

Utilisation of Anganwadi Services among Pre-School Age Children in Rural Telangana: A Cross Sectional Study

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ABSTRACT

Background: Integrated Child Development Services (ICDS) was launched in 1975 with the objectives to improve the nutritional and health status of children in the age group 0-6 years, to lay the foundations for proper psychological, physical and social development of the child, to reduce mortality and morbidity, malnutrition and school drop-out by delivering a package of services. It has been found that there is a gap in expected and actual delivery of services and less than expected utilisation of services from beneficiaries.

Methods: A cross-sectional study was conducted among 270 women with a pre-tested, semi structured questionnaire in order to assess utilisation of anganwadi services. Data collected was analysed using SPSS software.

Results: Immunization (85.18%) was the most common Anganwadi service utilized by children followed by supplementary nutrition (83.4%), health check-ups (77.4%), Non formal pre-school Education (68%) and referral services (55.5%). Child didn't like the taste of the food was the most common reason for not utilising supplementary nutrition.

Conclusions: Apart from supplementary nutrition and immunisation, there is a need to sensitise and motivate beneficiaries to utilise the other services offered by anganwadi centre.

Keywords: Anganwadi centre, Children, Supplementary nutrition, Immunisation

INTRODUCTION

The development of children is corresponding to the eventual fate of our nation, as they grow up to become residents of tomorrow. They are the foundation of a nation and their protection is basic for financial and political steadiness of the nation. The initial six years of a child's life are the most vital as cognitive, social, emotional, physical, motor and psychological development happen at this stage. Deficiencies during this vulnerable period bring about hampering of development and growth retardation. In 2018 an estimated 5.3 million deaths occurred in the first 5 years, with almost half of these in the first month of life. Leading causes of death in children under-5 years are preterm birth complications, pneumonia, birth asphyxia, congenital anomalies, diarrhoea and malnutrition.¹ Nearly half of these deaths in new born are preventable or can be treated with simple, affordable intervention. Government of India has launched many health programs for children and Integrated Child Development Services (ICDS) was the one, started in 1975 with the objectives to improve the nutritional and health status of children in the age group 0-6 years, to lay the foundations for proper psychological,

physical and social development of the child, to reduce mortality and morbidity, malnutrition and school drop-out, to achieve an effective coordination of policy and implementation among the various departments working for the promotion of child development and to enhance the capability of the mother and nutritional needs of the child through proper nutrition and health education.² But even after many years of implementation, it has been found that there is an error in expected and actual delivery of services due to programmatic and operational gaps. Hence this present study has been conducted with the objective to assess the reach of ICDS services for under six children.

METHODS

Study Design: Cross Sectional Study.

Study Period: April 2019 to July 2019.

Study Setting: 5 randomly selected villages out of 11 villages attached to rural health centre of a medical college in Telangana state.

Sample size: With the formula $4pq/l^2$, where $p=67.5\%$ based on previous study,³ $l = 10\%$ of p , the minimum sample size came to be 193, However a total of 270 were included in the study

Study Subjects: Children of age less than 6 years of age residing in the study area.

Sampling Method: Simple random sampling method was followed to select villages and based on proportionate sampling method; it was decided to collect data of 71 subjects, 59 subjects 54 subjects, 45 subjects and 41 subjects from 5 villages. Houses were selected by systematic random sampling method. After visiting the selected house, younger eligible subject among the available was included in the study.

Study Tool: A semi-structured questionnaire was prepared and suitable modifications were made after administering in a pilot study. The questionnaire consists of the demographic

information and a series of questions to assess the utilization of anganwadi services. **Method of Data Collection:** Data was collected from mother of the eligible child by face to face interview method after obtaining consent. The importance of this study was explained and ensured that confidentiality of the participant's responses.

Statistical Analysis: Data was analysed using Microsoft Excel and SPSS Statistical Package version 22. Data was expressed in proportions and Pearson's chi-square test was applied as test of significance considering $P < 0.05$ as statistically significant.

RESULTS

Immunization (85.18%) was the most common Anganwadi service utilized by children followed by supplementary nutrition (83.4%), health check-ups (77.4%), Non formal pre-school Education (68%) and referral services (55.5%). (Table 1)

Majority (86.7%) of the children of non-working mothers and from middle class (90.1%) are utilizing the supplementary nutrition services when compared to other corresponding groups and the difference was statistically significant. (Table 2)

Utilization of Non formal pre-school education was found to be higher among children of 3-4 years (81.1%) when compared to other groups and difference was statistically significant. (Table 3)

Majority (88%) of children of non-working mothers and with near distance of AWC from house (92.1%) were using immunisation services which was statistically significant. (Table 4)

Most (58.1%) children of non-working mothers and with near distance of AWC from house (73.5%) had utilised referral services when compared with other groups and the difference was found to be statistically significant. (Table 5)

Table1: Distribution of pre-school children based on utilization of ICDS services (n=270)

Anganwadi services (ICDS)	Utilized (%)	Not utilized (%)	Total (%)
Supplementary Nutrition	196 (83.4)	39 (16.6)	235*(100)
Non formal pre-school education	68 (68)	32 (32)	100# (100)
Immunization	230 (85.18)	40 (14.82)	270(100)
Referral services	150 (55.55)	120 (44.45)	270(100)
Health check up	209 (77.41)	61(22.59)	270(100)

* Children from 0-6months were 35 in number and excluded for supplementary nutrition.

Children from 0-3years were 170 in number and excluded for non - formal education

Table2: Association between sociodemographic factors and utilisation of supplementary nutrition (n=235)

Socio demographic variables		supplementary nutrition		Total (%)	p value
		Utilized (%) (n=196)	Not utilized (%) (n=39)		
Age (years)	6mnths-2	83(86.4)	13(13.6)	96(100)	0.464
	2-4	93(82.3)	20(17.7)	113(100)	
	4-6	20(76.9)	6(23.1)	26(100)	
Religion	Hindu	179(85.2)	31(14.8)	210(100)	0.062
	Muslim	11(73.3)	4(26.7)	15(100)	
	Christian	6(60)	4(40)	10(100)	
Working status of mother	House wife	176(86.7)	27(13.3)	203(100)	0.001
	Labour	20(62.5)	12(37.5)	32(100)	
Literacy status of mother	Literate	98(88.3)	13(11.7)	111(100)	0.056
	Illiterate	98(79)	26(21)	124(100)	
Socio-economic status	Upper	1(16.7)	5(83.3)	6(100)	0.001
	Upper middle	13(61.9)	8(38.1)	21(100)	
	Middle	118(90.1)	13(9.9)	131(100)	
	Lower middle	48(88.9)	6(11.1)	54(100)	
	Lower	16(69.6)	7(30.4)	23(100)	
Sex of the child	Male	117(85.4)	20(14.6)	137(100)	0.331
	Female	79(80.6)	19(19.4)	98(100)	
Distance of AWC from house	Near*	142(85.5)	24(14.5)	166(100)	0.172
	Far	54(78.3)	15(21.7)	69(100)	

* Near – 2kms and less

Table 3: Association between socio demographic variables and utilization of Non formal pre-school education (n=100)

Socio demographic variables		Non formal pre-school education		Total (%)	p value
		Utilized (n=68) (%)	Not (%) utilized (n=32)		
Age (years)	3-4	60(81.1)	14(18.9)	74(100)	0.001
	4-6	8(30.8)	18(69.2)	26(100)	
Religion	Hindu	61(67.8)	29(32.2)	90(100)	0.536
	Muslim	5(83.3)	1(16.7)	6(100)	
	Christian	2(50)	2(50)	4(100)	
Working status of mother	House wife	59(70.24)	25(29.76)	84(100)	0.272
	Labour	9(56.25)	7(43.75)	16(100)	
Literacy status of mother	Literate	33(75)	11(25)	44(100)	0.183
	Illiterate	35(62.5)	21(37.5)	56(100)	
Socio economic status	Upper	1(20)	4(80)	5(100)	0.101
	Upper middle	11(78.6)	3(21.4)	14(100)	
	Middle	32(64)	18(36)	50(100)	
	Lower middle	19(76)	6(24)	25(100)	
	Lower	5(83.3)	1(16.7)	6(100)	
Sex of the child	Male	40(72.7)	15(27.3)	55(100)	0.263
	Female	28(62.2)	17(37.8)	45(100)	
Distance of AWC from house	Near*	45(70.3)	19(29.7)	64(100)	0.509
	Far	23(63.9)	13(36.1)	36(100)	

* Near – 2kms and less

Utilization of Health check-up services was higher among 0-2years (80.9%), children of non-working mothers (82.1%), upper middle class (91.7%) and near Distance of AWC from house (87.8%) and was statistically significant. (Table 6)

Reasons for not utilising supplementary nutrition service was Child didn't like the taste of the food, meant for poor (51.3%), Distance (48.7%), Place was unhygienic (41%) and Poor quality of the food (38.5%). (Table 7)

Table 4: Association between socio demographic variables and utilization of Immunization services (n=270)

Socio demographic variables		Immunization		Total (%)	p value
		Utilized (%) (n=230)	Not utilized (%) (n=40)		
Age (years)	0-2	106(80.9)	25(19.1)	131(100)	0.158
	2-4	101(89.4)	12(10.6)	113(100)	
	4-6	23(88.5)	3(11.5)	26(100)	
Religion	Hindu	209(86.4)	33(13.6)	242 (100)	0.198
	Muslim	12(70.6)	5(29.4)	17 (100)	
	Christian	9(81.8)	2(18.2)	11 (100)	
Working status of mother	House wife	206(88)	28(12)	234 (100)	0.001
	Labour	24(66.7)	12(33.3)	36 (100)	
Literacy status of mother	Literate	105(82)	23 (18)	128 (100)	0.166
	Illiterate	125(88)	17(12)	142(100)	
Socio economic status	Upper	4(66.7)	2(33.3)	6 (100)	0.533
	Upper middle	19(79.2)	5(20.8)	24 (100)	
	Middle	130(85)	23(15)	153 (100)	
	Lower middle	57(89.1)	7(10.9)	64 (100)	
	Lower	20(86.9)	3(13.1)	23 (100)	
Sex of the child	Male	133(84.7)	24(15.3)	157 (100)	0.797
	Female	97(85.8)	16(14.2)	113 (100)	
Distance of AWC from house	Near	174(92.1)	15(7.9)	189 (100)	0.001
	Far	56(69.1)	25(30.9)	81 (100)	

Table 5: Association between socio demographic variables and utilization of Referral services (n=270)

Socio demographic variables		Referral services		Total (%)	p value
		Utilized (%) (n=150)	Not utilized (%) (n=120)		
Age (years)	0-2	75(57.3)	56(42.7)	131(100)	0.779
	2-4	62(54.9)	51(45.1)	113(100)	
	4-6	13(50)	13(50)	26(100)	
Religion	Hindu	138(57)	104(43)	242(100)	0.147
	Muslim	9(52.9)	8(47.1)	17 (100)	
	Christian	3(27.3)	8(72.7)	11 (100)	
Occupation	House wife	136(58.1)	98(41.9)	234(100)	0.031
	Labour	14(38.9)	22(61.1)	36 (100)	
Literacy status	Literate	77(60.1)	51(39.9)	128(100)	0.149
	Illiterate	73(51.4)	69(48.6)	142(100)	
SES (socio economic status)	Upper	2(33.3)	4 (66.7)	6 (100)	0.285
	Upper middle	12(50)	12 (50)	24 (100)	
	Middle	92(60.1)	61 (39.9)	153 (100)	
	Lower middle	30(46.9)	34 (53.1)	64 (100)	
	Lower	14(60.9)	9 (39.1)	23 (100)	
Sex	Male	89 (56.9)	68 (43.1)	157(100)	0.659
	Female	61 (54)	52(46)	113(100)	
Distance of AWC from house	Near	139(73.5)	50 (26.5)	189(100)	0.001
	Far	11 (13.6)	70 (86.4)	81 (100)	

Table 6: Association between socio demographic variables and utilization of Health Check-up services among children below six years (n=270)

Socio demographic variables		Health check up		Total (%)	p value
		Utilized (%) (n=209)	Not utilized (%) (n=61)		
Age (years)	0-2	106(80.9)	25(19.1)	131(100)	0.009
	2-4	89 (78.8)	24(21.2)	113(100)	
	4-6	14 (53.9)	12(46.1)	26(100)	
Religion	Hindu	188(77.7)	54(22.3)	242 (100)	0.486
	Muslim	14 (82.4)	3(17.6)	17 (100)	
	Christian	7 (63.6)	4(36.4)	11 (100)	
Occupation	House wife	192(82.1)	42(17.9)	234 (100)	0.001
	Labour	17(47.2)	19(52.8)	36 (100)	
Literacy status	Literate	99 (77.4)	29(22.6)	128 (100)	0.981
	Illiterate	110(77.5)	32(22.5)	142 (100)	
SES (socio economic status)	Upper	2(33.3)	4(66.7)	6 (100)	0.008
	Upper middle	22(91.7)	2(8.3)	24 (100)	
	Middle	119(77.8)	34(22.2)	153 (100)	
	Lower middle	52(81.2)	12(18.8)	64 (100)	
	Lower	14(60.9)	9(39.1)	23 (100)	
Sex	Male	127(80.9)	30(19.1)	157 (100)	0.106
	Female	82 (72.6)	31(27.4)	113 (100)	
Distance of AWC from house	Near	166(87.8)	23(12.2)	189 (100)	0.001
	Far	43(53.1)	38(46.9)	81 (100)	

Table 7: Reasons for not utilising supplementary nutrition services (n=39)

S. No	Reasons for not utilising services	Frequency (%)*
1	Distance	19 (48.7)
2	Place was unhygienic	16 (41)
3	Poor quality of the food	15 (38.5)
4	Child didn't like the taste of the food	21 (53.8)
5	Meant for poor	20 (51.3)

* Total Percentage doesn't correspond to 100% because of multiple responses

DISCUSSION

In present study, Immunization (85.18%) was the most common Anganwadi service utilized by children followed by supplementary nutrition (83.4%), health check-ups (77.4%), Non formal pre-school Education (68%) and referral services (55.5%). According to study conducted in Agartala by Das R et al., various services utilised are Supplementary nutrition (67.5%), Health check-up (30.7%), Non formal preschool education (28.1%), Immunization (17.4%), and Referral services (1.7%).³ In a study done by Patil KS et al., there was no utilization of Supplementary Nutrition (26.25%), Immunization (22.50%), Health check-up (35%) and Referral services (100%).⁴ In Ahmad E et al study, about 65% of eligible children were not utilizing Non formal pre-school education.⁵ This explains why still there is existence of malnutrition in our country. In present study, when compared between sociodemographic factors and utilization of supplementary nutrition, children 6m – 2y (86.4%), Hindu (85.2%), literate mother (86.7%), male child (85.4%) and near distance of AWC from house (85.5%) were utilizing services more when compared to other groups but the difference was statistically not significant. Majority (86.7%) of the children of non-working women and from middle class (90.1%) are utilizing the services more and it was statistically significant. According to Khan AA et al study, factors affecting the consumption of supplementary food by beneficiaries in the age group >6 months up to 3 years it was seen that factors such as age, gender and caste came out to be statistically significant.⁶ In present study, utilization of Non formal pre-school

education was found to be higher among children of 3-4 years (81.1%) and association was statistically significant. Majority (67.8%) of Hindus, children of non-working women (70.24%), Illiterates (62.5%), Lower class (83%), male child (72.7%) and near distance of AWC from house (70.3%) are utilizing services but association was not statistically significant. According to Rehman HM et al study, the utilization of Pre School Education by parents decreased with increase in level of education of mother and more in lower socio-economic classes and this association was found to be statistically significant.⁷ In present study, utilization of Immunisation services was higher among 2-4 years of age (89.4%), Hindus (86.4%), Illiterate mother (88%), Lower Middle class (89.1%) and Female child (85.8%) and association was not statistically significant. Majority of children of non-working women (88%) and with near distance of AWC from house (92.1%) were using immunisation services which was statistically significant. In Surwade JB et al study, Immunization service utilization in urban and rural area was 90.95% and 94.44% respectively with no significant difference.⁸ In present study, utilization of referral services was higher among children of non-working women (58.1%) and near distance of AWC from house (73.5%) and the association was found to be statistically significant. Utilization of Health check-up services was higher among 0-2years (80.9%), children of non-working women (82.1%), upper middle class (91.7%) and near Distance of AWC from house (87.8%) and was statistically significant. According to Surwade JB et al study, Utilization of health check-up facility was more in rural area (25%) than urban area (21.65%), but no statistical significant difference was observed.⁸ In present study, when asked about Reasons for not utilising Anganwadi services, Child didn't like the taste of the food (53.8%) was the most common reason said, followed by Meant for poor (51.3%), Distance (48.7%), Place was unhygienic (41%) and Poor quality of the

food (38.5%). In a study done by Dandotiya D et al., Reasons for non-satisfaction with Anganwadi services were poor quality of food (52%), unavailability of medicines (29.7%), less space at the centre (9.4%), irregular preschool education (6.7%), unavailability of school services (1.3%).⁹ According to Chitra A et al study, the reason for non-utilization, majority (69.4%) said that they don't know about the services provided in ICDS.¹⁰ In a study done by Patil KS et al., most common reasons of under-utilization as stated by the women were lack of awareness (28%), household work (24%).⁴

CONCLUSION

Apart from supplementary nutrition and immunisation, there is a need to sensitise and motivate beneficiaries to utilise the other services offered by anganwadi centre.

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Declarations

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