

# A Study to Assess the Awareness and Utilization of Integrated Child Development Scheme (ICDS) Services among the Mothers of Children under 6 Years of Age in a Selected Rural Community of Lakhimpur District, Assam

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**Abstract:** A study was conducted to assess the awareness and utilization of ICDS services among the mothers of children under 6 years of age in a selected rural community of Lakhimpur District, Assam. The objectives of the study were to assess the awareness and utilization of ICDS Services among the mothers and to find out the relationship between the awareness and utilization of ICDS services. The study also attempted to determine the association between awareness and utilization of ICDS services with the selected demographic variables i. e., age, education, occupation, parity of mothers, family income per month. Conceptual framework used for the study was based on "General System Model Approach" developed by Ludwig Von Bertalanffy. A descriptive quantitative approach and cross-sectional descriptive survey design was used for the study. The study was conducted in 10 randomly selected AWCs under Lakhimpur ICDS Project in Lakhimpur, Assam. The investigator used multi stage random sampling technique to select the 120 mothers of children under 6 years of age for the study. Structured interview schedule was used to gather information from the mothers. The collected data were analyzed and interpreted by using descriptive and inferential statistics. The study revealed that out of 120 mothers majority of the mothers i. e., 86 (71.7%) had moderate awareness, 23 (19.2%) had low awareness and 11 (9.2%) had high awareness of the ICDS services. In case of utilization of ICDS services, the study revealed that majority of the mothers i. e., 76 (63.3%) had moderate utilization, 28 (23.3%) had low utilization and 16 (13.3%) had high utilization of the ICDS services. The result showed that, there is weak positive correlation between awareness and utilization of ICDS services. The study revealed that, there was no significant association between the awareness of ICDS services and selected demographic variables. In case of utilization, the demographic variables i. e., education and family income per month showed significant association with the utilization of ICDS services.

**Keywords:** Assess, awareness, utilization, ICDS services, mothers of children under 6 years

## 1. Introduction

### 1.1 Background of the study

Children are the most precious resources and the citizens of tomorrow. Nurturing children in the best possible way to ensure their brilliant future is essential as because the foundation for lifelong learning and human development is laid in these crucial early years. It is now globally acknowledged that investment in human resources development is a pre requisite for economic development of any nation.<sup>1</sup>

During 1975, the maternal mortality rate and infant mortality rate was extremely high (MMR - 853 per 1, 00, 000 live birth and IMR - 134 per 1, 000 live births) due to the severe drought of country faced. To stop the soaring rate of MMR and IMR, the Prime Minister, Smt. Indira Gandhi launched ICDS in a few places which were severely affected by the drought. ICDS was inaugurated in 33 blocks across the country on 2nd October, 1975.<sup>2</sup>

The ICDS was initiated following the adoption of national policy for children and women and was planned to be a preventive and promotive measure. It was stated in the national policy of children: it shall be the policy of the state to provide adequate services to the children both before and after the birth and throughout the period of growth to ensure

their full physical, mental, and social development. The state shall progressively increase the scope of such services so that within a reasonable time, all children in the country enjoy optimum conditions for the balanced growth.<sup>3</sup>

The objectives of ICDS are to improve the nutritional and mental health status of children in the age group 0 - 6 years, to lay the foundation for proper psychological, physical and social development of the child, to reduce the incidence of mortality, morbidity, malnutrition, to achieve effective co-ordination of policy and implementation among the various departments to promote child development, and to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.<sup>4</sup>

Despite many lacunae in the functioning of the scheme, the achievements under ICDS are many. Notable among them is the progressive decline in infant and child mortality, and the spread of awareness about immunization and health and nutrition education among the public.

### 1.2 Need of the Study

In India ICDS is currently the most significant government intervention to reduce the maternal and child malnutrition and has emerged as the world's largest programme of its kind. ICDS is one of the most studied intervention and many

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studies have indicate its positive role for tackling India's health and nutritional problems. The available data indicates that the maternal and child interventions have played an important role in subsequently lowering the infant and under five mortality rates and the levels of severely and moderately malnourished children have declined due to ICDS.<sup>2</sup>

According to NFHS 3 nationwide, 81% of children under age 6 years live in areas covered by an AWC but only 33% of children under 6 years receive any kind of service from an Anganwadi center. Among children less than six years of age, who live in areas covered by an AWC, only 26% received food supplements from an AWC at any time in the 12 months and only 12% received supplementary food almost every day. Among those who received food supplements, one third received supplements less than once in a week. Among children under 5 years old who live in areas covered by an AWC, only 18% were weighed at an AWC at any time in the last 12 months. Among those who were weighed, half of their mothers did not receive counselling from an AWC after the child was weighed. A minority of children in areas with an AWC receive other services from the AWCs including immunization (20%), growth monitoring (18%), health check - up (16%), and pre - school or early childhood education (23%). Overall, only one - quarter of children age 12 - 35 months were given any vitamin A supplements in the six months preceding the NFHS - 3 survey. In 9 states including Assam less than 20% of children were given vitamin A supplements. Most pregnant women and nursing mothers do not use AWC services during pregnancy or while breastfeeding. Only 21% of women in areas served by an AWC received supplementary food during their last pregnancy, 12% received health check - ups, and 11% received health and nutrition education. Similarly, 83% of breastfeeding women did not get any services at all, and only 17% of breastfeeding women received supplementary food.<sup>5</sup>

While visiting the AWCs, the investigator also noted that only a few number of children are coming to the centers regularly and ICDS services were not fully utilized by the beneficiaries may be because of lack of awareness and negative attitude towards the ICDS services. The nurse plays a vital role in assessing the level of awareness, perception, and attitude among the beneficiaries regarding the ICDS services and applying some remedial measures to create more awareness for better utilization of the services in order to promote health and prevent illness among children. Considering all these matters, the present study is undertaken to have an idea about the awareness of mothers regarding ICDS services and the level of utilization of the services among the beneficiaries. The results of the study can draw attention of the government and the policy makers to plan some strategies to create more awareness regarding ICDS services, which will help the beneficiaries to involve positively and utilize the ICDS services adequately. The mother's positive approach will bring healthier children to the nation.

### 1.3 Objectives

The following objectives were formulated to carry out the study:

- 1) To assess the awareness of Integrated Child Development Scheme (ICDS) services among the mothers of children under 6 years of age.
- 2) To find out the utilization of Integrated Child Development Scheme (ICDS) services among the mothers of children under 6 years of age.
- 3) To find out the relationship between the awareness and utilization of ICDS services among the mothers of children under 6 years of age.
- 4) To determine the association between awareness of ICDS services among the mothers of children under 6 years of age and the selected demographic variables. (age, education, occupation, parity of mothers, family income per month.)
- 5) To determine the association between utilization of ICDS services among the mothers of children under 6 years of age and the selected demographic variables. (age, education, occupation, parity of mothers, family income per month.)

## 2. Research Methodology

- **Research Approach:** Descriptive Quantitative approach
- **Research Design:** Cross - Sectional Descriptive Survey Design.
- **Study setting:** Randomly selected 10 AWCs under Azad Gram Panchayat of Lakhimpur ICDS project, Lakhimpur.
- **Study population:** Mothers having children under 6 years of age.
- **Sample:** 120 mothers of children enrolled under selected 10 AWCs
- **Sampling technique:** Multi Stage Random Sampling Technique.

### a) Variables:

- **Study variables** – Awareness and Utilization of ICDS Services
- **Demographic variables** - Age, education, occupation, parity, family income per month.

### b) Data Collection tools: Structured Interview Schedule.

#### Inclusion criteria

- Mothers of children under 6 years of age, who are enrolled in the selected 10 AWCs.
- Mothers who are available at the time of data collection.

#### Exclusion criteria

- Mothers who are not willing to participate in the study.

#### Development of the tool:

A Structured interview schedule was prepared to collect data regarding Awareness and Utilization of ICDS Services from the mothers of children under 6 years of age under the following sections –

**Section I – Socio Demographic data:** This section is prepared to collect the demographic data of the mothers under the study.

**Section II – Awareness of ICDS services:** This section is

prepared to collect information about the awareness of ICDS services among the mothers. The questions were organized under five areas, these are – supplementary nutrition, pre - school education, immunization, nutrition and health education, health checkup and referral services. All the questions are multiple choice having only one correct answer. The maximum possible score is 16 and the minimum is 0. Using the formula Mean  $\pm$  S. D. the scoring interpretations are given as follows –

Awareness Categories	Score Range
High awareness [ $>$ (Mean +S. D.) ]	14 - 16
Moderate awareness [(Mean - S. D.) to (Mean +S. D.) ]	8 - 13
Low awareness [0 to (Mean - S. D.) ]	0 - 7

**Section III – Utilization of ICDS services:** This section is prepared to collect information about Utilization of ICDS services. The questions were organized under five area i. e., supplementary nutrition, pre - school education, immunization, nutrition and health education, health checkup and referral services. The maximum possible score is 17 and the minimum is 0. Using the formula Mean  $\pm$  S. D. the scoring interpretations are given as follows -

Utilization Categories	Score Range
High Utilization [ $>$ (Mean +S. D.) ]	16 - 17
Moderate Utilization [(Mean - S. D.) to (Mean +S. D.) ]	10 - 15
Low Utilization [0 to (Mean - S. D.) ]	0 - 9

**Reliability of the Tool:**

The reliability was computed using co - variance co - efficient test i. e., *Split-half (KR20) method*. The reliability of Section II is found to be  $r = 0.74$  and the reliability of Section III is found to be  $r = 0.801$ , which indicates that the tool is reliable.

**3. Analysis and Interpretation of Data**

The data collected from the samples are organized and presented for analysis according to the objectives of the study under the following sections –

**Section I:** Distribution of the respondents according to the demographic variables would be analyzed by using frequency and percentage.

**Table 1.1:** Frequency and percentage distribution of the respondents according to the Age, N = 120

Age (in years)	Frequency	Percentage (%)
Less than 20 years	11	9.17
20 - 30 years	85	70.83
31 – 40 years	24	20.00
Total	120	100

Data presented in the Table - 1.1 in age group shows that out of 120 mothers majority of the mothers i. e., 85 (70.83%) were in the age group 20 – 30 years, 24 (20%) were in the age group 31 - 40 years and remaining 11 (9.17%) of the mothers were belonging to the age group of less than 20 years.

**Table 1.2:** Frequency and percentage distribution of the respondents according to Education, N = 120

Education	Frequency	Percentage (%)
No formal education	6	5.00
Primary school	21	17.50
Middle school	18	15.00
High school	32	26.67
Higher secondary	29	24.17
Graduate & above	14	11.67
Total	120	100

Data presented in the Table - 1.2 in the education shows that out of 120 mothers majority of the mothers i. e., 32 (26.67%) were High school passed, 29 (24.17%) were Higher secondary passed, 21 (17.5%) were Primary school passed, 18 (15%) were Middle school passed, 14 (11.67%) were graduates and above and remaining 6 (5.00%) had no formal education.

**Table - 1.3:** Frequency and percentage distribution of the respondents according to the occupation, N= 120

Occupation	Frequency	Percentage (%)
Housewife	114	95.00
Govt. Employee	4	3.33
Any other	2	1.67
Total	120	100

Data presented in the Table - 1.3 in occupation shows that among the mothers majority i. e., 114 (95%) were housewives, 4 (3.33%) were Govt. Employee and remaining 2 (1.67%) were engaged in any other activities.

**Table 1.4:** Frequency and percentage distribution of the respondents according to the parity, N = 120

Parity	Frequency	Percentage (%)
Primi para	69	57.50
Multi para	51	42.50
Total	120	100

Data presented in the Table - 1.4. in parity of mother shows that among the mothers majority i. e., 69 (57.50%) were primi para and remaining 51 (42.50%) were multi para.

**Table 1.5:** Frequency and percentage distribution of the respondents according to family income per month, N = 120

Family income	Frequency	Percentage (%)
>Rs.30375	14	11.67
Rs.15188 - 30374	18	15.00
Rs.11362 – 15187	9	7.50
Rs.7594 - 11361	17	14.17
Rs.4556 – 7593	14	11.67
Rs.1521 – 4555	22	18.33
< Rs 1520	26	21.67
Total	120	100

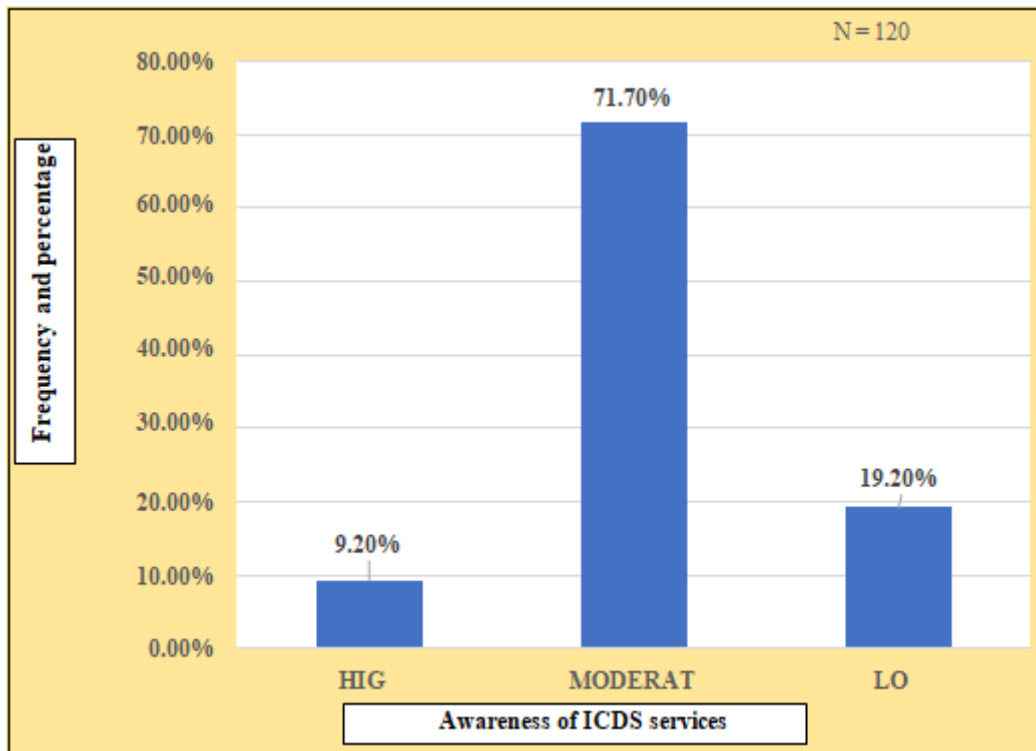
Data presented in the Table - 1.5 in the Family income shows that out of 120 mothers majority of the mothers i. e., 26 (21.6%) were had monthly family income < Rs.1520, 18.33% had income Rs.1521 - 4555, 15% of the mothers had income Rs.15, 188 – 30374, 14.17% had income Rs.7594 – 11, 361. Among them 11.67% of the total mothers had monthly family income > Rs 30, 375, 11.67% had income Rs.4556 – 7593 and 7.50% of the mothers had monthly family income Rs.11, 362 – 15, 187 per month.

**Section II: Distribution of the respondents according to the level of awareness of ICDS services would be analyzed by using frequency and percentage.**

**Table 2:** Frequency and percentage distribution of the respondents according to the level of awareness of ICDS services, N = 120

Awareness categories	Score range	Frequency	Percentage (%)
High awareness	14 - 16	11	9.2%
Moderate awareness	8 - 13	86	71.7%
Low awareness	0 - 7	23	19.2%

The data presented in the Table 2 shows that majority of the mothers i. e., 86 (71.7%) had moderate awareness of ICDS services, 23 (19.2%) of the mothers had low awareness and remaining 11 (9.2%) of the mothers had high awareness of the ICDS services.



**Figure 1:** Bar diagram representing the distribution of respondents according to the level of awareness of ICDS services.

**Section III: Distribution of the respondents according to the level of Utilization of ICDS services would be analyzed by using frequency and percentage.**

**Table 3:** Frequency and percentage distribution of the respondents according to the level of Utilization ICDS services, N = 120

Utilization categories	Score range	Frequency	Percentage (%)
High	16 - 17	16	13.3%
Moderate	10 - 15	76	63.3%
Low	0 - 9	28	23.3%

The data presented in the Table 3 shows that majority of the mothers i. e., 76 (63.3%) had moderate level of utilization, 28 (23.3%) of the mothers had low level of utilization and remaining 16 (13.3%) of the mothers had high level of utilization of the ICDS services.

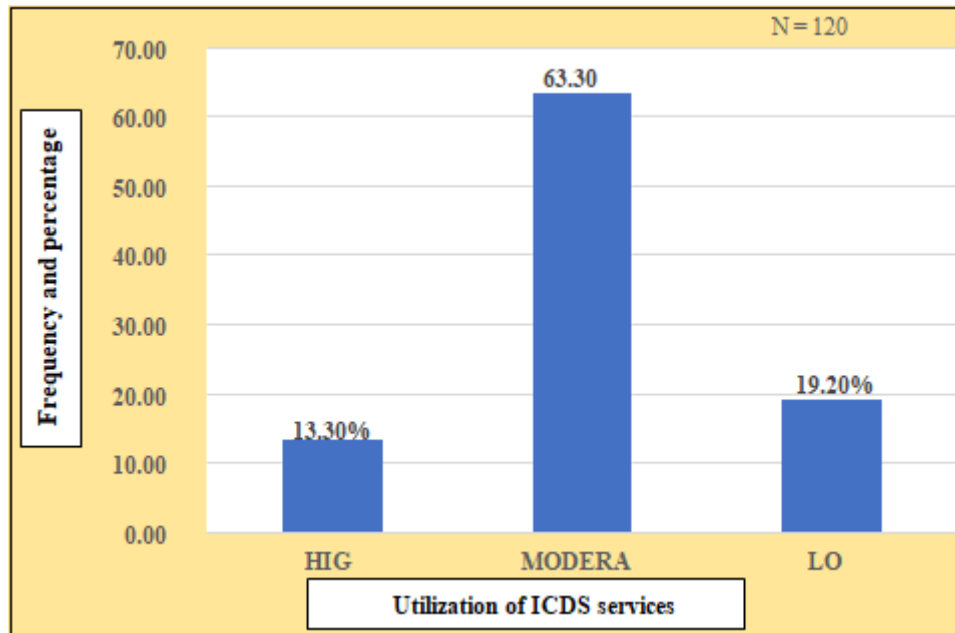


Figure 2: Bar diagram representing the distribution of respondents according to the level of utilization of ICDS services

**Section IV: Correlation between the awareness and utilization of ICDS services among the mothers of children under 6 years of age would be analyzed by using the test of Correlation (Karl Pearson’s Correlation and Coefficient.)**

**Null Hypothesis:**

**H01:** There is no significant correlation between the awareness and utilization of ICDS services among the mothers of children under 6 years of age.

Table 4: Mean, S. D., ‘r’ value and ‘p’ value for awareness and utilization scores.

Variables	Mean	S. D.	‘r’ value	‘p’ value	Remarks
Awareness	11.03	2.75	R =.353	<.001	S**
Utilization	13.03	2.932			

In Table 4, by using the Karl Pearson’s Correlation and Coefficient the calculated value of  $r = 0.353$ ,  $p$  value  $<.001$ , which is significant at 0.01 level of significance and it signifies that there is weak positive correlation between the awareness and utilization of ICDS services among the

mothers. Thus, it can be inferred that, when the awareness of ICDS services increases then the utilization of ICDS services also slowly increases. Hence, the null hypothesis H01 which states that, there is no significant correlation between the awareness and utilization of ICDS services among the mothers of children under 6 years of age was rejected.

**Section V: Association between awareness of ICDS services among the mothers of children under 6 years of age and the selected demographic variables i. e., age, education, occupation, parity of mothers, family income per month would be analyzed by using test of significance (Pearson Chi - Square).**

**Null hypothesis**

**H02:** There is no significant association between the awareness of ICDS services among the mothers of children under 6 years of age and the selected demographic variables.

Table 5: Association between awareness of ICDS services among the mothers of children under 6 years of age and the selected demographic variables, N= 120

Demographic Variables	Awareness			(c2) Value	df	P Value	Table value	Remarks
	High	Moderate	Low					
<b>Age in years</b>								
<20	2	9	0	4.898	4	0.298	9.49	NS
20 - 30	7	62	16					
31 - 40	2	15	7					
<b>Education</b>								
No formal education	0	6	0	9.702	10	0.467	18.31	NS
Primary school	3	14	4					
Middle school	1	10	7					
High school	2	26	4					
Higher secondary	3	21	5					
Graduate & above	2	9	3					
<b>Occupational status</b>								
House wife	10	82	22	2.239	4	0.692	9.49	NS
Govt. employee	1	2	1					

Any other	0	2	0					
<b>Parity of mothers</b>								
Primi para	6	50	13	0.063	2	0.969	5.99	NS
Multi para	5	36	10					
<b>Family income per month</b>								
>Rs. 30375	2	10	2	6.238	12	0.904	21.03	NS
Rs. 15188- 30374	2	10	6					
Rs. 11362 – 15187	1	6	2					
Rs. 7594 - 11361	0	14	3					
Rs. 4556 - 7593	2	10	2					
Rs. 1521 – 4555	2	17	3					
< Rs 1520	2	19	5					

Legend: \*= Significant at P (<0.05) \*\* = Significant at P (<0.01) NS – Not Significant

The data presented in the Table 5 shows Chi Square values computed between respondents’ awareness of ICDS services and demographic variables viz age, education, occupation, parity of mothers, family income per month. The result shows no significant association between the awareness of ICDS services and the selected variables i. e., age, education, occupation, parity and family income per month as the obtained chi square values i. e., 4.898, 9.702, 2.239, .063, 6.238 were less than the table value. Therefore, the null hypothesis H02 was retained and it can be inferred that, Awareness of ICDS services is not dependent on any of the demographic variables.

**Section VI: Association between Utilization of ICDS services among the mothers of children under 6 years of age and the selected demographic variables i. e., age, education, occupation, parity of mothers, family income per month would be analyzed by using test of significance (Pearson Chi - Square).**

**Null hypothesis**

**H03:** There is no significant association between the utilization of ICDS services among the mothers of children under 6 years of age and the selected demographic variables.

**Table 6:** Association between Utilization of ICDS services among the mothers of children under 6 years of age and the selected demographic variables, N= 120

Demographic Variables	Utilization			(c2) Value	df	P Value	Table value	Remarks
	High	Moderate	Low					
<b>Age in years</b>								
<20	1	9	1	3.565	4	0.468	9.49	NS
20 - 30	13	53	16					
31 - 40	2	14	8					
<b>Education</b>								
No formal education	0	2	4	22.895	10	0.01	18.31	*
Primary school	0	18	3					
Middle school	0	12	6					
High school	5	20	7					
Higher secondary	6	18	5					
Graduate & above	5	6	3					
<b>Occupational status</b>								
House wife	15	72	27	6.218	4	0.183	9.49	NS
Govt. employee	0	4	0					
Any other	1	0	1					
<b>Parity of mothers</b>								
Primi para	9	46	14	0.94	2	0.625	5.99	NS
Multi para	7	30	14					
<b>Family income per month</b>								
>Rs.30375	5	8	1	24.761	12	0.01	21.03	**
Rs.15188 - 30374	3	11	4					
Rs.11362 – 15187	1	7	1					
Rs.7594 - 11361	2	14	1					
Rs.4556 - 7593	3	8	3					
Rs.1521 – 4555	2	9	11					
< Rs 1520	0	19	7					

Legend: \*= Significant at P (<0.05) \*\* = Significant at P (<0.01) NS – Not Significant The data presented in the Table 6 shows Chi Square values computed between respondents’ Utilization of ICDS services and demographic variables viz age, education, occupation, parity of mothers, family income per month.

The result shows that there is no significant association between the Utilization of ICDS services and the selected variables i. e., age, occupation, parity of mothers as the

obtained chi square values i. e., 3.565, 6.218 and .940 respectively were less than the table value. Therefore, the null hypothesis H03 was retained and it can be inferred that,

Utilization of ICDS services is not dependent on the demographic variables i. e., age, occupation, parity of mothers.

In case of other demographic variables i. e., education and family income the result shows significant association with the Utilization of ICDS services as the obtained chi square values i. e., 22.895, and 24.761 respectively were greater than the table value. Therefore, the null hypothesis H03 was rejected and it can be inferred that, Utilization of ICDS services is dependent on the demographic variables i. e., education and family income.

#### Implication of the study in nursing:

- Health promotion is a vital function of nurse and community health nurse can organize mass education in the community regarding ICDS program using different A. V. Aids.
- The result of this study supports the need for nurses to make some step to increase the awareness and utilization of the ICDS services among the beneficiaries.
- A nurse administrator can plan training programs for the nurses and the health workers at the periphery level like ANM, ASHSA and AWWs regarding the importance ICDS scheme in improving child's health and nutritional status and creating awareness in the community.
- Emphasis should be laid on the publication of research finding of the factors influencing the awareness and utilization of ICDS services in the journals, and books to disseminate research - based evidence for the nurse and administrators to augment this knowledge.

#### 4. Recommendations

- The present study may be replicated on a larger sample, there by findings can be generalized for the large population.
- More qualitative research is required to conduct in order to identify the factors that affect the awareness and utilization of ICDS services.

#### 5. Conclusion

- From the study findings it is abundantly clear that the ICDS services are not properly utilized by the beneficiaries, which is interfering in achieving the actual goal of the scheme.
- It is necessary to develop some strategies or to conduct some teaching programmes in order to increase the awareness of the mothers of children under 6 years of age regarding the ICDS services and to change their attitude towards ICDS.

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