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## A functional assessment of rural ICDS projects in particular district

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### Abstract

In the present study, most of the AWCs cover the population of more than 1000 and majority of the centres had a pucca building. More than 2/3<sup>rd</sup>s of AWCs do not have electricity supply. Functional sanitary latrine is absent in more than a quarter of AWCs and 40% of the centres do not have safe water supply with in the premises. More than half of the AWCs do not have separate kitchen. Supplementary nutrition is available in all the Anganwadi centers. Non availability of IFA tablets and Vitamin A syrup in many AWCs is a matter of concern. Other logistics like essential medicines, pre-school education kits, growth cards, weighing scale, etc are present in almost all the Anganwadi centers. Activities like weighing, immunization, health check-ups, organization of village health and nutrition days are being done regularly. The majority of the AWWs are in the age group of 30 to 49 years. Almost all of them have completed 10<sup>th</sup> class and above. More than half of them belong to Lower middle socio-economic class. Maximum number of workers have experience of 10 years or more. All the AWWs in our study have knowledge of 50% and above with a majority scoring 61% to 80%. Best knowledge is seen regarding immunization followed by referral services. Least knowledge is seen regarding supplementary nutrition. Major problems reported were inadequate honorarium, excess work and record maintenance.

**Keywords:** ICDS, Anganwadi centers, Nutrition, Weighing scale

### Introduction

Children in the age group 0-6 years constitute around 158 million of the population of India as per the 2011 census. These Children are the future human resource of the country <sup>[1]</sup>. The most valuable asset of a nation is its children; therefore, the responsibility to invest in children and their overall wellbeing lies with the nation only <sup>[1]</sup>. The Constitution of India itself provides a framework for care and protection of women and children. Article 47 of the Directive Principles of State Policy States that “The state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the state shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health” <sup>[2]</sup>.

The Integrated Child Development Services scheme (ICDS) launched on 2nd October 1975, on an experimental basis in 33 ICDS blocks, has been gradually expanded to 7072 projects comprising 13, 46, 186 Anganwadi centers (AWCs) operational across 36 States/UTs, covering 1022.33 lakh beneficiaries under Supplementary Nutrition (SN) and 365.44 lakh 3-6 years children under pre-school component by the end of March 2015 <sup>[1]</sup>. ICDS is India's response to challenge of breaking a vicious cycle of malnutrition,

Various international agencies such as UNICEF, World Bank, CARE India, USAID and many others have supported ICDS in improving quality services. Many new projects and several initiatives were taken to improve quality, the goal being universalization with quality. Training programs for ICDS functionaries has improved over the years, upgrading their skills at the field level <sup>[3]</sup>.

With this background, the present study is carried out in Siddipet district to assess the knowledge of Anganwadi workers (AWWs) and the operational problems faced by them. An attempt is also made to find out the availability of infrastructure and logistics for AWCs under ICDS and to find out the efficiency of Anganwadi centers in providing service to beneficiaries.

**Aims and objectives**

1. To study the infrastructure facilities at the Anganwadi centres.
2. To study the socio-demographic profile and to assess the knowledge of the Anganwadi workers.

**Materials and methods**

The study entitled “a functional assessment of ICDS project in particular area” was undertaken from January 2018 to March 2019 for a period of 15 months.

**Research question**

What is the impact of the Anganwadi centres on Mother and Child health?

**Study design**

The present study is a Field based- Cross-Sectional, Observational study undertaken to study the services of Anganwadi centres.

**Study area**

The present study was carried out in Siddipet rural ICDS project area of Siddipet district, Telanagana. A total of 237 Anganwadi centres were functioning in the project area during the survey period.

**Method of selection of Anganwadi centres**

A total of 237 Anganwadi centres are functioning in the project area. The Anganwadi centres from all the 9 sectors have been numbered from 1 to 237. Each sector on an average consists of 25 Anganwadi centres. The Anganwadi centres are stratified sector wise and given serial numbers from 1 to 237. From each sector 20% of Anganwadi centres are selected for the study by simple random sampling through Lottery method. A total of 48 Anganwadi centres thus have been included in this study.

**Method of selection of Anganwadi workers**

To assess the socio-demographic profile and knowledge levels of the Anganwadi workers, all the Anganwadi workers who are working in Siddipet rural ICDS project area have been included in the study.

**Method of selection of the beneficiary families (study subjects)**

Based on the pilot study findings it was observed that each Anganwadi center is catering to the needs of 150 beneficiary families on an average. The beneficiaries include Antenatal mothers, Lactating mothers, Children below 3 years, Children between 3 – 6 years and Adolescent girls.

**Inclusion criteria**

All the AWCs, AWWs and the population falling under the Siddipet rural ICDS Project would form part of the study.

**Exclusion criteria**

Those families residing in the Siddipet rural ICDS Project area who are not willing to participate and families without any beneficiary are excluded from the study. Suppose if there are 2 beneficiaries in the family, enquiry was made

regarding the services received but only one beneficiary was included in the study.

**Method of data collection**

The data was collected using pre-tested semi-structured schedules by interview technique.

**Processing and analysis of the data**

The data collected was entered and analyzed using Microsoft Excel and EPI info software.

**Results****Anganwadi centres – Infrastructure facilities**

The study was carried out in Siddipet rural ICDS project. The project area includes 9 sectors spreading in 3 Revenue mandals viz. In total there are 237 functional AWCs in this ICDS Rural project.

**Table 1:** Distribution of AWCs in the study area of Siddipet rural ICDS project

Revenue Divisions	No of AWCs	Percentage (%)
Area I	22	45.8
Area II	14	29.2
Area III	12	25.0
Total	48	100.0

Out of the total 237 Anganwadi centres in the project area 48 centres [20.0%] were selected for the study purpose, 45.8% of centres are from Area I 29.2% of centres and 25.0% centres of which from Area III.

- The official timing of AWCs is from 9 AM to 4 PM.
- All the AWCs in the current study were kept open up to 4 pm. The time of opening varied between 8:30 am to 9:30 am.
- At the time of visit by the principal investigator, 37 AWWs (77%) were currently available at the AWCs and in the remaining 11 (23%) centers, the AWWs were absent. Anganwadi Helpers were present in 34(71%) centers at the time of visit.

**Table 2:** Distribution of population served by the AWCs (n=48)

Population served By the awcs	Number	Percentage (%)
<400	1	2.1%
401 – 800	6	12.5%
801 – 1000	5	10.4%
1001 – 1500	22	45.8%
>1500	14	29.2%
Total	48	100.0%

Three fourths of the AWCs are serving a population of more than 1000. Only 14.6% AWCs are serving a population of < 800 (Equal to or less than 800).

Out of total 7440 beneficiaries served by the 48 AWCs in the present study, more than one-thirds were adolescent girls 34.1% followed by < 3 years old children 29.5%, and children between 3-6 years of age 22.6%. Pregnant women and lactating mothers constituted 6.9% and 6.8% respectively.

**Table 3:** Distribution of Infrastructure facilities at the AWCs (n=48)

Infrastructure facilities in AWCs	Number and Present (%)
Own building	28 (58.3%)
Rental building	20 (41.7%)
Pucca building	38 (79.2%)
Electricity supply	14 (29.2%)
Safe water supply with in the premises of AWCs	29 (60.4%)
Water storage container	44(91.7%)
Functional sanitary latrine	35 (72.9%)
Separate kitchen	21 (43.7%)
Sufficient Cooking Utensils	35(72.9%)

Out of the 48 AWCs studied,

- 58.3% AWCs were having own building and 41.7% were functioning in a rental building.
- Majority 79.2% of the AWCs were having a pucca building.
- Electricity supply was present in only 29.2% AWCs.
- Safe water supply with in the premises was present in 60.4% centers
- Water storage containers were available in 91.7% centres
- Functional sanitary latrine was present in 72.9% centers.
- Separate kitchen was present in only 43.7% centers. Others they cook either in the verandahs or in the setback of AWC
- Sufficient cooking utensils were available in 72.9% centres.

Cleanliness around the AWCs was satisfactory in 81.2% of the AWCs and in the remaining 18.5% centres it was poor.

1. Cleanliness inside the AWCs was satisfactory in all of them except one.
2. About 97.9% Anganwadi centres were using LPG for cooking, whereas in one centre they were using kerosene for cooking food.
3. Beneficiaries in all the 48 centres had no complaint regarding the food served. They all liked the taste of the food served to them.

**Table 4:** Distribution of AWCs with Space for health check-ups (n=48)

Space For Checkups	Number	Percentage (%)
Available & adequate	47	97.9%
Not available	1	2.1%
Total	48	100.0%

Space for health check-ups was available and adequate in all the AWCs except one.

**Table 5:** Distribution of availability of materials at AWCs (n=48)

Type of supply	AWCs with adequate supply Number and percentage (%)
Essential medicines	45 (93.7%)
Pre-school education kits	46 (95.8%)
Reporting formats	39 (81.2%)

Adequate supplies of essential medicines were present in 93.7% centres, pre-school education kits in 95.8% and reporting formats in 81.2% centres.

- Growth cards, nutrition & health education material, NFPSE material was available in all the AWCs.
- Out of 48 AWCs in the study, IFA tablets and Vitamin A syrup was not available in 58.3% of AWCs.

**Table 6:** Distribution of AWCs with respect to Functional Measuring tools (n=48)

Measuring tool	Available and functional Number and Percentage (%)
Adult weighing scale	37 (77.1%)
Salters weighing scale	41 (85.4%)
Shakirs tape	42 (87.5%)

Measuring tools like adult weighing scale and Salters scale were present and are functional in 77.1% and 85.4% of the AWCs respectively. Shakirs tape was available and functional in 87.5% AWCs.

- Supplementary nutrition was available in all the AWCs, but some of the commodities for food preparation like oil and dal were out of stock in 4 AWCs at the time of visit.
- Except for one centre, all the AWCs were maintaining 15 registers. Regular weighing & immunization are done in all the AWCs studied. Health check-ups are done regularly in all the AWCs except one.

**Table 7:** Distribution of AWCs with regard to Village health and nutrition days conducted (n=48)

Village Health and Nutrition Days	Frequency	Percentage (%)
1st of every month	45	93.7%
2nd Wednesday	2	4.2%
2nd Saturday	1	2.1%
Total	48	100.0%

Village health and nutrition days were being conducted by all the centres once in every month. Majority 93.7% of the centres were conducting it on 1<sup>st</sup> day of every month.

- Home visits were carried out regularly in all the 48 AWCs.

**Table 8:** Distribution of AWCs with respect to Pre-school educational kits (n=48)

Pre-School Education Kits	Frequency	Percentage (%)
Available	47	97.9%
Not available	1	2.1%
Total	48	100.0%

Pre-School kits were available in all the AWCs except one. Socio – demographic profile of Anganwadi Workers

**Table 9:** Age distribution of the AWWs (n=212)

Age Distribution Of The Aww	Frequency	Percentage (%)
20 – 29 years	14	6.6%
30 – 39 years	86	40.6%
40 – 49 years	77	36.3%
50- 59 years	32	15.1%
60 years and above	3	1.4%
Total	212	100.0%

More than three- fourths 76.9% of the AWWs, who were made part of the study, were aged between 30 to 49 years. Only 6.6% AWWs were aged between 20-29 years.

**Table 10:** Distribution of AWWs based on Marital status (n=212)

Marital Status	Frequency	Percentage (%)
Unmarried	1	0.5%
Married	189	89.1%
Divorced	1	0.5%
Widowed	21	9.9%
Total	212	100.0%

Of the 212 AWWs in the study 89.1% were married, 9.9% while AWWs were widowed and only 0.5% AWW was unmarried.

**Table 11:** Distribution of AWWs based on Religion (n=212)

Religion	Frequency	Percentage (%)
Hindu	162	76.4%
Christian	42	19.8%
Muslim	8	3.8%
Total	212	100.0%

Majority of the AWWs i.e., 76.4% were Hindus, While 19.8% were Christians and only 3.8% AWWs were Muslims.

Out of 212 AWWs in the study, more than three- fourths 77.4% belonged to either Backward Caste or Scheduled Caste communities, while none were from the Scheduled Tribe community.

**Table 12:** Distribution of AWWs based on Education (n=212)

Education of the Aww	Frequency	Percentage (%)
5 <sup>th</sup> Class and below	3	1.4%
6 <sup>th</sup> class to 10 <sup>th</sup> class	123	58.0%
Intermediate level of Education	28	13.2%
Degree & above	58	27.4%
Total	212	100.0%

Majority of the AWWs i.e., 98.4% were having education qualification of 10<sup>th</sup> class and above. 27.4% AWWs were graduates.

**Table 13:** Distribution of AWWs based on Socio economic status (n=212)

Socio- Economic Status	Frequency	Percentage (%)
Below Poverty Line	2	0.9%
Lower Class	55	25.9%
Lower Middle	124	58.5%
Middle class	29	13.7%
Higher Middle	2	0.9%
Total	212	100.0%

Socio economic status of the AWWs was assessed using modified Pareek’s scale which is applicable in rural areas. According to that scale, 73.1% AWWs belonged to middle class and 25.9% belong to lower class. 0.9% AWWs were below the poverty line while there is no one in the upper class.

**Table 14:** Distribution of AWWs based on Years of service (n=212)

Years of service	Frequency	Percentage (%)
< 5 Years	23	10.8%
5 -10 Years	54	25.5%
> 10Years	135	63.7%
Total	212	100.0%

Majority of Anganwadi workers ie; 63.7% were having an experience of more than 10 years.

- Majority of AWWs 93.4% were residents of the village where the AWC is located.
- Most of the AWWs 93.9% have undergone training at least once.
- Most of the AWWs 92% have undergone refresher training
- Most of the AWWs 92% felt that the training was practical oriented.

**Discussion**

**Anganwadi Centre**

Timing of AWC: All the 48 AWCs in the present study were opened between 8:30 am to 9:30 am and closed at 4 pm.

Sandip B. Patil and Doibale MK in their study titled, ‘Study of Profile, Knowledge and Problems of Anganwadi Workers in ICDS Blocks: A Cross Sectional Study’ observed that the working time of AWCs was from 10am-1pm daily except in summer when the timings were from 9am to 12 noon

**Population covered by AWCs**

Population norms for one AWC in plain areas are 400 – 800. [1] In the current study, only 14.6% of AWCs are covering the population upto 800. Three fourths of the AWCs studied are covering a population more than 1000 in the current study.

**Pucca building**

Out of the 48 AWCs studied, 38 (79.2%) centers were having a pucca building.

The Committee on Empowerment of Women (2010-2011) eighth report, stated that 80.13% AWCs are running from pucca buildings. [5] In a cross sectional study titled, ‘Challenges in implementing ICDS scheme-A Study about facilities available in Anganwadi Centres of Greater Visakhapatnam Municipal Corporation, Andhra Pradesh, India’, done by Kanta Helena, Bhimarasetty Devi Madhavi and Pentakota J Srinivas, observed that of the 45 AWCs selected for the study, 71% were functioning in pucca buildings.<sup>4</sup>

**Rented building**

In this study out of 48 AWCs, 20 (41.7%) were running in rented building. The Committee on Empowerment of Women (2010-2011) in its eighth report said that about 37.47% AWCs/Mini-AWCs are running from rented buildings (pucca & kutcha) [5].



**Drinking water**

In this study, the safe water supply within the premises was present in 29 (60.4%) centres.

The Committee on Empowerment of Women (2010-2011) in its eighth report said that, 51.87% AWCs have drinking water facilities<sup>[5]</sup> In another study done by The Health of the Urban Poor (HUP) in Urban AWCs of Dehradun, municipal water supply is present in the houses in which AWC are operating, some AWCs also get drinking water through public stand post and hand pumps, a few AWCs do not have water connection<sup>[6]</sup>.

**Functional sanitary latrine**

In this study functional sanitary latrine was present in 35 (72.9%) AWCs.

In the similar study by Kanchan Thakur *et al.*, all the 60 AWCs studied had toilet facilities<sup>[18]</sup> whereas The Committee on Empowerment of Women (2010-2011) in its eighth report observed that only 41.54% AWCs have toilet facilities<sup>[5]</sup>.

**Cleanliness inside AWCs:** In this study cleanliness inside the AWCs was satisfactory in ALL the centers except one. Rajni Dhingra and Iesha Sharma observed that all the 60 AWCs studied in Jammu district of J&K state were broomed and mopped regularly.<sup>[7]</sup> Cleanliness is better inside the AWCs in the current study as is the case with Rajni Dhingra and Iesha Sharma study.<sup>[7]</sup>

**Essential medicines/Medicine kits**

In the present study, adequate supply of essential medicines were present in 45(93.7%) centres.

Nidhi Thomas, Paramita Sengupta and Anoop I Benjamin in a study done in urban area of Ludhiana in 2011 observed that only 2 AWCs out of 9 had complete medicine kits.<sup>[8]</sup>

**Non- Formal Pre- School Education kits**

In the present study NFPSE kits were present in 46 (95.8%) AWCs.

Nidhi Thomas, Paramita Sengupta and Anoop I Benjamin observed that all the 9 AWCs studied in Urban Ludhiana had playing kits for the children and most of the AWCs had charts and pre-school education materials like slate and books but none of them made any use of them.<sup>[9]</sup>

**Salter's scale**

In this study Salter's scale was present in 41(85.4%) AWCs. Nidhi Thomas, Paramita Sengupta and Anoop I Benjamin observed that none of the 9 AWCs studied in Urban Ludhiana had a Salter's scale and the AWWs did not know how to weigh children using this scale.<sup>[1]</sup>

**Adult Weighing Scale**

Adult weighing scale was present in 37(77.1%) AWCs. A study by The Health of the Urban Poor (HUP) team observed that almost all the centres have weighing machine in urban AWCs of Dehradun, however weight monitoring is inadequate/ not properly maintained.<sup>[6]</sup>

**Growth charts**

In the present study, Growth charts are available in all the AWCs.

Shamim Haider *et al.*, observed that growth charts were available and properly maintained at all the 50 AWCs studied in Ranchi district of Jharkhand.<sup>[21]</sup> The Health of the

Urban Poor (HUP) team in urban areas of Dehradun observed that almost all the AWCs have growth monitoring charts, however understanding of growth monitoring charts is inadequate/ not properly maintained.<sup>[6]</sup>

**Nutrition & Health Education (NHED) kits**

In the present study NHED kits are available in all the AWCs. Meenal M Thakare *et al.*, observed that NHED material was present in all th\_

**IFA tablets**

In the present study IFA tablets are not available in 28 (58.3%) AWCs.

In a study done by Shamim Haider *et al.*, Iron-Folic Acid (IFA) supplementations to pregnant women were available at 25 (50%) of the 50 AWCs in Ranchi district of Jharkhand<sup>[21]</sup>. e 28 AWCs studied in Aurangabad city.<sup>[9]</sup>

**Vitamin A syrup**

Vitamin A syrup is not currently available in 28 (58.3%) AWCs in the current study. Meenal M Thakare *et al.*, observed that vitamin A syrup is not available with any of the 28 AWCs functional in Aurangabad city for the last 7-8 months.<sup>[9]</sup>

**Weight measurement**

In the present study, weighing is done regularly in all the AWCs.

Nidhi Thomas, Paramita Sengupta and Anoop I Benjamin observed that none of the 9 AWCs were monitoring the growth of the children in urban Ludhiana.<sup>[8]</sup>

**Immunization**

In the present study immunization was done regularly in all the AWCs.

Mini Sharma, Soni GP and Nitin Sharma observed that there was a service deficit of immunization services in 13% of the 30 AWCs studied in Raipur city.<sup>[10]</sup>

**Health check-ups**

In this study health check-ups are done regularly in 47 AWCs (i.e., 97.9%).

Dixit S *et al.*, observed that absence of routine health checkup of beneficiaries was the problem encountered under the project areas surveyed.<sup>[11]</sup> Meenal M Thakare *et al.*, observed that health check-ups are not conducted in any of the 45 AWCs studied in urban ICDS block of Aurangabad city.<sup>[9]</sup>

In our study, performance of AWCs is better regarding conduction of health check-ups when compared to studies done elsewhere in the country.

**Village health and nutrition days**

In the present study Village health and nutrition days were being conducted by all the centers once in every month.

Report on Assessment of Urban Anganwadi Centres in Uttarakhand in their study stated that health and nutrition days are being observed in rural AWCs, but it is practically non-operational in the urban AWCs.<sup>[6]</sup>

**Anganwadi Worker****Age of the AWWs**

More than three- fourths (n=163, 76.9%) of the AWWs, who were made part of the study, were aged between 30 to

49 years.

Thakare Meenal M. *et al.*, observed that of the 28 AWCs studied, 39.28% of AWWs were in the age group of 41-50 years, 25% each in the age group of 31-40 years and more than 50 years in the urban ICDS block of Aurangabad city. [12]

#### Marital status of the AWWs

In the present study, out of the 212 AWWs, 189 (89.1%) were married, 21 (9.9%) AWWs were widowed and only 1(0.5%) AWW was unmarried (Table no 13). A study done by Nagaraj G.M. *et al.*, observed that all the Anganwadi workers in Kolar district were married [13].

#### Religion of the AWWs

In the present study majority of the AWWs i.e., 162(76.4%) are Hindus, 42(19.8%) are Christians and only 8(3.8%) were Muslims.

Vidya L Rao and Komala M in a cross-sectional study done on 408 AWWs of Mysore city observed that majority (90.9%) of them belonged to Hindu religion. [14] Majority of the AWWs follow Hinduism, similar to the other study.

#### Education of the AWWs

In the present study, majority of the AWWs 209 (98.6%) having education qualification of 10<sup>th</sup> class and above. 58 (27.4%) of AWWs are having Degree Qualification.

Thakare Meenal M. *et al.*, observed that half of the 28 AWWs, in the urban ICDS block of Aurangabad city, were matriculate. [12]

#### Work Experience of AWWs

In the present study majority i.e. 135(63.7%) AWWs were having an experience of 10 years and more.

Thakare Meenal M *et al.*, observed that 82.14% of the 28 AWWs in urban ICDS block of Aurangabad city, had an experience of more than 10 years [12]. Sandip B. Patil *et al.*, observed that only 11 (22.22%) of the 49 AWWs studied in 2 ICDS blocks of Aurnagabad city, had an experience of more than 10 years. [15]

#### Conclusion

Undoubtedly, whatever success ICDS programme has been able to achieve so far, it has been because of strong community support and cooperation. However, there is still much to be done in this direction to ensure community participation in ICDS programme at the expected level.

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#### Conflict of Interest

None

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