Status of services among child beneficiaries under Integrated Child Development Services (ICDS) scheme in Greater Visakhapatnam Municipal Corporation, Andhrapradesh, India

K. Helena¹, B. Devi Madhavi² S. Appala Naidu³, P. J. Srinivas⁴

¹,²,³,⁴ Resident, Department of Community Medicine, Andhra Medical College, Visakhapatnam, India.
² Professor & HOD, Department of Community Medicine, Rajiv Gandhi Institute Of Medical Sciences, Srikakulam, India.

ABSTRACT

BACKGROUND: Integrated child development services scheme is the most comprehensive scheme of the Government of India for early childhood care and development. It aims at enhancing survival and development of children from the vulnerable sections of the society.

Objectives: 1. To know the extent of coverage of the services under ICDS scheme among the child beneficiaries in the three ICDS projects of Greater Visakhapatnam Municipal Corporation. 2. To assess the nutritional status in relation to certain socio demographic characteristics.

MATERIALS AND METHODS: A convenience sample of 360 children (6 months to 6 years) were studied from 45 Anganwadi centres. Selection of AWCs was by simple random sampling from the three ICDS blocks in Greater Visakhapatnam Municipal Corporation. Eight children were randomly selected from each Anganwadi centre area. A pretested semi structured questionnaire was administered to the mothers/caretakers and information about the various ICDS services received by the children was collected. Nutritional status of children was assessed by taking weight, height and mid upper arm circumference.

RESULTS: In our study, 50.8% of the children were females and 49.2% were males. Majority were in the age group of 25-36 months. Regarding status of services, majority of children (99.2%), were immunized, 93.6% received preschool education and 92% supplementary nutrition. Only 59.7% of children’s growth was monitored and only 15% received treatment for minor ailments by the Anganwadi Worker. About 47.2% of the children were stunted and 25.3% were underweight.

CONCLUSIONS: coverage of services for children were good with regard to nutrition supplementation, immunization and non formal education. However there is scope for improving the other components.

Keywords: Anganwadi Centres, children, ICDS services, malnutrition, nutritional status, Visakhapatnam

INTRODUCTION

The clock is ticking for India to reach the MDGs related to malnutrition, child and maternal health, control of infections. India has around 15.8 million children constituting 13.12% of India’s population, who are below the age of 6 years.¹ Majority live in an environment of poverty, poor sanitation, infection, malnutrition and lack of access to primary health care. Families need additional support through outside interventions for proper health care, nutrition and education of their children.

The Integrated Child Development Services (ICDS) Scheme is a government run programme which adopts a multi-sectoral approach to child well-being, incorporating health, education and nutrition interventions. The scheme is in place for more than three decades and recently the Supreme Court of India passed a decrees that the services of ICDS must be made universal i.e reach all the children in India. However over the years, more attention has been given to increasing coverage than to improving the quality of service delivery resulting in limited impact. Visakhapatnam is a city located on the East Coast of India in the state of Andhra Pradesh. The city administration is run as the Greater Visakhapatnam Municipal Corporation. The population of Greater Visakhapatnam Municipal Corporation is 16.23 lakhs and
children below 6 years form 10.01% of its population.\(^1\)\(^2\) This study was taken up to know the extent of coverage of the services under ICDS scheme among the child beneficiaries in the three projects of Greater Visakhapatnam Municipal Corporation and to assess the nutritional status of the children.

**MATERIALS AND METHODS**

**Study design:** A community based descriptive cross sectional study was conducted between November 2010 to October 2012. Sampling frame was all children of 6 months to 6 years under the Anganwadis Centres in the three ICDS projects of Greater Visakhapatnam Municipal Corporation. **Sample size:** A convenience sample of 360 children was decided. **Sampling technique:** Fifteen Anganwadi centres were chosen through simple random sampling from each project. A total of 45 Anganwadi Centres were included in the study. Study instruments included a pre-tested and validated semi structured questionnaire, Salter’s weighing scale, wooden ruler & measuring tape. Study variables included Socio demographic characteristics of the children such as age, gender, nutritional status, mothers education, caste, religion, socioeconomic status of family, ICDS services such as immunization, supplementary nutrition, preschool education, growth monitoring and treatment of minor ailments. **Socio economic status was based on B.G. Prasad’s socio economic classification (modified as per All India Consumer Price Index for the month of December 2011).**\(^3\) **Malnutrition was graded as per WHO’s anthropometric calculator which is based on Z-scores and Children were graded as well nourished, moderately malnourished and severely malnourished.**\(^4\)

**Procedure for data collection:** Prior permission was obtained from the Project Director of Women and Child development, Visakhapatnam for conducting the study. The selected Anganwadicentres in each Project were visited. The information regarding the population covered was taken from the Anganwadi worker and a house to house survey was done to identify the child beneficiaries. Selection of the first house for beneficiaries in the area was by simple random technique. The survey was continued till the required number of 8 children were covered in that area. Information regarding the services received under the ICDS scheme for the child was taken from the mother/care taker after taking informed consent. Nutritional status of the children was assessed through height, weight and mid upper arm circumference. Weight was measured by using a Salter’s weighing scale to the nearest 100 grams. Height was measured to the nearest centimetre using a measuring tape.

**Data analysis:** Data was analyzed using Microsoft excel and expressed as percentages and proportions. Tests of significance (Chi square test) were used where ever necessary. A probability value of <0.05 was taken as statistically significant.

**RESULTS**

A total of 360 children in the age group of 6 months to 6 years were studied. 183 (50.8%) of the children were females and 177 (49.2%) were males. About 14% of children were in the age group of 6-12 months, 24.31% in 13-24 month, 30.8% in 25-36 months age group. Remaining of children (30.5%) were in the age group of 37-71 months. Mean age of the children was 30±14 months. About 14% of the mothers of the children were illiterates and 66.6% had an education of less than intermediate level.

Figure-1- depicts coverage of the services under ICDS for the children. It was observed that majority (99.2%) of children had received immunization services followed by preschool education (93.6%), Supplementary nutrition (92%), Growth monitoring (59.7%) and Treatment of minor ailments (15%).
Table 1: Age-wise distribution of malnutrition among children according to Weight for Age

<table>
<thead>
<tr>
<th>Age in months</th>
<th>Well nourished n(%)</th>
<th>Moderately Malnourished n (%)</th>
<th>Severely malnourished n(%)</th>
<th>Total n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-12</td>
<td>44 (16.3)</td>
<td>7 (11.4)</td>
<td>1 (3.3)</td>
<td>52 (14.4)</td>
</tr>
<tr>
<td>13-24</td>
<td>73 (27.1)</td>
<td>10 (16.4)</td>
<td>4 (13.3)</td>
<td>87 (24.2)</td>
</tr>
<tr>
<td>25-36</td>
<td>80 (29.7)</td>
<td>17 (27.9)</td>
<td>14 (46.7)</td>
<td>111 (30.8)</td>
</tr>
<tr>
<td>37-48</td>
<td>55 (20.4)</td>
<td>14 (22.9)</td>
<td>4 (13.3)</td>
<td>73 (20.4)</td>
</tr>
<tr>
<td>49-60</td>
<td>13 (4.8)</td>
<td>11 (18)</td>
<td>5 (16.7)</td>
<td>29 (8)</td>
</tr>
<tr>
<td>61-71</td>
<td>4 (1.5)</td>
<td>2 (3.4)</td>
<td>2 (6.7)</td>
<td>8 (2.2)</td>
</tr>
<tr>
<td>Total</td>
<td>269 (100)</td>
<td>61 (100)</td>
<td>30 (100)</td>
<td>360 (100)</td>
</tr>
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</table>

Majority i.e., 92% of children were receiving supplementary nutrition. Among those who were receiving supplementary nutrition, 94.5% of them were satisfied with the food that is being served at the AWC. About 5% of them were not satisfied with the quality of food. Reasons mentioned for not receiving supplementary nutrition in the remaining 8% of the children were that Anganwadi worker was not cooperative, child not liking the food, not interested in taking the food from the AWC and being new to that area.

Though 99.2% of children were immunized as per Universal Immunization Programme (UIP) schedule, none of the children had received vitamin-A supplementation for the last 18 months. 82.5% of children received immunization at the AWCs followed by 14% in other government facilities like Subcentres/UHCs/PHCs/Govt. hospitals, and 3.5% in the private clinics. The main source of information to mothers regarding immunization was AWW or Anganwadi helper in all the three ICDS Projects followed by ASHAs.

Growth monitoring was done in 59.7% of the children. About half (49.4%) of the mothers were informed about their children’s weight. Only 45.5% of the mothers were counselled about the children’s nutritional status. Only 3.6% of children reporting an illness among the children in last 15 days were being treated at the AWC, 80.5% of children were receiving treatment at a private clinic and the rest of them at other government facilities. However, in response to another question on whether the children had ever received treatment for minor illnesses from the AWW in past 1 year, 15% responded with “yes”. The eligible children (2 ½ years to <6 years) attending non-formal education was 93.6% in our study.

As per fig-2, 47.2% of the children were stunted and 25.3% were underweight. Only 10% were malnourished when MUAC was taken as a measurement of malnutrition. The mean weights and heights of boys were better in all age groups when compared to that of girls. As per table-1, children in the age group of 25-48 months were more
malnourished (51.2%) than children in the other age groups and this difference was statistically highly significant with p value < 0.001 (chi square value - 7.36 with degrees of freedom - 5). About one fourth of the children were underweight. Severe malnourishment was seen in 8.4% of the children. It was also observed that females (50.8%) were slightly more malnourished than males (49.2%). The observed difference was statistically not significant at p<0.05 (Chi square value - 3.943 with 2 degrees of freedom).

Malnutrition was higher (30.8%) among children of illiterate mothers compared to children of mothers with intermediate level of education (23.7%). Malnutrition was least (6%) among children whose mothers were graduates. However the observed difference was not statistically significant at p value =0.05 (Chi square value - 5.799 with degrees of freedom - 8). In our study around 23.8% and 27.5% of the children who belonged to socio economic class IV and V respectively were malnourished. However this difference was statistically not significant at p=0.05 (chi square value - 3.061 and 6 degrees of freedom). In our study, around 25% of children belonging to Hindu households, 33.3% of the Christians and 20% of the Muslims were malnourished. However this difference was also statistically not significant at p=0.05 (Chi square value - 2.534 at 4 degrees of freedom).

**DISCUSSION**

ICDS is a major programme channel for addressing child rights related to survival, protection, participation and development. The programme approaches a holistic child health comprising health, nutrition, and education components for pregnant women, lactating mothers, and children less than six years of age.

Majority of the beneficiaries utilized immunization services from the AWC. Our study results were similar to the HUNGaMA study report 2011 which states that the anganwadi services accessed by the largest proportion of mothers (85.8%) was immunization.[5] Immunization coverage in our study was higher (99.2%) when compared to the findings in other studies where the percentage of fully immunized children were 46%, 68%, 73% and 25.1% respectively.6,7,8,9 Urban setting, literacy status of mothers, small family size may be contributing for this high immunization coverage in our study. Our study results were similar with the study done in Orissa (2006), where the place of immunization had largely been the AWC10. Our study finding is reflective of the co-ordination between the health worker and the anganwadi worker in carrying out the immunization programme successfully. The high coverage at the AWC is also indicative of the acceptability and accessibility of the anganwadi centres among the urban underserved communities.

With regard to supplementary nutrition, our study showed high coverage and the results are similar to the results of previous studies.11,12 High coverage for supplementary nutrition indicates its acceptability in the community. However other studies reported lower coverage of supplementary nutrition.13 Difference in period and place of study could be a reason for this. With regard to growth monitoring, our study results indicate poor growth monitoring and is in concurrence with other studies.14,15 The factors contributing to poor growth monitoring in our study could be non availability of weighing machines, AWWs disinterest in weighing the child regularly and lack of knowledge of the AWW. Our study reported much lower utilization of AWC for treatment of minor ailments when compared to previous studies.10 This may be because of non availability of the medical kit at the AWCs, easy access to private health facilities in the urban areas, and lack of awareness regarding this aspect of the service among the community.

The prevalence of malnutrition and its distribution in relation to age, gender,
mothers education is consistent with earlier studies.5,6,15,16

Limitation:
The study presents the utilization of services as reported by the mothers of the child beneficiaries and may be subject to recall bias.

CONCLUSION
Our study of ICDS scheme in GVMC found that the coverage of services for children were good with regard to nutrition supplementation, immunization and non formal education. However there is scope for improving the other components such as growth monitoring, home visits and nutrition counseling which provide opportunities for promoting child health.

REFERENCES
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