

A Study on Pattern of Utilisation of Health Services in an Integrated Child Development Services Project in Andhra Pradesh

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ABSTRACT An attempt is made to examine the pattern of utilisation of health services in Kamalapuram ICDS project of Cuddapah district in Andhra Pradesh. The study was conducted as part of ICDS survey in which 118 lactating mothers were interviewed to elicit information on utilisation of services of antenatal care, supplementary nutrition and maternity assistance. Also the relation between the caste of the family of the lactating woman and utilisation of health services is analysed.

INTRODUCTION

In India, one of the important reasons for national health services not reaching their programme goals is poor utilisation. Provision and utilisation can only be brought into balance if there is an understanding of people's health seeking behaviour. The Integrated Child Development Services Scheme (ICDS) was set up by Government of India in the year 1975 with the following main objectives: 1. to improve the nutritional and health status of children below 6 years of age and also to reduce the incidence of mortality, morbidity, malnutrition and school drop-out. 2. to lay foundation for proper psychological, physical and social development of the child. 3. to enhance the capability of the mother to look after the normal health and nutritional needs. To achieve these objectives, a package of services is provided through the Anganwadi workers at the village centre called Anganwadi. The package of services include Supplementary nutrition, Vitamin A, Iron and Folic acid tablets distribution, Immunisation, Health check-ups, Referral services, Nutrition and Health education to women in reproductive age group. The beneficiaries under this programme are children below 6 years of age, pregnant and lactating mothers and women in reproductive age group. Each ICDS project covers about 1 lakh population in 100

villages. The services at village level are provided through Anganwadi centre which covers a population of about 1000. Pregnant and lactating mothers receive the services of supplementary nutrition, iron and folic acid tablets distribution, immunisation against tetanus, health check-ups, nutrition and health education through the Anganwadi. WHO has identified utilisation of Health services as part of the indicators for provision of health services to monitor the goal of Health for all by 2000 A.D. Though the services are provided at the local level, there may not be proper utilisation of these services by the needy for varied reasons. Present study was planned to observe the pattern of utilisation of health services at the level of Kamalapuram ICDS project area in Cuddapah district of Andhra Pradesh (A.P.).

MATERIALS AND METHODS

An attempt was made to find out the utilisation of health services keeping in view the following objectives:

1. To find out the extent of utilisation of health services in terms of antenatal care, supplementary nutrition and maternity assistance.
2. To examine the relation between the caste of the family and the utilisation of health services.

The ICDS project areas were selected by a two stage stratified random sampling procedure by the Central Technical Committee of ICDS scheme. Our ICDS project area which is Kamalapuram in Cuddapah district has about 1,30,000 population. It has four mandal primary health centres. From each mandal primary health centre among the two villages selected, one village was selected from the sub centre headquarter villages and the other village was selected from non-subcentre headquarter villages by stratified

random sampling technique. Thus eight villages were selected from the four mandal primary health centres. From the selected villages all the available lactating women form our study sample *i.e.*, 118 lactating women.

In this study, 118 lactating women were interviewed using structured pre-tested interview schedules as part of ICDS survey. Data collected about antenatal services included first contact between pregnant women and health facility (months of pregnancy), person who gave antenatal care, number of antenatal checkups, coverage of immunisation against tetanus. Data regarding supplementary nutrition and iron and folic acid supplementation were collected. Also data regarding maternity assistance were collected which included person conducting the delivery, place of the delivery and the status of breast feeding. The data were analysed using chi-square test and other appropriate statistical techniques.

RESULTS AND DISCUSSION

Table 1 describes the utilisation of health a

Table 1: Utilisation of Health Services

1. Antenatal Care

(a) First Contact between pregnant woman and health facility

Months of pregnancy (Mean $\pm$ SD) 3.85 ± 1.48

(b) Distribution of pregnant women according to persons who gave antenatal care

Person who gave antenatal care	Number of Pregnant women	Percentage
1. Untrained dai	3	2.5
2. Trained dai	5	4.2
3. Auxiliary nurse midwife	28	23.7
4. Medical officer	76	64.4
5. No antenatal care	6	5.1
Total	118	100.0

(c) Number of antenatal checkups per pregnant woman

Number of antenatal checkups (Mean $\pm$ SD) 3.80 ± 1.59

(d) Status of immunisation against tetanus

Immunisation received	Number of Pregnant women	Percentage
Yes	109	92.4
No	9	7.6
Total	118	100.0

Table 1: Contd...

2. Nutritional Services

(a) Distribution of pregnant and lactating women according to supplementary nutrition received

Supplementary nutrition	Number of pregnant and lactating women	Percentage
Received	27	23.0
Not received	91	77.0
Total	118	100.0

(b) Distribution of pregnant women according to status of Iron and Folic acid supplementation

Iron and Folic acid supplementation	Number of pregnant women	Percentage
Received	72	61.0
Not received	46	39.0
Total	118	100.0

3. Maternity Assistance

(a) Distribution of pregnant women according to person conducting the delivery

Person conducting the delivery	Number of pregnant women	Percentage
Untrained dai	23	19.5
Trained dai	20	16.9
Auxiliary Nurse midwife	14	11.9
Doctor	55	46.6
Others	6	5.1
Total	118	100.0

(b) Distribution of pregnant women according to place of delivery

Place of delivery	Number of pregnant women	Percentage
Govt. Hospital	29	24.6
Private Hospital	27	22.9
PHC/SC	0	0.0
Home	62	52.5
Total	118	100.0

(c) Distribution of lactating mothers according to status of breast feeding

Breast feeding given	Number of lactating mothers	Percentage
No	3	2.5
Yes	115	97.5
Total	118	100.0

(ii) When was breast feeding given after delivery

When was breast feeding given after delivery	Number of lactating mothers	Percentage
0-6 hrs	8	7.0
6+ - 24 hrs	5	4.4
24+ - 48 hrs	11	9.6
48+ hrs	91	79.0
Total	115	100.0

services by lactating women during their pregnancy and lactation. In our study the mean months pregnant at first visit of antenatal care was observed to be 3.85 months. NFHS survey (1992) in Andhra Pradesh has observed median months pregnant at first visit of antenatal care to be 5 months. Our study has revealed that 5% of the pregnant women have received no antenatal care. Among those who received antenatal care, 64.4% received from doctors and 23.7% received from auxiliary nurse midwife and only 2.5% received from untrained dai. The corresponding figures of NFHS survey (1992) showed that 12.2% of pregnant women have received no antenatal care, 61.9% have received from doctor, 20% from health worker and 0.5% from traditional birth attendant. Our findings are similar to that of NFHS survey findings.

Mean number of antenatal checkups per pregnant woman in our study was observed to be 3.8. NFHS survey has found median number of antenatal care visits to be 4.7. About 92.4% of pregnant women in our study had received complete tetanus immunisation. The corresponding figures of tetanus immunisation in NFHS survey (1992) was found to be 84.8%. Only 23% of pregnant women have received supplementary nutrition in our study. About 61% of pregnant women have received iron and folic acid tablets.

About 25% of the deliveries were conducted by untrained personnel. Untrained personnel include untrained dais, relatives, neighbours etc. Among the trained personnel conducting deliveries, doctors constitute 46.6% followed by trained dai and auxiliary nurse midwife who constitute 16.9% and 11.9%, respectively. The corresponding figures of NFHS survey revealed that among the deliveries conducted, 33.9% were conducted by traditional birth attendants, 36.6% were by the doctors, 14.4% by the auxiliary nurse midwives and 15.9% by relatives/others. The percentage of deliveries conducted by traditional birth attendants (36.4%) in our study is similar to the figures of NFHS survey (33.9%). NFHS survey (1992) has also revealed that there is not much difference in tetanus toxoid immunisation coverage between scheduled castes and other castes which was reported to be 77.3% and 76.8%, respectively.

In our study majority (52.5%) of the deliveries

were conducted at home. About 25% and 23% of the deliveries were conducted in Government and private hospital, respectively. No delivery occurred in primary health centre/subcentre. NFHS survey (1992) have reported deliveries conducted at home to be 65.7% of all deliveries a figure higher than our study. NFHS survey figures for deliveries that have occurred in government and private health facility were reported to be 13.7% and 19.2%, respectively. 115 women (97.5%) breast fed their new born in our study. Among the women who breast fed their new born 79% breast fed after 48 hours of the delivery.

Table 2 describes the utilisation of health services by scheduled castes, backward castes - the priority group of social services in India. The

Table 2: Utilisation of health services by caste

1. First contact of pregnant woman (months of pregnancy) with the health facility

Groups	First contact (mean $\pm$ SD)
Scheduled caste	3.82 $\pm$ 1.8
Backward caste	3.75 $\pm$ 1.8
Other caste	3.77 $\pm$ 1.7

2. Distribution of persons giving antenatal care

Persons giving antenatal care	Scheduled caste	Backward caste	Other caste	Total
Untrained dai	0 (0)	2 (4.4)	1 (2.4)	3 (2.7)
Trained dai	1 (4.2)	4 (8.7)	0 (0)	5 (4.5)
Auxiliary nurse midwife	9 (37.5)	15 (32.6)	4 (9.5)	28 (25)
Doctor	14 (58.3)	25 (54.3)	37 (88.1)	76 (67.8)
Total	24 (100)	46 (100)	42 (100)	112 (100)

$\chi^2 = 15.302$ df = 6 $P < 0.05$

3. Number of antenatal checkups per pregnant woman

Groups	Number of antenatal checkups (Mean $\pm$ SD)
Scheduled caste	3.7 $\pm$ 1.7
Backward caste	3.6 $\pm$ 1.7
Other caste	3.7 $\pm$ 1.7

4. Distribution of registration status of pregnant women

Groups	Booked	Unbooked	Total
Scheduled caste	18 (69.2)	8 (30.8)	26 (100)
Backward caste	36 (72)	14 (28)	50 (100)
Other caste	38 (90.5)	4 (9.5)	42 (100)
Total	92 (78)	26 (22)	118 (100)

$\chi^2 = 6$ df = 2 $P < 0.05$

Table 2: Contd...

5. Coverage of tetanus toxoid immunisation

Group	Received tetanus toxoid immunisation		
	Yes	No	Total
Scheduled caste	22 (84.6)	4 (15.4)	26 (100)
Backward caste	47 (94.0)	3 (6.0)	50 (100)
Other caste	40 (95.2)	2 (4.8)	42 (100)
Total	109 (92.4)	9 (7.6)	118 (100)

 $\chi^2 = 2.9$ df = 2 $P > 0.05$

6. Coverage of distribution of Iron and folic acid tablets

Group	Received iron and folic acid tablets		
	Yes	No	Total
Scheduled caste	22 (84.6)	4 (15.4)	26 (100)
Backward caste	47 (94.0)	3 (6.0)	50 (100)
Other caste	40 (95.2)	2 (4.8)	42 (100)
Total	109 (92.4)	9 (7.6)	118 (100)

 $\chi^2 = 2.9$ df = 2 $P > 0.05$

7. Coverage of supplementary nutrition services

Group	Received supplementary nutrition		
	Yes	No	Total
Scheduled caste	10 (62.5)	16 (37.5)	26 (100)
Backward caste	9 (18.0)	41 (82.0)	50 (100)
Other caste	8 (19.0)	34 (81.0)	42 (100)
Total	27 (23)	91 (77)	118 (100)

 $\chi^2 = 4.6$ df = 2 $P > 0.05$

8. Distribution of persons conducting delivery

Persons conducting delivery	Scheduled caste	Backward caste	Other caste	Total
Untrained dai	8 (30.8)	15 (30)	0 (0)	23 (19.5)
Trained dai	1 (34.6)	8 (16)	3 (7.1)	20 (16.9)
Auxiliary nurse	3 (11.5)	7 (14)	4 (9.5)	14 (11.9)
Doctor	6 (23.1)	15 (30)	34 (81.0)	55 (46.6)
Others	0 (0)	5 (10)	1 (2.4)	6 (5.1)
Total	26 (100)	50 (100)	42 (100)	118 (100)

 $\chi^2 = 40.113$ df = 8 $P < 0.001$

9. Place of delivery

Place of delivery	Scheduled caste	Backward caste	Other caste	Total
Govt. Hospital	5 (19.2)	7 (14)	17 (40.5)	29 (24.6)
Private Hospital	1 (3.9)	10 (20)	16 (38.1)	27 (22.9)
PHC/SC	0 (0)	0 (0)	0 (0)	0 (0)
Home	20 (76.9)	33 (66)	9 (21.4)	62 (52.5)
Total	26 (100)	50 (100)	42 (100)	118 (100)

 $\chi^2 = 44$ df = 6 $P < 0.001$

Table 2: Contd...

10. Distribution of status of breast feeding

Group	Status of breast feeding		
	Yes	No	Total
Scheduled caste	23 (88.5)	3 (11.5)	26 (100)
Backward caste	50 (100)	0 (0)	50 (100)
Other caste	42 (100)	0 (0)	42 (100)
Total	115 (97.5)	3 (2.5)	118 (100)

 $\chi^2 = 9.22$ df = 2 $P < 0.01$

* Percentages are given in parenthesis

mean months pregnant at the first visit of antenatal care among scheduled castes, backward castes and other castes was observed to be 3.82, 3.75 and 3.77, respectively. Highest percentage of pregnant women received antenatal care by doctors among other castes (88.1%) as compared to backward castes (54.3%) and scheduled castes (58.3%), respectively. The number of pregnant women who received antenatal care by auxiliary nurse midwives was found to be highest among scheduled castes (37.5%) as compared to backward castes (32.6%) and other castes (9.5%), respectively. The difference was found to be statistically significant (Chi-square = 15.302, df=6, $P < 0.05$).

The mean number of antenatal checkups per pregnant woman among scheduled castes, backward castes and other castes was observed to be 3.71, 3.6 and 3.7, respectively. An antenatal case is considered to be booked if she has at least 3 or more antenatal checkups. The percentage of unbooked cases among scheduled castes, backward castes and other castes was found to be 30.8%, 28% and 9.5%, respectively and the difference was found to be statistically significant (Chi-square = 6 df=2 $P < 0.05$). In our study the findings of distribution of iron and folic acid tablets among different castes was similar to the findings of tetanus immunisation coverage.

In our study, coverage of supplementary nutrition among scheduled caste women was observed to be 62.5%. In ICDS scheme, it is targeted that 100% coverage is ensured among scheduled castes. So the coverage of supplementary nutrition among scheduled castes is far from adequate.

Our study revealed that deliveries conducted by untrained dais were highest among

scheduled castes (30.8%) followed by backward castes (30%) and other castes (0%). Similar were the observations with respect to deliveries conducted by trained dai. But the deliveries conducted by doctors were found to be highest among other castes (81%) followed by backward castes (30%) and scheduled castes (23.1%). The difference between the groups with respect to person conducting delivery was found to be statistically significant (Chi-square = 40.113, df=8, $P < 0.001$). The corresponding figures of NFHS survey (1992) show somewhat similar findings with higher number of deliveries conducted by traditional birth attendants among scheduled castes (41%) as compared to other castes (32.4%). Also NFHS survey revealed higher number of deliveries conducted by doctor among the other castes (39.7%) as compared to scheduled castes (32.4%).

Deliveries conducted at home were commonest among scheduled castes (76.9%) as compared to backward castes (66%) and other castes (21.4%). No delivery occurred in primary health centre/subcenter in our study. Highest number of government hospital deliveries occurred among other castes (40.5%) followed by scheduled castes (19.2%) and backward castes (14%). In our study, difference with respect to place of delivery among different caste groups was found to be statistically significant. NFHS survey (1992) revealed similar findings which include higher percentage of home deliveries among Scheduled Castes (72.7%) as compared to other castes (62.3%).

To summarise, the important findings of our study include the following: (1) About 25% of all the deliveries are conducted by untrained personnel. (2) Highest percentage of deliveries conducted at home are seen among scheduled castes (76.9%) and backward castes (66%) which are priority group of social services in India. (3) Deliveries conducted by untrained personnel among scheduled castes (30.8%) and backward castes (30%) are high as compared to other castes (0%). (4) Registration status of pregnant women suggest highest percentage of pregnant women are unbooked among scheduled castes (30.8%) as compared to backward castes (28%) and other castes (9.5%). (5) It is found that only 23% and 61% of pregnant women have received supplementary nutrition and iron

and folic acid tablets, respectively. (6) Coverage of supplementary nutrition was only 62.5% among scheduled caste mothers. (7) Immunisation coverage against tetanus (92.4%) in pregnant women appears to be satisfactory but all mothers should be covered.

This study suggests the need for improving utilisation of health services. Also some of the measures recommended are as follows:

1. Efforts are needed to register all antenatal mothers specially those who belong to scheduled caste by the female health worker (auxiliary nurse mid wife) with the help of traditional birth attendant.
2. All traditional birth attendants in the villages should be identified and trained in safe delivery practices as considerable proportion of deliveries are conducted by untrained traditional birth attendants.
3. The mothers should be educated about the need for supplementary nutrition during pregnancy and efforts should be made to feed all mothers belonging to scheduled castes and needy mothers from backward castes and other castes at the anganwadi centre of the ICDS scheme.
4. The health worker female (auxiliary nurse midwife) should distribute iron and folic acid tablets to all pregnant mothers and immunise 100% of antenatal cases with tetanus toxoid with the help of traditional birth attendant and anganwadi worker.
5. All mothers whose conditions are not suitable for a safe delivery should be encouraged to have Institutional deliveries preferably at subcentres and primary health centres. To achieve this, facilities, equipment as well as personnel should be available at all subcentres and primary health centres. The personnel should not only be available but also accessible and acceptable.
6. There is an urgent need for educating all mothers about the right time for commencing breast feeding of their babies and feeding with colostrum after delivery.

We feel the necessity of larger and detailed studies to elicit factors responsible for non-utilisation of health services at local levels in different states of India to enable implementation of necessary measures.

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