# **Original Research Article**

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# An assessment of facilities and activities under integrated child development services in a city of Darjeeling district, West Bengal, India

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# **ABSTRACT**

**Background:** ICDS is the unique community based programme for early childhood care and development. The objective of the study were to assess the facilities and activities of ICDS centres and the utilization of ICDS services among children aged 6 months to 6 years in a city of Darjeeling district, West Bengal, India. Study setting and design – Community based cross-sectional study done in a city of Darjeeling District of West Bengal, India during June – September 2016.

**Methods:** 30 ICDS centres were selected by cluster sampling method. From each cluster 7 households were selected randomly with help of register of AWCs. 30 AWWs and 210 mothers of 6 months – 6 years children were interviewed with pre-designed, pre-tested schedule.

**Results:** 86.66% AWCs were running in pukka building. Toilet facility was absent in 43.33% AWC. All AWCs were well equipped & all workers were literate. 65.12% male child and 70.74% female child had received supplementary nutrition. Immunization records were present in all AWC. NHED was celebrated in all AWC twice monthly. 80% AWC referred sick children verbally. 17.61% of children took the meal to their home and 29.57% mother didn't attend NHED meeting.

**Conclusions:** There was gap in infrastructural facility and some activities. Mothers were satisfied with overall functioning of AWC.

**Keywords:** Anganwadi worker, ICDS, Utilization of services, Gap in activities

#### INTRODUCTION

ICDS is recognized as unique community based outreach system for child nutrition and development programme. It is the most comprehensive scheme of India Government for early childhood. The programme was launched on 2<sup>nd</sup> Oct 1975 in thirty three projects with aim of reducing malnourishment level and was targeted at children in age group 0 to 6 year and pregnant and lactating mother. During the 6<sup>th</sup> five year plan it was included under the new 20 point programme and achieved the status of a national programme. There are various components of

ICDS programme. These are supplementary nutrition, non-formal preschool education, immunization, nutrition health counselling, health check-up, and growth monitoring and referral service for children less than 6year. ICDS also seeks to strengthen the capacity of care givers and community for child care by building upon local knowledge and child care practices. These services are provided through childcare centre, known as Anganwadi centre (AWC) except immunization, health check-up and referral service that are provided by Health and family welfare ministry through NHM and health system. Each centre is managed by an Anganwadi worker

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(AWW) who is voluntary and pivotal worker selected from the village which she serves.<sup>1</sup>

The two services of ICDS, supplementary nutrition and health investment, can be expected to improve health outcome. Health investment service, by improving mother's nutrition knowledge would be expected to lead to improve health of their children. Supplementary nutrition can help children to achieve their potential. Vaccination enables children to fight the disease better and thus be less susceptible to compromised growth.

Children are the future of country. Therefore it is important to look after their growth and development by all section of community. ICDS programme is most important government intervention for reducing childhood malnutrition. According to 2011 census, India has around 164.5 million children below the age of 6years, constituting 13.6% of population.<sup>2</sup> According to NFHS- 4 report, percentage of children under 5 who are stunted is 37%, under 5 children who are wasted is 22% and under 5 children with under-weight is 34%. ICDS provides opportunities for development of children from vulnerable backgrounds. Even after 4 decades of implementation, the success of ICDS in tackling childhood problems is still a matter of concern in India.<sup>3</sup>

Utilization of ICDS service depends on various factors like infrastructure, availability of resources and client satisfaction. In ICDS scheme mothers are consider major client because they play major role in growth and development of child. People's active participation and co-operation is needed for success of ICDS programme.

With this background the present study was carried out to assess the various activities of ICDS programme related to under 6 year children, infrastructure of AWCs, facilities available, service provided to the beneficiary children and factors of non-utilization of service in Siliguri city of Darjeeling district.

# **Objectives**

- 1. To assess the facilities and activities of ICDS centres in Siliguri city of Darjeeling district.
- 2. To study the utilization of ICDS services among children 6 months to 6 years of age in study area.

### **METHODS**

The present study was descriptive, observational with cross-sectional in design done in Siliguri city of West Bengal, in urban-1 area among 111 ICDS centres during June 2016-September 2016 in the vicinity of the urban field practice area of department of community medicine of North Bengal Medical College and Hospital. 30 ICDS centres were selected by cluster sampling method. From each cluster, 7 households of beneficiary residing around the centre were selected randomly with the help of registers of ICDS centre. Thus from 30 ICDS centre, 30 Anganwadi worker and (30×7) 210 mothers of 6 months 6 years children were interviewed house to house.

Mothers of children aged 0–6 months and unwilling to participate were excluded from the study.

#### Study tools and techniques

Information was collected by interviewing respondent with pre-designed, pre-tested scheduled with prior consent. The schedule consist of two parts with 1<sup>st</sup> part contains checklist to assess the services of ICDS centres. In 2<sup>nd</sup> part of schedule, pattern of utilization of services for 6 months - 6 years children was assessed from their mothers.

#### Study variables

Infrastructure of AWC like building ownership by state or not, availability of adequate space, sufficient medicines, playing instruments/toys, charts, safe drinking water, electricity and toilet facility and staff etc.

Activities of AWW like proper maintenance of register, frequency of weighing of children by AWW, discussion with mother about nutritional status & growth chart of child, quality & regularity of food given to child, attitude of AWW towards children, immunization service, nonformal education, prophylaxis of medicines to the children.

Age, sex, religion and caste of children, education &occupation of parent, distance of house from ICDS centre reasons of non-utilisation if any.

#### Data collection

Data was collected with the help from a) AWWs of selected ICDS centre and b) mothers of 6months to 6 years children selected for the study. Information on their socio-demographic status and utilization of ICDS scheme was collected using a structured interview schedule and observatory checklist. The functioning of AWC was assessed by interviewing AWW with the help of records, reports, and logistics available at the centre. Workers were enquired about regular & adequate supply of different logistics in previous 6 months. Infrastructure of AWC, adequacy and frequency of different services was assessed.

#### Data analysis

Analysis of the data was done by using IBM statistical package for social sciences version 20 (SPSS 20). Distribution was measured in percentages. Tables and bar diagrams are shown.

#### **RESULTS**

#### **Building status**

Only 33.33% AWCs were running in rented Govt. building and the rest were in rented private building. Adequate indoor space was present in 86.66% AWCs.

Out of all 60% AWCs had electricity with fan facility. Toilet facility was absent 43.33% centres, had toilet facility with running water was present only in 16.66%. Separate kitchen were present in 60% of centres.

#### Availability of equipment

All AWCs were well equipped. Salter weighing scale and pre-school kits were available in all centres but adult weighing scale was available 70% AWC. Medicine kits were present in all but in 3 centres, medicines were expired. Sufficient play materials were present in all.

#### AWW characteristic

All the Anganwadi workers were literate. 26.67% of them were Madhyamik passed and 43.33% had higher secondary level of education. 96.67% had received job training. AWW had received refresher training. 76.67% of AWWs had work experience more than 20 years.

90.64% boys and 83.68% girls had regular growth monitoring done. 65.12% boys and 70.74% girls had received supplementary nutrition in all 30 AWCs. Out of 505 boys, 61.58% received PSE and out of 440 girls, 64.54% had received PSE.

Out of registered children, 106 (7.24%) male and 109 (7.44%) female child were suffering from moderately underweight and 4 (0.27%) female child suffering from severely underweight.

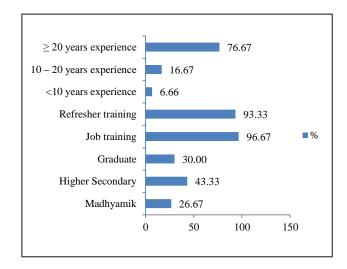


Figure 1: Profile of Anganwadi workers of Siliguri (n=30).

Table 1: Infrastructural and equipment status of Anganwadi centres of Siliguri.

Infrastructure		No.	(%)
Building	Govt. rented	10	33.33
Туре	Pucca	26	86.66
Electricity	Present	18	60.00
Toilet facility	Present with running water	5	16.66
Indoor space	Adequate	26	86.66
Outdoor space	Present	3	10.00
Separate kitchen	Present	18	60.00
Equipment			
Salter weighing scale	Available	30	100.00
Adult weighing scale	Available	21	70.00
Pre-school kits (PSE)	Available	30	100.00
Medicine kits	Available	27	90.00

Table 2: Distribution of registered children availing the services.

Services	No. of registered boys No. (%)	Boys availing services No. (%)	No. of registered girls No. (%)	Girls availing services No. (%)
Growth monitoring	823 (100)	746 (90.64)	858 (100)	718 (83.68)
Supplementary nutrition	823 (100)	536 (65.12)	858 (100)	607 (70.74)
Pre-school equipment (PSE)	505 (100)	311 (61.58)	440 (100)	284 (64.54)

# Various services

Supplementary nutrition

Good quality and adequate amount of morning snacks and hot cooked meals as per weakly menu chart were provided in all 30AWC. Interruption in supply of supplementary food during last six month was reported in 23 (76.66%) AWC.

Pre-school education

All the selected 30 AWC used teaching method in play way.

Health check-up

During last 6 month, health check-up of beneficiary was done by MO only one time in 23 (76.66%) AWC.

Monthly growth monitoring done in 30 (100%) AWC and was plotted accurately by AWW in 30 (100%) AWC.

Table 3: Various activities at selected Anganwadi centres.

Activities	No. (%)			
Supplementary nutrition:				
Morning snacks and lunch as per menu chart	30 (100%)			
Good quality & adequate quantity	30 (100%)			
Pre-school education (PSE):				
Teaching method used in play way	30 (100%)			
Activities like reciting poem, counting, playing indoor games, drawing, praying	30 (100%)			
Growth Monitoring:				
Plotting of Growth chart by AWW monthly	30 (100%)			
Immunization:				
Immunization record present	30 (100%)			
Partially immunized children present in	14 (46.66%)			
Nutrition & health education day (NHED):				
Meeting done twice in month	30 (100%)			
Discussion method used	30 (100%)			
Demonstration method used	4 (13.33%)			
Referral service:				
No referral slip used	30 (100%)			
Referred verbally	24 (80%)			
Referred to Siliguri dist. hospital	23 (76.66%)			

Table 4: Socio-demographic characteristic of mothers attending ICDS centres.

Socio-demographic characteristics		No. (%)
Age of child (in months)	6 -24	81 (38.57%)
	25-48	94 (44.76%)
	≥48	35 (16.66%)
Sex of child	Male	105 (50%)
	Female	105 (50%)
Religion	Hindu	174 (82.85%)
	Muslim	36 (17.14%)
Type of family	Nuclear	113 (53.80%)
	Joint	97 (46.19%)
	Illiterate	36 (17.14%)
	Primary	49 (23.33%)
Education of mother	Secondary	102 (48.57%)
	Madhyamik	8 (3.80%)
	HS or more	15 (7.14%)
	Illiterate	38 (18.04%)
Education of father	Primary	50 (23.80%)
Education of father	Secondary	103 (49.04%)
	Madhyamik	3 (1.42%)
	HS of more	16 (7.61%)
Occupation of mother	Home maker	181 (86.19%)
	Maid servant	22 (10.47%)
	Others	7 (3.33%)
Occupation of father	Service	24 (11.42%)
	Business	19 (9.04%)
	Skilled labour	27 (12.85%)
	Unskilled labour	140 (66.66%)
Per capita monthly income (Rs.)	<rs. 1000<="" th=""><th>39 (18.57%)</th></rs.>	39 (18.57%)
	1000 - 3000	138 (65.71%)
	>3000	32 (15.23%)

Practice of mothers		No. (%)
Place of consumption of food	AWC	173 (82.38%)
	Home	37 (17.61%)
Regularity in attending centre	Yes	204 (97.14%)
	No	6 (2.92%)
Discussing with growth chart	Yes	83 (40.57%)
	No	127 (60.74%)
Medicine taken from AWC	Yes	163 (70.61%)
	No	47 (23.83%)
Attending NHED meeting	Regularly	146 (69.52%)
	Never	60 (29.57%)
	Sometimes	4 (1 90%)

Table 5: Mothers of beneficiary children utilising ICDS services.

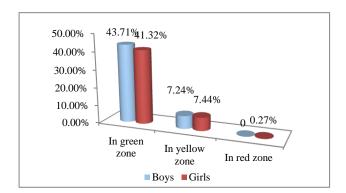


Figure 2: Distribution of beneficiary children according their growth chart plotting.

**Immunization** 

Immunization record was present in 30 (100%) AWC. Partially immunized children were present in 14 (46.66%) AWC. The reason was lack of interest and ignorance of parents of beneficiary.

Nutrition and health education day

Nutrition and health education day was celebrated in 30 (100%) AWC twice in a month. All AWC conducted NHED by discussion. Only 4 (13.33%) AWC conducted NHED by using demonstration method in addition to discussion. 19 (63.33%) AWC had <50% attendance of mother on NHED.

# Referral service

Selected 30 (100%) AWC did not use referral slip. 24 (80%) AWC referred sick children verbally. Majority 23 (76.66%) AWC referred the sick children at Siliguri Dist. Hospital.

# Socio-demographic profile of mothers of beneficiary children

210 mothers, whose children were utilizing ICDS service, were interviewed. 44.76% of children were in the age

group between 25 -48 months. 53.80% respondents were from nuclear family. More than 70% of the parents were literate. 86.19% mothers were home maker and 66.66% fathers were engaged in unskilled work. Majority of children 65.71% belonged to family with per capita monthly income between Rs. 1000-3000.

All the mothers were satisfied about the functioning of AWC. But it was seen from the table that 17.61% of children took the meal to their home. 2.92% children did not attend AWC regularly because their mothers were busy with household works. 60.74% mothers were not discussed about the growth chart. 29.57% mother did not attend NHED meeting as they were less interested about meeting.

# **DISCUSSION**

The present study shows 33.33% AWCs were running in rented govt. building and 86.66% AWC were running in pukka building with adequate indoor space but a study held in Gujarat shows that 66.7% AWC building were owned by state & 53.3% AWC had adequate indoor space. AWC had toilet facility with running water but in Gujarat study showed 61.7% AWC had child friendly toilet facility. It was found 40% AWC did not have separate kitchen in the present study which is almost similar to the study report of Gujarat.

All the centres were well equipped.

The present study shows that all Anganwadi workers were literate. Among them 96.66% AWW received job training & 76.67% had more than 20 years of work experience. Study held in Gujarat also shows all AWW were literate but only 86.7% had received job training.<sup>4</sup>

The present study shows good quality & adequate amount supplementary food was available in all AWCs of the current study area whereas study held in Gujarat shows 86.7% AWC provided good quality food & 95.0% AWC provided adequate quantity to children.<sup>4</sup>

Present study shows monthly growth monitoring by plotting in growth charts was done in all centres but study held at Gujarat shows growth chart was present in 96.7% AWC & accurately plotted by 95.0% AWW. The study in Tripura, Agartala highlighted that there is a gap in generating awareness regarding the services under the scheme. 90.2% of participants utilized growth monitoring and immunization services. Study held in Ludhiana revealed 55.6% AWW knew how to plot on growth chart.

Immunization records were present in all AWC of present study area & partially immunized children were present 46.60% AWC. But study held in Gujarat shows 10% AWC recorded immunization.

Present study shows NHED was celebrated twice monthly in all AWC. The study in Gujarat showed 81.7% AWC celebrated NHED. The present study shows all AWC used discussion method & 13.33% AWC used demonstration method in addition to discussion for conduction of NHED but study held in Gujarat shows 81.6% AWC were conducting NHED by discussion method.<sup>4</sup>

The present study shows 65.12% boys and 70.74% of girls availed supplementary nutrition but 61.58% male children and 64.54% female availed PSE. Study held in Tripura<sup>5</sup> revealed 67.50% children taking meals which are almost similar to present study but PSE was taken by only 28.10% children. Study held in Aligarh, UP shows 24.3% children received SN and 34.52% child received PSE. 10

The present study shows 7.24% males & 7.44% females belonged to moderately underweight category and 0.27% female child belonged to severely underweight category. As per national health policy the impact of ICDS scheme should help to increase immunization coverage & reduce incidence of malnutrition. Study done in Aligarh revealed 15.7% children were suffering from PEM and study held in urban area of Maharashtra shows 48.03% beneficiary utilized SN, 32.28% children belonged grade I & 11.03% children belonged grade II malnutrition. 9,10

Under socio-demographic characteristic, the present study shows there were equal number of boys and girls and 82.85% of children were Hindu by religion. The study done in Tripura shows 47.80% children was male, and all of them were Hindus.<sup>5</sup> The study done in Lucknow revealed 86.8% children were Hindu, the study held in urban slum, Kolkata revealed 80.7% children were Hindu which were almost similar to the report of present study.<sup>12</sup> In the current study 53.80% children belonged to nuclear family. Study done in Kolar dist. Karnataka showed 61.16% children belonged to nuclear family and 57.6% children belonged to nuclear family in the study was done in Lucknow.<sup>12,13</sup>

In the present study, 86.19% mothers were home makers & 66.6% fathers were unskilled labours. Study done in Tripura showed 92.2% mothers were house wives & 57.4% fathers were skilled labour by occupation.<sup>5</sup> Study done in Chetla, Kolkata found 85% mother were unemployed & regarding educational status of mother 36.3% had completed middle level of education &5.2% were illiterate. 14 Present study shows 17.14% mother were illiterate & 48.57% mothers studied up to secondary level of education. Study done in Karnataka revealed 71.8% mothers were illiterate & 57.1% fathers were illiterate. Present study shows 18.1% fathers were illiterate & 65.7% children belonged to a family with per capita monthly income between Rs.1000 and Rs.3000. Study in Lucknow revealed 54.4% children belonged to family income per month Rs.<3000.<sup>12</sup>

Study done in the Lucknow showed 24.2% children brought food partially at home, 21.9% brought the entire food item at home. <sup>12</sup> In current study growth chart was not discussed with 60.74% mother. Study done by Biswas et al in two districts of West Bengal showed growth chart was not discussed with 87.5% mothers. The study done in Kolkata showed growth chart was discussed with 31.9% mother and only 4.4% mother received medicine from AWC but present study revealed 70.61% mother took medicine from AWC. <sup>14</sup> In the present study 69.52% mother attended NHED meeting regularly but study at Kolkata shows that 9.6% mother said meeting held regularly in their location. <sup>14</sup>

All the mothers of current study were satisfied about functioning of AWC but study done in Kolkata shows 63% beneficiary mother had average level of satisfaction and only 1.4% mother were well satisfied. Study held in Aligarh, shows 10.84% mother were satisfied and 59.44% mothers were dissatisfied. On the satisfied and 59.44% mothers were dissatisfied.

#### **CONCLUSION**

The present study reported a gap in infrastructure and facility of AWCs, mainly child friendly toilet facility, inadequate indoor space, separate kitchen and electric facility. It requires immediate attention and action to provide toilet facility to all ICDS centres. Inadequate indoor space also hampers to conduct the play activity properly. There was gap in some activities of AWC like regular health check-up of beneficiaries, use of referral slip to refer a child and timely supply of supplementary food. All the workers were well trained and done monthly growth monitoring & celebrated NHED twice in a month. But AWW have to give more emphasis to complete the immunization of all beneficiaries. Counselling is needed for the parents of partially immunized children. Mothers of beneficiaries were satisfied about the functioning of AWC but some didn't attend NHED due to lack of time and interest. It is essential to increase awareness of mother about child's need and her capacity for care.

Attention of health and ICDS authorities is needed and more efforts should be given to achieve total utilization of services among children.

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Institutional Ethics Committee

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