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Research Article

A study to assess availability of basic infrastructure of anganwadi centers in a rural area

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ABSTRACT

Background: The integrated child development service (ICDS) was launched on 2nd October, 1975 as an effort to meet the holistic needs of children below 6 years, adolescent girls, expectant and nursing mothers through the network of anganwadis. Purpose of the study was to assess the availability of basic infrastructure for AWCs under ICDS.
Methods: This cross-sectional study was conducted in 21 AWCs in Sondekoppa area, rural field practice area of Bangalore medical college and research institute, Bangalore, India.
Results: All anganwadi centers were found to be located within the village locality, favouring easy access for the beneficiaries. 17(81%) AWCs were functioning in government allotted buildings. Compound wall or fence all around the anganwadis were found to be present in only 10 (47.6%) centers. Toilet facilities were found to be present in 12(57.1%) centers. When cleanliness of room and kitchen was assessed, it was found to be good in 13 (61.9%) centers. Assessment of area surrounding the anganwadi centers revealed that 12 (52.1%) centers were free from any nuisance causing factors around.
Conclusions: Since anganwadi centre is nodal point for service delivery under ICDS programme, infrastructures like toilet facilities were found to be present in 57.1%, cleanliness of room and kitchen was assessed, it was found to be good in 61.9%.

Keywords: Anganwadi, Basic infrastructure

INTRODUCTION

According to John F Kennedy, "Children are the world's most valuable resources and its best hope for the future". As per 2011 census, India has around 158.79 million children constituting 13.1% of India's population, who are below the age of 6 years. Majority of these children live in an economic and social environment which impairs a child's physical and mental development.[1]

Government of India launched National policy on children in August 1974 declared children as "supremely important asset". The integrated child development service (ICDS) was launched on 2nd October, 1975, which functioned through a vast network of ICDS centers, better known as Anganwadis, as an effort to meet the holistic needs of children below 6 years, adolescent girls, expectant and nursing mothers.[2]

Package of services provided by the ICDS scheme through Anganwadi include supplementary nutrition, pre-school education, immunization, health check-up, referral services and nutrition and health education to children of 3-6 years.[3] With Karnataka having a predominantly rural population of 61.3% and 12. 05 % of them being in the age group of 0-6 years, it has a high incidence of malnutrition, mortality and morbidity among children and pregnant and nursing mothers.[2,4]

As on 22nd October 2012, 204 ICDS project areas have been sanctioned in Karnataka out of which 185 project areas with 63377 anganwadi centers (AWCs) are functional.[5]

It is observed that even though ICDS has produced the changes, it is not uniform and not upto the expectations. Service delivery by the anganwadi centers are still not upto the mark because of varied reasons like inadequate knowledge, lack of proper and competent training, poor infrastructure of the anganwadi centers, poor logistics, poor remuneration and so on.

Poor and inadequate infrastructure can create many challenges in the delivery of ICDS services, can create hazards and health problems for the anganwadi children and can cause loss of beneficiaries. This study aims at evaluating the basic infrastructure available at the anganwadi centers, which even though a minor component, can pose a serious threat to the existence of ICDS project.

METHODS

This was a cross-sectional study conducted in the 21 anganwadi centers, included through universal sampling method, in Sondekoppa, the rural field practice area of Bangalore medical college and research institute from October 2013 to May 2015. Permission was obtained from the child development project officer at Sondekoppa for carrying out the study. The nature and purpose of the study was explained to the anganwadi worker (AWW). The study was carried out with AWW consent and co-operation. Data was collected by visiting the anganwadi centers between 10 am to 2 pm. The basic infrastructure of the anganwadis was assessed using a prevalidated checklist. Data was analysed using statistical software SPSS trial version 20 and presented in the form of tables, figures, graphs, wherever necessary. Statistical methods used include descriptive statistics (percentages and mean) and chi-square test.

RESULTS

Study was conducted among 21 anganwadi centers (AWC). Location of the anganwadi center (AWC) was given in (Table 1 and Table 2). All Anganwadi centers (100%) were found to be located within the village locality, favouring easy access for the beneficiaries.

Table 1: Distribution of AWC according to the location.

Location of AWC	Number of AWC	Percentage
Within village locality	21	100
Far from village locality	0	0
Total	21	100

Table 2: Distribution of AWC with respect to distance from houses and primary health care (PHC) centre.

Location		Number of AWC	Percentage
Easily accessible area		21	100
Distance of AWC from farthest house (in kms)	≤0.5	16	76.2
	>0.5	05	23.8
Distance of AWC from nearest PHC (in kms)	≤1	07	33.3
	1-5	08	38.1
	>5	06	28.6

In a study by Chudasama et al in Gujurat also showed that out of 46 rural AWCs visited, 15.2% Anganwadis were within the village/locality.[6] All Anganwadi centers were located in easily accessible area, within the village locality. Majority of centers, 76.2%, were within a distance of 0.5 km to the farthest house in the locality. Most of the centers, 38.1%, were within a distance of 1-5 km from the nearest primary health center.

In a similar study by Thakur et al in Himachal Pradesh, it was found that out of 60 AWCs, 65% AWCs were having the distance of less than 1 km from the nearest health center and only 6.7% were more than 2 km away. Most of AWCs 51.7% were less than 1km from the nearest primary school, 38% were 1-2 km away and 10% were more than 2 km away.[7]

Building status of AWCs was given in Table 3 and Figure 1, 2. Out of 21 anganwadi centers, 17 (81%) were functioning in government allotted buildings, 01 (4.8%) was functioning in a rented premise while remaining 3 (14.2%) were functioning in other non-allotted government buildings like school or panchayat building.

Construction of the buildings where the anganwadi centers were functioning was found to be complete in 20(95.2%) centers while it was incomplete in 1 (4.8%) of the center. Lack of funds was stated as the reason for the same. Cement roof was present in 13 (61.9%) centers, while asbestos and tiled roof was seen in 7 (33.3%) and 01 (4.8%) centers respectively.

Compound wall or fence all around the anganwadis were found to be present in only 10 (47.6%) centers while in the remaining 11 (52.4%) centers it was completely absent. The anganwadi opened directly onto the main

road in such centers. Toilet facilities were found to be present in 12(57.1%) centers while it was non-existent in the remaining 09(42.9%) centers, where children had to relieve themselves either in the nearby school buildings or on roads.

In a similar study by pradhan in Odisha found that out of 30 anganwadi centers, 33% of the buildings belonged to government quarters. About 46% of anganwadi center belonged to the private quarters followed by 3% established in club building. Results showed that most of the AWCs had inadequate level of infrastructure facility in terms of availability of electricity, toilet, and drinking water facility. Toilet facilities were found to be present in only 55% of centers.[8]

Table 3: Distribution of building of AWCs according to infrastructure and surroundings.

	Components	Number of AWCs	Percentage
Building infrastructure	Government allotted	17	81.0
	Rented premises	01	4.8
	Other government buildings	03	14.2
	Total	21	100
Current status of construction	Complete	20	95.2
	Incomplete	01	4.8
	Total	21	100
Roof	Cement	13	61.9
	Asbestos	07	33.3
	Tiles	01	4.8
	Total	21	100
Compound wall/fencing	All around	10	47.6
	Partial	00	00
	None	11	52.4
	Total	21	100
Toilet	Present	12	57.1
	Absent	09	42.9
	Total	21	100

A study by Chudasama et al in Gujurat, who assessed performance of Anganwadi workers in both urban and rural areas found that out of 46 rural Anganwadi centers, 36 (78.3%) were functioning in state or government owned buildings while 8 (17.4%) and 2 (4.4%) of the centers were functioning in rented or community owned buildings. Only 37 (80.4%) of buildings were pucca type while 7 (15.2%) and 2 (4.4%) were semi pucca and kuccha type respectively. Toilet facilities were available only in 32 (69.6%) centers.[6]

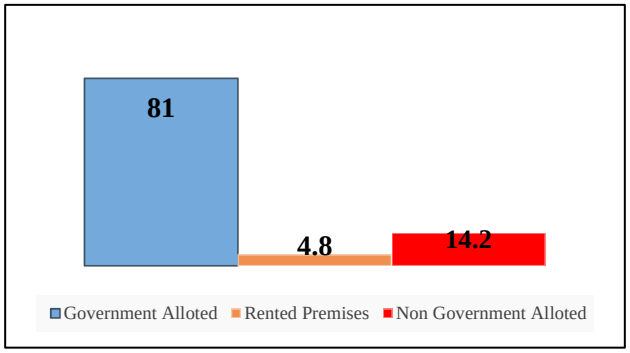

Figure 1: Building status of anganwadi centers (AWCs).

Another study by Kaushik et al in Jamnagar, Gujurat revealed that on evaluating the infrastructure facilities of the AWCs, it was found that out of 48 Aanganwadi centers (AWCs), half (50%) of the AWCs were in kuccha or semi pucca buildings. 44% of the AWCs did not have sufficient space for sitting of children.

Basic facilities like drinking water & toilet facility were not available at 22% & 42% of the centers respectively.[9]

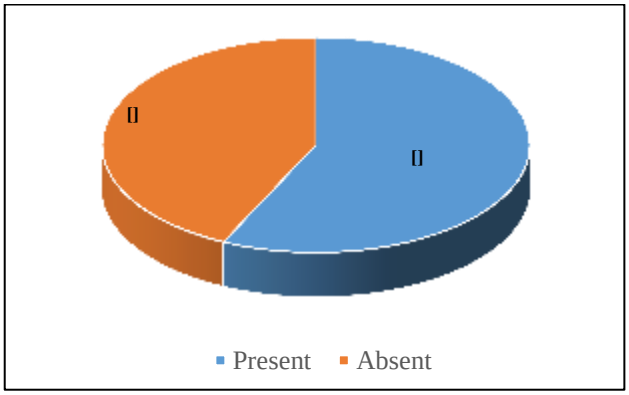

Figure 2: Status of toilet facility at the AWCs.

Table 4: Qualitative assessment of AWCs.

Parameter	Components	Number of AWCs	Percentage
Condition of walls	Well plastered with plaster intact everywhere	18	85.7
	Plaster coming off in some places	03	14.3
	Plaster coming off in many places or no plaster	00	00
	Total	21	100
Condition of floor	Floor in good condition	15	71.4
	Floor coming off in some places	06	28.6
	Floor coming off in many places or no floor	00	00
	Total	21	100
Cleanliness of room and kitchen	Good	13	61.9
	Fair	07	33.3
	Poor	01	4.8
	Total	21	100
Cleanliness of toilet	Good	03	14.3
	Fair	08	38.1
	Poor	01	4.8
	No toilet	09	42.9
	Total	21	100
Surrounding area	Nomal	12	57.1
	Cattle shed	02	9.5
	Cattle shed and Stagnant pools	02	9.5
Prominent display of boards	Present	09	42.9
	Absent	12	57.1
Communication facility	Present	20	95.2
	Absent	01	4.8

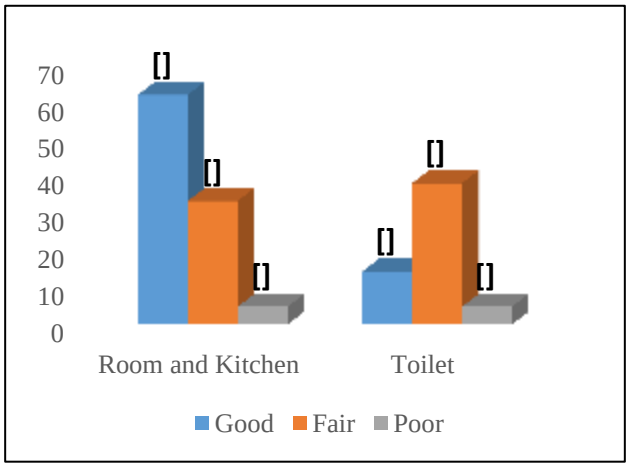

Figure 3: Qualitative assessment of room, kitchen and toilet at the AWCs.

Qualitative assessment of AWCs was given in Table 4 and Figure 3. On qualitatively assessing the Anganwadi centers, it was found that well plastered walls were seen in 18 (85.7%) centers while in 3 (14.3%) centers plaster was coming off in some places.

Floor was in good condition, without any gaps, in 15 (71.4%) centers while it was coming off in some places, making it uncomfortable for the children, in 6 (28.6%) centers. Remaining 9 (42.9%) centers had no toilet facility at all. When cleanliness of room and kitchen was assessed, it was found to be good in 13 (61.9%) centers while it was found to be fair and poor in 7 (33.3%) and 1 (4.8%) centers respectively. While assessing cleanliness of toilet, it was found that condition was good in only 3 (14.3%) centers while it was fair and poor in 8 (38.1%) and 1 (4.8%) centers respectively.

Assessment of area surrounding the anganwadi centers revealed that 12 (52.1%) centers were free from any nuisance causing factors around. But cattle shed was seen to be present around 2 (9.5%) centers and both cattle shed and stagnant pools or drains were present around 2 (9.5%) centers. Besides these, other nuisance causing factors like open garbage dump and open drains with flies were also seen around some centers. This risks not only

the health of the children but also affects effective and smooth functioning of the anganwadi centers.

Prominent display of charts, posters, boards etc were present in only 9 (42.9%) centers while it was not seen in remaining 12 (57.1%) centers. Communication facilities like mobile phones were found in majority, 20 (95.2%) centers.

Similar findings were reported by study done by Dhingra and Shrama in Jammu district, revealed that out of 60 AWCs, 20% of the centers were surrounded with uncovered drains and stagnant water which stunk badly. Stagnant pools were seen in 16.66% of centers and heaps of garbage in 11.66% of centers. As far as internal set up of AWCs was concerned, only 20% AWCs were properly whitewashed and all teaching learning aids including charts, poster and indigenous toys were displayed. Present study also found that most (65%) of the AWCs had fairly functional buildings with only one room facility with no provision of ventilation and lighting.[10]

DISCUSSION

All anganwadi centers were found to be located within the village locality, favouring easy access for the beneficiaries. Out of 21 anganwadi centers, 17 (81%) were functioning in government allotted buildings, 01 (4.8%) was functioning in a rented premise while remaining 3 (14.2%) were functioning in other non-allotted government buildings like school or panchayat building. Construction of the buildings where the anganwadi centers were functioning was found to be complete in 20 (95.2%) centers while it was incomplete in 1(4.8%) of the center. Lack of funds was stated as the reason for the same. Cement roof was present in 13 (61.9%) centers, while asbestos and tiled roof was seen in 7 (33.3%) and 01 (4.8%) centers respectively. Compound wall or fence all around the anganwadis were found to be present in only 10 (47.6%) centers while in the remaining 11 (52.4%) centers it was completely absent. The anganwadi opened directly onto the main road in such centers, posing threat to the well-being of the children. Toilet facilities were found to be present in 12 (57.1%) centers while it was non-existent in the remaining 09 (42.9%) centers, where children had to relieve themselves either in the nearby school buildings or on roads. Immediate action is needed by the government in this aspect for convenience and health of the children well plastered walls were seen in 18 (85.7%) centers while in 3 (14.3%) centers plaster was coming off in some places.Floor was in good condition, without any gaps, in 15 (71.4%) centers while it was coming off in some places, making it uncomfortable for the children, in 6 (28.6%) centers. Remaining 9 (42.9%) centers had no toilet facility at all. Similar Findings were seen in Prasanti Jena et al study.[8]

When cleanliness of room and kitchen was assessed, it was found to be good in 13 (61.9%) centers while it was found to be fair and poor in 7 (33.3%) and 1 (4.8%) centers respectively. While assessing cleanliness of toilet, it was found that condition was good in only 3 (14.3%) centers while it was fair and poor in 8 (38.1%) and 1 (4.8%) centers respectively.

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Prominent display of charts, posters, boards etc were present in only 9 (42.9%) centers while it was not seen in remaining 12 (57.1%) centers. Communication facilities like mobile phones were found in majority, 20 (95.2%) centers. Arrangements should be made in the centers where communication facilities are not available to facilitate smooth functioning and access during emergencies, similar findings were seen in Dhingra R et al study.[10]

The children of today are the future of tomorrow. Since anganwadi centre is nodal point for service delivery under ICDS programme, it has always been emphasized that as far as possible AWC should be built with community involvement. Further, it should be owned and maintained by community/village panchayat/urban local bodies, who should be educated about the importance of proper, clean and safe infrastructure of AWCs.

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REFERENCES

1. Government of India. Ministry of women and child development. 2015. Available at http: // wcd. nic. in/. Accessed on 5 April 2015.
2. Park K. Park's textbook of preventive and social medicine. 22nd ed. Jabalpur M/s Banarasidas Bhanot Publishers;2013:546.
3. Kishore J. National health programmes of India. 11th ed. New Delhi:Century Publications;404-10.

4. Census Info India 2011 Karnataka Profile. Available at URL: http: //www. censusindia. gov.in/2011-prov-results/provdata products karnataka.html. Accessed on 18 April 2016.
5. Integrated child development services (ICDS) scheme, New Delhi: Ministry of women and child development, Government of India. 2013. Available at URL: http: //wcd.nic.in /icdsimg /mpr2009.pdf. Accessed on 16 September 2015.
6. Chudasama RK, Patel UV, Verma PB, Vala M, Rangoonwala M, Sheth A, et al. Evaluation of anganwadi centers performance under integrated child development services (ICDS) program in Gujarat State, India during year 2012-13. J Mahatma Gandhi Inst Med Sci. 2015;20:60-5.
7. Thakur K, Chauhan H, Gupta N, Thakur P, Malla D. A study to assess the knowledge and practices of anganwadi workers and availability of infrastructure in ICDS program, at district Mandi of Himachal Pradesh. Int Multidisciplinary Res J. 2015; 2(1):1-6.
8. Prasanti J. Knowledge of anganwadi worker about integrated child development services (ICDS): study of urban blocks in sundargarh district of odisha" Master of Arts in development studies department of humanities and social sciences national institute of technology Rourkela.769008. 2013.
9. Lodhiya K. An Evaluative Study on Integrated Child development Services. National J Integrated Res Med. 2013;4(1):62-6.
10. Dhingra R, Shrama I. Assessment of preschool education component of icds scheme in Jammu district. Global J Human Social Sci. 2011;11(6):13-8.

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