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Utilization of ICDS Scheme in Urban and Rural Area of Latur District with Special Reference to Pediatric Beneficiaries

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Research Article

Abstract: **Introduction:** ICDS is the most unique programme for early childhood care and development encompassing integrated services for development of children below six years, expectant and nursing mothers and adolescent girls living in the most backward, rural, urban and tribal areas. **Materials and method:** The present comparative cross-sectional study was conducted at anganwadis in urban and rural blocks of Latur district. The sample size required for the study was calculated by using a population proportion with specified relative precision. Total 506 children were studied. Information about demographic data and utilization of various services provided under ICDS were collected on pre-structured proforma. **Results:** Out of total 506 children examined 252 were from urban (Latur-Udgir) block and 254 from rural (Nilanga) block. Utilization of supplimentry nutrition was more in urban area (48.03%) than rural area (37.7%) with significant statistical difference. Non formal preschool education service utilization was more in urban area. Whereas immunization, health checkup service, vitamin A prophylaxis and IFA supplementation was more in rural area. Percentage of malnourished children was 46.46% and 55.56% in urban and rural area respectively with statistical significant difference. Majority of the malnourished children in urban and riral area were from grade I malnutrition. **Conclusion:** utilization of supplimentry nutrition and nonfromal preschool education was more in urban area. Utilization of immunization, vitamin A prophylaxis, IFA supplementation and health checkup service was more in rural area.

Introduction:

Integrated Child Development Services (ICDS) Scheme was launched on 2 October, 1975 – the 106th birth anniversary of Mahatma Gandhi–the Father of the Nation. ICDS is the most unique programme for early childhood care and development encompassing integrated services for development of children below six years, expectant and nursing mothers and adolescent girls living in the most backward, rural, urban and tribal areas.[1] Over last 35 years the programme has expanded progressively and at present it has 6719 projects covering 12 lakh anganwadis.[2] Integrated Child Development Services Scheme (ICDS) provides an integrated approach for converging all the basic services for improved child care, early stimulation and learning, health and nutrition, water and environmental sanitation aimed at the young children, expectant and lactating mothers, other women and adolescent girls in a community. ICDS services are provided through a village based centre i.e., the Anganwadi centre. The Anganwadi worker is the most peripheral functionary which implements the programme services at the village/community level.[3]

Beneficiaries of ICDS scheme are Children below six years of age, pregnant women, lactating mothers, women in the age group of 15 to 44 years, adolescent girls up to age of 18 years.[4 and 5]

Activities and services under ICDS scheme:

I. Supplementary nutrition,
II. Immunization,
III. Health check-up,
IV. Referral services,
V. Pre-school non-formal education and
VI. Nutrition & health education.[2,6]

Aims and Objective:

1. To study and compare utilization of services provided under ICDS to children attending Anganwadi Center in urban and rural area of Latur district.
2. To study health and nutritional status of beneficiary children in anganwadis in the study area.

Materials and methods:

The present comparative cross-sectional study was conducted at anganwadis in urban and rural blocks of Latur district. The entire Latur district was covered under ICDS. There are total ten functioning ICDS blocks, one urban (Latur- Udgir block) and nine rural. One rural block (Nilanga) was selected randomly for present study. The sample size required for the study was calculated by using a population proportion with specified relative

precision.[7] For this purpose "Sample size Determination in health studies- a practical manual by WHO" was used. A rough estimate of anticipated population proportion (*P)* was usually sufficient to calculate the sample size. In this study it was not possible to estimate *P, so* a figure of 0.5 (i.e.50%) was used, which was the "safest" choice for the population proportion since the sample size required was largest when $P = 0.5$. As per the table in the manual the anticipated population (P= 50%) with relative precision 10% at confidence level 95% the minimum sample size was 384.[7] Therefore 500 children from the study areas were selected (i.e. 250 children from urban block and 250 children from rural block) for the study. One block was selected randomly for present study. Anganwadis were selected randomly to cover 250 children from the each selected block. In the first anganwadi all the children present on the day of examination were enrolled in the study. Same procedure was applied to next anganwadi till 250 children covered from each selected block. For this purpose total six anganwadis were examined and total 252 children were enrolled in the study from urban block. Similarly 254 children were selected from rural block. Children below six months of age did not report to anganwadis regularly, except for immunization. Hence they were not included in the selection of subjects. The selected anganwadis were visited for data collection after taking permission from appropriate authority. The parents of children from selected anganwadis were called on a scheduled day to anganwadis for interview. Information was collected from the parents of the child beneficiary of the anganwadi with a pre-tested and pre-structured proforma which includes basic information (Age, Sex, Religion, Address, Socioeconomic status, etc.) and the proforma also includes information about immunization status, supplementary nutrition status, etc.) Specific detailed criteria were utilized to assess and quantitate various qualitative and quantitative aspects of utilization of study. The history of present illness or illness in last one month (if any) was asked. Complete physical examination of the child was done including systemic examination i.e. cardiac, respiratory, central nervous system and per abdomen examination. Anthropometry including weight in kg by Salter's weight scale, height, mid arm circumference, head circumference and chest circumference in cm was recorded with the help of measuring tape. After examination treatment was given whenever required. Children requiring referral service were referred to nearest primary health center or medical college hospital for further management. Weight for age was taken as criterion for malnutrition as per Indian Academy of Pediatrics (I.A.P.) classification which was being used in ICDS. Immunization coverage of the children was assessed from immunization cards of children and scrutiny of records.

Results:

Out of total 506 children examined 252 were from urban (Latur-Udgir) block and 254 from rural (Nilanga) block. It was observed that out of total 254 children in the study from urban area 142 were male and 112 were female. Where as in rural area out of 252 children 136 were male and 116 were female. Majority of chldren were majority of children in the study were in 3 to 6 yr of age group (Table no.1). Table no.2 describes utilization of various services provided under ICDS. It was observed that out of the total beneficiaries from urban area 48.03% had utilized supplementary nutrition service satisfactorily. Where as in rural area only 37.7% children had utilized the service and the difference was statistically significant ($\chi^2 = 5.51$, df = 1, $p<0.05$). Non formal preschool education service was utilized better in urban area (57.72%) than rural area (53.79%) but it showed no statistical significant difference. Utilization of health checkup facility was more in rural area (25%) than urban area (21.65%). But no statistical significant difference was observed ($\chi^2 = 0.79$, df = 1, $p>0.05$). Immunization service utilization in urban and rural area was 90.95% and 94.44% respectively with no significant difference. Receipt of vitamin A prophylaxis and IFA prophylaxis was more in rural area than urban area and the difference was statistically significant.($\chi^2 = 4.55$, df = 1, $p<0.05$ and $\chi^2 = 22.04$, df = 1, $p<0.01$ respectively). The prevalence of malnutrition in the present study population was 50.99% (Table no.3). It was seen that percentage of malnourished children was 46.46% and 55.56% in urban and rural area respectively. The proportion of malnourished children was more in rural area as compared to urban area and this difference was statistically significant. ($\chi^2 =4.19$, df = 1, $p< 0.05$). It was seen that in urban and rural area majority of malnourished children were suffering from grade I malnutrition (i.e. 32.28% and 36.91% respectively). The percentage of malnourished children in grade II was 11.03% in urban area and 14.68% in rural area.

Table No. 1: Distribution of Beneficiary Children According Their Age and Sex

AGE(in years)	Urban		Rural	
	Male	Female	Male	Female
6mth to 1 yr	04	09	15	11
>1yr to 3yr	50	43	50	43
>3yr to 6 yr	88	60	71	62
TOTAL	142	112	136	116

Table No. 2: Distribution of Beneficiary Children According Their Utilization of ICDS Services

Services	Urban	Rural	Chi square test result
Supplementary Nutrition	122 (48.03%)	95 (37.7%)	$\chi^2 = 5.51$, df = 1, p<0.05(significant)
Nonformal Preschool Education	86 (57.72%)	71 (53.79%)	$\chi^2 = 0.44$, df = 1, p>0.05(not significant)
Health Checkup Facility	55 (21.65%)	63 (25%)	$\chi^2 = 0.79$, df = 1, p>0.05(not significant)
Immunization Service	231 (90.95%)	238 (94.44%)	$\chi^2 = 2.29$, df = 1, p>0.05(not significant)
Vitamin A Prophylaxis	109 (42.91%)	132 (52.38%)	$\chi^2 = 4.55$, df = 1, p<0.05(significant)
Iron And Folic Acid (IFA) Prophylaxis	09 (03.73%)	38 (16.81%)	$\chi^2 = 22.04$, df = 1, p<0.01(significant)

Table No. 3: Distribution of Beneficiary Children According Their Nutritional Status

Nutritional Status	Urban	Rural	Total
Malnourished	118 (46.46%)	140 (55.56%)	258 (50.99%)
Normal	136 (53.54%)	112 (44.44%)	248 (49.01%)

$\chi^2 = 4.19$, df = 1, p<0.05 (significant)

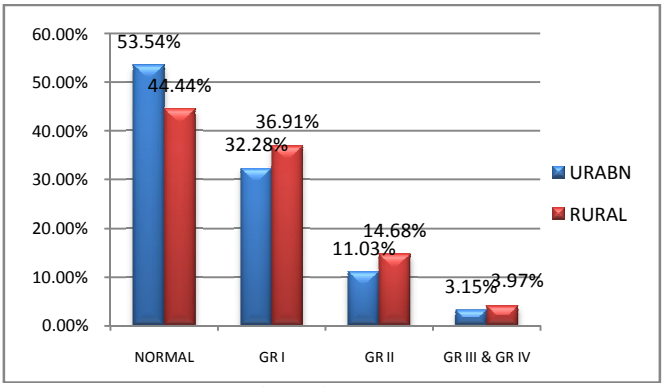

Figure 1: *Distribution of Beneficiary Children According Their Nutritional Grades*

Discussion:

In the present study total 506 children were enrolled. Out of these 254 were from urban area and 252 were from rural area. It was observed that more children from urban area (48.03%) had satisfactorily received supplementary nutrition than rural area (37.7%). The difference in receipt of supplementary nutrition between urban and rural area was statistically significant ($\chi^2 = 5.51$, df = 1, p< 0.05). It may be due to more awareness of mothers in urban area. It was also seen that educational status of mothers and socioeconomic status in urban area was better than rural area. It was observed that more children in urban area (57.72%) had attended Nonformal Preschool Education satisfactorily than rural area (53.79%). But the difference was not statistically significance ($\chi^2 = 0.44$, df = 1, p> 0.05). Similar results were found by *Samridhi Arora et al.*[8] It was seen that only 21.65% children in urban area and 25% children in rural area had received health checkup facility and the difference was not statistically significant ($\chi^2 = 0.79$, df = 1, p> 0.05). The receipt of health check up service for the children in urban and rural area was less than the study reported by *Deepika Nayar al*[9] 39.2% in Fatehpursikri, 57.4% in Khandoli and 27% in Bichpuri in Agra. In almost all anganwadis health check up sessions were not conducted regularly. No unimmunized child found in the study. It was seen than complete utilization of immunization service by the beneficiary children was 92.69%. The complete utilization of immunization services was more in rural area (94.44%) than urban area (90.95%) but difference was not statistically significant. Immunization coverage in urban and rural area was nearly similar to the coverage reported by *Punith Ket al*[10] i.e. (92.11%). Adequate vitamin A prophylaxis was received more in rural area (52.38%) as compared to urban area (42.91%) and the difference was statistically significant. The coverage of vitamin A supplementation in urban and rural area found in this study was more than the study done by *A.I. Benjamin et al*[11] i.e.29%. AWWs in open discussion with them states that in rural areas, multipurpose camps were organized by the sub-centre ANMs. During these camps, Vitamin A supplementation and IFA tablets were also distributed. In addition the sub-centre ANMs distributed Vitamin A supplementation and IFA tablets during their home visits. Therefore the higher coverage might have been observed in rural areas. It was seen that adequate prophylaxis of IFA by children in rural area (16.81%) was higher as compared to urban area (3.73%) and the difference was statistically significant. The receipt of IFA prophylaxis in the rural area in this study was more than in study done by *A.I. Benjamin et al*[11] i.e. 6%. Whereas the overall coverage of IFA prophylaxis in the study was only 10.06%. One of the reasons which were noticed in the low coverage of IFA prophylaxis was inadequate knowledge of anganwadi workers regarding this service in both urban and rural area. Anganwadi workers were using these tablets for therapeutic purpose only and not for prophylaxis. It was observed that malnourished children were more in rural (55.56%) area than urban area (46.46%) and this difference was statistically significant ($\chi^2 = 4.19$, df = 1, p< 0.05). It was because of low educational status of parents, low socioeconomic status. The overall prevalence of malnutrition in study area was 50.99% which was similar to prevalence reported by *Shubhada S. Avachat et al*[12] (50.46%). This percentage was less than

the percentage of malnourished children reported by *Bhatia V et al*[13] (65.87%), S. P. Mitra[14] (61.11%), Anita Khokhar[15] (60.7%), K.D.Bhalani[16] (62.9%). It was observed that majority of malnourished children were from grade I malnutrition. In urban area 32.28% and in rural area 36.91% children were suffering from grade I malnutrition which was nearly similar to reported by S. P. Mitra (2007)[14] (37.6%), *Umesh Kapil et al*[17] (35.2%). The percentage of grade I malnourished children in study area was more than reported by *A. Mittal et al*[18] (26.76%), *Arshad Farooq et al*[19] (24.14%). Though the percentage was more for grade I malnutrition there was decrease in grade II malnutrition.

Conclusion:

Hence it may be concluded that:

In urban area utilization of supplementary nutrition service was more than rural area. The receipt of vitamin A prophylaxis was more in rural area as compared to urban area. Receipt of IFA prophylaxis was poor in both urban and rural area. Complete utilization of immunization service was better in both urban and rural area. The health checkup service was irregularly in both urban and rural. Utilization of Nonformal Preschool Education was more in urban area as compared to rural area but the difference was not significant.

The prevalence of malnutrition was 50.99%. Proportion of malnourished children was more in rural area (55.56%) than urban area (46.46%). Majority of malnourished children in urban and rural were suffering from grade I malnutrition.

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