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Original Research Article

Perception, awareness and utilization of integrated child development services scheme by mothers in coastal Karnataka, India

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ABSTRACT

Background: Integrated Child Development Services (ICDS) scheme is the leading outreach program aimed at promoting maternal and child health care and help in strengthening the implementation of MCH activities like immunization, growth monitoring, supplementation of vitamin A and iron folic acid tablets. Hence, ICDS takes holistic approach in development of children and attempts to improve their prenatal and post-natal environment. Hence the present study was undertaken to study the awareness and utilization of ICDS scheme by expectant mothers and nursing mothers in coastal Karnataka. Objectives of current study were to study the awareness and utilization of services offered to mothers under ICDS 2 and to assess the perception about the services.
Methods: A community based cross sectional study was done among 141 mothers registered in anganwadis.
Results: Majority were aware of SN (96.5%) followed by TT immunization (89.4%) and NHED (22%). The most common service utilized by the study subjects was supplementary nutrition (94.3%) followed by NHED (24.1%) and home visit (23.4%). Larger proportion of the study subjects were of opinion that SN food of good quality (57.1%) and almost 96.2% mothers said food was of adequate quantity.
Conclusions: Among the eligible expectant and nursing mothers, majority of them utilized supplementary nutrition. Nearly 40% of expectant and nursing mothers were not happy about the quality of food offered to them. Nutrition and health education sessions were attended by only 40% of the eligible mothers.

Keywords: Utilization, Mothers, ICDS, Anganwadi, Coastal Karnataka

INTRODUCTION

During the year 1975, the maternal mortality rates (MMR) and infant mortality rates (IMR) were extremely high (MMR–853 per 1, 00,000 live births and IMR 134 per 1,000 live births) due to the severe drought faced by the country. In view of impeding the soaring rate of MMR and IMR, the Prime Minister launched ICDS Scheme on 2nd October 1975, 106th birthday of Mahatma Gandhi during the fifth five-year plan in pursuance of national policy for children in 33 experimental blocks.[1] It began as one pilot project in T. Narasipura taluka, Mysuru district in Karnataka with just 100 AWCs. Subsequently, the outreach of ICDS scheme increased to all the revenue taluks of the state and country as the launch of the Government of India's National Health Mission and a National Nutrition Mission in fiscal year

2005-2006, to expedite the expansion of program, it had been universalized.[2-4] Integrated child development services (ICDS) scheme is the leading outreach program aimed at promoting maternal and child health care and help in strengthening the implementation of MCH activities like immunization, growth monitoring, supplementation of vitamin A and iron folic acid tablets.[5,6] It is the only program where attempt has been made to prevent undernutrition right from intra-uterine period by providing SN to expectant mothers.[7,8] ICDS therefore takes holistic approach of development of children and attempts to improve their prenatal and post-natal environment. The entire development of the child is influenced by social contact. Hence the present study was undertaken to study the awareness and utilization of ICDS scheme by expectant mothers and nursing mothers in coastal Karnataka.

METHODS

The community based cross sectional study was carried out during the period October 2013 to March 2016 in the field practice area of department of community medicine, Kasturba Medical College, Manipal University, Manipal, South India among expectant mothers and nursing mothers. It is situated along the coastal belt of Udupi District covering a population of 45,246 spread out over 13 villages. These villages have a homogenous population in terms of occupation, socio-economic status and food habits. The total literacy rate in the field practice area is 87.5% with female literacy of 84.1% and sex ratio of 1036.8/1000 males. The department of community medicine provides health care services to this population through a network of five rural maternity and child welfare homes (RMCW homes)/ centres. The detailed information of the population in the field practice area was captured and fed into the central database in eRMCWH portal which can be accessed any time. The peripheral health centres provide services through weekly clinic. In addition to the clinics, health education sessions are arranged for the population. In the field practice area, IMR is 3.83 per 1000 live births and nil MMR; all the expectant mothers had undergone Institutional deliveries. All the children less than five years of age and expectant mothers were immunized and effective couple protection rate was 50%.

Inclusion criteria

Inclusion criteria for current study were; the expectant and nursing mothers who were registered at least for six months prior to the study in the anganwadi centres (AWCs).

Exclusion criteria

The mothers who did not fulfill the inclusion criteria were excluded.

Sample size

According to the study conducted by Kumar and Garg in 2008 Quick appraisal of SN component of ICDS in Udupi and Karkala, utilization rate by pregnant mothers was 95.16% and lactating mothers was 94.43%.

Applying the formula of sample size for estimating a Prevalence

$$n = 4PQ/D^2$$

Where P= Utilization rate of previous study, Q=1-P, D=P x 0.10 for 10% relative precision, we got a sample size of 20 pregnant mothers and 25 lactating mothers. Considering variation in utilization of services of AWCs, a design effect of 2 was applied and sample size was multiplied by 2. Hence 40 pregnant mothers and 50 lactating mothers was the minimal sample to be achieved with no non-response rate. Written Informed consent was obtained before interviewing the mothers of children.

Data collection

House to house visit was conducted and mothers were interviewed. Details regarding socio-demographic factors, awareness, utilization and perception about ICDS services like supplementary nutrition, nutrition and health education, immunization, health checkups and referral services were obtained from them. Regarding supplementary nutrition, details of food received any interruption in utilization, their perception and reasons for underutilization were collected from the mothers.

Data analysis

Data was entered and analyzed in statistical package for social sciences (SPSS version 15.0 as it is licensed with the Manipal University). Results were expressed in percentages and proportions with 95% confidence interval. Statistical tests like Chi square test and Fischer's exact test were used to assess significance of categorical variables.

RESULTS

Larger proportion of the study subjects (87.52%) were Hindus. Most of the mothers were educated up to High school (33.3%) and were homemakers (79.4%). About 52.5% mothers belonged to BPL family. Among 69 Expectant mothers, mothers in second trimester were 43.5% and the remaining in third trimester of gestation (Table 1). Almost all the study subjects 140 (99.3%) were registered in AWC, among them 55.1% were registered in third month of gestation. Whereas, only 133 (94.3%) were utilizing ICDS services.

As seen in (Table 2), larger proportion of the study subjects was aware of SN (96.5%) followed by TT immunization (89.4%) and NHED (22%). The most

common service utilized by the study subjects was supplementary nutrition (94.3%) followed by NHED (24.1%) and home visit (23.4%). All the mothers received antenatal care and adequate TT immunization from different sources of health care facility. Among them 96.5% received iron and folic acid supplementation as prescribed from distinctive sources. It can be explained by high literacy status of mothers and availability of several health care facilities in the field practice area.

Table 1: Socio demographic characteristics of expectant mothers (69) and nursing mothers (72) in the study (n=141).

Factor	Category	N (%)
Religion	Hindu	123 (87.2)
	Muslim	15 (10.7)
	Christian	3 (2.1)
Literacy of wife	Illiterate	1 (0.7)
	Primary school	2 (1.4)
	Middle school	27 (19.2)
	High school	47 (33.3)
	Post high school diploma	28 (19.9)
	UG/PG	36 (25.5)
Occupation of husband	Unskilled	37 (26.2)
	Semi-skilled	35 (24.8)
	Skilled	55 (39.1)
	Business	3 (2.1)
	Professional/White collar	11 (7.8)
Occupation of wife	House wife	112 (79.4)
	Unskilled	3 (2.1)
	Semi-skilled	9 (6.4)
	Skilled	8 (5.7)
	Professional/White collar	9 (6.4)
Ration card	BPL	74 (52.5)
	APL	54 (38.3)
	No card	13 (9.2)

Table 2: Awareness and utilization of ICDS services by the expectant mothers and nursing mothers in the study (n=141).

Services	Awareness, N (%)	Utilization, N (%)
Supplementary nutrition	136 (96.5)	133 (94.3)
TT immunization	126 (89.4)	141 (100)
Home visit	31 (22)	33 (23.4)
Health check-up (ANC)	1 (0.7)	141 (100)
Nutrition and health education	1 (0.7)	34 (24.1)

Similarly, RSOC India had reported among currently pregnant mothers, majority (87.7%) were aware of SN, followed by immunization (59.6%), health check-up (29.9%), NHED (16.5%) and referral services (11%).[10] Only about 8.3% were aware of all the services. RSOC Karnataka identified among currently pregnant mothers, majority (90.5%) were aware of SN, followed by Immunization (52.3%), health check-up (31.1%), NHED (12.3%) and referral services (6.7%) similar to our findings.[11] Only about 5.7% were aware of all the services.

DISCUSSION

SN utilization by mothers in our study was found to be similar to the studies by Chudasama et al, Madhavi et al, Sharma et al and Davis SF et al.[12-15] Whereas our study was found to be in contrast to the studies done by Thakare et al and Preethy et al; RSOC India and Karnataka reported very lesser SN utilization by mothers.[10-17] Mothers attending NHED session in our study was found to be very less in comparison to the study by Tharkare et al[16] and Sharma et al which reported all the beneficiaries

attended the NHED session. On the contrary the study by Preethy et al had reported only 4.8% attended health education sessions.[10,14,17] All the mothers received ANC and adequate TT immunization was comparable to the study done by Sharma et al.[14] The study by Madhavi et al reported 90.8% received health check-up.[13] On contrary, the study by Thakare et al had shown lower health check-up coverage.[16]

Table 3: Health check-up and referral services among mothers in the study (n=141).

Factor	Category	N (%)
Antenatal care	Less than 4 visits	4 (5.8)
	More than 4 visits	137 (97.2)
Source of ANC	Government	19 (13.5)
	Private	100 (70.9)
	Government and private	11 (7.8)
	RMCWH	11 (7.8)
Number of IFA tablets received	Nil	9 (6.4)
	Less than 100	10 (7.1)
	100-200	113 (80.1)
	More than 200	9 (6.4)

Table 4: Perception of supplementary nutrition by the expectant and nursing mothers in the study (n=133).

Variables	Category	N (%)
Quality	Good	76 (57.1)
	Average	52 (39.1)
	Poor	4 (3)
	Don't know	1 (0.8)
Satisfaction of quality of food	Yes	124 (93.2)
	No	8 (6)
	Don't know	1 (0.8)
Quantity	Adequate	128 (96.2)
	Inadequate	4 (3)
	Don't know	1 (0.8)
Quantity as per norm	Yes	54 (40.6)
	No	72 (54.1)
	Don't know	7 (5.3)

Among the reasons quoted for non-utilization, the most common reason for non-utilization was expectant mothers were not aware of the ICDS services and even if they were aware there was none at home to collect the SN food. The most common reason for interruption of services was the expectant mothers went out of station to their mother's home. The most common reason was nursing mothers were not aware of the ICDS services. Inspite of awareness, the most common reason for interruption of services was inability to go to AWC to avail the benefits being busy with their baby. The study by Preethy et al had reported reasons for non-utilization to be lack of awareness (13%) similar to the present study; followed by household work (43%) and distance from AWC (40%) were not observed in our study. In contrast, the study by Bhagat et al had found women married in teen age, working women and those with lower socioeconomic status not utilizing services.[17,18] As shown in (Table 3), there were 30 Expectant mothers in second trimester and 39 Expectant mothers in third trimester. About 55.1% expectant mothers were registered in AWC in first trimester, similar to the study by Kotecha et al to assess the health seeking behavior and utilization of health services by expectant mothers in Vadodara slums reporting 53.8%.[19] Among mothers in second trimester, 86.7% received ANC more than four times. The most common source of antenatal care was private hospital (73.3%). On an average they received IFA tablets 94±42. All the mothers in third trimester received ANC more than four visits. The most common source of ANC was private hospital (79.5%), similar to the study by Kotecha et al reporting 54.2%. On an average they received 175±41 IFA tablets during their ante natal period. The study by Kotecha et al had noted 10% had consumed IFA tablets less than 90 and 76.6% consumed less than 100 tablets contrary to our finding.[10,19]

On contrary, the study by Madhavi et al reported among pregnant women only 80.7% received IFA supplementation; RSOC India and Karnataka reported only 23.6% and 34.1% respectively had consumed 100 or more IFA tablets/syrup during pregnancy.[10-13] All the nursing mothers had received ANC. The most common source for antenatal care was private hospital (65.3%) similar to RSOC Karnataka (54.9%), while RSOC India had reported government health facility (43.3%) as the common source for ANC.[10,11] On an average they received IFA tablets 188±44. In contrast to our study, RSOC India and Karnataka had reported full ANC was received by only 19.7% and 32.4% respectively.[10,11] Larger proportion of the study subjects were of opinion: SN food of good quality (57.1%) followed by average quality (39.1%) and of adequate quantity (96.2%) found to be similar to the study by Biswas et al, reporting quality and quantity of supplementary food was acceptable among 72.7% and 88% mothers respectively.[20] It was also found that 93.2% mothers were satisfied with SN similar to the study by Chudasama et al reporting 90%.[12] In contrast study by Ram et al, had observed food of good quality to be 20% and adequate quantity to be 23.7%.[21] As observed by the investigator, only 40.6% of the study subjects had received SN as per norm (Table 4).

CONCLUSION

Among the eligible expectant and nursing mothers, majority of them utilized supplementary nutrition. Nearly 40% of expectant and nursing mothers were not happy about the quality of food offered to them. Nutrition and health education sessions were attended by only 40% of the eligible mothers.

Recommendations

It is very important to register all eligible expectant and nursing mothers and ensure that they all avail the

services. There is a need to improve the quality of food provided at the anganwadi centers as per the expectation of majority of the mothers.

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