

Utilization of Anganwadi Centres under ICDS Program for Maternal and Child Health Care in India.

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ABSTRACT

Government of India has implemented various health programs like National Health Mission in all the states, but still there existed inter state, inter district and inter block variations in achieving health goals. Integrated Child Development Scheme, ICDS was initiated to address the nutritional health status of children in the age group of 0-6 years. The child malnutrition is still a major problem in India and nearly three-fourths of the states/UTs have below the nutritional status compared with the Indian average (NFHS 4: Underweight: 35.8 percent). It is clear that the effectiveness of ICDS program is not satisfactory even after 40 years of implementation of the program. The data from the Rapid survey on children conducted by Ministry of women and child development, GoI during 2013-14 in 29 states of India was considered for this study. The objective of this study is to assess the performance of Anganwadi centres under ICDS program for maternal and child health care and to suggest to improve the performance of AWCs. Nutrition education to mothers, awareness creating through AWCs, monitoring mechanism and infrastructure development will help to improve the performance of ICDS centres to achieve health goals uniformly throughout the states.

Keyword : - ICDS, Anganwadi centres, Child nutrition, Child health care.

INTRODUCTION:

Government of India has launched the Integrated Child Development Scheme (ICDS) during 1975 to address the nutritional health status of children in the age group of 0-6 years, however the scheme implementation is done by the State Governments. As on 31st March 2015, 7072 projects and 13,46,186 AWCs are operational across 36 States/UTs, covering 1022.33 lakh beneficiaries under supplementary nutrition and 365.44 lakh 3-6 years children under pre-school component. The package of services delivered at Anganwadi Centres are Growth Promotion, Universal Supplementary nutrition, Early Childhood care including immunization and Pre-School education, Nutrition and Health education, Health Services by Health personnel (VHN/M.O.) and Referral Services respectively. The beneficiaries of ICDS projects are Children 0-3 years, Children 3-6 years, Expectant mothers, Nursing mothers, Old Age Pensioners, Adolescent girls and Community Groups/Community Leaders.

According to NFHS 4 (2015-16), only 54 percent of children have received any one of the services of ICDS and forty-eight percent received food supplements. Nutritional status was ascertained according to weight for age criteria laid down by the Nutrition sub-committee of Indian Academy of Pediatrics (1972). As per the Children's nutritional status in India, Stunting decreased from 48 percent to 38 percent between NFHS-3 (2005-06) and NFHS-4 (2015-16), wasting increased from 20 percent to 21 percent, and the percentage of children who are underweight decreased from 43 percent to 36 percent. Even though, the child malnutrition is still a major problem in India and nearly three-fourths of the states/UTs have below the nutritional status compared with the Indian average (NFHS 4: Underweight: 35.8 percent). The effectiveness of ICDS program is not satisfactory even after 40 years of implementation of the program and the success of ICDS program in tackling maternal and childhood problems still remains a matter of concern (Gragnotati M, 2010).

Sangita Trivedi (1994) highlighted in his study that the ICDS scheme was under utilized by the community and the health authorities have to promote the services. An evaluation study by NITI AAYOG (2015) revealed that 24.3 percent of AWCs have not maintained the records properly, 22.5 percent of AWCs do not have the required medicines for the children, 41 percent of AWCs have either shortage of space or unsuitable accommodation and 60 percent of AWCs have located in rented accommodations. ICDS scheme oriented research has been attempted at evaluating its impact towards reduction in malnutrition or child morbidity (Agarwal KN et.al., 2000; Dongre AR, 2008). Tandon and Kapil (1998) recommended the need for revitalization of ICDS towards better maternal and child health (MCH) especially in rural areas.

According to Datta et.al., (2010), the reported reasons of mothers for not sending their children in rural Anganwadis which include poor quality of supplementary food, regular absence of Anganwadi Worker (AWW) in AWC and poor sanitation at rural AWC premises. A significant number of pregnant mothers, lactating mothers and adolescent girls received services from Anganwadi centres in rural areas compared to urban areas. Research studies attempted at evaluating its impact for nutritional status and child morbidity but the status AWCs and the performance of ICDS were not assessed much. The present study is conducted to assess the performance of AW centres under ICDS program for maternal and child health purposes.

METHODOLOGY:

The secondary data was used which was collected from a nationwide household cum facility survey during 213-14 in 29 states of India. The Rapid survey on children was conducted by Ministry of women and child development, GoI which covered 105,483 households and 5630 Anganwadi centres (AWC) with height and weight measurements among children aged 0-4, adolescent girls aged 10-18 across all states. The important indicators such as process, outcome and performance indicators were used for analysis in this paper. The objective of this study is to assess the performance of Anganwadi centres under ICDS program for maternal and child health care and to suggest to improve the performance of AWCs.

FINDINGS AND DISCUSSION:

Factor analysis was carried out, the Principal component method was used for data reduction and to estimate the factors describing the variability among variables and to measure the strength of variables and the extracted factors which are highly significant.

The total variance explained is presented in Table 1 which shows the percent of variance and the cumulative percentage of variance among the variables.

Table 1. Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.135	34.086	34.086	6.135	34.086	34.086	4.663	25.903	25.903
2	3.034	16.854	50.939	3.034	16.854	50.939	2.939	16.327	42.230
3	2.455	13.641	64.580	2.455	13.641	64.580	2.488	13.820	56.049
4	1.267	7.039	71.619	1.267	7.039	71.619	2.348	13.047	69.096
5	1.159	6.440	78.059	1.159	6.440	78.059	1.613	8.964	78.059
6	.854	4.745	82.805						
7	.731	4.061	86.866						

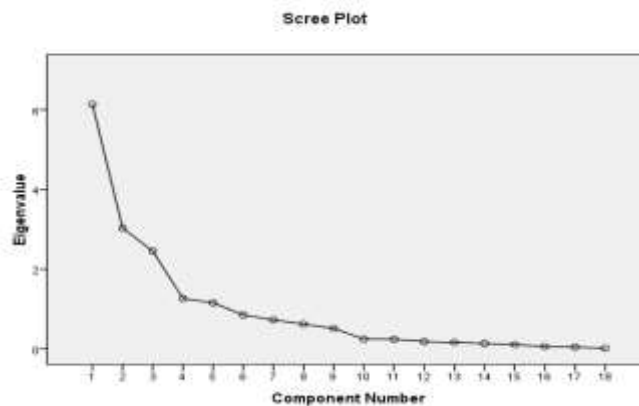
8	.624	3.468	90.334						
9	.516	2.868	93.202						
10	.247	1.372	94.574						
11	.244	1.357	95.932						
12	.188	1.046	96.978						
13	.166	.920	97.898						
14	.138	.766	98.664						
15	.111	.617	99.281						
16	.062	.345	99.626						
17	.049	.273	99.899						
18	.018	.101	100.000						
Extraction Method: Principal Component Analysis.									

The KMO and Bartlett’s tests indicated the strength of relationship and variability among variables (Table 2). KMO measures the sampling adequacy which is $0.578 > 0.5$ for a satisfactory factor analysis to proceed. Bartlett's test is another indication of the strength of the relationship among variables which is significant and 87 percent of variability is accounted for “Received advice from AWW about delivery facility and 85 percent of variability is accounted for ANC registration. It is noticed that the first factor accounted for 34.086 percent of the variance, the second factor 16.854 percent and third factor 13.641 percent varied significantly.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.578
Bartlett's Test of Sphericity	Approx. Chi-Square	373.606
	df	153
	Sig.	.000

The screen plot shows that the Eigen value decreases from 6th component onwards and the Eigen value is greater than one up to 6th component and is significant.



After getting the component matrix, the rotated component matrix is generated and is presented in Table 3.

Table 3. Rotated Component Matrix

Rotated Component Matrix ^a	Component				
	1	2	3	4	5
ANC Registration	.685				
First trimester registration	.837				
4 ANC visits	.769				
Institutional delivery	.732				
Full Immunization		.805			
LBW		.857			
breastfeeding_ <1hr		-.626			
Underweight <18.5		.854			
Children deworming_AWC		.804			
EMW_aware__VHND			.728		
EMW_attended__VHND			.659		
AWW_home visits			.822		
JSY_JSSK_availed				.868	
Received advice from AWW_delivery_facility				.554	
Aware_6 services _AWC				.835	
Severely_Stunted					.837
Severely_Wasted					.672
Severely_Underweight					.770

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 8 iterations

There are 18 variables which are loaded in 5 factors namely AN Care and delivery are loaded in factor 1, child care is loaded in factor 2, VHND and home visits are loaded in factor 3, maternity benefit schemes and awareness are loaded in factor 4 and Malnutrition is loaded in factor 5. These variables under each factor can be used for further analysis.

The performance of indicators was measured by calculating index using Iyengar method. The indicators selected for analysis were ANC Registration, First trimester registration, 4 ANC visits, Institutional delivery, Full Immunization, LBW, breastfeeding less than 1 hour, Underweight <18.5, Children deworming through AWC, EMW aware about VHND, Ever married women attended VHN Days, home visits by AWW, Average home visits last 3 months, JSY_JSSK availed by women, Received advice from AWW about delivery facility, Aware about 6 services of AWC, children severely stunted, severely wasted and severely underweight respectively.

Index calculated for each indicator was aggregated and the performance of each state was measured. The total scores obtained for each state is ranked. The analysis clearly shows that the performance of AWCs in southern states namely Andhra Pradesh, Karnataka, Tamil Nadu, Gujarat and the eastern state Odisha was better have obtained ranks 1 to 5. The bottom five states with low performance of AWCs in East, North and North East states were Bihar, Punjab, Uttarakhand, Jammu and Kashmir and Nagaland respectively. The overall performance of India with maximum and minimum percentages and the range for each indicator is presented in Table 4.

Though government of India has implemented various health programs like National Health Mission throughout the states, still there existed inter state, inter district and inter block variations in achieving health goals. The highest difference was observed for the indicators namely, Children deworming through AWC (83.5), percent of

Institutional delivery (80.9), breastfeeding less than one hour (79.9), four ANC visits (77.3), Home visits by AWW (77.0) and JSY_JSSK availed by women (66.5) respectively. It is clearly understood from the analysis that the performance of AWCs under ICDS program was very poor. These important indicators have to be concentrated by the health officials and ICDS program Coordinators to reduce inter state differences. The coordination between ICDS centres and health institutions like CHC, PHC and HSC have to be improved to improve health indicators.

Table 4. Performance indicators of States in India.

Sl. No.	Indicators	India	States		
			Maximum	Minimum	Range
1	ANC Registration	84.1	99.2	56.8	42.4
2	First trimester registration	64.5	86.0	33.7	52.3
3	4 ANC visits	45.4	86.7	9.4	77.3
4	Institutional delivery	78.7	99.5	18.6	80.9
5	JSY_JSSK availed by women	53.9	87.8	21.3	66.5
6	Received advice from AWW about delivery facility	13.0	22.3	0.0	22.3
7	Full Immunization	65.3	91.9	33.2	58.7
8	LBW	18.6	23.2	2.2	21.0
9	breastfeeding less than 1 hour	44.6	93.8	13.9	79.9
10	Children severely stunted	17.3	29.4	6.6	22.8
11	Children Severely Wasted	4.6	7.1	1.4	5.7
12	Children Severely Underweight	9.5	16.8	2.0	14.8
13	Under-weight (<18.5)	62.5	74.4	35.2	39.2
14	Children deworming through AWC _6months	51.1	85	1.5	83.5
15	Aware about 6 services of AWC	9.5	30.8	0.1	30.7
16	EMW aware about VHND_AWC	22.9	63.8	0.6	63.2
17	Ever married women attended VHN Days _3months	43.2	64.1	16.5	47.6
18	Home visits by AWW _3months	34.6	77.7	0.7	77.0
19	Average_home_visit_3months	2.6	3.2	1.4	1.8

CONCLUSION AND SUGGESTION

To improve the performance of AWCs, the infrastructure has to be improved with all basic essential facilities such as drinking water, electricity, fencing and sanitation. The Coordination between AWCs and health institutions like CHC, PHC and HSC has to be improved. Nutritional diet given to the children has to be improved and the AWW have to be given additional re-orientation training. Community participation, nutrition and health education to mothers, education on anaemia, personal and menstrual hygiene practices among women and adolescent girls should be improved through anganwadi centres. Monitoring mechanism may be implemented by nearby schools or health institutions by merging the AWCs with nearby schools with qualified staff and program Coordinators.

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