A Study to Assess the Gaps in the Knowledge and Practices of Anganwadi Workers in a Rural Area of Meerut - A Situational Analysis on Umbrella ICDS Scheme

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Abstract: _Context: Anganwadi centres established under ICDS Scheme has been planned to be used as platforms for implementing a series of national health programs. To understand the knowledge of anganwadi workers for the existing scheme and proposed programs and its implication on the attitude and practices the present study has been planned. Settings and Design: The present cross sectional descriptive study has been undertaken in a rural block of Meerut from January 2017 to June 2017 covering all anganwadi and anganwadi centres. (n = 180). Methods and Material: A list of anganwadi centres and workers was obtained from Block level CDPO office and the anganwadi workers were contacted prior to the day of data collection. The data on socio demographic factors, knowledge and practices carried under ICDS scheme, Bal Swasthya Poshan Mah (BSPM), National Iron Plus initiative (NIPI), Poshan Abhiyan etc was captured using structured questionnaire by a single observer. The data was collected and analysed using epi info software. Results: The results we thus obtained from the present study revealed that knowledge regarding various activities is adequate among the anganwadi workers but it's on ground implementation is lacking. Conclusions: The present study conclude that there is a major knowledge – practice gap among the anganwadi workers and there is a need for a robust mechanism to strengthen the existing processes for on ground implementation of the schemes._

Keywords: Anganwadi Workers, Anganwadi Centres, ICDS, Rural, Meerut

1. Introduction

Integrated child development services (ICDS) scheme, launched in 1975 with 33 projects and 4891 Anganwadi centres and was gradually expanded to 7075 projects and 13,77,995 operational anganwadi centres in 2019. Presently ICDS services are being availed by 836.25 lakh beneficiaries of which 305.09 lakh beneficiaries are pre-school children.[1]

Integrated child development services scheme a flagship program under Ministry of Women and Child development is one of the largest and unique program for early child care and development. It forecast India's commitment to its children and nursing mothers through prevention and early detection of malnutrition and anemia, providing informal education to children and providing health care and referral services including support for routine immunization program.[2]

The integration of ICDS Scheme with various ministries and health system has provided opportunity to launch various nutritional and health related program using Anganwadi Center and Anganwadi Worker as the platform. Rashtriya Bal Swasthya Karyakaram (RBSK), Bal Swasthya Poshan Mah (BSPM), National Iron Plus Initiative (NIPI) and recently launched Poshan Abhiyan are some of the examples of integration of ICDS Scheme with Health programs.[3]

The gaps between the trainings provided to the anganwadi workers and its implementation on the ground is being highlighted in the studies by Thakur et al 4, Vakilna et al 5, and Joshi et al 6. These studies conducted across different states of India revealed that despite the knowledge of the anganwadi workers for the various ICDS activities is adequate (> 90 %) but the implementation of this knowledge into practices is much less (40 % – 60 %).

The rising scope and responsibilities of anganwadi workers under ICDS and the gaps in converting knowledge into action has raised the question on the success of existing scheme and proposed programs. Empowering Anganwadi Workers at this junction where the country is relying on them as an important component of health system to combat the challenges of malnutrition and meet the needs of early childhood care and development is the demand of the hour.

2. Aim

The aim of the present study has been planned to assess the gaps in the knowledge and its implications on the attitude and practices of anganwadi workers in implementation of ICDS scheme and other programs through anganwadi centers.

3. Methodology

This study has been undertaken to explore the gaps in the knowledge of anganwadi workers and how it is influencing their attitude and practices in delivering ICDS services in an area about which no descriptive survey is available.

3.1 Study Design and location

A cross sectional descriptive study was carried out at the selected anganwadi centers of Machhra block in Meerut District from January 2017 to June 2017. The selected block is also the rural field practice area under the Department of Community Medicine, LLRM medical College, Meerut.

3.2 Study population and sample size

Machhra block of Meerut comprises of 196 anganwadi centers and anganwadi workers spread across 6 PHCs and 46 villages covering a population of around two lakhs. To understand the overall situation of the block and prevent selection bias all the anganwadi workers were included in the present study. A prior written permission for this study was obtained from Child Development Project Officer (CDPO), Machhra and the Medical officer in-charge of CHC Machhra Block to carry this study in their area.

3.3 Data Collection and analysis

The data was collected using semi structured questionnaire with open and closed ended questions to gather information regarding socio demography, assess knowledge of anganwadi workers and their implications in their attitude and practice towards delivering ICDS services and other programs. The questions were developed after reviewing the literature and formulated into English and Hindi (local language) for better understanding of the anganwadi workers. Piloting of the questionnaire was carried on 10 % of the study population (18 Anganwadi Workers) to remove ambiguous questions and ensure validity and reliability of the study questionnaire. This exercise further helped to find the practicability, feasibility and acceptability of the study.

The validated questionnaire was then administered on all anganwadi workers in the block. A total of 180 anganwadi workers were being interviewed for the study while rest 16 were not available on the day of visit to the Anganwadi center. Prior to interview an informed consent was obtained from each anganwadi worker with assurance of maintaining confidentiality of their name and responses. To maintain the quality of the data and prevent observer bias, the observations and interviews were carried out by single researcher (first author).

The data thus collected was compiled on MS Excel 2013 and analyzed by epi info software version 3.7.2.

3.4 Ethical Consideration

The ethical clearance for the present study was obtained from the Institutional Ethical Committee of LLRM Medical College, Meerut. Ethical principle of self-determination was maintained and subjects were treated as autonomous sources by informing them about the study and allowing them to voluntarily choose to participate.

4. Results

4.1 Socio Demographic Profile

The present study carried out among all the anganwadi workers in a rural block of Meerut. A total of 180 anganwadi workers were included in the study. The socio demographic profile of the anganwadi workers is depicted in Table 1. Majority of Anganwadi workers were in the age group of 30 – 39 and 40 – 49 years (76 (43 %) and 60 (33 %)) and according to education most of them were graduate 82 (46 %).

ICDS scheme provide opportunity to appoint anganwadi worker from the same village but this study found that 8 (4 %) anganwadi workers were recruited from different villages who travel > 5 kilometers daily to provide services. Socio economic classification of anganwadi workers was calculated using BG Prasad socio economic scale (CPI Index November, 2017 with base of 2000) and it revealed majority of them belong to class 2 of the classification (108 (60 %)).

Table 1: Socio demographic characteristics of anganwadi workers

Socio demographic factor	Frequency (n = 180)	Percentage
Age		
20 -29	25	14
30 -39	76	43
40 -49	60	33
≥ 50	19	11
Educational Qualification		
High School or less	42	23
Secondary	56	31
Graduate	82	46
Marital Status		
Married	169	94
Unmarried	11	6
Distance from the centre		
Same Village	172	96
Different Village	8	4
Religion		
Hindu	148	82
Muslim	32	18
Socio Economic Status		
Class 1	13	7
Class 2	108	60
Class 3	47	26
Class 4	12	7

4.2 Availability of resources and their maintenance

The table 2 focuses on the availability of resources and their maintenance at anganwadi center. The results we obtained after the assessment, highlights that majority of the resources are in place at the anganwadi centers but their maintenance is an issue. Weighing machine an important part for proper implementation of ICDS is found to be nonfunctional in more than 50 % of the centers. Growth charts though available with almost all anganwadi workers they were

incomplete in majority of the cases (completed by merely 13 % anganwadi workers).

Table 2: Logistics in Anganwadi Centers

Logistic	Present (%)	Maintained (%)
Weighing Machine	179 (99 %)	88 (49 %)
Toy Kit	177 (98 %)	94 (52 %)
Medicine Kit	170 (94 %)	114 (63 %)
Registers		
6 months – 3 years	170 (94 %)	169 (94 %)
3 years – 6 years	172 (96 %)	169 (94 %)
Immunization	170 (94 %)	169 (94 %)
Food supply	170 (94 %)	168 (93 %)
Pregnancy	171 (95 %)	169 (94 %)
Lactating Women	171 (95 %)	169 (94 %)
Growth Chart	165 (92 %)	24 (13 %)
Daily Diary	177 (98 %)	86 (48 %)

4.3 Assessment of Knowledge

The present study assessed knowledge of anganwadi worker for the existing services delivered at anganwadi workers and their understanding of the components for the other program. The knowledge was assessed for immunization services, Vitamin A (Part of Immunization services and also for BSPM), Breast feeding, antenatal care (under ICDS and JSY), Iron and folic acid (Under NIPI) and malnutrition (for ICDS and Poshan Abhiyan) as shown in Table 3. The overall knowledge of anganwadi workers was found to be satisfactory for most of the factors it was above 90 %. But knowledge regarding immunization schedule (76%), advantages of breast milk for baby (53 %) and mother (27 %), timings for initiating breast feeding after delivery (42 %) and antenatal care (50 %) were found to be below satisfaction level.

Table 3: Assessment of knowledge of the anganwadi workers

Services	Satisfactory results (%)(n = 180)
Immunization Services	
Knowledge about Immunization Schedule	136 (76 %)
Knowledge about dose of polio vaccine	171 (95 %)
Knowledge about Vitamin A as part of Immunization Schedule	169 (94 %)
Importance of Vitamin A	169 (94 %)
Breast Feeding	
Exclusive Breast Feeding	177 (98 %)
Duration	176 (98 %)
Advantages of breast milk for baby	96 (53 %)
Advantages of breast milk for Mother	49 (27 %)
Complementary Feeding	178 (99 %)
Time after delivery to initiate breast feeding	76 (42 %)
Constituents of complementary feeding	179 (99 %)
Antenatal Care	
Number of minimum antenatal visits required	125 (69 %)
TT Injections	124 (69 %)
IFA Tablets	143 (79 %)
Malnutrition and Growth Monitoring	
Regular Monitoring of weight	180 (100 %)
Ability to read growth chart	169 (94 %)
Knowledge of road to health	21 (12 %)
Fever	
Knowledge about normal temperature	52 (29 %)
Knowledge about medicine for fever	159 (88 %)
ORS	
Knowledge about ORS	170 (94 %)

4.4 Assessment of Practices

The gaps in implementation of services by anganwadi workers are being depicted in table 4. Majority of the anganwadi workers measures the weight of the children monthly (43 %) or three monthly (35 %) intervals but a clarity about the fact why weight is taken at such intervals was missing. The present study reveal that majority of anganwadi workers (94 %) know that growth charts are used for assessing malnutrition in the children and they bring this knowledge into practice but they don't know what to do if a child is found to be malnourished (70 %).

Table 4: Assessment of practices by anganwadi workers

Practices	Indicators	Responses (N = 180)
Weight Monitoring		
Frequency of Weight monitoring	Monthly	77 (43 %)
	3 Monthly	63 (35 %)
	Both	34 (19 %)
	Other	6 (3 %)
Method used for diagnosing malnutrition	Growth Chart	169 (94 %)
	Mid arm circumference	1 (1%)
	Don't Know	10 (6 %)
Treatment of common diseases		
If a child is found to be malnourished what are the next steps you usually take	Referral	0
	Double the food supply	39 (22 %)
	Both Referral and Double the food supply	15 (8 %)
	Do not know	126 (70 %)
If you find a child having diarrhoea what will you do	ORS	164 (91 %)
	Referral	16 (9 %)

4.5 Satisfaction of anganwadi workers

Average salary given to each anganwadi worker was found to be Rs 3200/- per month which was even released at an interval of 3.4 months ($\pm$ 0.9 months). Apart from less salary and irregularity in release of payments the workload of maintaining records and challenge of implementing various national programs (along with ICDS) lead to high dissatisfaction among the ICDS scheme implementers.

Table 5: Situation of anganwadi Workers and their job satisfaction

Particulars		Response
Situation analysis		
Salary / month		Rs 3200/ month
Salary provided on time		Yes - 55 (31 %)
Average delay in salary		3.4 $\pm$ 0.9 months (n = 125)
Satisfaction		
Are you satisfied with the job	Yes	43 (24 %)
	No	137 (76 %)
Reason for poor satisfaction (n = 137)		
Less salary		82 (96 %)
Excessive Work		55 (4 %)

5. Discussion

The present study was carried out among 180 anganwadi workers and anganwadi centers distributed across 46 villages of Machhra Block of Meerut. The sample size selected for the present study was quite similar to other studies Thakur et al (2015) [4], Chaudhary et al (2017) [7], Andey et al (2019) [8] and Akshatha et al (2019) [9].

The present study aimed to assess the situation of anganwadi centers, the knowledge attitude and practices of anganwadi workers for ICDS Scheme and other health programs implemented through anganwadi center while the other similar studies Thakur et al [4], Vakilna et al [6], Chaudhary et al [7], Andey et al [8] and Akshatha et al [9] which assessed the knowledge attitude and practices limited to ICDS Scheme only.

On reviewing the literature and understanding the guidelines of the programs a structured questionnaire prepared which was contextualized after piloting with a selected sample of anganwadi workers.

Majority of the anganwadi workers in the present block were above 35 years of age (67 %) which is similar to Thakur et al (58 %) [4] and Vakilna et al (87 %) [6] while higher than the studies by Jan et al (48 %) [10]. The educational qualification of the anganwadi workers was found to be graduate and above in 46 % which were much higher than the results of studies Thakur et al [4], Joshi et al [5], Vakilna et al [6], Andey et al [8] and Jan et al [10].

When we assess the logistics, weighing machine was found to be present with almost all anganwadi centers (99 %), similar results were reported by Thakur et al [4] and Joshi et al [5] (100 %). No study reported the condition of these machine, which was found to be working in only half the anganwadi centers.

The toy kit which is used for providing informal education to the children was almost available with all anganwadi centers (97 %) but was maintained in only 53 % of the anganwadi centers. Similar result was reported by Joshi et al [5] where toy kit was present and maintained by only 45 % of anganwadi workers. The medicine kit for common ailments was present with all anganwadi workers (90%) but refilling of the kit with medicines was missing in 31 % of them. Thakur et al assess the availability of the kit which was found to be 100 % but no study evaluated the condition of the medicines.

When the records were assessed for 6 registers, they were present and well maintained with majority of anganwadi workers indicating the completeness of paper work. Growth chart though was present with all anganwadi workers but entry of children and the marking on the growth chart for road to health was missing in 85 % of the anganwadi records. The quality of growth charts was not found to be assessed by any study.

The knowledge of anganwadi workers was assessed for immunization, breast feeding practices, iron and folic acid tablets, malnutrition, growth charts and treatment for minor ailments and the results were found to be satisfactory in majority of anganwadi workers (> 75 %) but when assessed for the importance of these practices, the rationale was missing indicating lack of clarity in training. Similar results were reported by Chaudhary et al [7], Andey et al [8], Akshatha et al [9] and Baliga et al [11] who assess the knowledge for the above mentioned parameters but no study evaluated the rationale for these practices.

We evaluated the anganwadi workers for the practices regarding weighing the children, monitoring children for malnutrition and what actions they took if any child found to be malnourished. The results were quite alarming as majority of them do nothing despite a child is found to be malnourished indicating a huge gap in their knowledge and practices.

An average anganwadi worker is getting salary of Rs 3200/- which is reported to be delayed on an average by 3 months. 61 % of the anganwadi workers reported this issue of delayed payment while 15 % of the anganwadi workers of Himachal Pradesh (Thakur et al [4]) reported delay in payments.

In the present study we found due to low salary amount and irregularity while releasing salary has caused a huge dissatisfaction among anganwadi workers (76 %) which is much higher than the results reported by Thakur et al (27%) [4] and Joshi et al (18 %) [5] but similar to Chaudhary et al (80 %) [7].

6. Conclusion and recommendations

The present study concludes that the knowledge of anganwadi workers in majority of cases was adequate and meeting the requirements of the various programs implemented through anganwadi workers. But the implementation of the knowledge on the ground is markedly missing in the practices. This knowledge – practice gap in the implementation of ICDS will further affect the execution of other programs which are or which will be using anganwadi center and anganwadi worker as a platform. In addition, majority of the program implementation is on paper and in reports while in reality its facing challenges of non-functional instruments and incomplete and outdated kits.

This study thus recommends need for a robust mechanism for monitoring on ground implementation of the project activities by anganwadi workers which should be evaluated through process observations alongside the report submission.

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Author Profile

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