, Sex Ratio, Literacy and Inequality.

1. INTRODUCTION:

Drought is a normal, recurrent feature of climate. It occurs in virtually all climatic zones, but its characteristics vary significantly from one region to another. Drought is a temporary aberration; it differs from aridity, which is restricted to low rainfall regions and is a permanent feature of climate. Droughts are categorized as meteorological, hydrological, and agricultural (**World Bank, 2005**). The word ‘drought’ indicates scarcity of water for ecosystems, land and human use, resulting in failing crops, livestock, livelihoods and human health. The table 1.1 indicates that the total Districts declared Drought affected during the period of 2015-6. In Andhra Pradesh there are 10 Districts under drought crisis, they are: Anantapur, Chittoor, YSR Kadapa, Kurnool, Prakasam, SPSR Nellore, Guntur, Srikakulam, Vizianagaram, Krishna

Table 1.: State-Wise details of Districts declared Drought Affected during 2015-16

S.no.	Name of State/ total number of districts	Total
1	Karnataka (30)	27 & 12 (Rabi)
2	Chhattisgarh (27)	25
3	Madhya Pradesh (51)	46
4	Maharashtra (36)	21
5	Odisha (30)	27
6	Andhra Pradesh (13)	10
7	Uttar Pradesh (75)	50
8	Telangana (10)	7
9	Jharkhand (24)	22
10	Rajasthan (33)	19

Source: Ministry of Agriculture and Farmers Welfare, 2016.

The Manual for Drought Management 2009 recommends rainfall deficiency, extent of area sown, normalised difference vegetative index and moisture adequacy Index, as the four standard monitoring tools which could be applied in combination for drought declaration. However it is the State Governments that take the decision on the most appropriate administrative unit and the parameters for the declaration of drought. The above table clearly reveals that

the total drought affected districts in India. Particularly in Andhra Pradesh there are 10 Districts are under drought crisis, they are, Anantapur, Chittoor, YSR Kadapa, Kurnool, Prakasam, SPSR Nellore, Guntur, Srikakulam, Vizianagaram, and Krishna.

2. OBJECTIVES:

Gender gaps favouring males in education, health, personal autonomy, and more are systematically larger in developing countries than in advanced countries. This paper explores the gender inequality in drought areas. The objective of this paper is to examine the inter district disparity or inequality between men and women in the entire Rayalaseema Region of Andhra Pradesh. The analysis of the above objective is based on the some selected variables like literacy rate, sex ratio and work participation based on secondary data from census of Andhra Pradesh.

3. METHODOLOGY:

The Rayalaseema Region, comprising of four Districts i.e, Anantapur, Kurnool, Kadapa and Chittoor, all these four districts of Andhra Pradesh in particular this region is considered in the study. The Rayalaseema Region is still backward in all spheres of activity. The secondary data had collected from the various sources like Report of Census of India, District census handbook and Statistical abstract Andhra Pradesh.

4. STATES AFFECTED BY DROUGHT IN INDIA AND ANDHRA PRADESH:

Andhra Pradesh is the third most drought prone State after Rajasthan and Karnataka. Andhra Pradesh is exposed to cyclones, storm surges, floods and droughts. Drought is one of the most crippling hazards that impact the State. In Andhra Pradesh drought has been occurring at various intervals particularly due to the delays in the arrival of monsoon rains. Due to scanty rains below the normal level a number of districts are getting affected. The ground water table is going below at a faster rate. The area under forest has been fast decreasing as the grazing field does. Most of the districts are now under the impact of drought and people are awaiting the declaration of such areas as drought-prone by the government. The farmers are not even getting enough water for growing a single crop. Tanks are dried and the ayacut areas which were yielding two crops (irrigated) in a year, for a period of two years when once filled with water, now are kept fallow. Many villages are drinking water problem villages. Wells and bore wells are getting dried up. Live stock is being disposed in urban markets at minimum prices due to non availability of fodder and water. Within this few introductory background of Drought in India and Andhra Pradesh the paper attempts to focus on gender inequalities in prone area.

Conspicuously, Gender equality and women's empowerment are important for sustainable development of any Nation. Sustainable development, therefore, is economic, social and environmental development that ensures human well-being and dignity, ecological integrity, gender equality and social justice, now and in the future. This concept of substantive gender equality resonates strongly with the capabilities framework, which draws attention to the substantive freedoms that people have "to lead the kinds of lives they value — and have reason to value" (Sen, 1999). While the removal of such inequalities in basic well-being is of utmost importance, the capabilities framework, like the human rights approach, also draws attention to the significance of the agency of women because of its intrinsic value and because the "limited role of women's active agency seriously afflicts the lives of all people — men as well as women, children as well as adults" (Sen 1999, 191).

5. GENDER DIFFERENCES IN INDIA:

As per the provisional results of Census 2011, total population of India is 1,21,01,93,422 which comprises of 62,37,24,248 males and 58,64,69,174 females with the sex ratio of 940 females per 1000 males. Madhya Pradesh has a total population of 7,25,97,565 with 3,76,12,920 males and 3,49,84,645 females with sex ratio of 930. As per Census 2011, top five states/Union territories which have the highest sex ratio are Kerela (1,084) followed by Puducherry (1,038), Tamil Nadu (995), Andhra Pradesh (992) and Chhattisgarh (991). Five states which have the lowest sex ratio are Daman & Diu (618), Dadra & Nagar Haveli (775), Chandigarh (818), NCT of Delhi (866) and Andaman & Nicobar Islands (878).

Table: 2. Sex Ratio in India: Top and Bottom Five States-wise

Top Five States / UTs	Sex ratio (females per 1000 males)	Bottom Five States/UTs	Sex ratio (females per 1000 males)
Kerela	1,084	Daman & Diu	618
Puducherry	1,038	Dadra & Nagar Haveli	775
Tamil Nadu	995	Chandigarh	818
Andhra Pradesh	992	NCT of Delhi	866
Chhattisgarh	991	A & N Islands	878

Source: Census Data, 2011

Table: 3. Sex ratio: India & southern states

Census Year	Sex ratio: India & southern states				
	India	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu
1961	941	981	959	1022	992
1971	930	977	957	1016	978
1981	934	975	963	1032	977
1991	927	972	960	1036	974
2001	933	978	965	1058	987
2011	940	997	973	1084	996

Source: Census Data, 2011

Table: 4. Child Sex ratio (0-6) in India

Year	Child Sex Ratio	Rural	Urban
1981	962	963	931
1991	945	948	935
2001	927	934	903
2011	914	919	902

Table 5. Child sex ration India & southern states

Southern States	1991	2001	2011	Difference
Andhra Pradesh	975	964	944	-20
Kerala	958	963	960	-3
Karnataka	960	949	948	-1
Tamil Nadu	948	939	943	+5
All-India	945	927	914	-13

In the case of Child Sex Ratio among the States/Union Territories the highest is reported by Mizoram (971), followed by Meghalaya (970), Andaman & Nicobar Islands (966), Puducherry (965) and Chhattisgarh (964). On the contrary, states and union territories which have reported lowest child sex ratio (0-6years) are Haryana (830) followed by Punjab (846), Jammu & Kashmir (859), NCT of Delhi (866) and Chandigarh (867).

Table 4 and 5 clearly indicates that, from adverse sex ratio it is quite clear that female is killed before and after birth. Increase in overall sex ratio in Census 2011 indicates improved visibility of women in the country. Paradoxically, the child sex ratio (0-6) continues to decline in the successive censuses.

In certain belief systems, such as Confucianism in China and Hinduism in India, sons play a special role. Confucianism encourages the patrilineal and patrilocal system in place in China, Vietnam, and elsewhere. But another part of the special role of sons is in rituals. Ancestor worship within Confucianism involves rituals where a son plays an essential part. Similarly, son preference is mentioned in the Vedas, the ancient Hindu texts. In addition, in Hindu societies, it is supposed to be a son who lights a deceased person's funeral pyre and brings him or her salvation. Consistent with this idea, **Jayachandran (2014)** finds that parents in India strongly want to have one son and, once they have one son, prefer a balanced gender ratio, more or less.

Table 6. Percentage of Female Main Workers to Total Female Population Under Broad Categories - 1981 to 2011

Census Year	Percentage to Total Female Population				
	Female Main Workers	Cultivators	Agricultural Labourers	Household Industry	Other Workers
1981	13.99	6.46	4.65	0.64	2.24
1991	15.93	5.51	7.05	0.55	2.82
2001	14.6	8 5.11	4.51	0.95	4.11
2011	25.5	24.0	41.1	5.7	29.2

Source: Office of the Registrar General, India.

The above 6. clearly shows that the percentage of female work participation from globalization and post globalization era. The per cent of agricultural labourers are tremendously are increased after globalization i.e. 41.1. It is not easy to compare the wages that men and women receive, as there are only a few agricultural operations that

are performed by both men and women. There is also much diversity in the level and form of payments for different operations

The labour force participation rate for women across all age-groups was 25.3 in rural sector and 15.5 in urban sector compared with 55.3 and 56.3 for men in the rural and urban sectors respectively in 2011-12 (NSS 68th Round).

Historically, women have been credited with the origins of field agriculture. In rural India today, the majority of women continue to be engaged in agriculture and related activities. There is thus an urgent need to focus on the concerns of women in agriculture (Swaminathan, Madhura, 2011).

A substantial wage differential between men and women has been found to exist in the Indian labour market.

Thus, social justice along with economic justice is essential for well-being (Sen 1980, 1984, 1985, 1987, 1992, 1999). Amartya Sen's capability approach puts human beings at the centre of development. Sen admits that economic growth and expansion of goods and services are necessary for human development. However, he argues that wealth is not what we are pursuing, it is a means to achieve something else (Sen 1990: 44).

The importance of human resource development in general, and specifically human capital in socio-economic development has been well recognised ever since the 'human investment revolution in economic thought' was initiated by Theodore Schultz in 1960 (Schultz, 1961). Of the various components of human capital, education and health have been found to be most important. In short, human capital, counts more significantly in the development (Schultz, 1981).

Table 7 : Literacy Rate by Sex: INDIA : 1951 TO 2011

Census Year	Persons	Males	Females
1951	18.33	27.16	8.86
1961	28.30	40.40	15.36
1971	34.45	45.96	21.97
1981	43.57	56.38	29.76
1991	52.21	64.13	39.29
2001	64.84	75.26	53.67
2011	74.04	82.14	65.47

Source: Census Data, 2011

As per Population Census of India 2011, the Literacy rate of India has shown as improvement of almost 9 percent. It has gone up to 74.04% in 2011 from 65.38% in 2001, thus showing an increase of 9 percent in the last 10 years. It consists of male literacy rate 82.14% and female literacy rate is 65.46%. Kerala with 93.9% literacy rate is the top state in India. Lakshadweep and Mizoram are at second and third position with 92.3% and 91.06% literacy rate respectively. Bihar with 63.08% literacy rate is the last in terms of literacy rate in India

Andhra Pradesh is the fifth largest state in the Country, in terms of population. As per the Census-2011(Provisional), the State accounts for 7.0 per cent of the total population in the country. The population of Andhra Pradesh more than quadrupled in the last century from 19.1 million in 1901 to 84.7 million in 2011. Of this, 42.5 millions are males and 42.2 millions females. The Sex ratio in the State was up from 978 in 2001 to 992 in 2011 and is higher than All India figures of 940 in 2011.

Table: 8. Literacy Trends in Andhra Pradesh

Census Year	Literacy rate (%)	Female Literacy
1961	21.19	12.03
1971	24.57	15.75
1981	35.66	24.16
1991	44.08	32.72
2001	60.47	50.4
2011	65.46	59.74

Source: Census Data, 2011.

A person aged 7 years and above who can both read and write with understanding in any language is considered as a Literate. The literacy rate of the State was 67.66 percent in 2011 as against 60.47 percent in 2001. The literacy rate of the State is lower than the All India literacy rate of 74.04 percent. The literacy rate in India increased from 64.84 to 74.04 percent during 2001-2011. The overall literacy rate has gone up from 60.47 percent in 2001 to 67.66 percent in 2011, the male literacy rate has increased from 70.32 percent to 75.56 percent. Female literacy rate has gone up from 50.43 percent in 2001 to 59.74 percent in 2011. Hyderabad is at the top with 80.96 percent and Mahabubnagar is at the lowest with 56.06 percent in 2011 among the districts (AP Economic Survey, 2014). The table 1.5.5 reveals the trends in literacy as well as female literacy in Andhra Pradesh. The female literacy at 12.03 per cent in 1961 increased nearly five times in 59.74 per cent.

According to Sen (2001), women's gainful employment and literacy play a significant role in improving FMR (Female Population to Male Population Ratio). Kerala is one example which stands for literacy. Female life expectancy in Kerala is also very high. Kerala also has other features which may influence FMR values. The Nairs of Kerala have the custom of female ownership of property.

6. PROFILE OF THE STUDY AREA:

Royalaseema is a landlocked region with an expanse of 67,298 Sq Km accounting for 42 per cent of the total geographical area of Andhra Pradesh. The region from its location extends approximately from 12°3'N to 16°15' North Latitude and 76°55' E to 79°55' East Longitude. Geographically the Royalaseema region forms the south and South-Eastern portion of the Deccan Plateau. It is located nearly in the middle of the southerly portion of the Indian peninsula. It includes within its fold the districts of Anantapur, Chittoor, Kadapa and Kurnool. It is bordered on the south by the states of Tamil Nadu and Karnataka, on the west by Karnataka state, on the north by Telangana and on the east by coastal region of Andhra Pradesh. The Royalaseema region has no coastline and is approachable only by land. The area lies mostly at an altitude of approximately 300 to 700 meters above mean sea level. Royalaseema region is the still neglected and economically backward region when compare to Coastal Andhra and also the region faces so many problems. Royalaseema receives more rain from the South-West monsoon than the North-East monsoon. The average annual rainfall is hardly 672mm. South-West monsoon spreads from early June till the remainder of September. The North-East monsoon is generally from October to December. The cropping pattern also varies with the effect of temperature, soil and other irrigation facilities. The food crops occupy a significant place, among them paddy, jowar and other millets are main. Among the commercial crops, groundnut is the most predominant crops followed by sugarcane and cotton.

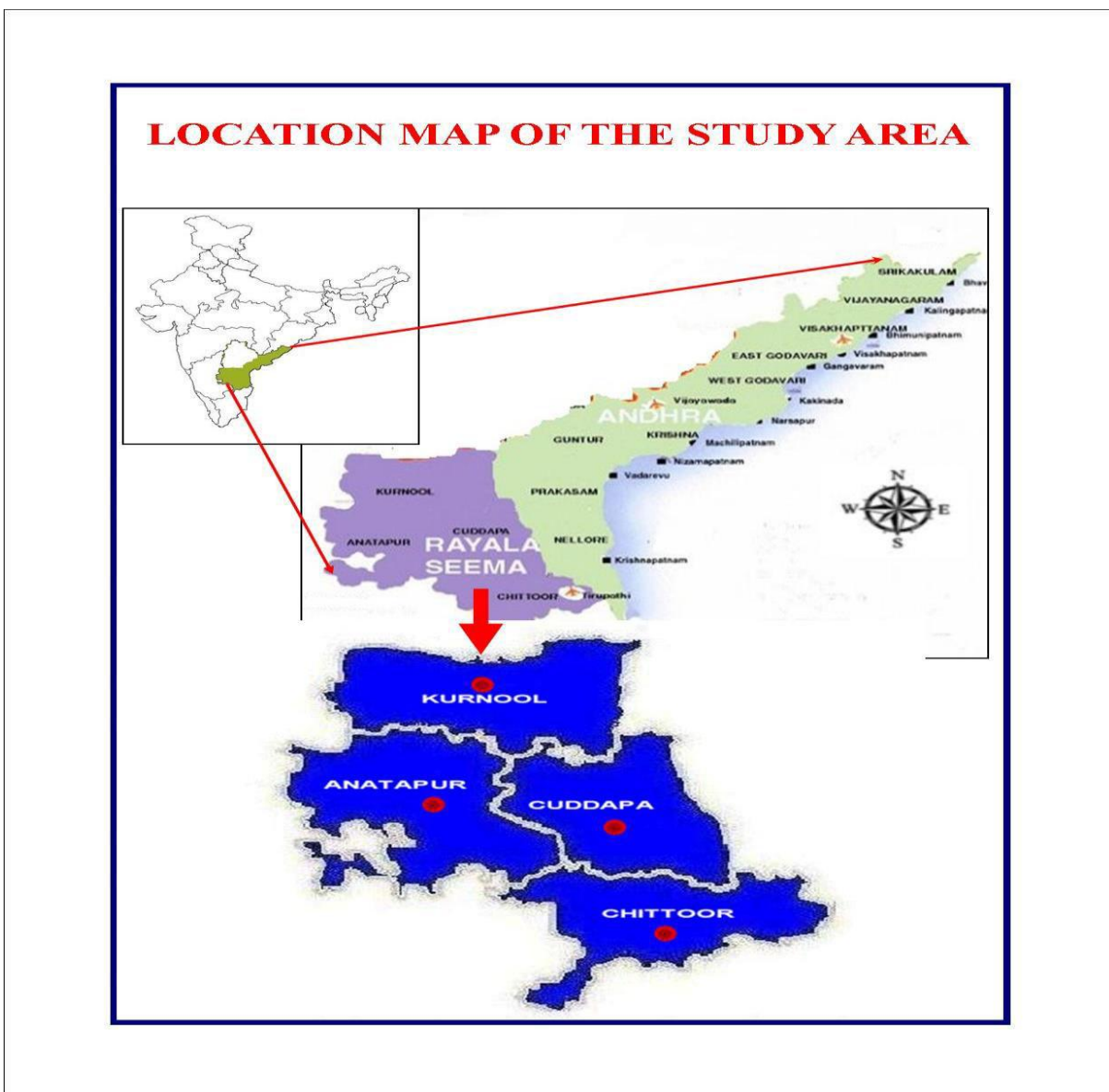


Fig.1

Table: 9. Status of Literacy

Census Year	Rayalaseema Region			
	Chittoor	Kadapa	Kurnool	Anantapur
1971	25.4	24.7	23.6	23.8
1981	31.4	31.1	26.9	28.5
1991	51.8	50.2	40.7	42.9
2001	67.46	62.83	54.43	56.13
2011	71.53	67.30	59.97	63.57
ANDHRA PRADESH 67.02 (2011 Census)				

Table: 10. Gender-wise Literacy Rate

Census Year	Rayalaseema Region							
	Chittoor		Kadapa		Kurnool		Anantapur	
	Men	Women	Men	Women	Men	Women	Men	Women
2001	77.62	55.78	75.83	49.54	65.96	40.03	68.38	43.34
2011	79.83	63.28	77.78	56.77	70.10	49.98	73.02	53.97
ANDHRA PRADESH Male: 74.88, Female: 59.15 (2011 Census)								

It is evident from the above data, that the highest gap in literacy rates of males and females are recorded in districts of Kadapa, Kurnool, and Anantapur. The literacy rates are significantly varied by gender among the districts in Andhra Pradesh. Moreover, high range of male female gap in literacy rate is exiting in most of the districts. The highest gap is recorded in top ten district of Kadapa. Therefore, female literacy is a key aspect in the process demographic change thereby lead to socio-economic development in India (**Dharmalingam and Morgan, 1996**).

Table: 11. Sex Ratio in Drought Region of Rayalaseema (Female per 1000 Male)

Census Year	Rayalaseema Region			
	Chittoor	Kadapa	Kurnool	Anantapur
1951	954	952	979	943
1961	957	957	977	946
1971	960	958	969	947
1981	966	959	962	946
1991	966	955	953	946
2001	982	974	965	958
2011	997	985	988	977
ANDHRA PRADESH 997 (2011 Census)				
INDIA 943 (2011 Census)				

Source: Hand Books of Statistics, Rayalaseema region.

Table:12 Child Sex Ratio in Drought Region of Rayalaseema (Female per 1000 Male)

Year	Rayalaseema Region			
	Chittoor	Kadapa	Kurnool	Anantapur
2001	955	951	958	959
2011	931	918	938	927
ANDHRA PRADESH 944 (2011 Census)				
INDIA 914 (2011 Census)				

Source: Population Census (2011)

The above table 1.6.4 depicts that, the child sex ratio is worse in Rayalaseema region, particularly Kadapa (918) and Anantapur (927). A particularly troubling form of gender bias is the sex imbalance at birth. **Sen (1990)** famously highlighted this problem of missing women, which he found to be concentrated in East and South Asia.

Adult sons are expected to provide economic support and hence having more sons is always desirable (**Das, 1987, Lahiri, 1984, Miller, 1981**) On the other hand, daughters are supposed to create an economic burden for the parents in terms of dowry etc. As a consequence, parents desire a high proportion of sons. The drastic method of doing this is the use of sex selective abortion (**Park and Cho, 1995**).

7. CONCLUSION:

Drought is a complex, slow-onset phenomenon of ecological challenge that affects people more than any other natural hazards by causing serious economic, social and environmental losses in both developing and developed countries. The period of unusual dryness (i.e. drought) is a normal feature of the climate and weather system in semi-arid and arid regions of the tropics, which covers more than one-third of the land surface and is vulnerable to drought and desertification. Drought is not a purely physical phenomenon, but instead is interplay between natural water availability and human demands for water supply. There is no universally accepted definition of drought. It is generally considered to be occurring when the principal monsoons, i.e. southwest monsoon and northeast monsoon, fail or are deficient or scanty. Monsoon failure causing crop failure, drying up ecosystems and shortage of drinking water results in undue hardship to the rural and urban communities. In Andhra Pradesh particularly in Rayalaseema region the child sex ratio is drastically decreases. Government should take appropriate measures have to take up. Female literacy needs to be improved, because education is a key driver of Gender Equality. Constant programmes should be taken up to control infant and maternal mortality rates in prone areas.

India ranks 132 out of 187 countries on the gender inequality index- lower than Pakistan (123), according to the United Nations Development Program's Human Development Report 2013. The report found that all countries in South Asia, with the exception of Afghanistan, were a better place of women than India. The gender inequality index in the report measures the loss in country's progress and human development because of gender inequality in three sectors: reproductive health, women empowerment and labor market participation. The report notes 'gender inequality is especially tragic not only because it excludes women from basic social opportunities, but also because it gravely imperils the life prospects of future generations'. **Amartya Sen (2001)** has explored these issues greatly and highlights key obstacles to the betterment of women and the realization of gender equality. Sen argues that all too often the burden of hardship falls disproportionately on women; 'gender inequality in India is not one homogenous phenomenon but a collection of disparate and interlinked problems'. Education forms a very basic indicator for women's equality and empowerment. Levels of female literacy, gender gaps in literacy levels, and enrolment and dropout rates at the primary school level are relevant indicators.

To conclude this paper, Literacy is essential for eradicating poverty, reducing child mortality, curbing population growth, achieving Gender equality and ensuring sustainable development. . Various factors such as lack of in taking of nutritious food, improper health facilities, inaccessibility, low income, illiteracy, ignorance, adherence to superstitious beliefs and lack of awareness are the attributing factors. It is suggested that concerted and sustained efforts coupled with social welfare measures are imperative to improve the standards and quality of health of rural women in the district which would in turn improve the overall health of the nation.

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