

ORIGINAL ARTICLE

A rapid assessment of service deliveries at Anganwadi Centres in Ranchi district of JharkhandShamim Haider¹, Chandramani Kumar², Shalini Sunderam³, Mithilesh Kumar⁴, Vivek Kashyap⁵, Shashi Bhushan Singh⁶¹Professor & Head, ²Junior Resident, ³Associate Professor, ⁴Assistant Professor, ⁵Professor, ⁶Lecturer cum Statistician, Department of PSM, Rajendra Institute of Medical Sciences, Ranchi, India – 834009

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Abstract

Introduction: Proper functioning of Anganwadi Centres (AWCs) are important for better service delivery which will lead to healthy mother and child, and ultimately better development of human resources in order to build a healthy and productive nation. **Objectives:** To assess the functioning of AWCs. 2) To measure the quantitative gap in coverage of beneficiaries. 3) To find out bottlenecks in proper service delivery of AWCs. **Methods:** Randomly selected 50 AWCs in Ranchi district were surveyed during July 2012 to September 2012. Semi-structured questionnaire was used to collect information from Anganwadi workers (AWWs). Existing records at AWCs were also accessed to collect data. Statistical analysis: Frequency distribution and chi-square test were done. **Results:** 3941 (>73%) out of 5387 eligible children aged 6-71 months were enrolled at AWCs and 3870 (97.45%) enrolled children were availing food under Supplementary Nutrition Programme (SNP). Growth charts were available and properly maintained at all AWCs however; regular health check-up of all children was done in only 5 (10%) AWCs. Pre-School Education (PSE) materials, mainly in form of charts and posters were available at 47 (94%) AWCs. More than 90% pregnant & lactating women were enrolled at AWCs and almost all centres were providing maternal health services like Ante natal care (ANC) and Tetanus Toxoid (TT) to them. Only 955 (33%) out of 2859 eligible adolescent girls were enrolled in AWCs. Iron-Folic Acid (IFA) supplementations to pregnant women were available at 25 (50%) AWCs. **Conclusions:** Though coverage and supplementary nutrition of children is good; poor coverage, lack of health education and supplementary nutrition of adolescent girls is a matter of concern. Low honorarium, excess workload and poor infrastructure of AWCs are main impediment in proper service delivery.

Key Words

AWCs; Supplementary nutrition; PSE; ANC

Introduction

Integrated Child Development Services (ICDS) scheme started on 2nd October 1975 in 33 project areas and now implemented in whole country; represents one of the world's largest and most unique programme for early childhood development. ICDS scheme is foremost symbol of India's commitment to her children – India's response to the challenge of providing preschool education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other hand (1). The ICDS seeks to lay a solid foundation for the development of human resource by providing an integrated package of early childhood services in the form of supplementary

nutrition, immunization, health checkup, medical referral services, growth monitoring and non-formal pre-school education (2) Children less than 6 years of age, adolescent girls, pregnant & lactating females and women of reproductive age group (15-45 years) are beneficiaries of ICDS scheme. Along with, it also provides immunization, nutrition & health education services to pregnant and lactating women. This approach can break vicious cycle of inter-generational malnutrition in order to achieve an acceptable health status of country.

Anganwadi centres (AWCs) run by anganwadi workers (AWWs), are focal point at the grass root level for proper service delivery to its beneficiaries under

scheme. Anganwadi worker (AWW) manages AWC with the help of Anganwadi helper. Both, AWW and Anganwadi helper are voluntary workers, getting fixed monthly honorarium for their work. Many health related programmes like Kishori Shakti Yojana, SABLA, Indira Gandhi Matritva Sahyog Yojana (IGMSY), Nutritional Programme for Adolescent Girls (NPAG) are using ICDS platform for service delivery. Hence, proper functioning of AWCs is an essential pre requisite to fulfil the objectives of all health related programme delivering its services through AWCs.

Monitoring and evaluation is backbone for success of any health programme or project, as they provide valuable information about functioning and trace the direction of ongoing programme or project. ICDS scheme is being monitored and evaluated by central monitoring unit at National Institute of Public Cooperation and Child Development (NIPCCD) through independent professionals & organizations/institutions in each state/UT. Annual surveys and other studies have indicated significant improvements in health and nutrition status of children in ICDS project areas. Evaluation by NIPCCD in 2006 shows the improvement not only in terms of increased enrolment of beneficiaries for Supplementary Nutrition Programme (SNP) but also decreased prevalence of Low Birth Weight (LBW) babies and severe malnutrition (3). However, malnutrition among children is still prevalent and declining very slowly even after such a long journey of ICDS scheme (51.5% as per NFHS-1 in 1992-93 to 45.9% as per NFHS-3 in 2005-06). The prevalence of malnutrition was relatively static between NFHS-2 and NFHS-3 (decreased by around 1%). Above 56% ever married women in reproductive age group are still anaemic. (3) These figures show that we have to go a long way to achieve reasonable good health status for our children as well as the country. Present study was conducted to assess the functioning of AWCs in Ranchi district of Jharkhand and to find out bottlenecks in proper service deliveries of AWCs.

Aims & Objectives

1. To assess the functioning of AWCs.
2. To measure the quantitative gap in coverage of beneficiaries.
3. To find out bottlenecks in proper service delivery of AWCs

Material and Methods

A cross sectional study was conducted from July 2012 to September 2012 in Ranchi district of Jharkhand by department of Preventive & Social Medicine, RIMS, Ranchi. In Ranchi districts, there are 2832 functional AWCs under 15 project areas. 50 AWCs were randomly

selected for study. Out of 50 AWCs chosen for study, 15 were in rural area, 5 in urban area and 30 in tribal area. Period of data collection was fixed for one month with 25 working days in that month. Many AWCs in Ranchi district are located in hard to reach areas. Number of AWC to be assessed was fixed as two AWC per day keeping in mind the fact of hard to reach areas and distance from RIMS. Hence, we came to a sample size of 50 AWCs. AWWs of selected AWCs were interviewed using pre-tested semi structured questionnaire and existing records were also accessed to assess the various functions of AWCs like supplementary nutrition, immunization activity, growth monitoring, non-formal pre-school education, ante-natal checkup of pregnant women and health education. AWCs were visited on working days between 10 am to 1 pm. Data analysis was done using MS Excel and Epi Info 7. Chi-square test was used to see the association between grading of malnutrition among children of different age group (0-3 years & 3-6 years). Nutritional grading was based on new WHO growth standards (Moderate < -2SD, Severe < -3SD). P-value was considered significant as <0.05.

Results

In our study it is found that 25 (50%) AWCs were running in pucca building whereas 21 (42%) and 4(8%) AWCs were running in semi-pucca and kutcha buildings respectively. Half of the AWCs (50%) were functioning in rented building; remaining AWCs were functioning in either state govt. building (34%) or building provided by community free of cost (16%).

This study also shows that 2155 (nearly 80%) children of age 6 months – 3 years, 1786 (67%) children of age 3 – 6 years and 1029 (around 92%) pregnant and lactating women were enrolled at AWC. Almost all (nearly 99%) enrolled children, pregnant and lactating women were availing food under SNP. However only 955 (34%) adolescent girls were enrolled at AWC and none of them were getting food under SNP ([Table-1](#)).

Growth charts were available at all AWCs and all (100%) Anganwadi Workers (AWWs) were well trained and accurate in plotting the weight on growth chart. Most of the AWWs (90%) were using Salter scale/spring balance for measurement of weight. Mid Upper Arm Circumference (MUAC) scale was available at 20 (40%) AWCs only. All AWWs use to organise counselling session with mothers on child growth after growth monitoring. Regular health checkup of all enrolled children was being done at only 5 (10%) AWCs. All enrolled children less than 6 years of age were fully immunized for their age and immunization cards were properly filled and maintained at all AWCs. All AWCs

were conducting Non Formal Pre School Education (NFPSE) for children aged 3 years – 6 years. Pre-School Education (PSE) materials were available at almost all 47 (94%) AWCs. Charts and posters were being used as PSE material at all 47 AWCs. However, significant numbers of AWCs were also using other methods like play way (40) and role play (39) methods ([Table-2](#)).

With available data on grading of malnutrition (Moderately and Severely Underweight) among different age group of children (0-3 years, 3-6 years), we looked for the association between malnutrition and age of children. However, there was no statistically significant association (chi-square= 3.77, df = 2, p = 0.15) between malnutrition and different age group of children ([Table-3](#)).

At 43 (86%) AWCs, all enrolled pregnant women were registered early in pregnancy (in first trimester) for regular ANC and at 46 (92%) AWCs all pregnant women were receiving any ANC (i.e. at least one ANC). 47 (94%) of AWCs were providing 2 doses of tetanus toxoid to all enrolled pregnant women. 26 (52%) AWCs were providing 100 days IFA supplementation to all pregnant women. However, IFA tablets to adolescent girls were being provided at only 22 (44%) AWCs.

All AWCs were organizing Nutrition and Health Education (NHED) sessions for women in reproductive age group around 3 to 5 times every quarter of a year. Immunization, Anaemia, Nutrition, Personal Hygiene, Environmental sanitation, Family planning practices and common illness prevalent in community were main theme for NHED sessions. Most of the AWCs (94%) were maintaining various records and registers properly and referral slips were available at 40 (80%) of AWCs. Poor infrastructure of AWCs was the main problem in providing proper service delivery as stated by 38 (76%) AWWs. Significant proportion of AWWs also consider low honorarium (74%) and excess workload (60%) as other important obstacle in proper service delivery. Only 4 (8%) AWWs said that there is no difficulty in running AWCs ([Table-4](#)).

Discussion

Significant proportions of beneficiaries were getting food under supplementary nutrition programme (SNP) except adolescent girls as they were not included in SNP. In our study it was found that all AWWs (100%) were accurate in growth monitoring and plotting the growth chart which is better than the result shown by Chattopadhyay D where according to his study, about two third of the Anganwadi workers had average skills regarding growth monitoring (4). However, Chattopadhyay D conducted his study in 1998-99, so

improvement found in our study may be due to government's effort to improve the ICDS services across the country. ANC services are not very encouraging in our study, and every pregnant woman was not getting minimum three ANC during her pregnancy. Interrupted supply of IFA tablets at the AWCs was the reason for the non-distribution of IFA tablets at around half of the AWCs to pregnant women and adolescent girls. In a study conducted by Meenal et al, it was found that 75% AWWs complained of inadequate honorarium. Our study shows similar results where 74% AWWs were complaining about low honorarium⁵. However, poor infrastructure of AWCs was problem for 76% of AWWs in our study which was far more than the study done by Meenal et al, where only 32.14% AWWs complained about infrastructure related problem (5). This difference may be largely due to fact that above mentioned study was carried out in urban ICDS project whereas most of the AWCs in our study belong to rural areas including difficult hilly and tribal area. Problem of excess workload was almost similar in both studies i.e. 50% and 60% in above mentioned study and our study respectively. However, felt workload was more (60%) in comparison to another study by Gaurav Desai et al (33%) conducted in Vadora district, Gujrat in 2010 (6). Present study was conducted on a small sample and results of the study can give a glimpse of current situation and encourage in conducting a large study to explore the situation further.

Conclusion

Though overall coverage and supplementary nutrition of children is good, those of children in age group 3 – 6 years need to be strengthened further. IFA supplementation to pregnant women is a matter of concern as prevalence of anaemia is very high among this vulnerable group. Low honorarium and excess workload are main obstacles in proper service delivery by AWCs.

Recommendation

Though criteria for establishment of AWCs in terms of population have been relaxed especially in hilly and tribal area; reason for excess workload should be explored.

Authors Contribution

SH: Conception and design of study, interpretation of data, drafting and critical revision of article, final approval of version to be published. CK: Conception and design of study, Acquisition of data, analysis and interpretation of data, critical revision of article, final

approval of version to be published. SS: Conception and design of study, interpretation of data, drafting and critical revision of article, final approval of version to be published. MK: Conception and design of study, acquisition of data, drafting and critical revision of article, final approval of version to be published. VK: Conception and design of study, interpretation of data, drafting and critical revision of article, final approval of version to be published. SBS: Conception and design of study, analysis and interpretation of data, drafting and critical revision of article, final approval of version to be published

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Tables

TABLE NO. 1: NUMBER AND PERCENTAGE OF ENROLLED BENEFICIARIES GETTING SUPPLEMENTARY NUTRITION

Beneficiaries		Total number of eligible population	Total number (%) of enrolled population	Number (%) of enrolled beneficiaries getting supplementary nutrition
Children	6 months-3 years	2716	2155 (79.34%)	2133 (98.97%)
	3 years- 6 years	2671	1786 (66.86%)	1737 (97.25%)
Pregnant female		531	488 (91.90%)	485 (99.38%)
Lactating female		579	541 (93.43%)	537 (99.26%)
Adolescent girls		2859	955 (33.40%)	Nil

TABLE NO. 2 SERVICE DELIVERY AT ANGANWADI CENTRES OTHER THAN SUPPLEMENTARY NUTRITION (N=50)

Service delivery at Anganwadi centres	Number(%) of AWCs
Availability of growth charts at AWC	
Available	50 (100%)
Scale used for growth monitoring (multiple response possible)	
Salter scale/Spring balance	45 (90%)
Electronic weighing machine	15 (30%)
MUAC scale	20 (40%)
Regular health check-up of children at AWC	
All children	05 (10%)
Half or more than half of children	02 (04%)
No or less than half of children	43 (86%)
Immunization of children	
All children immunized for age	50 (100%)
Availability of PSE material	
Available	47 (94%)
Not available	03 (06%)
PSE methods used at Anganwadi centres (multiple response possible)	
Posters/Charts	47 (94%)
Play Way	40 (80%)
Role Play	39 (78%)
Any other*	15 (30%)

Immunization against tetanus of pregnant women at AWCs	
All women	47 (94%)
More than half of women	03 (06%)
Early registration of pregnancy at AWC (in first 3 months)	
All women	43 (86%)
More than half women	04 (08%)
Less than half women	03 (06%)
IFA tablets given to pregnant women	
All women	25 (50%)
More than half women	01 (02%)
No or less than half of women	24 (48%)
Any ANC given to pregnant women	
All women	46 (92%)
More than half of women	02 (04%)
Less than half of women	02 (04%)

TABLE NO. 3 MALNUTRITION IN DIFFERENT AGE GROUP OF CHILDREN (GROWTH RECORD OF ALL CHILDREN WERE NOT AVAILABLE)

Age group	Grade of Nutrition				Total
		Normal	Moderately underweight	Severely Underweight	
0-3 years (n=1555)		1009 (64.88%)	464 (29.83%)	82 (5.27%)	1555
3-6 years (n=967)		636 (65.77%)	298 (30.81%)	35 (3.61%)	967
Total (n=2522)		1645	762	117	2522

(chi-square = 3.77, df = 2, p = 0.15)

TABLE NO. 4 PROBLEM FACED BY AWWs IN RUNNING AWC (N=50)

Problem faced by AWWs (multiple response possible)	Frequency (%)
Low honorarium	37 (74%)
Excess workload	30 (60%)
Poor infrastructure of AWC	38 (76%)
Any other**	08 (16%)
No problem	04 (08%)

** Lack of interest of ANM, Lack of support/Indifferent attitude of the community, Lack of funds