International Journal of Academic Research
ISSN: 2348-7666: Vol.1 Issue-3 (2), October-December 2014

HEALTH ASPECTS OF HUMAN DEVELOPMENT IN EAST GODAVARI DISTRICT: AN ANALYSIS

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Abstract:
In economic aspect human development is one of the essential factors of the nation's development. In this context, this paper try to explain the Socio, economic and health profile of the study area of the East Godavari District of Andhra Pradesh at micro level which influence on the life style and on agricultural production process. The study also concentrated on the health development aspects of the state of Andhra Pradesh and the study area.

Abstract: Couple Protection, Fertility, Human development, Infant

1. Introduction

The basic difference between economic development and human development is that economic development entirely focuses on the increase of income whereas the human development believes in expanding and widening of all aspects of human life be it economic, social, political, cultural, etc. In economic aspect human development is one of the essential elements. The basic idea behind this is that it is the use of income and not the income itself that decides the human choices. Since, the real wealth of a nation is its people; therefore, the goal of development should be the enrichment of human life.

2. Objectives of the paper

The main objective of this paper is to explain the Socio, economic and health profile of the study area of the East Godavari District of Andhra Pradesh at micro level which influences life style and on agricultural production process. The study also concentrated on the health development aspects of the state of Andhra Pradesh and the study area.

3. Analysis of the concept

1. Profile of East Godavari District:

East Godavari District is a residuary portion of the old Godavari District after West Godavari District was separated in 1925. Area of the District is 10,807 Sq.Kms. The District is located between Northern latitudes of 16° 30' and 18° 20' and between the Eastern longitudes of 81° 30' and 82° 30'. The District has 5 Revenue Divisions viz., Kakinada, Rajahmundry, Peddapuram, Rampachodavaram and Amalapuram and has 60 mandals. A new Revenue Division Ramachandrapuram has been constituted recently by carving some mandals from the existing revenue divisions.

Tribal area: The tribal area towards the northern part of the district, which are backward. There is an Integrated Tribal Development Agency (ITDA) for the

welfare of the tribals, which also covers the health aspects.

Upland Area: The upland area is sandwiched between the tribal and delta area. It is agrarian and depends on monsoon; therefore the crop losses are frequent and can be compared with backward Visakhapatnam District in the economy.

Delta Area: It from the south part of the District and is irrigated by the canals of Godavari River. The areas are rich and economically comparable with the development of West Godavari District**.**

Agriculture and other sources:

The net area cultivated with crops from about 41 percent of the total Geographical area of the district. Paddy forming covered 53 percent of the total area sown with an average yield of 2625 kgs/acre in the district. The district stands first in the cultivation of the Coconut and Banana. Maize crop grown both in kharif and Rabi, in kharif 2001 the crop is grown in an area of 2495 Hactars, a production of 6442 Tons and productivity is 2582 Kg/Ha. In Rabi, an area of 241 Ha is covered with maize and production is 10770 Tons with productivity of 3323 Kg/Ha.

Industries:

Rice, Sugar, Fertilisers and Textiles are the large and medium scale industries in the district. Besides there are Small scale Industries like Agro based industries, Chemical, Ceramic, Light Engineering, Non-ferrous metals, Leather, etc. In the private sector there are three Spinning Mills, three Sugar Factories, One paper Mill, One Plywood Factory, one Horlicks Factory in the district besides others. There are two large scale Fertilisers and Chemicals Factories at Kakinada viz., Nagarjuna and Godavari Fertilisers. There are five industrial Estates in the district at Samalkota, Dowleswaram, Rampa Chodavaram, Kakinada and Gopalapuram. A number of Edible Oil packing Industries are established in Kakinada. The forests in the district cover with Teak, Bamboo, Tamarind, medicinal plants, Adda leaves, Timber and Bamboo are the main sources of revenue earnings

Communications:

The district is served by Rail line (Broad gauge) which is double line from Rajahmundry to Tuni and single line from Kakinada to Samalkota and Kakinada to Kotipalli covering a distance of 1717 Km only. Almost all the places in the district are connected by well-laid out roads. The District has a network of navigation canals also to facilitate transport by boat. Mostly Agricultural commodities like coconut and other goods are carrying through water transport system.

4. Health and Demographic Goals:

East Godavari district had set for itself specific goals in demographic and health indicators under the State Population Policy 1997, and the Andhra Pradesh Vision-2020. These goals are:

NRHM goals by 2012 in the District: The District has highest Infant mortality rate of 54 per 1000 live births while that of the State is 59. The Maternal Mortality Rate, highest in the state is 305 per one

lakh live births while that of the State is 341. Immunisation coverage is nearly 75.00 per cent in the District while that of the State is slightly more than 71 percent. However the District has to improve its performance IMR and MMR to meet the NRHM goals.

- Infant Mortality Rate : 30 per 1000 live births
- Total Fertility Rate : 2.1
- Maternal Mortality Rate : 100 per 1lakh live births
- Couple Protection rate : 65
- Immunization :100%

National Population Policy Goals:

Under the National Population Policy finalised in the year 2000 by the Government of India, goals are set under various demographic parameters for achievement by the country by the year 2010. Table 1 and Table 2 reveal the Andhra Pradesh State health and demographic goals, and Goals under NRHM East Godavari District. There is steady decline in the natural Growth Rate, Crude Birth Rate, Crude Death Rate, Infant Mortality Rate and Maternal Mortality Ratio. Goals are also set for East Godavari District under National Rural Health Mission (NRHM) were presented in Table 2.

Table 1 health and demographic goals of Andhra Pradesh

Indicator	2000	2010	2020
a. Natural Growth Rate (%)	1.15	0.80	0.70
b. Crude Birth Rate	19.0	15.0	13.0
c. Crude Death Rate	7.5	7.0	6.0
d. Infant Mortality Rate	45.0	30.0	15.0
e. Maternal Mortality Ratio*	200	120	50
f. Couple Protection Rate (%)	60.0	70.0	75.0
g. Total Fertility Rate	2.1	1.5	1.5

Source: Compiled from National Population Policy Document

Note: per 100,000 live births

Table 2 Goals under NRHM East Godavari District

Goals Under NRHM East Godavari District				
S.No.	INDICATOR	District	State	NRHM Goals by 2012
1	IMR	54 per 1000 live births	59 per 1000 live births	< 30
2	MMR	305 per 1 lakh live births	341 per 1 lakh live births	< 100
3	TFR	2.1	2.3	2.1
4	CPR	67.7	62.5	65
5	Full Immunisation	75.00 %	71.40	100

Source: Compiled from National Population Policy Document

Millennium Development Goals:

All countries of the world had accepted the Millennium Development Goals (MDGs) at the Millennium Summit held in New York, USA, in September 2000. The following are the important MDGs in the area of health and family welfare to be achieved by the year 2015 from their levels in 1990 by India (United Nations – 2000). The level of these indicators to be achieved by AP would be much higher than those for the country as a whole, since AP is already above the country average in many of these indicators.

- Infant Mortality Rate : Reduce from 80 in 1990 to 26 by 2015
- Under 5 Mortality Rate : Reduce from 123 in 1990 to 41 by 2015
- Maternal Mortality Ratio : Reduce from 540 in 1990 to 135 by 2015

Health and Demographic Goals for AP - An Analysis:

A quick analysis of the above policy documents gives the following picture in respect of health and demographic goals to be achieved by East Godavari district in the next 10-15 years:

- Infant Mortality Rate – less than 30 by 2012; 26 by 2015; and 10 by 2020
- Maternal Mortality Ratio – less than 100 by 2012 and 50 by 2020
- Institutional Delivery Rate – 80% by 2015
- Immunisation against all vaccine preventable diseases for children– 100% by 2015

The above brief analysis clearly suggests that substantial increases in specific programme components aimed at improving maternal and child health areas would be required to achieve the health and demographic goals set under various policy documents by 2010, 2015 and 2020.

Population Stabilisation in East Godavari

The performance of East Godavari district in population stabilisation as reflected in the 2001 census has revealed that Andhra Pradesh had a 13.86% decadal population growth rate from 1991 to 2001, as against the all-India decadal growth rate of 21.34%. East Godavari district is the better performing districts in respect of decadal population growth rate in the State with 7.93%. The density of population of AP has increased from 242 per sq.km in 1991 to 275 per sq.km in 2001 recording an increase of 13.64%. During the same period, the all India increase was from 267 to 324 recording a 21.35% increase. During the same period the life expectancy increased from 45.6 to 64 years.

Core Indicators of Population Stabilisation:

The Government of AP has evolved four core indicators to achieve the overall goal of population stabilisation, in the State Population Policy. These are: Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR), Total Fertility Rate (TFR), and Couple Protection Rate (CPR). It can be

seen that for East Godavari district indicators are not good as country averages, the district lags behind considerably in most of the indicators among the districts in Andhra Pradesh.

Total Fertility Rate (TFR):

Total Fertility Rate (TFR) in East Godavari District is 2.1 in 1998-99 (NFHS-Comparatively, TFR for India was 5 in 1971-73 and 3.2 in 1998-99. Though district has shown much greater fertility decline compared to national average, median age at first childbirth is considerably lower in the district than the national average; and spacing between births has not been a culturally well- accepted practice in the State.

Population 'Below Poverty Line' (BPL) and Poverty Indicators:

The Andhra Pradesh Economic Restructuring Programme (APERP) has estimated that 51.33 per cent of households are below poverty line in the district against the State average of 55 per cent based on the grama Sabhas conducted for this purpose. These estimates, however, are substantially higher than the estimates of the Government of India, Rural Development department which put the BPL population. There is changing pattern in poverty levels over the past four decades in rural and urban areas in India as per the Planning Commission of India estimates. The Planning Commission estimates are substantially lower than the estimates generated by the Eradication of Rural poverty (Velugu) component under the AP Economic Restructuring Project, since these estimates were made through village level Gram Sabha meetings with the population of the respective villages participating. However, it is felt that the estimates of rural poverty made by the Planning Commission may not be a good indicator of the relative disability of the rural population to access health care services, due to the substantial difficulties faced by the rural population on account of distance and lack of transport and communication facilities as compared to the urban population. The urban BPL population, though are much higher in proportion than the rural BPL population, are able to access health care services with minimum effort and loss of time, which translates into better health outcomes particularly in maternal and child health areas.

Child Health:

The infant mortality Rate (IMR) is 54 per 1000 live births in East Godavari District. However, the NRHM objective is bring IMR to 30 by 2015, therefore the District has to work to reduce the IMR to half its present rate. The moderate to severe anemia is 17.76 percent (see Table 3) in the district while the State percentage is only 17.79. Therefore the District would like to concentrate on institutional deliveries as already mentioned. The district would like to cross check the immunisation and administration of Vitamin A in the decentralised processes envisaged in NRHM. In addition, the Health Administration in the District will work in close collaboration with the Women

and Child Development Department, especially through with their Anganwadis, such that the health status of the children would improve.

Table 3: Child Health Profile

S.No.	Child Health Profile	Percentage
1.	100% immunization against seven vaccine preventable diseases (%)	75
2.	Vitamin-A administration (%)	99.77
3.	Moderate to severe anemia (%)	17.76
4.	Infant Mortality Rate (per 1000 live births)	54

Adolescent Health:

As seen in the Table 4, the District shows slightly more than 36 percent of the girls below 18 years were married, which is almost equal to the State average of 37 percent. One of the reasons for prevailing IMR and MMR rates in the district could be due to child marriages. The community can control this. Therefore, in the NHRM, the District will make all the efforts to educate the public to avoid child marriages. As the District is going to strengthen the organisational structure taking the guidelines of NRHM, the participation of non-officials and the members of the community will give a fillip to creating awareness and educating the people about marrying their daughter after 18 years. In addition, the nutritional support that is possible through various Government departments will be strengthening. Another notable point in the table is prevalence of Anemia in adolescent girls 35.24 per cent, which is also to be controlled to the desirable level by taking some more steps.

Table 4: Adolescent Health Profile

S.No.	Adolescent Health Profile	Percentage
1.	Girls married at < 18 years of age (Age at marriage for girls)	36.4
2.	Prevalence of anemia in adolescent girls	35.24

Burden of Disease:

Morbidity:

The leading causes of disease burden in rural and urban areas of East Godavari. Thus the leading causes of disease burden among children common to both rural and urban areas are low birth weight, lower respiratory infections and diarrheal diseases. Among women the leading cause of disease burden is obstructed labour, and in the rest of the population, it is tuberculosis.

a. Maternal or obstetric morbidity: The most commonly reported maternal health problems related to pregnancy in the district are, anemia (35%), excessive

fatigue (33%) followed by the swelling of legs, body or face (25%). More than half (55%) of the women in the reproductive age group 15-19 years suffer from some kind of anemia. About 17% of the women in reproductive age group (15-49) in the district have moderate to severe anemia.

b. Gynecological morbidity: Common condition, disease or dysfunction of the reproductive system not related to pregnancy abortion or childbirth include abnormal vaginal discharge, urinary tract infections, scanty periods, adolescent menstrual difficulties like back pain, calf pain and irritability.

Maternal Mortality Ratio (MMR):

MMR reflects the risk to mothers during pregnancy and childbirth. The DFHS study conducted in three districts in the State in 2000 estimated the MMR in these districts to be 997 per 100000 live births during 1990s. However the SRS estimates for 1997 for MMR in A.P. stand at 154, though estimates for MMR for the country as a whole, reported by the World Health Organisation & UNDP for the years 1997-2000, range between 480 to 540 for 100000 live births. The district estimates of maternal mortality ratios made by the Indian Institute of Health and Family Welfare, Hyderabad, regression models based on utilisation indicators for maternal healthcare services as revealed by the NFHS-2, and the estimates of infant mortality rates. These estimates show a clear pattern of high levels of MMR and IMR in district similar to the other socio-economic indicators earlier discussed. This study of the IIHFW has estimated the MMR for the district in 2000 at 305 per 100,000 live births.

Infant Mortality Ratio (IMR):

According to the Sample Registration System of the Government of India, in 2002, the IMR for East Godavari district was estimated at 54 per 1000 live births against the State average of 62 and national average of 64. The IMR for Kerala is estimated at 10, Tamil Nadu at 44 and Karnataka at 55 per 1000 live births respectively. According to the Survey on the Causes of Death (SCD) report (in respect of infant deaths) of the Sample Registration System, Registrar General of India (2002), the top ten diseases responsible for infant deaths in AP in the year 1999 are given in the table.

The major causes of infant deaths as analysed by the CPDS, Hyderabad (2003) are Respiratory distress of new born / Pneumonia, Sepsis Prematurity / Low-birth-weight, Diseases of liver, Congenital malformation, Tetanus, Typhoid & paratyphoid, Anemia, Diarrhea and gastroenteritis, Digestive system disorders of fetus and new born, Malaria.

Organisational Structure of Medical and Health Services in East Godavari:

Health care institutions in the East Godavari district can broadly be categorised under public and private sectors. In the public sector, the State Government provides health care services under the allopathic and Indian Systems of Medicine. The Indian Systems of

Medicine comprise of Ayurveda, Homeopathy, Unani, Siddha, etc. The majority of in-patient services in the state are rendered under the allopathic system of medicine only. In the private sector, all the systems of medicine are provided by the private agencies and voluntary organisations.

Public Sector Health Care Institutions:

Health care institutions under the public sector include those run by the State Government, Central Government Health Scheme clinics, hospitals run by public sector undertakings, and health care institutions run under the Employees State Insurance Corporation. Public sector health care institutions other than those run by the State Government (such as those run by Public Sector Undertakings, Port Trusts, etc.) mostly cater to identified groups of individuals affiliated with specific organisations, and therefore, are not accessible to the general public.

Health care institutions run by the State Government for the general public are organised under three segments: (a) primary health care institutions comprising of Primary Health Centres (PHCs) & Rural Health Sub-Centers; (b) First Referral Unit hospitals such as Community Health Centers, Area Hospitals and District Headquarters Hospitals; and (c) tertiary sector institutions comprising of teaching hospitals attached to the Medical Colleges. A total number of 488 Health Sub-Centers, 70 Primary Health Centers, 9 Community Health Centers, 2 Area Hospitals, 1 District Headquarters hospitals are located in the district.

Optimising the Utilisation of Existing Health Facilities in the public sector:

Considering the fact that all the existing healthcare institutions in the public sector in the state have adequate workload in terms of out-patients and inpatients, as well as responsibilities for outreach services such as immunisation, antenatal care, etc., it is felt that there is no need to relocate any existing facility to a new location. In respect of maternal and child healthcare services, in order to make available emergency obstetric and neonatal care services to every needy woman and child in the rural areas, it is being proposed to develop four existing FRUs in each district as Comprehensive Emergency Obstetric and Neonatal Care Centers (CEMONC Centers). This proposal has been described in detail under the head maternal health. Further, in order to enable poor women from rural and interior areas access the healthcare services particularly in respect of maternal and child health services, it is being proposed to establish a Rural Emergency Health Transportation Scheme.

5. Health Care Institutions in the Private Sector:

Health care institutions in the private sector can broadly be categorised under three groups: (i) those run by private individuals, corporations etc., (ii) those run by philanthropic bodies such as Lions Clubs, Charitable Trusts, etc., and

(iii) those run by Non-Governmental Organisations. According to the information obtained in Census of India, 2001 there were 396 private hospitals / nursing homes in the District in March, 2001. It is clear that the district had relatively smaller number of health care institutions in the private sector, reflecting the poverty of the people and the consequent lower capacity of the people to pay for the private health care services.

RCH infrastructure in the Public Sector:

A health care facility, such as any hospital, can be described as fully operationalised for maternal health, child health, contraceptive use and adolescent health services when such facility has all the required specialty staff to give medical, surgical and counseling services required in these areas, and also has all the required equipment, drugs, and supplies that are necessary to provide such services. Obstetrician / Gynecologist, Pediatrician, Anesthetist, blood transfusion services, quality operation theaters with all necessary equipment and other supporting staff would be the minimum requirement to enable a health care institution to be fully operationalised for reproductive and child health services. The operationalisation and utilisation of health care institutions for the rendering of RCH services is full-fledged in respect of all the teaching hospitals and district headquarters hospitals in the state. Almost all these institutions have the required staff, equipment and supplies for rendering maternal, child and other reproductive health care services. All these hospitals are adequately equipped and staffed to provide basic and comprehensive emergency obstetric care services such as presence of obstetrician, anesthetist and blood transfusion services. Most Area hospitals have obstetricians, but do not have anesthetists and blood transfusion services, and as a result, they are unable to render comprehensive emergency obstetric care services to the people. The situation in respect of the Community Health Centers and other Government hospitals that render 24-hour patient care is very poor from the aspect of their ability to render comprehensive emergency obstetric care services. Most of these facilities do not have any of the components of emergency obstetric care services.

6. Organization of RCH services in the private sector

The private sector's participation in the delivery of Reproductive and Child Health Care services is largely limited to the population who can pay for these services. RCH services rendered in the private sector include antenatal care, conducting child births, immunisation for newborns and children, Medical Termination of Pregnancy services, services under temporary and permanent methods of contraception, counseling on infertility and assisted reproduction services. Voluntary sector health care institutions render RCH services on par with the public sector, and in specific

instances, have better reputation than the public sector health care institutions.

Reproductive and Child Health services are being rendered in the private sector health care institutions also through their voluntary participation and networking in the different programme components under the RCH programme. One examples of such participation by the private sector institutions is networking with private hospitals through providing bed maintenance grants and family planning incentives for sterilisation where persons who are below poverty line are given cash incentive for undergoing institutional delivery services in private hospitals.

Health & Education Infrastructure:

The district has Rangaraya Medical College at Kakinada. There are 807 sub centers includes 2 Urban Sub centers, 80 PHCs, 6 CHCs (APVVP), 2 CHCs (other Hospitals) and three area hospitals in the District. In the district the existed Schools including elementary, UP and High Schools are 4858 (5.11 percent in the United A.P). Similarly the district also consists of 139 Junior colleges, 61 Degree colleges, one Adikavi Nannayya University and one Andhra University Campus, nearly 49 Colleges are covered Professional and Special education institutions.

7. Conclusion:

East Godavari district has recognised and called Rice bowl (Annapurna/ Dhanya Gara) of the Andhra Pradesh. Banking, Transport, Education, Electricity, irrigation and other infrastructure facilities have also better in position in the district compare to the other districts of the state but health statistics shows insufficient manner. The occupation and employment conditions in East Godavari district is in a remarkable position compared the surrounding districts.

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