CHAPTER 4

Utilization of Reproductive and Child Health Services in Tribal Areas of Andhra Pradesh

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Tribal populations are isolated from general population with their own physical, socio-economic and cultural environment. They are the most backward section of the society, due to various factors like ignorance, poverty, lack of development in the inaccessible areas, illiteracy and exploitation. Several studies have documented a close relationship between Tribal eco-system and their health and nutritional status (Hanumatha Rao and Mallikharjuna Rao, 1994; Hanumatha Rao, 1996). The habitat of the tribe has conferred certain advantages. The dietary habits and other related modes of life contributed to their better nutritional and health status in some tribal groups, while in other groups these practices are not conducive to good health. (Sen Gupta, 1980) Poverty, consequent low purchasing power, poor environmental sanitation and hygiene, lack of safe drinking water, lack of access to health facilities resulting in high morbidity and mortality in tribal areas.

Higher prevalence of under nutrition and consequent morbidity and mortality among these tribes stress the need for providing appropriate health and nutritional interventions.This has been strongly recognized by the planners and policy makers. The National Health policy (1983), plan document of ninth plan as well as National population policy (2000) made special mention of Tribal areas in terms of improving basic health and reproductive and child health services. Since the information on the health and nutritional status, the access to and utilization of available health services by the tribal population especially on reproductive and child health is scanty The present study was carried out during the year 2000 (as a part of Andhra Pradesh Economic Reconstruction) to assess the profile of reproductive and child health among the tribal population in ICDS project areas of Andhra Pradesh.

MATERIAL AND METHODS

The study was carried out in 204 anganwadi centres from 10 tribal ICDS projects (out of 29 projects) spread over the state.In each project, ten or more Anganwadi centres (to cover 10,000 population) were selected at random for survey. All the households (HHs) in each Anganwadi centre were enumerated to identify the beneficiaries of ICDS. Among them 20 households, including 4 HHs having 6-36 months children, 4 HHs having 36-72 months children, 3 HHs each for less than 3 months of lactation and 6-12 months of lactation and another 3 each for 11-15 yr and 16-17 year adolescent girls were selected to collect required information using pre-coded schedules. Mothers of child beneficiaries (6 months – 6 years), Lactating women consisting of less than 3 months of lactation and 6-12 months of lactation were the respondents. Information on child rearing and other health practices were collected from the mothers of child beneficiaries. Similarly, details of Antenatal care and reproductive history was collected from lactating mothers.In addition details on births and deaths were also collected to estimate Infant mortality rate (IMR), maternal mortality rate (MMR) in the population. Body-weight was recorded on all the available children of 0 - 71 months of age to assess the prevalence of undernutrition.

RESULTS

A Total of 21,275 households were enumerated from the ten selected ICDS projects. Eight hundred and seventy one children of 6-35 months, 814 children of 36-71 month, 532 lactating women (less than 3 months of lactation) 528 mothers of 6 -12 months of lactation were covered for different investigations. A total of 10,877 children of 0-71 months were weighed to assess the nutritional status.

Socio-economic Profile of Households

The socio-economic profile of households covered is provided in Table 1. About 65% of the households surveyed were nuclear families. Sixty five percent of the male head of the households and 82% of their female spouses were illiterate.Occupational profile of the head of the household revealed, that 34% were land less

Table 1: Socio-Economic profile of the households surveyed.

S. No.	*Socio-economic characteristics*	*(No. of Households Surveyed =3753)*	*%*
1	Type of Family	a)Nuclear	65.4
		b)Extended nuclear	17.7
		c)Joint Family	16.9
2	Literacy Status of Father	a)Illiterate	65.0
		b)Read and write	3.5
		c)Primary (1-5th class)	12.9
		d)Secondary (6-7th class)	6.6
		e)Above Secondary	12.0
3	Literacy Status of Mother	a)Illiterate	81.9
		b)Read and Write	2.3
		c) Primary (1-5th class)	7.7
		d)Secondary (6-7 th class	3.2
		e)Above Secondary	4.8
4	Occupation of the HH	a) Labourer	34.1
		b)Cultivation	52.0
		c)Artisan	1.6
		d)Business	3.6
		e)Service	4.1
		h)Others	4.6
5	Type of House	a)Kutcha	59.0
		b)semi pucca	35.0
		c)Pucca	6.0
6	Source of Drinking water	a)Open well	26.3
		b)Tube well	43.0
		c)Tap	13.1
		d)Pond/tank	0.6
		e)Stream/river	17.1
7	Type of fuel used for cooking	a)Firewood	96.9
		b)L.P.G.	1.8
		c)Others	1.3
8	Households having electricity	a)Present	47.0
		b)Absent	53.0
9	Households having sanitary Latrine	a)yes	3.7
		b)No	96.3
10	Access to Media	a)Radio	45.5
		b)Television	28.5
		c)News paper	4.7

labourers and 52% were cultivators. About 59% of the houses were kutcha, 35% were semi pucca and only 6% were pucca houses. Forty four percent of households had no access to safe drinking water, while only 47% were having electricity. About 45% households had access to Radio, and 29% had access to Television.

Births and Deaths

The total number of live births and infant deaths for the previous one year were 2118 and 179 respectively in the enumerated population. Thus, the infant mortality rate was 85 per 1000 live births, which was higher compared to state average (68) as well as rural projects (64). The causes for infant deaths were premature birth (20.5%), low birth weight (11.4%), diarrhoea (9.1%), tetanus (6.8%) and jaundice (5.7%). Similarly, maternal mortality was observed to be very high with 992 maternal deaths per one-lakh live births against 196 for rural projects. Tetanus (23.8%), bleeding (14.3%), toxaemia (14.3%) were the important causes for maternal mortality.

Nutritional Status of Children

The nutritional status of children (0-71 months) by age, using IAP classification is presented in table 2. It was observed that about 60.0 % of the children were in different grades of protein energy malnutrition (PEM). As age advances the proportion of normal children decreased. The prevalence of undernutrition was more among 36-71 months children than 0 - 35 months children. Similarly the prevalence of under nutrition was higher (60.0 %) compared to their rural counter parts (52.0 %).

Antenatal Care among Pregnant Women

A total of 532 mothers of less than three months of lactation were interviewed to obtain the information on antenatal history of their recent pregnancy. The results indicated that about 87.0 % of the women were registered for antenatal check up either by Auxiliary Nurse Midwife (65.0 %) or through anganwadi worker (15.2 %). Only one fifth of the women were registered for ANC before 16 weeks of gestation (Table 3). Twelve per cent of women attended ANC for more than 5 times, 42.0 % of the women had 2-3 antenatal check ups, while13.0 % attended only once. Mostly ANCs were conducted by the ANM (51.2%) followed by private medical practitioner (17.5%), PHC medical officer (16.0 %). ANC was usually conducted at home (30.0 %) and in anganwadi centre (12.0 %) in the village. The major components of ANC included were

Table 2: Distribution (%) of tribal preschool children (0-71 Months) according to IAP classification

Age group (m)	*n*	*Normal*	*Grade I*	*Grade II*	*Grade III*	*Grade IV*
0-35m	5515	48.4	33.4	14.8	2.7	0.7
36-71m	5363	28.6	48.2	20.2	2.6	0.4
Pooled (0-71m)	10878	38.6	40.7	17.5	2.6	0.6
Rural (APER-2000)	22120	48.2	37.2	12.6	1.7	0.3

physical examination (98.3%), followed by weight recording (51.0 %). In addition, blood pressure was examined on 39.0 %, urine and blood test was carried on about 29.0 % of woman attending antenatal clinics. Ninety two percent of women received TT vaccine and among them 80.0 % received two doses, while the rest received only one dose. Usually the place of immunization was home (38.0 %), anganwadi centre (29.0 %) primary health centre (17.0 %). About 8.0 % of women did not receive TT vaccine and majority of them reported that they were not offered by any health personnel.

About 82.0 % of the women received iron and folic acid tablets while, only 35.0 % received stipulated number of tablets (90 -100). Anaemia (16.0 %) and oedema (16.0 %) were the main complications experienced during pregnancy. About 47.0 % of women consulted private medical practitioner for treatment followed by PHC medical officer (26.0 %) ANM (14.0 %) and Taluk Hospital (11.0 %). Only two per cent of women with complications were referred by AWW to health personnel.

Details of Deliveries

About 85.0 % of deliveries were conducted at home (Table 4). Among them 51.0 % of the deleveries were conducted either by untrained dai or elders. Twenty percent of deliveries were conducted by Trained Birth Attendant followed by private practitioner (14.3 %) ANM (7.0 %) and PHC Medical officer (6.0 %). Disposable delivery kits were used only in about 40.0 % of the home deliveries.

The main problems reported during lactation were anaemia (6.4 %), lactation failure (3.0 %), and breast abscess (0.7 %) and majority of them consulted private medical practitioners (67.0 %) for treatment.

Child Health and Nutrition Practices

The information on child health and nutrition practices are presented in table 5. About 79.0 % of the mothers initiated breast feeding to their babies within 24 hours of delivery, while about 8.0 % started breast feeding on second day and the rest on the third day. About 30.0 % of the infants were given prelacteal feeds such as glucose water, honey, plain water etc., before initiation of breast feeding.

Seventy nine percent of mothers fed colostrum to their infants, while the rest did not feed

Table 3: Details of antenatal care among tribal pregnant women

S. No.	*Particulars*	*Percent*
Number of mothers Interviewed=532 (Women<3 moths of lactation are respondents)		
1.	*Percent of Women Registered for ANC (n=532)*	
	a) Yes	87.2
	b) No	12.8
2.	*Registration for First ANC (n=464)*	
	a) <16 weeks of gestation	21.4
	b) 16-24 weeks	47.6
	c) >=24 weeks	18.2
3.	*Functionary Registering for ANC (n=464)*	
	a) ANM	64.7
	b) AWW	15.2
	c) Medical Officer	4.5
	d) Others	2.8
4.	*Total Number of ANCs Attended (n=464)*	
	a) 1	13.4
	b) 2-3	41.7
	c) 4-5	20.4
	d) >5	11.7
5.	*Functionary Conducted ANC (n=464)*	
	a) ANM	51.2
	b) LHV	0.2
	c) MO (PHC)	16.4
	d) Pvt. Doctor	17.5
	e) Others	1.9
6.	*Place of ANC (n=464)*	
	a) Home	30.4
	b) AWC	12.1
	c) Sub center	2.4
	d) PHC	16.5
	e) Taluk Hospital	5.1
	f) Pvt. Hospital	16.7
	g) Others	13.0
7.	*Components of ANC (n=464) (Multiple Responses)*	
	a) Physical Examination	98.3
	b) Weight recording	51.0
	c) Urine test	28.3
	d) Blood test	29.2
	e) Blood pressure	38.9
	f) Not received	7.9
8.	*Percent of Preg. Women Received TT Vaccination*	
	a) One dose	11.9
	b) Two doses	80.2
9.	*Percent Women Received IFA tablets*	
	a) Not received	17.9
	b) < 30	15.2
	c) 30-60	25.7
	d) 60-90	6.6
	e) >90	34.6
10.	*Complications During Pregnancy (Multiple Responses)*	
	a) Anaemia	16.0
	b) Oedema	16.5
	c) Bleeding	1.3
	d) Mal position of foetus	2.4
	e) Pregnancy induced hyper tension	1.5
	f) No complications	85.0
11.	*Functionary Consulted for Complications*	
	a) ANM	13.8
	b) Health Visitor	1.3
	c) MO-PHC	26.3
	d) Pvt.Doctor	47.4
	e) Taluk Hospital	11.2

Table 4: Details of the deliveries

S.No. Particulars (n=528)	%
1. Place of Delivery	
a) Home	84.8
b) sub center	0.4
c) PHC	0.9
d) Govt .Hospital	6.0
e) Pvt. Hospital	7.9
2. Person Conducting Delivery	
a) Untrained Dai	28.4
b) Elders	22.6
c) Trained Birth Attendant	20.3
d) ANM	7.0
e) M.O-PHC	6.0
f) Pvt. Doctor	14.3
g) Others	1.5
3. Use of DDK for Home Deliveries	
a) Yes	39.7
b) No	60.3
4. Problems During Lactation	
a) Anaemia	6.4
b) Breast abscess	0.6
c) Lactation failure	3.0
d) Others	1.7
e) No problem	88.3
5. Person Contacted for Complication	
a) ANM	13.3
b) MO-PHC	20.0
c) Pvt.Doctor	66.7

the same on elder's advice. About half of 6-35 months children were given complementary feeds by the time they were six months old.On the whole about 98.0 % of children were on complementary feed by one year of age. Use of infant formula (2.4%), and milk supplements (0.5%) was negligible, while giving semi solids (51.8%) and solids (44.8%) was more common.

Only seventy one per cent of children of 12-23 months of age received primary vaccination including BCG, polio 3 doses, DPT-3 doses and Measles, while the other children were either partially immunized (22.6%) or not immunized (6.2%). More than two thirds of mothers reported that the vaccination services were not offered to them, while another 9.0 % stated that they were not aware of the need for immunization. Ten per cent of mothers mentioned that the time and place of immunization was not convenient for them.

Sixty four per cent of the children (9 – 36 month) did not receive Vit-A at all in the previous year. About 31.0 % received one dose and only 6.0 % received two doses. The coverage of Iron Folic Acid tablets was very poor. Only 11.0 % of the children had received the tablets during previous one year. Majority of the mothers reported the main reason for not receiving Vit-A

Table 5: Details of child health and nutrition practices.

S.No. Particulars	%
1. Time of Initiation of Breast Feeding to New Born (n=528)	
a) <24 hours	79.3
b) 2nd day	7.6
c) 3rd day	9.7
d) After 3 days	2.8
e) Lactation failure	0.6
2. Type of Liquid Fed to the Infant Before Initiation of Breast Milk (n=159)	
a) Glucose water	31.4
b) Honey	15.7
c) Wet nursing	15.1
d) plain water	10.1
e) others	27.7
3. Feeding Colostrums (n=528)	
a) Yes	78.8
b) No	21.2
4. Reasons for not Feeding Colostrum	
a) Elder's advise	57.1
b) Not good for child	29.4
c) Child can not suck	3.6
d) Others	9.9
5. Age of Initiation of Complementary Feeding (n=817) (Mothers of 6-35m Children)	
a) <6 months	48.8
b) 6-9 months	32.8
c) 9-12 months	14.7
d) >12 months	1.6
e) Solely breast fed	2.1
6. Type of Complementary Food	
a) Milk	1.0
b) Infant formula	2.4
c) Semi solids	51.8
d) Solids	44.8
7. Immunization Status of Children (12-23 months) n=409	
a) BCG	91.0
b) DPT1	90.2
c) DPT2	88.3
d) DPT3	84.2
e) OPV1	91.7
f) OPV2	88.8
g) OPV3	85.6
h) Measles	73.1
8. Children with Complete/partial Immunization	
a) Fully immunized	71.2
b) Partially immunized	22.6
c) Not immunized	6.2
9. Reasons for Incomplete Immunization	
a) Not Offered	67.2
b) Time & Place inconvenient	10.3
c) Motherbusy	8.0
d) Unaware of the need	8.8
e) Fear of side effects	1.7
f) Sickness of child	1.7
g) Don't know	2.3
10. No.of Children (9-36 months) Received Vit. A Solution (n=796)	
a) Yes	36.2
b) No	63.8

Table 5: Contd. ...

S.No.	Particulars	%
11.	*Agent Provided Vit. A (n=288)*	
	a) ANM	88.2
	b) AWW	10.4
	c) LHV	0.4
	d) MO-PHC	1.0
12.	*Reasons for not Receiving Vit.A (n=508)*	
	a) Not offered	78.3
	b) Unaware of the need	16.1
	c) Others	15.6
13.	*No. of children (6-35m) Reported Sickness During Last 15 days (n=815)*	
	a) Fever	18.3
	b) Diarrhoea	4.7
	c) No sickness	77.0
14.	*Health Functionary Consulted During Sickness (n=187)*	
	a) AWW	2.9
	b) ANM	9.8
	c) MO-PHC	16.2
	d) Traditional Practitioner	0.8
	e) Private Doctor	39.7
	f) Not consulted	30.6
15.	*Household Use of ORT During Diarrhoea (n=38)*	
	a) Home made ORS	10.5
	b) ORS given by AWW/ANM	39.5
	c) Commercial ORS	13.2
	d) coconut water	13.2
	e) Rice Kanji	13.2
	f) Others	31.6
	g) Not given ORS	18.4

and IFA tablets was that they were not offered by any health personnel.

Details on morbidity of children during previous fortnight were collected from the mothers. About 18.0 % of the children had fever and 4.7% had diarrhoea. Mothers of about 31.0 % of these children did not consult any medical personnel for treatment. About 40.0 % of them consulted a private medical practitioner, while 16.0 % consulted PHC Medical Officer.

Of the children who had diarrhoea during last fortnight about 82.0 % of the children were given oral rehydration therapy. About 40.0 % were given ORS supplied by either AWW, 13.0 % used commercial ORS, while 47.0 % of children were given liquids such as Rice kanji, coconut water etc, About 5.0 % of the mothers stated that their children were referred to PHC or Taluk Hospital by AWW during ailment. All of them utilized the services and were satisfied with the quality of services provided.

DISCUSSION

Antenatal registration, TT immunization, use of safe delivery kits, home visits by health functionaries, birth weight recording are some key MCH services. The antenatal registration is an important indicator to show improvement in the quality and coverage for maternal and child health (MCH) Services. Low percent of early registration, low coverage for different components of Antenatal check ups indicate the need for improving health care during pregnancy. Home visits by health functionaries form a crucial factor for improving health care during pregnancy (Verma et al., 1995; Maitra et al., 1995).

Similar to their rural counterparts most of the deliveries in tribal areas were being conducted at home. It was also noted that a majority of these deliveries were conducted by untrained Dai/ neighbors. Birth weight recording is non-existent, expect for hospital deliveries. A multi centric study by the ICMR during 1981-84, indicated that the prevalence of low birth weight was ranged between 26.0 – 57.0 % in urban slums and 35.0 – 41.0 % in rural communities. There is no data on the prevalence of LBW among tribal population.

Anaemia and Oedema were some of the complications reported by the tribal pregnant women. Anaemia is common not only in the tribal areas but also in the rural counterparts. Prevalence ranges from 50.0 – 70.0 % in rural areas (Ramachandran, 1989). In a study on primitive tribals 70.0 – 90.0 % prevalence of anaemia was reported among these tribal groups of different states (Hanumatha Rao et al., 1989a; b; c; d). Present study revealed that only 30.0 - 35.0 % of pregnant and lactating women received stipulated number of iron folic acid tablets. Similarly the coverage of children for vitamin A prophylaxis programme was also poor (36.0 %). About 29.0 % of children were either non immunized or partially immunised. The main reason given by the respondents was that nobody offer the services to them. This indicates the need for strengthening of services to be provided.

Initiation of breast feeding before 24 hours of delivery, feeding of colostrum and early starting of complementary feeding were some of the good traditional practices followed by the tribal population. Studies have shown that, in general the growth of infants in the first few months when the baby is breast fed is good, and many babies double that of their birth weight by 4 - 5 month. While a majority breast-fed their babies, the feeding is often delayed for 2 - 3 days and various alternatives were given to babies. The real problems arise around 5 - 6 months, when

breast milk is no longer enough and no or very little semi solid foods were given. Hence, the period between 6 months to 2 years, when breast milk is no longer enough and the child is dependent on some one else to feed is the critical period for developing malnutrition. According to present study, the proportion of normal grade children was decreased from 56.0 % in the age group of below 12 months, to 30.0 % or even less by the age of 5 - 6 years. Ghosh (1999) pointed out that apart from the belief and prejudices of the families regarding starting of complementary foods, a major constraint is the availability of the mother for feeding because of her never ending chores and income generating activities. She added besides adequate food and freedom from infections, a caring environment contributes to better nutrition and development of child.

The identification of mothers and children having risk is another important component of MCH services. Pregnant women with gravida 5, shorter birth interval (pregnancy interval), bad obstetric history are the risk factors for women and low birth weight, gestation age less than 37 weeks were risk factors for children. Keeping all these things in view, the health worker should assess the felt needs as well as service needs of the community and prepare to provide good quality care to tackle the problem in her/his area. On the whole, to achieve the set goals there is a need for effective management of health and nutrition programmes in tribal areas.

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ABSTRACT There is wide variation among the tribals of India living in contrasting conditions with different life styles, environment and socio-cultural traditions and practices. Andhra Pradesh is homeland of nearly thirty-three tribal groups. Most of these communities are found inhabiting in North and North- Eastern regions of the State. A number of factors namely inadequate household food security, inadequate access to health services, traditional beliefs, economic constraints and inadequate care of women and children made the tribals vulnerable to health and nutrition stand point. The wide heterogeneity in their development is reflected in the health and nutritional status of the tribal population with some sections well fed and other left grossly undernourished. In addition, ecological degradation aggravates the situation in these areas.The information on the health and nutrition status, the access to and utilization of available health services for the tribal population is scanty. Therefore the present survey is an attempt to study reproductive and child health and nutrition in tribal areas of Andhra Pradesh. The study was carried out in 10 tribal ICDS projects spread over the State. In each project 10 Anganwadi centres or more (to cover 10,000 populations) were covered for survey. The study revealed that only 21.0 % pregnant women were registered for ANC before 16th week of pregnancy. Auxiliary Nurse Midwife (65.0 %) usually registered the women

for ANC and the place of antenatal check up was mostly home (30%) followed by hospital (Govt.16.0 % or private 17.0 %) and Anganwadi center (12.0 %). Only 15.0 % were institutional deliveries, while among the home deliveries 40.0 % used Disposable Delivery Kits (DDK). About 79.0 % of the mothers initiated breast feeding with in 24 hours of delivery, while about 8.0 % started breast feeding on 2nd day and rest did it only on third day or after. About 21% of the mothers stated that they discarded colostrum mainly on the elder's advice. About 49% of mothers initiated complementary foods before 6 months of age and the food was mostly semisolid (52.0 %) or solids (45.0 %). Immunization status revealed that about 71.0 % of children were fully immunized and only 36.0 % and 8.0 % of the children (1 - 3 years) were covered for Vit.A and National Nutritional Anaemia Prophylaxis programme respectively. Sixty percent of children (0 - 72 months) were in different grades of protein energy malnutrition. The infant mortality (85 per 1000 live births) and maternal mortality rates (10 per 1000 live births) were higher as compared to the state and national average. Thus, to achieve the set of goals of either for health or nutrition, there is a need to improve the out reach and quality of health services in the tribal areas.

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