



UTILIZATION OF ICDS SERVICES BY WOMEN DURING THEIR PREGNANCY PERIOD IN KERALA

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ABSTRACT:

Children are the most valuable precious gift of nature and important human resource as well. They are valuable not only because young children are the most vulnerable, but also because the foundations for cognitive, social, emotional, physical and motor development and for lifelong learning ability are laid in these crucial early years. There have to be balanced linkages between education, health and nutrition for proper development of a child.

KEYWORDS: human resource , education, health and nutrition , lifelong learning.

INTRODUCTION

In pursuance of National Policy on Child Development, Government of India launched Integrated Child Development Services (ICDS) in (2nd October 1975) which has a comprehensive approach for an all-round development of child up to six years of age. Because the health and nutrition needs have a child cannot be addressed in isolation from those of his/her mother, the programme is also extended to adolescent girls, pregnant women and nursing mothers. ICDS is a child-focused programme rather than one targeted exclusively towards children.

The functional and grass route level of ICDS scheme is an Anganwadi centre. Each Anganwadi is supposed to cover a population of 500-1500 persons in Rural and urban area and 300-1500 in tribal area and Mini AWC cover a population of 150-500 persons. It has been a focus of interest of the WHO as well as government of India to expand ICDS scheme and provide adequate quality of services to the beneficiaries. The work of an Anganwadi worker is key in the implementation of this scheme and she is supposed to carry over all the survey and services efficiently. However it has repeatedly been found that there is discrepancy in the expected verses actually delivered services. If we want to decrease malnutrition, IMR and school dropout it is essential to cover every beneficiary in the respective locality of AWC. Optimum Utilization of ICDS Services would definitely help pregnant women. But in the era of globalization, one would imagine that the services provided through ICDS are not being fully utilized by these pregnant women. A large number of monitoring studies indicate that the ICDS programme has many problems with implementation, as well as programme design (Allen and Gillespie, 2001; Bredenkamp and Akin, 2004; Greiner and Pyle, 2000; NCAER, 2001; NIPCCD, 1992). One major implementation problem is that AWWs are inadequately trained, supervised and supported, while their duties require considerable understanding of nutrition, pre-school education, and MCH issues. A second problem is erratic provision of supplies, and leakage in food procurement. Thirdly, the food supplementation is poorly targeted: it is not confined to malnourished children, and mostly reaches children aged between four and six years old, who are past the optimal window for influencing growth (Allen and Gillespie, 2001:) Problems of programme design include a lack of community participation (Greiner and Pyle, 2000).

The programme is run in a very top-down fashion, with all the logistical and implementation inefficiencies and rigidities that such an approach entails, and workers are not accountable to the communities they serve. Also, the heavy focus of the ICDS on nutritional supplementation leads to the relative neglect of other more cost-effective approaches to improving nutrition outcomes, including efforts to improve environmental hygiene and domestic health management practices, so that the children are less exposed to disease which takes a toll on child growth. In India, a large number of women who were in areas covered by Anganwadi centers did not receive any service from an AWC during pregnancy (78 percent) or during the lactation period (83 percent). This is true for women in every group except for those belonging to religious categorized as "other" religions, Buddhist/Neo-Buddhist women, and scheduled tribe women. Notably, women with some education were somewhat more likely to have received services than women with no education or with higher levels of education (IIPS 2008). Regional wise variations were also evident; with a handful proportion of women in Kerala had utilized all the services, during their pregnancy period (IIPS 2008). This is the reason behind the study, and it is being identify; in Kerala the first state had achieved the replacement level of fertility in India.

Aim

- The extent by which the ICDS Services are utilized by the pregnant women in Kerala
- The determinants of the utilization of ICDS services by the pregnant women in Kerala

DATA AND METHODOLOGY

The data for the present study was extracted from the Third round of National Family Health Survey (NFHS-III) conducted during 2005-2006. A total sample woman (15-49) in Kerala was 3566 out of which 3566, 26.8 percent (954 women) had at least one live birth during the past five year period prior to the survey. The questions in (NFHS-III) regarding the utilization of ICDS services, during the pregnancy period, had been asked with respect to all pregnancies leading to live birth during the period. But in the present analysis only the details regarding the last pregnancy which ended in to live birth was considered.

The dependent variable, the ICDS services received during pregnancy, was grouped in to two categories. those who received services 'Received category' and those who did not receive services as 'Not Received category'. The socio-economic and demographic differentials of ICDS Services received had been studied using cross tabulation and chi-square tests. The effect of socio-economic and demographic variables on receiving ICDS services was analyzed using Discriminant Analysis.

FINDINGS: SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF WOMEN DURING THEIR PREGNANCY PERIOD.

Around 40 percent of the women had not utilized ICDS service during their pregnancy period while 60 percent of the women received ICDS service. The distribution of women who have utilized ICDS service by selected socio-economic, demographic characteristics is presented in table -I. It is clear that, utilization of ICDS service in Kerala vary with age. Among the Hindu, Muslim and Christen, not received category had been high among the Christen. Caste-wise differentials were quite evident, as a large proportion of Scheduled Castes and Scheduled Tribe were receiving ICDS service, when compared to other OBC and Other caste. Also the same rural women were receiving ICDS service during their pregnancy period. When the level of education increasing the level of utilization of ICDS service decreasing in Kerala. Age at marriage clearly revealed that among the 18-21 age categories received ICDS service high compared to others. The same trend had been seen in number of living children. The variation of ICDS service with respect to the occupation of respondent had been seen that ICDS users are high among the agricultural workers. Around half of the poorest women achieved ICDS service during their pregnancy period compared to others. The women who belonged to the nuclear family had been use more ICDS service compared to others. The proportion of ICDS service had been high among women involved in Final say own deciding what to do with money husband earns. The decision making final say own spending money for health care the ICDS users are

more among the women involved category. The proportion ICDS service had been high among the not watching Television at the same time reverse trend can be seen in listening Radio.

Table-1
Distribution of women received ICDS services by selected Demographic, Socio-economic characteristics

Age**	Received	Not Received	Total
15-19	3 (20%)	12 (80%)	15 (100%)
20-24	46 (23.2%)	152 (76.8%)	198 (100%)
25-29	60 (16.65%)	302 (83.4%)	362 (100%)
30-34	34 (13.0%)	228 (87.0%)	262 (100%)
35-39	11 (11.15%)	88 (88.9%)	99 (100)
40-44	2 (12.5%)	14 (87.5%)	16 (100%)
45-49	0 (0%)	2 (100%)	2 (100%)
Total	156 (16.4%)	798 (83.6%)	956 (100%)
Religion**			
Hindu	87(18.7%)	378 (81.3%)	465 (100%)
Muslim	57 (15.9%)	301 (84.1%)	358 (100%)
Christian	12 (9.3%)	117 (90.7%)	129 (100%)
Others	0 (0.00%)	2 (100%)	2 (100%)
Total	156 (16.4%)	798 (83.6%)	954 (100%)
Caste			
SC/ST	30 (27.8%)	78 (72.2%)	108 (100%)
OBC	43 (13.0%)	288 (87.0%)	33 (100%)
Others	73 (18.1%)	330 (81.3%)	403 (100%)
Total	146 (17.3%)	696 (82.7%)	842 (100%)
Place of Residence			
Rural	107 (16.6%)	536 (83.4%)	643 (100%)
Urban	49 (15.8%)	262 (84.2%)	311 (100%)
Total	156 (16.4%)	798 (83.65)	954 (100%)
Education**			
Illiterate	2 (13.3%)	13 (86.1%)	15 (100%)
Primary	11 (21.2%)	41 (78.8%)	52 (100%)
Secondary	119 (18.1%)	539 (81.9%)	658 (100%)
Higher	24 (10.5%)	205 (89.5%)	229 (100%)
Total	156 (16.4%)	798 (83.65%)	954 (100%)
Age at first marriage			
<18	39 (17.6%)	183 (82.4%)	222 (100%)
18-21	66 (18.1%)	298 (81.9%)	364 (100%)
21+	51 (13.9%)	317 (86.1%)	368 (100%)
Total	156 (16.4%)	798 (83.6%)	954 (100%)
Number of Living Children			
0	0 (0%)	1 (100%)	1 (100%)
1	62 (17.2%)	298 (82.8%)	36 (100%)
2	65 (16.2)	337 (83.8%)	402 (100%)
3+	29 (15.2%)	162 (84.8%)	191 (100%)
Total	156 (16.4%)	798 (83.6%)	954 (100%)

Respondent Occupation			
Not working	129 (16.9%)	634 (83.1%)	763 (100%)
Non-agriculture	19 (11.8%)	142 (88.1%)	161 (100%)
Agriculture	8 (27.6%)	21 (72.4%)	29 (100%)
Total	156 (16.4%)	797 (83.6%)	953 (100%)
Wealth Index***			
Poorest	6 (50%)	6 (50%)	12 (100%)
Poorer	9 (23.7%)	29 (76.3%)	38 (100%)
Middle	21 (19.9%)	85 (80.2%)	106 (100%)
Richer	85 (24.9%)	257 (75.2%)	342 (100%)
Richest	35 (7.7%)	421 (92.3%)	456 (100%)
Total	156 (16.4%)	798 (83.6%)	954 (100%)
House structure**			
Nuclear	108 (18.3%)	483 (81.7%)	591 (100%)
Non-Nuclear	35 (13.8%)	218 (86.2%)	253 (100%)
Other	13 (11.8%)	97 (88.2%)	110 (100%)
Total	156 (16.4%)	798 (83.6%)	954 (100%)
Final say own deciding what to do with money husband earns.			
Women involved	105 (17.3%)	502 (82.7%)	607 (100%)
Women not involved	45 (14.1%)	275 (85.9%)	320 (100%)
other	3 (33.3%)	6 (66.7%)	9 (100%)
Total	153 (16.3%)	783 (83.75)	936 (100%)
Final say own health care**			
Women involved	49 (20.2%)	193 (79.8%)	242 (100%)
Women not involved	104 (15.3%)	577 (84.7%)	681 (100%)
Other	0 (00.0%)	15 (100%)	15 (100%)
Total	153 (16.3%)	785 (83.7%)	938 (100%)
Watching Television***			
Yes	72 (13.2%)	475 (86.8%)	547 (100%)
No	71 (23.9%)	226 (76.1%)	297 (100%)
Total	143 (16.9%)	701 (83.1%)	849 (100%)
Listening Radio			
Yes	41 (19.0%)	175 (81.0%)	216 (100%)
No	58 (14.8%)	333 (85.2%)	391 (100%)
Total	99 (16.3)	508 (83.7%)	607 (100%)

*** $P \leq 0.001$, ** $P \leq 0.001$ levels of significance

Discriminant Analysis

Discriminant function analysis is used to test whether any variation exists in the utilization of ICDS services during their pregnancy period based on some socio-economic variables and to identify the variables which contribute more in the discrimination.

HYPOTHESIS

The hypothesis to be tested is that the distance between the groups is zero or the two group means are equal with respect to the above defined variables.

ie $H_0 = 0$ against $H_0 > 0$

CLASSIFICATION FUNCTION CO-EFFICIENT

Discriminant function can be obtained from the classification function co-efficient. The Discriminant function is $Z = -0.043 \times \text{living daughter} - 0.718 \times \text{type of house} + 0.252 \times \text{radio} + 0.042 \times \text{respondent occupation} - 0.512 \times \text{final say own spending money} - 0.419 \times \text{final say own health care} + 0.152 \times \text{tv} - 0.633 \times \text{wealth index} - 0.27 \times \text{age at marriage} + 0.097 \times \text{education} + 0.003 \times \text{type of caste} - 0.078 \times \text{number of living children} + 0.194 \times \text{place of residents} - 0.167 \times \text{five year age group} - 0.101 \times \text{religion}$.

And the sample mean of the Discriminant function score is 3.341, the coefficients are different between the groups.

Table-2

Classification Function		
Variables	ICDS Service Received	
	Received	Not Received
Number of living daughter	-.187	-.144
House structure	-.152	.566
Listening Radio	2.589	2.841
Respondent Occupation	.073	.031
Final say own deciding what to do with money husband earns	3.005	3.517
Final say own health care	2.656	3.075
Watching Television	10.149	9.997
Wealth Index	4.874	5.507
Age at marriage	2.083	2.354
Respondent Education	5.157	5.060
Type of Caste	1.271	1.268
Number of living children	4.279	4.351
Place of Residence	1.219	1.025
Age of the Respondent	.224	.391
Religion	.247	.348
(Constant)	-23.484	-26.825

Wilk's Lambda

The Wilk's Lambda part provides a test for assessing the null hypothesis that in the population the vector means of the above variables are the same in the groups. Table 3 gives the Canonical correlation and Chi-Square along with significance level for the survey data. Table indicates a highly significant function ($p < .000$) and provides the proportion of total variability not explained, i.e. it is the converse of the squared canonical correlation. From Wilk's Lambda test, it can be seen that the equality of mean vector hypothesis has been rejected for women who received and not received ICDS care during their pregnancy period with respect to the variables and the distance between the group is significant at one percent level of significance ($\chi^2(15) = \dots, p = 0.000$). Here about 91.6 percent of the variance in the Discriminant scores cannot be

explained by the group difference for women who received and not received ICDS service during their pregnancy period.

Table-3
Result of Wilk's Lambda test

Test of Function(s)	Wilks' Lambda	Chi-square	df	Significance
1	.916	40.348	15	.000

Group Centroid

The group centroid for the utilization of ICDS service during their pregnancy period received category is -.643 and the not received category is .142.

Table-4
Group Centroid

Utilization of ICDS Service	Function
Received	-.643
Not Received	.142

Standardized Discriminant Function Coefficient

The standard canonical Discriminant function coefficient table provides the importance of each predictable variable. The sign indicate the direction of the relationship. House structure seems to be the strongest predictor while wealth index and money are the next important predictor. These three variables with largest coefficients stands out as those that strongly predict allocation to utilize ICDS care and do not take ICDS service. Caste, daughter and children's score were less successful predictors.

Table-5
Standardized Discriminant Function Coefficient

Variables	Function
Number of living daughter	.054
House structure	.916
Listening Radio	.322
Respondent Occupation	-.054
Final say own deciding what to do with money husband earns	.652
Final say own health care	.533
Watching Television	-.193
Wealth Index	.806
Age at marriage	.346
Respondent Education	-.124
Type of Caste	-.004
Number of living children	.091
Place of Residence	-.247
Age of the Respondent	.213
Religion	.129
(Constant)	-4.507

Classification Result

Classification result revealed that 65.45 percent of the respondent was classified correctly in Received ICDS service during their pregnancy period or not received category not receiving ICDS service during their pregnancy period not received category classified with slightly better accuracy (67.4percent) utilization of ICDS service during their pregnancy period received category.

Table-6
Classification Result

Original	Utilization of ICDS service		Total
	Received	Not Received	
	63.5	36.5	100.0
	32.6	67.4	100.0

SUMMARY AND CONCLUSION

This study identified the fact that, the optimum utilization of Integrated Child Development Service (ICDS) would definitely benefit for pregnant women, lactating mother and 0-6 year children and especially the low wealth quintal people in India. The services given, as part of ICDS, during the pregnancy period are health checkups, education on health and nutrition and providing supplementary food. The extent by which those ICDS services are utilized and the various determinants of utilization were under the examination here, using the third round National Family Health Survey (NFHS-III) in India.

This result identified that around (377) 40 percent of the women had not utilized ICDS service during their pregnancy period in Kerala; (577) 60 percent of the women received ICDS service. The result shows that utilization of ICDS service in Kerala had been significantly varying with age. Among the religion not received category had been high among the Christen. Caste-wise differentials were quite evident in Kerala, as a large proportion of Scheduled Castes and Scheduled Tribe were receiving ICDS service, when compared to other OBC and Other caste during the pregnancy period. Also the urban rural differentials, in receiving ICDS service same proportion during their pregnancy period. When the level of education increasing the level of utilization of ICDS service decreasing in Kerala. Age at marriage clearly revealed that among the 18-21 age categories received ICDS service high compared to others. The same trend had been seen in number of living children. The variation of ICDS service with respect to the occupation of respondent had been seen that ICDS users are high among the agricultural workers. Around half of the poorest women achieved ICDS service during their pregnancy period compared to others. The women who belonged to the nuclear family had been use more ICDS service compared to others. The proportion of ICDS service had been high among women involved in Final say own deciding what to do with money husband earns. The decision making final say own spending money for health care the ICDS users are more among the women involved category. The utilization of ICDS service had been high among the not watching Television at the same time reverse trend can be seen in listening Radio.

Discriminant analysis conducted for assessing whether there is any group difference existing and also to understand which predictor variable have more contributed more contributed for the difference of the group significant mean difference were observed for all the predictors on dependent variable. The Discriminant function revealed association between groups and predictors, accounts only 8.4 percent of between groups variable. The strong predictor variable is structure of house, wealth index and money.

This study showed that in Kerala, though the state has the highest literacy, especially female literacy, in Kerala. The percentage of under utilization of ICDS service is 40 percent. This is an evident for the degree of under utilization of ICDS service in Kerala. This crucial situation paved the way for social injustice. So the operational research is required in selected regions in Kerala before AWW given the responsibility of care of normal neonates and LBW newborn in Kerala

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