



EVALUATION OF HEALTH CARE SERVICES OF INTEGRATED CHILDHOOD DEVELOPMENT SERVICES (ICDS) AT JAMNAGAR, GUJARAT, INDIA

Community Medicine

Dr. Prashant D. Dave*	Assistant Professor, Department of Community Medicine (PSM), Government Medical College, Bhavnagar, Gujarat *Corresponding Author
Dr. Trusha R. Kansagara	Associate Professor, Department of Community Medicine (PSM), Shantabaa Medical College, Amreli
Dr. Patel Mehul Ramanbhai	Assistant Professor, Department of Community Medicine, Dr. N.D. Desai Faculty of Medical Science & Research

ABSTRACT

Background: Early years of the life are the most crucial period for the physical, mental, social, emotional, language development and lifelong learning. Integrated child development services (ICDS) program continues to be the world's most unique early childhood development program. ICDS provides integrated package of services like: (a) supplementary nutrition (b) immunization (c) health check up (d) medical referral services (e) non-formal education of children up to 6 yrs (f) nutrition and health education for women. For improving the quality of service delivery of any scheme, there must be periodic evaluation of its service delivery and service utilization components. **Objectives:** (1) to evaluate the ICDS services & its utilization by the beneficiaries. (2) to find out differences in health care services between rural & urban AWCs **Method:** A cross sectional study involving selected 120 AWCs of Jamnagar was carried out using a pro forma having questions related to health care services provided under ICDS. **Results:** All AWCs had prepared time table of activities for pre-school education (PSE) with availability of PSE Material & PSE guidebook in 92.5% of them. 62.5% AWCs received co-operation of parents for PSE. 67% of beneficiaries were regular in PSE & that was seen more commonly in urban AWCs than rural ones. 75% of AWW found supplementary nutrition to be of good quality & acceptable to the beneficiaries and 80% AWW found its quantity as enough for children. 47.5% AWCs faced an interruption of supply at least once in last 6 months. Percentage of mild, moderate & severe malnutrition varied between 82-85%, 7-12% & 6-8% in children between 6m-6 years respectively. Referral services, Nutrition and Health care session, vaccination services, routine Healthcare check up of children at every 1-3 month and Minimum 4 ANC visits were provided in 60%, 82.5%, 62.5%, 75% and 77.5% AWCs respectively. Mild malnourished children were more common in rural AWCs compared to the urban ones while severely malnourished children were more common in urban AWCs than the rural. **Conclusion:** PSE Material & guidebook were seen in >90% AWCs but parents' co-operation for PSE was seen in only 62.5% centres. About 2/3rd beneficiaries were regularly attending PSE with higher prevalence in urban than rural AWCs. 75% AWWs found supplementary nutrition to be of good quality & acceptable to the beneficiaries. AWWs felt that supplementary nutrition provided to urban AWCs was of superior in quality with higher acceptability than that of the rural ones. 80% AWW said that the quantity provided was enough. About half AWWs reported about interrupted supply of supplementary nutrition at least once in last 6 month. Percentage of mild, moderate & severe malnutrition varied between 82-85%, 7-12% & 6-8% in children of 6m-6 years respectively. Referral services, Nutrition and Health care session, vaccination services, Routine Healthcare check up of children at every 1-3 month & Minimum 4 ANC visits were provided in 60%, 82.5%, 62.5%, 75% & 77.5% AWCs respectively. Rural AWCs had more 'mild malnourished' child & Urban AWCs had more 'severely malnourished child'.

KEYWORDS

Evaluation, ICDS, healthcare service

INTRODUCTION:

Children are the first call on the agenda of human resource development – not only because young children are the most vulnerable, but because the foundation for lifelong learning and human development is laid in these crucial, early years⁽¹⁾. Early years of the life are the most crucial period for the physical, mental, social, emotional, language development and lifelong learning⁽²⁾. There have to be balanced linkages between education, health and nutrition for proper development of a child. This led to the birth of the Integrated Child Development Services (ICDS) in 1975. Integrated child development services (ICDS) program continues to be the world's most unique early childhood development program⁽³⁾.

The ICDS programme functions through a network of Anganwadi Centres (AWCs) which are the focal points for the delivery of services attached to the scheme and are managed by the Anganwadi Workers (AWWs)⁽⁴⁾. ICDS provides integrated package of services like: (a) supplementary nutrition (b) immunization (c) health check up (d) medical referral services (e) non-formal education of children upto 6 yrs (f) nutrition and health education for women. For improving the quality of service delivery of any scheme, there must be periodic evaluation of its service delivery and service utilization components. So we conducted this study with following objectives.

Objectives:

1. To evaluate the ICDS services and its utilization by the beneficiaries.
2. To find out differences in health care services between rural and urban AWCs

Materials and Methodology

Type of study design: Cross sectional study

Study Period: 12 month (from july-2017 to june-2018)

Study Area: Selected Anganwadi Centres of Jamnagar District, Gujarat, India

Sampling method: Simple random sampling method

Sample Size: 120 (total of A+B)

A=10% number of AWCs selected from the total number of 913 AWCs from all taluka of jamanagar= 91 B= 10% number of AWCs selected from the total number of 294 AWCs from all urban wards of Jamnagar municipal corporation=29

Method of Data collection:

A pre-tested semi-structured pro forma designed by NIPCCD (National institute of public co-operation for child development) was used for data collection which includes questions related to health care services like preschool education, supplementary nutrition, health check up of children and pregnant lady, vaccination service, referral service and nutrition and health care education. One of the authors visited the facility and filled the pro forma after assessment.

Inclusion criteria:

All the AWCs selected by above procedure except which falls under exclusion criteria

Exclusion criteria:

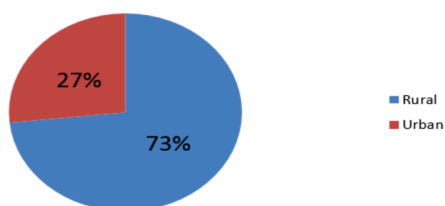
AWC which are not functioning at the time of study (i.e. where post of Anganwadi worker (AWW) was vacant at the time of study).

Data Entry and Analysis:

The data entry was done in MS Excel version 10.0 and data analysis was done using SPSS (Statistical Package for social sciences) version 20.0. For qualitative data, Pearson's chi-square test was applied to test the relationship between different categorical data. A 'P value' of <0.05 was considered statistically significant

Ethical Clearance:

The present study was approved by M.P.SHAH MEDICAL COLLEGE INSTITUTIONAL ETHICS COMMITTEE, GURU GOBINDSINGH GOVERNMENT HOSPITAL, JAMNAGAR. Written approval was also obtained from District programme officer for ICDS.

RESULTS**Selection of AWCs****Figure 1: Selection of AWCs**

We can see from figure 1 that 88 AWCs (i.e. 73%) were selected from rural areas of Jamnagar while 32 AWCs (i.e. 27%) were selected from urban areas of Jamnagar.

Table 1: Evaluation of 'Pre-school Education' service

Pre-School Education activity evaluation	Sub-groups	Number of AWCs	% (n=120)
Service provider side	Time table of activities	120	100.00%
	PSE Material	111	92.50%
	PSE Kit	105	87.50%
	Guide book	111	92.50%
	Knowledge about ECCE (early childhood care and education day)	120	100.00%
	Cooperation from parents	75	62.50%
Beneficiary Side	Beneficiaries attending PSE	Number of Beneficiaries	% (n=4533)
	Regular Beneficiaries	3018	66.58%
	Irregular Beneficiaries	1515	33.42%

Table 1 show that all AWCs had prepared time table of activities for pre-school education (PSE) and all AWW have knowledge about ECCE (early childhood care and education day).

PSE Material and PSE guidebook were available in 92.5% of AWCs while co-operation of parents for PSE activity was available only in 62.5% AWCs. About 67% of beneficiaries were regular in attending PSE.

Table 2: Evaluation of Supplementary Nutrition Service

Evaluation of Supplementary Nutrition	sub-groups	No of AWW (n=120)	Percentage
Service provider side (perception of AWW regarding supplementary nutrition)	Good Quality	75	62.50%
	Acceptability	75	62.50%
	Enough Quantity	96	80.00%
	Interruption in supply	57	47.50%

Beneficiary Side (Zone of Growth Chart of children)	Zone	Children 6m- <1 yr (%) (n=1620)	Children 1-3 yr (%) (n=3642)	Children 3-6 yr (%) (n=3594)
	Green	85.26%	82.69%	81.93%
	Yellow	7.17%	9.97%	12.34%
	Red	7.57%	7.34%	5.72%

It can be stated from table 2 that 75% of AWW finds supplementary nutrition to be of good quality and acceptable to the beneficiaries. 80% AWW said that the quantity of supplementary nutrition was enough to the need of enrolled children. About half (47.5%) of AWW agree on that supply of supplementary nutrition is interrupted (not consistent throughout the year). 82-85% of children of either 6m-1 yr or 1-3 yr or 3-6 years were falling into green color zone of growth chart which indicated mild malnutrition in them. About 7-12% of children of either 6m-1 yr or 1-3 yr or 3-6 years were having moderate malnutrition (as per WHO growth charts) while 6-8% of children between 6m-6 years had severe malnutrition (as per WHO growth charts) at the time of visit.

Table 3: Evaluation of services like Vaccination, referral, nutrition & health education and health check up

Health care service	sub-group	No of AWC (n=120)	Percentage
Referral Service	AWWs referring beneficiaries	72	60.00%
	AWWs using referral slip while referring beneficiaries	9	7.50%
	Follow up of referred beneficiaries	3	2.50%
Nutrition & Health education session organized	Yes	99	82.50%
	No	21	17.50%
Vaccination Activity Location	S.C	36	30.00%
	P.H.C	9	7.50%
Health check up (a) frequency of health check up of children	AWC	75	62.50%
	1 - 3 month	90	75.00%
	3 - 6 month	9	7.50%
	> 6 month	21	17.50%
Health check up (b) pregnant female	Average no. of ANC visits	No of AWC (n=120)	%
	2 & <2	9	7.50%
	3	18	15.00%
	4	15	12.50%
	5 & >5	78	65.00%

Table 3 indicates that when assessed 'referral service', it was seen that about 60% of AWW were providing referral services. Out of them only 7.5% were using referral slip along with referral and only 2.5% AWW were doing follow up of referred beneficiaries. Nutrition and health care sessions were organized in about 82.5% AWCs. Vaccination service was provided at AWC in about 62.5% AWCs while it was provided at nearby SC, PHC in rest of AWCs. Routine Healthcare check up of children was provided every 1-3 months in only 75% of AWCs. Minimum 4 ANC visits were provided by in about 77.5% AWCs.

Table 4: Comparison of health care services between rural and urban AWCs

Health care services or its utilization	Sub-group	URB AN	%	RUR AL	%	χ ² Test Value	P value
Beneficiaries attending Pre-school education	Regular Beneficiary	915	77.81 %	2103	62.65 %	89.283	<0.0001
	Irregular Beneficiary	261	22.19 %	1254	37.35 %		
Perception of AWW regarding supplementary Nutrition	Good Quality	27	84.38 %	48	54.55 %	7.682	0.005

	Acceptability	27	84.38%	48	54.55%	7.682	0.005
Zone of Growth chart of children 6m-1 yr	Green	1113	86.28%	303	91.82%	16.528	<0.0003
	Yellow	105	8.14%	6	1.82%		
	Red	72	5.58%	21	6.36%		
Zone of Growth chart of children 1 yr-3 yr	Green	2205	81.04%	777	84.36%	49.898	<0.0001
	Yellow	273	10.03%	123	13.36%		
	Red	243	8.93%	21	2.28%		
Zone of Growth chart of children 3 yr-6 yr	Green	2229	79.81%	753	94.01%	89.043	<0.0001
	Yellow	360	12.89%	33	4.12%		
	Red	204	7.30%	15	1.87%		

Table 4 indicates 'Regular' beneficiaries attending pre-school education are more in urban AWCs compared to rural AWCs and this is highly significant association. If compared the perception of AWW regarding supplementary nutrition, it was of more good quality with higher acceptability amongst beneficiaries in AWCs of urban areas in comparison with AWCs of rural areas. A common and statistically significant finding came out that the children having 'Green Zone' (i.e mild malnutrition) in growth chart plotting were higher in rural AWCs as compared to urban ones. One more significant finding revealed by the study was that children between 1-6 yrs having 'Red Zone' (i.e. severe malnutrition) as per WHO growth chart plotting were higher in number in urban AWCs as compared with rural AWCs.

DISCUSSION:

In our study 73% AWCs were selected from rural and 27% from urban areas of Jamnagar. A study carried out by Dr.Rajesh Chudasama et al⁽⁵⁾ included 77% AWCs from rural and 23% from urban areas. Both studies share more or less same type of selection of AWCs. All AWCs in our study had prepared time table of activities for pre-school education (PSE) and all AWW have knowledge about ECCE (early childhood care and education day). PSE Material and PSE guidebook were available in 92.5% AWCs while PSE kit was available in 87.5% AWCs. Co-operation of parents for PSE activity was available only in 62.5% AWCs. A study by Dr.Rajesh Chudasama et al⁽⁵⁾ found that the PSE kit was available in 40% AWCs. This indicates that availability of PSE kit has improved since last 2012-13 till present study

The average number of 'regular' beneficiaries of pre-school education per AWC was 25 while it was 14 as per the study conducted by NCAER in 2009-10 yrs based on three sudden visits by the Research Team⁽⁶⁾. This shows a favourable change towards utilization of Pre-school education services since the previous study. In our study, 75% of AWW finds supplementary nutrition to be of good quality and acceptable to the beneficiaries. About 47.50% AWCs reported some interruption in supply at least once in last 6 months. A study by Dr.Rajesh Chudasama et al⁽⁵⁾ states that 87% AWCs reported acceptability of supplementary nutrition. The same study mentioned that 80% AWCs reported interruption in supplementary nutrition in at least once in last 6 months. We can say from both these studies that acceptability of supplementary nutrition has remained same with no improvement since last 5 yrs but interruptions in supply has been drastically reduced from 80% to 47.5% in last 5 yrs of the present study which is a very impressive change in implementation aspect of ICDS.

Present study says that about 60% of AWW were providing referral services, out of them only 7.5% were using referral slip along with referral. A study by Dr.Rajesh Chudasama et al⁽⁵⁾ states that regular referral of sick children was seen in 8.3% of AWCs, out of which 18.3% AWCs were using referral slip. Again an improvement in referral services has been noticed which shows progress in the implementation of ICDS. Routine Healthcare check up of children was provided every 1-3 monthly in 75% of AWCs. A study by Dr.Rajesh Chudasama et al⁽⁵⁾ reported that only 30.40% AWCs were providing regular health check up of enrolled children. Health Check up services for children of AWCs has shown terrible progress since 2012 to present study and it's a welcome sign for India for better health of children.

CONCLUSION:

All AWCs had prepared time table of activities for pre-school education (PSE). PSE Material and PSE guidebook were available at

majority (92.5%) AWCs but co-operation of parents for PSE was seen in only 62.5% centres. About 2/3rd beneficiaries were regular in attending PSE and that too were more common in urban AWCs than rural ones. 75% AWWs found supplementary nutrition to be of good quality and acceptable to the beneficiaries. AWWs had the perception that supplementary nutrition provided to urban AWCs was of superior in quality with higher acceptability than that of the rural ones. 80% AWW said that the quantity provided was enough. Almost half AWW told that supply of supplementary nutrition was interrupted at least once in last 6 month. 82-85% children of 6m-6 years had mild malnutrition while 7-12% had moderate and 6-8% had severe malnutrition. Near 60% of AWCs were providing referral services. Nutrition and health care sessions were organized in about 80% AWCs. Vaccination service was provided at AWC itself in about 60%. Routine Healthcare check up of children was done every 1-3 monthly in only 3/4th of AWCs. Minimum 4 ANC visits were provided by in about 80% AWCs. Children with mild malnutrition were common in rural AWCs compared to the urban ones while severely malnourished children were more common in urban AWCs than the rural.

REFERENCES:

1. Ministry of Women and Child Development, Government of India. Integrated Child Development Services (ICDS) Scheme. Available from: <http://wcd.nic.in/icds.htm>.
2. Shahanaz V, Naidu NA, Vidyasagar P. et al. .Nutritional status, Psychological development and the Home environment of Indian rural children. : Indian J Pediatr 1998;35:959-66.
3. NIPCCD. Three Decades of ICDS - An Appraisal. <http://www.nipccd.nic.in>. [Online] 2006. <http://www.nipccd.nic.in/reports/icdsvol3.pdf>.
4. Dept. of Women and Child Development, Ministry of Human Resources Development. Integrated Child Development Services. s.l.: Govt. of India, New Delhi 1995; 1-24
5. Dr.Rajesh Chudasama et. al.Evaluation of Anganwadi centres performance under ICDS in gujarat state 2012-13, rajkot : Journal of Mahatma Gandhi Institute of Medical Sciences, march 2015, Vol. 20
6. NCAER-national council of applied economic research., National Council of Applied Economic Research (NCAER). Report of the Evaluation of Integrated Child Development Services 2009. 2009