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Review Article

Evaluation of the Basic Infrastructure and Logistics at Anganwadi Centres in Urban Field Practice Area, Raichur - A Cross-Sectional Study

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Abstract

Background: Integrated Child Development Services (ICDS) Scheme is launched for early childhood care and development. It provides pre-school non-formal education and nutrition to decrease malnutrition and morbidity in the form of Anganwadi centres. Poor infrastructure can cause health problems of both service providers and beneficiaries and also lead to loss of beneficiaries

Objectives: To assess basic infrastructure and logistics at anganwadi centres in urban field practice area of a tertiary care centre

Methodology: A cross-sectional study was done among 35 anganwadi centres for 2 months. A pretested semi-structured questionnaire was used to collect information about basic infrastructure among anganwadi workers. A simple descriptive statistics was done using the Epi info version 7.0. Frequencies, percentages and mean were computed.

Results: In this study majority of anganwadi centres were graded as Good on the basis of presence of infrastructure and logistics. Only 17 (48.6%) anganwadi centres surroundings were hygienic. 77% and 71% of anganwadi centres had adequate indoor space and outdoor space respectively.

Conclusions: This study shows that majority of the anganwadi centres were not built according to the norms. Anganwadi centre should have hygienic surrounding and basic facilities as they will impact on the health of the children.

INTRODUCTION

Children are the world's most valuable resources and they are the best hope for future. The topmost agenda for human resource development is the health and welfare of children because they are most vulnerable. For proper development of a child there should be balanced linkages between education, health and nutrition [1]. Integrated Child Development Services (ICDS) Scheme was launched on 2nd October, 1975. It is one of the flagship programs of the Government of India and represents one of the world's largest and unique programs for early childhood care and development. It is the foremost symbol of the country's commitment to its children, pregnant 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, women 15-45yrs age group and adolescent girl. This convergence is in-built in the scheme which provides a platform in the form of Anganwadi centres (AWC) for providing all services under the scheme. Each ICDS project consists of three levels (cadets) of staff members, namely Anganwadi worker (AWW), Mukhya Sevika (supervisor), and Child Development Project Office (CDPO) [2]. It would be wrong if we assume that everything is fine with ICDS. Even after more than 40 years of its implementation, the changes produced by ICDS are not up to the expectations. Service delivery by the anganwadi centres is still not up to the mark. This may be because of varied reasons like poor infrastructure of the anganwadi centres, poor logistics, inadequate knowledge, lack of proper training and poor remuneration to the anganwadi worker.

Despite all these efforts by the government, recent trend is discouraging in the rural as well as urban areas.

Many parents are preferring play homes and Montessori's with hefty fees over proven establishments of AWC. Poor infrastructure can hamper routine activities of anganwadi's which can cause health problems of both service providers and beneficiaries. This also leads to loss of beneficiaries [1]. ICDS provides a package of integrated services which includes supplementary nutrition, immunisation, health check-ups, referral services and non-formal preschool education (NFPSE) delivered through designated AWC. Anganwadi centres deliver services right at the doorsteps of the beneficiaries to ensure their maximum participation. Thus, for the attainment of ICDS scheme goals, each AWC needs to be equipped with adequate infrastructure, functional equipment, tools and drugs [3].

The Ministry of Women and Child development has issued guidelines stating that AWC should be child friendly with all relevant infrastructures, separate sitting room for children/women, separate kitchen, store for storing food items and child friendly toilets and space for playing for children and the space should be at least 600 sq.ft [4]. But poor infrastructure and logistics pose a risk of domestic accidents and it can cause health problems like respiratory infections. Several studies have found that many AWC had poor infrastructure, lack of essential amenities like safe drinking water, toilet, electricity, separate kitchen, storage space, etc. and lack of logistics like non-functional weighing machine and medicine kits, etc [5-9].

At present 62580 AWCs and 3331 mini AWC are functioning in 204 ICDS projects in the State, covering all the 175 taluks (181 rural projects & 12 tribal & 11 urban projects). During 2017-18, 56.50 lakh beneficiaries availed benefits under the scheme [10].

Although there is a scheme for construction of AWCs at a unit cost of Rs. 4.5 lakh per unit under ICDS, it was felt that this can be best done through convergence of schemes like MGNREGA. Smooth functioning of AWC as well as adequate delivery of services by AWCs depends highly on the infrastructure and facilities present in them [11].

Intensive efforts are being made for improving the service delivery at the AWC, an estimated 2 lakh AWCs in India have no building to locate their activities. Therefore, there is an urgent need to take up construction of buildings for these AWCs. Evaluation and monitoring of these AWCs is necessary to look for any lacunae and gaps in service delivery.

OBJECTIVES

To assess the basic infrastructure and logistics at AWC in the urban field practice area of tertiary care centre.

METHODOLOGY

A descriptive cross-sectional study was done for 2 months (4th August 2022 to 10th October 2022). All 35 AWC in urban field practice area of Navodaya Medical College Hospital and Research centre, were included in the study. Anganwadi workers who were available at the time of data collection were included in the study.

The data was collected after obtaining prior permission from CDPO. The purpose of the study was explained to the AWW and an informed written consent was taken. It was a one-to-one type of interaction. A pretested, predesigned, semi-structured questionnaire was used to collect information from the AWW, regarding basic infrastructure of the AWC, essential amenities like electricity, safe drinking water, toilet facility, indoor and outdoor space and separate kitchen, availability of logistics like Salter's weighing scale, adult weighing machine, indoor and outdoor playing kits, pre-school education kits and other supplies to the AWC. For assessing the infrastructure and logistics, a scoring method was adopted. The questionnaire consisted of 47 questions among that 20 questions were regarding infrastructure and 10 questions were regarding logistics. Each correct answer was marked as 1 point and the wrong answer was marked as 0 point. Grading was done on the basis of presence of infrastructure and logistics, total score for infrastructure was 20, which was divided into Good (13-20), Average (7-12) and Poor (0-6). Total score for logistics was 10, which was divided into Good (7-10), Average (4-6) and Poor (0-3).

Statistical analysis

The data was entered in an excel spread sheet after coding. It was further processed and analysed. Frequencies, percentages and mean were computed using the CDC's Epi info software version 7.1.

RESULTS

Among 35 AWC, from 35 wards, all AWC were open during the time of data collection. All AWC were analysed according to their infrastructure and logistics. Table 1, shows distribution of AWCs according to socio-demographic characteristics of AWW. It depicts the distribution of AWC according to the socio- demographic profile of AWW. Mean age of AWW is 46years and 51% of AWW are in the age group of 40-49years.

Among 35 AWW, 31 (88.6%) of them are married and 29 (83%) of them belong to Hindu religion. Majority (97.1%) of them are SSLC passed and all of them have received basic training. 34 AWC have anganwadi helper

and mean duration of working experience as AWW are 14 years. All AWW get salary of 10,000/- per month and only 11 among them were receiving regular salary. All AWC work for 26 days per month and 9:30am to 4:30pm is the working hours.

Table 2, shows the distribution of AWCs according to the presence of infrastructure. Among 35, only 6 (17.1%) centres displayed the signboards and it is visible to the public. Only 4 (11.4%) are under government property and 31 (88.6%) are rented. All AWCs are pucca building, and 24 (68.6%) centres need repair. Among 35 AWC, only 17 (48.6%) are in hygienic condition, 2 (5.7%) have cattle shed, 15 (42.9%) have open drains and 1(2.9%) has a garbage dump surrounding area. In this study, 25 (71.4%) centres have 2 rooms and 10 (28.6%) have 3 rooms. 23(66%), 30(86%), and 25(71.4%) AWC have adequate ventilation, adequate lighting and safe drinking water respectively. All 35 AWCs have toilet and electricity facility and have separate kitchen facility. 27 (77.1%) and 10 (29%) centres have adequate indoor and outdoor space respectively, while 25 (71.4%) of them have inadequate outdoor space. 33 (94%) centres have food storage space. All centres use LPG fuel for cooking and only 5 (14%) have smoke vents. All 35 AWC have sufficient utensils for cooking purposes.

Table 3, shows the distribution of AWC according to the presence of logistics. Among 35 centres, all of them have maintained registers up to date and have salter's weighing scale, adult weighing scale, indoor playing kit, pre-school education kit, growth chart, IEC material and Mother and Child protection (MCP) cards. Only 12 (34%) AWC have outdoor playing kits and 11 (31%) have medicine kits

Figure 1 & 2 shows distribution of AWCs according to infrastructure and logistics score. It depicts the majority (65.7%) of the AWCs are graded as good on the basis of the presence of infrastructure and all of them are graded as good on the basis of the presence of logistics.

DISCUSSION

The present study was carried out to evaluate the infrastructure and logistics of the anganwadi centres in urban field practice area of Navodaya Medical College Hospital and Research centre, Raichur. All anganwadi centres were opened during the time of data collection.

Socio-Demographic Profile of Anganwadi Worker

In this study, the mean age of AWW was 47 years and the majority (97.1%) of them had passed SSLC. Mean duration of work experience was 14 years. Similar results were noted in the study conducted by Siddalingappa H et al. [7], showed that 53%of AWW experience was more than 20 yrs. Another study conducted by Janki Batwal et al. [9], showed that 45% of anganwadi worker's educational qualification was postgraduate and 90% of them had 6-10yrs of working experience. In this study, the majority (97.1%) of the AWCs had anganwadi helpers. Similarly, in the study conducted by Gill KPK et al. [8], 69.3% of the AWCs had helpers.

Infrastructure of Anganwadi Centre

In this study, only 6 (17%) of anganwadi centres displayed the signboards. Among 29 (83%) AWCs, few did not have enough space to display, and few boards were damaged and had to be replaced. 17 (49%) AWCs surrounding area were hygienic and remaining centres were surrounded by cattle sheds, open drains and garbage dumps. Awareness regarding the importance of hygienic surroundings was given to AWW as it will affect the health of the children. Whereas, in the study conducted by Smaranita Sabat et al. [1], shows that 87% of AWC displayed sign boards in the local language and majority (54%) of their surrounding area was hygienic and remaining centres were surrounded by cattle shed, open drains and garbage dump.

Majority (89%) of AWCs were in the rented building, similar results were noted in the studies conducted by Anuj Kapoor et al. [3], and Janaki Bartwal et al. [9]. Whereas, in several other studies, the majority of the AWCs were located in the government building [1-12]. In present study, majority of the centres had adequate ventilation (66%) and adequate lighting (86%). Similar results were in other studies [1-9]. In present study, majority (77%) of indoor space was adequate and majority (71%) of outdoor space was inadequate, which is similar to study conducted by Smaranita Sabat et al [1]. Whereas, in another study conducted by Manisha Dhinwa et al. [5], majority of indoor space was inadequate while outdoor space was adequate. In this study, all AWCs had separate kitchen. In other studies, majority had separate kitchen [1-7], whereas in a study conducted by Janki Bartwal et al. [9], all 29 AWCs did not have separate kitchen facilities.

In present study, all AWCs had toilet facility which is similar to study conducted by Janki Bartwal et al. [9], In other studies, majority of them had toilet facility [1-7], whereas in studies conducted by Manisha Dhinwa et al [5] and Neelam Kumar et al. [6], study shows majority of the centres did not have toilet facility. In this study, all AWCs had electricity facility which is similar to the study conducted by Anuj Kapoor et al [3]. In other studies

majority of them had electricity facility [1-9], whereas in the studies conducted by Neelam Kumar et al. [6], and Gill KPK et al. [8], majority of the centres did not have electricity facility. In the present study, the majority (71%) of AWC had safe drinking water facilities. Similar results were noted in other studies [1-9].

In present study, majority (94%) of AWC had adequate food storage space which is similar to study conducted by Neelam Kumar et al [6]. Whereas in other studies conducted by Smaranita Sabat et al. [1], and Manisha Dhinwa et al. [5], the centres had inadequate food storage space. In this study, all AWCs used LPG as fuel for cooking. While in the studies conducted by Neelam Kumar et al. [6], and Siddalingappa H et al. [7], majority of the centres used LPG for cooking. In the present study, all AWCs had sufficient utensils, similarly in a study conducted by Gill KPK et al. [8], majority of the centres had sufficient utensils.

Logistics of the Anganwadi Centre

In present study, all AWCs had registers up to date, which was similar to the studies done by Baseer MA et al. [13], and Thakur K et al [14]. While in another study conducted by Anuj Kapoor et al. [3], majority (94.5%) of the centres had registers up to date. In this study, all AWCs had Salter's weighing scale. While in other studies, the majority of them had Salter's weighing scale [1-8]. In present study, all AWCs had Adult weighing scale. In present study, all centres had indoor playing kit which is similar to study conducted by Manisha Dhinwa et al [5]. In present study, 65% of AWCs do not have outdoor playing kit but in the study conducted by Manisha Dhinwa et al. [5], majority of the centres had outdoor playing kit available. In this study, all AWCs had a pre-school education kit. Similar results were noted in other studies [1-9]. In the present study, all centres had growth charts. While in other studies conducted by Anuj Kapoor et al. [3], and Janki Bartwal et al. [9], majority of the centres had growth charts. In the present study, all AWC had IEC materials. In several other studies, the majority of anganwadi centres had IEC materials [1-5]. In the present study, the majority (68%) did not have a medicine kit. Whereas, in other studies it was noted as majority of them had medicine kit [1-15]. In this study, all AWCs had MCP cards, whereas in another study conducted by Smaranita Sabat et al. [1], the majority (95.8%) of them had MCP cards.

Grading on the Basis of Presence of Infrastructure and Logistics

In the present study, the majority (65.7%) of the AWCs were graded as good on the basis of the presence of infrastructure and all of the them were graded as good on the basis of the presence of logistics. In the study conducted by Manisha Dhinwa et al. [5], only 46.6% of the AWCs were graded as average on the basis of presence of infrastructure.

LIMITATIONS

Because of short study duration, all anganwadi centres in the urban area of Raichur could not be included in the study.

RECOMMENDATION

Further studies are needed to assess the impact of infrastructure and logistics of anganwadi centres on health and nutrition of children.

CONCLUSION

This study revealed that majority of the anganwadi centres were not built according to the norms since most of the buildings are rented. Majority (66%) of anganwadi centres were graded as Good on the basis of presence of infrastructure and logistics. Even though they were graded as good some anganwadi centres need to strengthen and require higher quality services which helps in improving child health and development.

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