



ASSESSMENT OF INFRASTRUCTURE AND SUPPLIES AT ANGANWADI CENTERS UNDER BADAGAON BLOCK, JHANSI: AN OBSERVATIONAL STUDY

Community Medicine

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ABSTRACT

Background: Launched on 2nd October, 1975, the Integrated Child Development Services (ICDS) Scheme is a response to the challenge of providing pre-school non-formal education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other.

Objectives: To evaluate the infrastructure of anganwadi centers and to assess the supplies to anganwadi centers.

Materials and Methods: An observational cross-sectional study conducted at 30 AWCs under Badagaon block in Jhansi district using a pretested structured questionnaire. Data analysis was performed using EpiInfo.

Results: Deficiency in infrastructure and irregularity in supplies was observed at most of the centers.

Conclusion: These deficiencies have a significant effect on utilization by the beneficiaries. The condition of supply does not appear to have improved over the years and it may work as a deterrent for the beneficiaries to attend the centers.

KEYWORDS

ICDS, Anganwadi

INTRODUCTION

UNICEF states that investing financial resources to help children survive and develop to their full potential is, first and foremost, a moral imperative (1). The foundation of any person's physical, psychological and social growth is laid in the childhood of that individual. It is the most crucial time when an individual needs special care mainly regarding nutrition and education. NFHS 4 (2015-16) reveals that infant mortality in our country is 41 per 1000 live births and under five mortality is 50 per 1000 live births (2). Keeping these issues in mind, launched on 2nd October, 1975, the Integrated Child Development Services (ICDS) Scheme is one of the flagship programmes of the Government of India. It is the foremost symbol of country's commitment to its children and nursing mothers, as a response to the challenge of providing pre-school non-formal education on one hand and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity and mortality on the other. The beneficiaries under the Scheme are children in the age group of 0-6 years, pregnant women and lactating mothers. All the services in the ICDS Scheme are provided by the Anganwadi Worker (AWW). The infrastructure of AWCs and the supply of required materials act as input to produce the desired output. Proper infrastructure and regular supply of needed equipments is therefore necessary for proper functioning of the AWCs.

Objectives

- To evaluate the infrastructure of anganwadi centers.
- To assess the supplies to anganwadi centers.

Materials and Methods

The present observational, cross-sectional, community-based study was conducted at the anganwadi centers under Badagaon block of district Jhansi. Under Badagaon block there are a total of 147 anganwadi centers. Out of these 147 anganwadi centers, 30 were selected keeping feasibility in mind by simple random sampling using lottery method. The study was carried out from April 2017 to September 2017. Anganwadi Centers were observed for the infrastructure and AWWs were interviewed to assess the supply of required materials. Anganwadi workers of the selected centers were interviewed in Hindi language using a structured questionnaire which was pretested. The inclusion criteria for the center and the worker were-

- Selected in the lottery method.
- Centers open during the visit.
- Workers available at the time of data collection.
- Willing to participate in the study.

All the selected centers were open during the first visit to them and AWWs of those centers were also present during the visit and none of

the anganwadi workers objected for participation in the study after the procedure and purpose was explained to them. Permission to conduct this research study in the community was taken from the Institutional Ethics Committee of Maharani Laxmi Bai Medical College, Jhansi. Informed verbal consent was taken from the anganwadi workers and then face to face interview was done. To maintain the anonymity, strict confidentiality with regard to their information was assured to every respondent. The responses were entered in Epi Info software and the collected data were consolidated on visual dashboard and further analyzed in Epi Info version 7.1.3.0. Frequency of data was presented in the form of tables and graphs. The data were analyzed by using descriptive statistics.

Results

Table 1: Infrastructure of Anganwadi Centers (N=30)

Building	Frequency	Percentage
In Govt. School Building	13	43.33
Own Building	5	16.67
Panchayat Bhawan	5	16.67
Rented Building	4	13.33
Anganwadi Worker's Home	3	10.00
Condition	Yes (No./Percentage)	No (No./Percentage)
Needs repair	12 (40)	18 (60)
Water proof	29 (96.67)	1 (3.33)
Adequately ventilated	29 (96.67)	1 (3.33)
Well lit	29 (96.67)	1 (3.33)
Boundary wall	9 (30)	21 (70)
Facility	Yes (No./Percentage)	No (No./Percentage)
Electricity connection	30 (100)	0 (0)
Fan	12 (40)	18 (60)
Safe drinking water	28 (93.33)	2 (6.67)
Toilet	20 (66.67)	10 (33.33)
Indoor activity space (whether adequate)	12 (40)	18 (60)
Kitchen/separate space for cooking	12 (40)	18 (60)
Storage facility for food	2 (6.67)	28 (93.33)

Table 1 shows where the centers were located and their infrastructure. Most of the centers (43.33%) were located in the a government school

building followed by panchayat bhawan and own building. 4 (13.33%) centers were housed in rented buildings with rent ranging from 300 to 500 rupees per month. 3 (10%) centers were being operated at anganwadi workers' homes. All of the centers were of concrete (pucca) type. Fair level of cleanliness was maintained at all the centers.

40% of the centers needed a repair as the plaster was coming off at many places from the walls, rest 60% were in good condition. Almost all the centers (96.67%) were water proof, adequately ventilated and well lit. Only 1 center was having inadequate ventilation and improper light for reading. This one center was also having water seepage problem. 30% centers were having a complete boundary wall around them whereas the rest 70% were not having a boundary wall. Near two of the centers which were not having a boundary wall, open garbage disposal and stinking uncovered drains were observed.

Electricity connection was present in 100% of the centers but ceiling fan was available in only 40% of the centers. Safe drinking water for children was available in 28 (93.33%) of the centers. These 28 centers included 27 centers having water storage facility as shown in the previous table and at one center the anganwadi worker was bringing drinking water from her home in bottles.

Toilet facility was present in only 66.67% centers. These 20 (66.67%) centers included 13 centers that were running in school buildings, 3 that were present at anganwadi worker's home and 4 which were running in rented buildings. Independent centers which were having their independent building (5 in number) were not having toilet facilities along with those running in panchayat bhawan.

Indoor space for activity was found adequate in only 40% of the centers and same was the case with kitchen/separate space for cooking. Separate space for cooking was observed in centers mainly running in govt. school buildings or those which were running at anganwadi worker's home.

Food packets that were received at the centers from the block were stored properly at 93.33% of the centers and the rest 6.67% centers were storing food packets without proper hygiene. Storage facility for equipments like toys, cooking vessels etc. was observed at 90% centers whereas it was absent in 10% of the centers.

Table 2: Availability and Quality of Equipments at the Centers (N=30)

Equipment	Present		Absent
	Good Quality	Poor Quality	
Medicine kit/First aid box	0 (0)	3 (10)	27 (90)
Weighing scale	27 (90)	2 (6.67)	1 (3.33)
Wall charts and paintings	28 (93.33)	2 (6.67)	0 (0)
Indoor play equipments	15 (50)	15 (50)	0 (0)
Mats for sitting	24 (80)	6 (20)	0 (0)
Vessels for cooking	21 (70)	6 (20)	3 (10)
Vessels for storing drinking water	27 (90)	0 (0)	3 (10)

Regarding the materials available at the centers, medicine kit/first aid box was present at only 10% of the centers and that too was of poor quality. Most of the medicines were expired or packets torn. Weighing scale of good quality was present in 90% of the centers. At 6.67% of the centers it was not of good quality and having error in measurement of weight. There was only one center which reported not having a weighing scale at the time of visit. The anganwadi worker of this center stated that she had requested for a weighing scale one week earlier.

Wall charts and paintings were present in all of the centers but they were of poor quality in 2 (96.67%) centers. Adequate number of charts and paintings was present at the centers for teaching children about alphabets, numbers, names of animals, vegetables etc.

Toys were present at all the centers although they were not of good quality at 50% of the centers. Mats for sitting of children were present at all of the centers. 20% centers had mats of poor quality which were torn and not suitable for use. Vessels for cooking were found in 90% of the centers and 10% centers were not having cooking vessels.

Although vessels were present at 90% of the centers (including 20% centers having poor quality vessels), cooking was not being done at most of the centers as they were providing ready to eat food packets. Only one center which was running at anganwadi worker's home was providing cooked meal to the children.

Vessels for storing drinking water were present in 90% of the centers. These vessels were kept covered and a long handled mug was present to take out water from them. 10% centers were not having drinking water storage facility.

Table 3: Supply of Supplementary Food and Medicines (N=30)

Supplies	Very Irregular	Irregular	Regular
Supplementary food	5 (16.67)	10 (33.33)	15 (50)
Medicines	15 (50)	13 (43.33)	2 (6.67)

The anganwadi workers were questioned about regularity and timeliness of receiving of supplementary food and medicines. Table 3 shows that 50% of the centers received supplementary food items on a fairly regular basis. Workers of 33.33% centers reported that food supply was irregular and 16.67% centers received it on very irregular basis. Supplementary food is supplied to the centers from the block office at Badagaon.

When they workers were enquired about medicines supply like ORS sachets, tablets of paracetamol, 50% workers reported that its supply was highly irregular and 43.33% reported it irregular. Only 2 (6.67%) centers reported receiving these supplies on a fairly regular basis. Supply of iron folic acid tablets was however quite regular at all of the centers.

DISCUSSION

The 2015 NITI Aayog report (3) states a higher percentage (60%) of centers running in rented accommodations as does the study by Nidhi Thomas et al (4) (2015) which shows that 8 out of 9 AWCs studied were in rented rooms. All the centers (100%) in our study were of concrete (pucca) type as compared to 84.2% of rural AWCs and 77.2% of urban AWCs which were pucca type in the study by Datta SS et al (5) (2010) and 63.6% of pucca type centers in the study by Anas Ahmad Khan et al (6) (2016). Similar to our findings, Madhavi H et al in 2011 also reported all the centers to be of pucca type (7). All the centers in our study were having electricity connection but fan was present in only 40% centers (Table 1). This is in contrast to the study conducted by Madhavi H et al (7) (2011) in which only 20% centers had electricity supply and the study by Anas Ahmad Khan et al (6) (2016) in which none of the AWCs had electricity supply. Safe drinking water was available in 93.33% of centers and toilet facility was found only in 66.67% of centers in our study (Table 1). In the PEO report (8) (1976), it was seen that toilet facility was present in 88.9% centers with only 22.2% centers having piped water supply. 46.66% AWCs were having sanitary toilets in the study by Madhavi H et al (7) (2011). Almost similar percentage of AWCs (86.3%) were having drinking water facility in the NITI Aayog report (3) in 2015 compared to our study. A very less percentage of AWCs (18.2%) were having toilet facility in the study by Anas Ahmad Khan et al (6) (2016) in contrast to our study. Chudasama RK et al (9) (2016) reported the availability of separate toilet in 65.3% rural areas and in 62.9% urban areas which is similar to our study.

With respect to availability and quality of equipments, it was seen in the present study that good quality wall charts and painting were available in most (93.33%) of the centers. Good quality mats for sitting were available in 80% centers and vessels for cooking were present in 90% of centers with only 70% having utensils of good quality (Table 2). This percentage was higher compared to the studies conducted by Khan AA et al (6) (2016) in which cooking utensils were present in 27.3% centers and by Dixit S et al (10) (2010) in which utensils were present in 24.4% of AWCs. On the contrary Sharma M et al (11) (2013) found in their study that all the AWCs had adequate number of utensils. The supply of supplementary food was regular only in 50% of AWCs and supply of medicines was regular in only 6.67% of centers except for the supply of iron folic acid tablets which were supplied to almost all the centers on a fairly regular basis (Table 3). The National Institute of Public Co-operation and Child Development, New Delhi (NIPCCD) evaluation reported that food distribution had ceased for periods longer than 90 days in 27% of AWCs (12). The results showed in a study conducted by Dixit S et al in 2010 revealed that there was

shortage of supplementary nutrition in all assessed AWCs (10). On the contrary, Nidhi Thomas et al (4) (2015) reported that all the AWCs received regular ration supply.

Similar to our findings studies in Madhya Pradesh (13) (2009) and in Jammu & Kashmir also found AWCs to be lacking in medicine supplies or facing short/inadequate supply. The 2015 NITI Aayog report states that 22.5% of AWCs do not have the required medicines for the children (3). Nidhi Thomas et al (4) (2015) also reported that only 22.23% of AWCs had complete medicine kits.

CONCLUSION

Findings indicate that while the condition of AWCs appears to have improved in terms of building's construction and condition, basic facilities like toilet, kitchen, utensils for cooking, indoor space and storage facility for food are still lacking in most of the centers. In our study and most of the studies, supply of food and medicines still remains a problem. It has a significant effect on utilization by the beneficiaries. The condition of supplies does not appear to have improved over the years and it may work as a deterrent for the beneficiaries to attend the centers.

Recommendations

1. Infrastructure needs to be improved as repair is needed for almost half of the centers and most of them require a boundary wall.
2. Ceiling fan and toilet facility needs to be provided to centers as these are lacking. Provision of large rooms should be made as some centers have inadequate space and no storage facility for food.
3. Medicine kit should be provided to the centers as most of them were lacking them and the quality of equipments like play equipments, mats for sitting etc. needs to be improved at some centers.
4. Adequate attention and a concrete action is required to regularize the supply of supplementary food and medicine kits.

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