

Knowledge and Utilization of Integrated Child Development Services (ICDS) services in urban field practice area, Central Karnataka - A Cross-sectional study

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Abstract

Introduction: Child malnutrition is a significant issue in India. Prevalence of undernutrition among children under 5 remain concerning, with millions still affected. Programs like the Integrated Child Development Services (ICDS) aim to address malnutrition through supplementary nutrition, health check-ups, and early childhood care.

Objectives: To study the sociodemographic profile of mothers and assess their utilization and perception regarding ICDS services.

Materials and methods: This community based cross sectional study was carried out for a period of 3 months in Central Karnataka among the beneficiaries of ICDS scheme.

Results: The present study revealed that 94.3% women were aware about Anganwadi services. However, only (56.3%) mothers reported that their children received supplementary food from AWC regularly. Most of the reasons for not utilizing the services were presence of nearby government hospital and most of them preferred sending the children to private schools.

Conclusion: This study indicated that the utilization of ICDS services needs to be improved in the study area. We need to strengthen the IEC and BCC activities regarding the services provided under ICDS scheme to reduce the gap in awareness regarding services and beneficiaries under the scheme.

Keywords: ICDS, Utilization, Anganwadi, Mothers

Introduction: Pediatric malnutrition has always been a global public health problem. In a country like India that still struggles with issues of malnutrition and inadequate prenatal and antenatal assistance with respect to pre-school education and health education, many health programs were initiated by the Government of India (GOI) which did not reach out to the target community adequately. In 1974, India adopted a national policy for children in which it decided to start a holistic multicentric comprehensive program with a package of services^[1]. The Integrated Child Development Services Scheme program (ICDS) is a centrally sponsored scheme which was started in Karnataka on 2nd October 1975 with a pilot project at T. Narasipur in Mysore District with just 100 Anganwadi Centers comprising of a comprehensive

set of services aimed at laying the foundation for the proper physical and mental development of children 0-6 years to improve the nutritional status of children and reduce child mortality and malnutrition. Integrated child development services (ICDS) scheme is the leading outreach program which aims at promoting maternal and child health (MCH) care and strengthens the implementation of MCH activities like immunization, growth monitoring, supplementation of vitamin A and iron folic acid tablets^[2].

The total population under ICDS coverage was 89 million in 2021, which was approximately 7 percent of the total population of one billion. In Karnataka, 60.29% of the population received any ICDS benefit.

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The main thrust of the scheme is on the villages where over 75 percent of the population lives. Urban slums are also a priority area of the programme^[1].

ICDS is necessary to ensure a basic minimum level of health and nutrition among the most vulnerable sections of its citizens. ICDS has been effective in combating childhood underweight. It has grown into one of the world's largest family and community welfare schemes. The Government of India is committed to make the program universally available.

Despite considerable investments and long-running implementation of the ICDS, there is much to be attained in the sphere of child development in India. Children in India continue to suffer from a high burden of anthropometric failures (under-five stunting prevalence at 38% and underweight prevalence at 36% in 2015-16). Persistently high and widespread prevalence of child undernutrition thus remains a fundamental policy concern.

The ICDS scheme is expected to significantly contribute toward the POSHAN Abhiyaan and achieve accelerated reductions in child anthropometric failure. As such, the implementation of ICDS varies across different states, and therefore, it is equally important to learn from people's experiences and identify opportunities and challenges for enhancing coverage, efficiency and impact.

It was observed in the field practice area that ICDS services were not fully utilized by the mothers with children below the age of five because of lack of knowledge on ICDS services. So we felt the need to assess the knowledge, utilization, level of satisfaction of utilization and barriers of non-utilization regarding ICDS among women. The improvement of knowledge related to ICDS services will help the beneficiaries to involve actively and utilize the services adequately.

Objectives : To study the sociodemographic profile of mothers receiving services under ICDS and to assess utilization and perception of mothers regarding ICDS services .

Materials and Methods

This community based cross sectional study was carried out during the period December 2024 to February 2025 for a period of 3 months in the field practice area of department of community medicine, Basaveshwara Medical College, Chitradurga, Central Karnataka, India among the beneficiaries of ICDS scheme.

A total of 32,000 populations are covered under Urban Health Training Centre.

Considering the value of P as 90.5%^[3], value of d as 0.5 and 'Confidence Limit' as 95%, the sample size calculated was 133. But around 150 mothers of children aged 0-6 years (registered beneficiaries of AWC) were taken in the study. Out of 32 AWCs, all the pregnant mothers i.e 152 registered under Anganwadi for a period of 3 months were taken into study.

After taking permission from the Institutional Ethical Committee (IEC), study was carried out for three months from December 2024 to February 2025. An informed consent was taken from the women to be interviewed from the household. A detailed socio-demographic information of her family, information regarding knowledge of the ICDS scheme and utilization of ICDS services such as immunization, supplementary nutrition, health checkup, referral services, preschool non-formal education and health education etc. were collected in a predesigned and pretested questionnaire by questioning in the local language for better response and clarity.

Data was analyzed using SPSS version 22. Data is presented in frequency and percentages. During the study, the subjects with poor knowledge of ICDS were given proper information about this scheme through personal counseling in the local vernacular language. The subjects who have been enrolled but are under utilizing the ICDS scheme were motivated to take maximum benefit of the scheme. The subjects who fall under the beneficiary group but are not enrolled and not utilizing the scheme but are interested and needy were linked to the service provider (Anganwadi worker) through proper channel.

Results

In the present study, the majority, i.e. 72 (47.4%) mothers were in the age group of 26-30 years, followed by 67 (44.1%) in the age group of 21-25 years. 74.9 % of the participants were Hindu religion, followed by the Muslim religion (31.5%); 5 (3.6%) belonged to other religions. In total, 29 (19%) of the mothers were illiterate while 70 (46%) had completed only primary education and 6 (4%) were graduates or above. The socioeconomic classification was assessed using the modified Kuppaswamy Scale (2016). The majority of the study participants (69.7%) belonged to the upper lower socioeconomic class (class IV), followed by the lower middle class (class III) (23%).

In the current study, 96 (63.2%) mothers lived in a nuclear family, 45 (29.6%) lived in a 3 generation family , followed by 11 (7.2%) participants lived in a joint family [Table 1].

Table 1: Sociodemographic profile of study participants

| | No. (n=152) | % |
|-----------------------------|-------------|-------|
| AGE (in years) | | |
| ≤20 | 3 | 1.9 |
| 2125 | 67 | 44.1 |
| 2630 | 72 | 47.4 |
| 3135 | 6 | 4 |
| 3640 | 4 | 2.6 |
| RELIGION | | |
| HINDU | 114 | 74.9 |
| MUSLIMS | 33 | 21.5 |
| OTHERS (CHRISTIAN, JAINS) | 5 | 3.6 |
| PARITY | | |
| 1 | 54 | 35.2 |
| 2 | 79 | 52.2 |
| >3 | 19 | 12.6 |
| EDUCATION | | |
| Illiterate | 29 | 19 |
| Primary | 70 | 46 |
| Middle | 25 | 16.5 |
| Matriculate | 22 | 14.5 |
| Graduate and above | 6 | 4 |
| SOCIOECONOMIC STATUS | | |
| Upper | 0 | 0 |
| Upper middle | 7 | 4.6 |
| Lower middle | 35 | 23 |
| Upper lower | 106 | 69.7 |
| Lower | 4 | 2.7 |
| TYPE OF FAMILY | | |
| Nuclear | 96 | 63.2% |
| Joint | 11 | 7.2% |
| 3 generation | 45 | 29.6% |

Knowledge about services provided under ICDS:

In our study 143(94.3%) women were aware about Anganwadi. They were aware about the AWW of their respected area. Majority women 131(92.1%) women knew about provision of supplementary nutrition, 128(89.4%) knew about immunization services and health checkups, 107 (74.6%) & 81(56.3%) respectively knew about nutritional & health education & non formal education, but only 49 (34.3%) were aware about Referral services. Major source of information about Anganwadi was the AWW herself as 120(84.11%) women received the information from her.

Utilization of services of ICDS: Utilization of Services provided under ICDS was around 77.48% in general, and only 152 (77.15%) beneficiaries out of total 197 utilized the available services. Out of 103 houses with 1 beneficiary only 80 (52.98%) houses utilized the services, and out of 45 houses with two beneficiary only 36 (23.83%) houses utilized the services.

The study consisted of 12 Pregnant women and 10 Nursing mothers. Level of utilization was poor among pregnant and nursing mothers, Out of these 6 (50%) pregnant ladies neither utilized the immunization services against tetanus nor the health check-up services, 9 (75%) did not take supplementary nutrition and 11 (91.6%) ladies did not attend the Educational programs. Nursing mothers too were ignorant regarding health checkup as only 4 (40%) used it, only 3 (30%) nursing mothers received supplementary nutrition and mere 2 (20%) received Nutrition & Health education.

Table 2: Knowledge, Attitude, Practices of individual services among those registered (n = 152)

| S. No | Services | YES/NO | Supplementary nutrition | Immunization | Pre-school education | Health check-up |
|-------|--------------------|---------------------|-------------------------|---------------------------------------|-------------------------------|-----------------|
| 1. | Do you know? | Yes | 152 (100%) | 10 (80.3%) | 12 (92.6%) | 12 (93.5%) |
| | | No | 0 (0%) | 4 (28.6%) | 2 (14.3%) | 2 (14.3%) |
| 2. | Do you avail? | Yes | 13 (97.3%) | 0 (25.2%) | 11 (82.5%) | 11 (82.5%) |
| | | No | 1 (7.2%) | 14 (100%) | 3 (21.5%) | 3 (21.5%) |
| 3. | If yes, how often? | Almost daily | 5 (42.4%) | 7 (0%) | 0 (100%) | |
| | | Weekly once | 5 (43.5%) | 3 (15.3%) | 0 | |
| | | Monthly once | 3 (14.1%) | 0 (84.7%) | 0 | (93.6%) |
| | | Less often | 0 | 1 (9%) | 10 (91%) | (6.4%) |
| 4. | If not, reason? | Going to school (1) | Near-by Govt. facility | Going to school (1) Don't know (2) | Private (1) Don't know (2) | |

Table 3: Response of mothers regarding supplementary nutrition and counselling

| Response | Yes | % |
|--|-----|------|
| Received regular supplementary food | 86 | 56.3 |
| Received counselling regarding supplementary nutrition | 70 | 46.2 |
| Received counselling regarding quantity of food to be given to child at home | 97 | 63.5 |
| Received counselling regarding weight gain of the baby | 83 | 54.8 |

In this study, 86 (56.3%) mothers reported that their children received supplementary food from AWC regularly (Table 3). Around 63.5% of the mothers were satisfied with the counselling given by Anganwadi teachers regarding quantity of food to be given to children at home.

Discussion

In our study 91.6% women knew about ICDS services while some services were very well known other weren't. Similar aspect was looked into by *Biswas AB et al*^[4] in a study conducted in Howrah and Purulia districts of West Bengal in 2007, in that study results lower than the current study were found as 84.2% of women were aware of any ICDS services.

A study in Udupi district by *Jawahar Preethy et al*^[5] showed that 49.3% had average knowledge of ICDS while 46.7% had poor knowledge about ICDS services. In the present study, 100% of the participants received supplementary nutrition. About 80.3% of the children and pregnant women received immunization in Anganwadi center during immunization session conducted by ANM's.

Another study conducted in rural area of Gulbarga, Karnataka by *Madhavi H et al* found that 50.88% had regular checkups and 70.33% took regular Supplementary nutrition^[6]. A contrasting result was seen in a study conducted in Latur district by *Jitendra Surwade et al* in which the urban Supplementary nutrition utilization (48%) was more than the Rural (37.7%)^[7].

A study done in Tripura, showed 67.5 % were getting supplementary nutrition from ICDS^[8]. A study done in Karnataka, showed 95.9% children were getting supplementary nutrition, 99.3% getting immunization services, 83.4% were getting preschool education and 66.0% were getting regular health check-up^[9].

In our study about 93.5% of the beneficiaries come regularly for health check up. On contrary, the study by *Thakare et al* had shown lower health check-up

coverage^[10].

Most of the reasons for not utilizing the services were presence of nearby government hospital and most of them preferred sending the children to private schools. The work of *Davey A et al*^[11]. confirmed many barriers like not easy accessibility of the AWC and less space available at the AWC (68.6%), followed by the poor quality of the food distributed (66.7%) and irregular preschool education (57.1%) from AWCs^[11].

A study conducted in Udupi district by *Jawahar Preethy et al* had contrasting results with around 74.1% and 7.4% utilization of supplementary nutrition and immunization respectively which is very less than the current study. On the contrary the study by *Preethy et al* had reported only 4.8% attended health education sessions^[12].

In the current study, 46.25 of the mothers Received counselling regarding supplementary nutrition and 54.8% of them Received counselling regarding weight gain of the baby. In a similar study from Gujarat^[13], it was reported that only 20.8% of mothers received counselling regarding child nutrition and only 12.5% said received counselling regarding child growth chart.

In the current study, only 56.6% of the children who were sick were referred by AWW and the rest were treated only at home. Similar results were found in a study^[14] where the uptake of referrals by beneficiaries was very low as opposed to the expected uptake of 100%.

A study conducted in Uttar Pradesh^[15]. found that nearly twofifth (39.5%) of parents did not send their children to Anganwadi centres and more than onethird (36.6%) of parents said that overall services were of poor quality.

Recommendation

IEC activities and Health education regarding the services provided in Anganwadi centres should be conducted. Regular Health check ups should be conducted by the nearby Urban health centre faculties.

Conclusions

This study indicated that the utilization of ICDS services was very less among the beneficiaries and had to be improved. This can be improved by strengthening IEC activities regarding the services in the study area

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