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A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE, UTILIZATION, LEVEL OF SATISFACTION OF UTILIZATION AND BARRIERS OF NON-UTILIZATION REGARDING ICDS SCHEME AMONG THE MOTHERS AT SELECTED RURAL AREAS OF SEPAHIJALA, TRIPURA.

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ABSTRACT

Background: Integrated Child Development Services (ICDS) is a major community-based programme providing essential services for children below six years and mothers through Anganwadi centres. Although the programme has extensive coverage, variations in awareness, utilization and satisfaction may affect the effective use of available services. Aim: The present study aimed to assess knowledge, utilization, level of satisfaction and barriers related to ICDS services among mothers of children below six years in selected rural areas of Sepahijala, Tripura, and to develop and disseminate an information booklet for non-utilizing mothers. **Materials and Method:** A quantitative research approach with a non-experimental descriptive research design was adopted. A total of 260 mothers having children below six years were selected using convenience sampling from Tarapukur, Shantinagar and Induria villages of Sepahijala district, Tripura. Data were collected using a demographic proforma, structured knowledge questionnaire, ICDS utilization checklist, five-point Likert satisfaction scale and barrier checklist. Descriptive statistics and chi-square tests were used for analysis. Results: Among 260 mothers, 83.8% had adequate knowledge, 13.8% had moderate knowledge and 2.3% had inadequate knowledge regarding ICDS services. The mean knowledge score was 15.82 ± 2.15, with a mean percentage of 87.89%. Overall, 90% of mothers had utilized at least one ICDS service. Supplementary nutrition was utilized by 86.2%, immunization by 85.8%, deworming and vitamin A supplementation by 85.8%, health check-up by 80.8%, and growth monitoring by 81.9%. Among eligible children, 93.3% attended preschool activities at Anganwadi centres. Among service users, 82.1% reported higher satisfaction, 14.5% moderate satisfaction and 3.4% lower satisfaction. Significant associations were found between knowledge and age of the child, maternal education, religion and family decision-maker. Satisfaction was significantly associated with maternal education and religion. **Conclusion:** The study revealed generally high knowledge, utilization and satisfaction regarding ICDS services among mothers. However, specific barriers remained among non-utilizers, particularly concerns regarding food quality, inconvenient immunization timings and preference for higher healthcare facilities. Targeted community education and improvement in service delivery may further strengthen ICDS utilization.

KEYWORDS

Integrated Child Development Services; ICDS; Knowledge; Utilization; Satisfaction; Barriers; Mothers; Rural Area.

INTRODUCTION

The first six years of life are crucial for a child's physical, cognitive, emotional, and social development. During this period, inadequate nutrition, healthcare, stimulation, and essential support services may negatively affect growth and development. In India, the **Integrated Child Development Services (ICDS)** programme was introduced in 1975 to address the health, nutritional, and developmental needs of children and mothers. Through Anganwadi centres, ICDS provides supplementary nutrition, immunization, health check-ups, referral services, nutrition and health education, and preschool education.

ICDS is a comprehensive programme aimed at reducing malnutrition, morbidity, and mortality while promoting early childhood development and maternal health. Effective utilization of these services is essential for improving child and maternal health outcomes. Mothers play an important role in accessing and continuing ICDS services for their children. Their knowledge, satisfaction, perceptions, and experiences may influence service utilization. Therefore, assessing knowledge, utilization, satisfaction, and barriers is important for improving ICDS service delivery. The present study was conducted to assess these aspects among mothers of children below six years in selected rural areas of Sepahijala, Tripura.

OBJECTIVES OF THE STUDY

1. To assess the knowledge regarding ICDS Scheme among mothers.
2. To assess the utilization of ICDS Scheme among mothers.
3. To assess the level of satisfaction regarding utilization of ICDS services.
4. To determine the barriers to non-utilization of ICDS services.
5. To determine the association between knowledge regarding ICDS services and selected socio-demographic variables.
6. To determine the association between satisfaction regarding ICDS utilization and selected socio-demographic variables.
7. To develop and disseminate an information booklet regarding ICDS services among non-utilizing mothers.

HYPOTHESES

H1: There is a significant association between knowledge regarding ICDS services and selected socio-demographic variables.

H2: There is a significant association between satisfaction regarding ICDS utilization and selected socio-demographic variables.

RESEARCH METHODOLOGY:

Research Approach

A quantitative research approach was adopted for the present study.

Research Design

A **non-experimental descriptive research design** was adopted for the study to assess the knowledge, utilization, satisfaction, and barriers related to the ICDS Scheme among mothers.

Research Setting

The study was conducted among mothers of children below six years of age in selected rural areas of **Sepahijala District, Tripura**. The main study settings were **Tarapukur, Shantinagar, and Induria villages**. The pilot study was conducted at **Madhya Shantinagar village**.

Sample and Sampling Technique

The sample consisted of **260 mothers of children below six years of age**. A **convenience sampling technique** was used to select the participants based on their availability and willingness to participate in the study.

Sample Selection Criteria

Inclusion Criteria

- Mothers having children below six years of age.
- Mothers who were available at the time of data collection.

Exclusion Criteria

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

Selection and Development of Tools

The tools consisted of the following sections:

- **Section A:** Demographic proforma.
- **Section B:** Structured knowledge questionnaire regarding the ICDS Scheme.
- **Section C:** Checklist to assess utilization of ICDS services.
- **Section D:** Five-point Likert scale to assess the level of satisfaction regarding ICDS utilization.
- **Section E:** Checklist to identify barriers to non-utilization of ICDS services.

The knowledge questionnaire contained **18 items**, with one mark for each correct response and zero for an incorrect response. The utilization and barrier checklists were scored as **Yes = 1 and No = 0**. The satisfaction scale had a minimum score of 0 and a maximum score of 36.

Development of Information Booklet

An **information booklet on the ICDS Scheme** was developed for mothers of children below six years who were not utilizing ICDS services. The content was validated by experts, and their suggestions were incorporated before final preparation. The booklet was distributed to non-utilizing mothers after completion of data collection.

Validity of Tool

The content validity of the tools was established by obtaining opinions and suggestions from **five experts**. Necessary modifications were incorporated based on their recommendations in consultation with the research guide.

Reliability of Tool

The knowledge questionnaire was tested using the **test-retest method**, yielding a Karl Pearson correlation coefficient of **r = 0.94**. The utilization checklist, satisfaction scale, and barrier checklist were assessed using the **split-half method**, with reliability coefficients of **r = 0.89, r = 0.87, and r = 0.85**, respectively. Thus, all the tools were found to be reliable for data collection.

Data Collection Method

Data collection was carried out during **January 2025** after obtaining formal permission from the District Magistrate of Sepahijala District, Tripura. The investigator introduced herself to the participants, explained the purpose of the study, clarified their queries, and obtained written informed consent. A total of **260 eligible mothers** participated in the study. The average time required to complete the tools was approximately **35–40 minutes per participant**.

Ethical Consideration

Ethical and administrative permissions were obtained before conducting the study. Approval was obtained from the Principal and Research and Ethical Committee of **Tripura Institute of Paramedical Sciences–Nursing**, and written permission was obtained from the **District Magistrate, Sepahijala District, Tripura**.

Plan of Data Analysis

The collected data were analyzed using **descriptive and inferential statistics**. The **chi-square test** was used to determine the association between knowledge and selected socio-demographic variables and between satisfaction.

RESULTS:

Table 1: Distribution of mothers according to Socio-demographic characteristics and association with level of knowledge regarding ICDS Scheme (n=260)

Demographic variables	n (%)	χ^2 value	p-value
Age of mother		0.98	0.61
18–30 years	230 (88.5)		
30.1–45 years	30 (11.5)		
Mother's marital status		0.59	0.97
Married	257 (98.8)		
Widowed	1 (0.4)		
Divorced	2 (0.8)		
Gender of child		0	1
Male	111 (42.7)		
Female	149 (57.3)		
Age of child		44.82	<0.001
0–3 years	67 (25.8)		
3.1–6 years	193 (74.2)		
Education of mother		135.01	<0.001
No formal education	9 (3.5)		
Primary education	149 (57.3)		
Secondary education	95 (36.5)		
Higher secondary	4 (1.5)		
Graduate and above	3 (1.2)		
Occupation of mother		4.27	0.64
Unemployed	239 (91.9)		
Self-employed	14 (5.4)		
Government employee	2 (0.8)		
Private employee	5 (1.9)		
Education of father		2.53	0.96
No formal education	7 (2.7)		
Primary education	51 (19.6)		
Secondary education	145 (55.8)		
Higher secondary education	46 (17.7)		
Graduate and above	11 (4.2)		
Occupation of father		1.21	0.00†
Unemployed	11 (4.2)		
Self-employed	208 (80.0)		
Government employee	26 (10.0)		
Private employee	15 (5.8)		
Monthly family income		0.56	0.99
5,000–20,000	199 (76.6)		
20,001–35,000	49 (18.8)		
35,001–50,000	12 (4.6)		
Type of family		0	1
Nuclear family	138 (53.1)		
Joint family	118 (45.4)		
Extended family	4 (1.5)		
Religion		133.98	<0.001
Hindu	173 (66.5)		
Muslim	87 (33.5)		
Distance to nearest Anganwadi centre		1.28	0.87
Less than 1 km	241 (92.7)		
1–3 km	16 (6.1)		
More than 3 km	3 (1.2)		
Decision-maker for child's healthcare		24.58	<0.001
Mother	4 (1.5)		
Father	106 (40.8)		
Both parents jointly	147 (56.5)		
Grandparents	3 (1.2)		

Tab. 2 deceptive statistics knowledge and Satisfaction regarding ICDS Scheme among the mothers.

Attributes	Min.	Max.	Mean	SD	Mean %
Knowledge	05	18	15.82	2.15	87.89
Satisfaction	8	36	30.50	6.69	84.72%

The knowledge scores ranged from 5 to 18, with a mean of 15.82 (SD = 2.15) and a mean percentage of 87.89%, indicating a high level of knowledge. Satisfaction scores ranged from 8 to 36, with a mean of 30.50 (SD = 6.69) and a mean percentage of 84.72%, reflecting a high level of satisfaction.

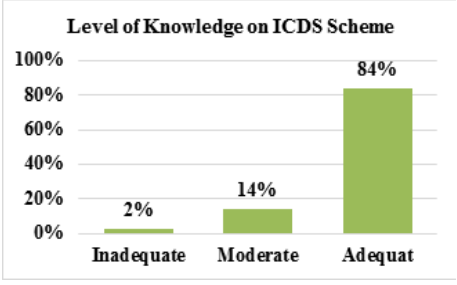
Table 3: frequency and percentage distribution of section wise utilization of ICDS scheme among the mothers.

Sl. No.	Services / Activities	Yes (f)	Yes (%)	No (f)	No (%)
A.	Utilization of Supplementary Nutrition				
1	Do you regularly receive supplementary nutrition for your child from the Anganwadi center?	224	86.2	36	13.8
B.	Utilization of Health Services				
2	Do you take your child for regular health check-ups at the Anganwadi center?	210	80.8	50	19.2
3	Does your child undergo regular growth monitoring (weight and height measurement)?	213	81.9	47	18.1

4	Have you received deworming and Vitamin A supplements for your child from the Anganwadi center?	223	85.8	37	14.2
C.	Utilization of Immunization Services				
5	Do you avail immunization services for your child from Anganwadi centre?	223	85.8	37	14.2
D.	Utilization of Early Childhood Education (Pre-school) (if applicable) n = 193				
6	Is your child regular at attending Anganwadi centre for pre-school activities?	180	93.3	13	6.7
E.	Referral Services and others				
7	Do you avail referral services provided by Anganwadi centre for your child?	0	0	260	100
8	Have you attended any nutritional awareness programme conducted by Anganwadi centre?	234	90	26	10

Table 4: Frequency and percentage distribution of barriers of non-utilization of ICDS Scheme among the mothers.

Sl. No.	Barriers	Yes (f)	Yes (%)	No (f)	No (%)
A.	Supplementary Nutrition				
1	Lack of awareness about nutritional benefits	0	0	26	100
2	Non-cooperative behavior of Anganwadi worker	0	0	26	100
3	Insufficient quantity of supplementary food	0	0	26	100
4	Poor quality of supplementary food	14	53.8	12	46.2
5	Cultural or social barriers to consuming specific foods	0	0	26	100
6	Non-preference of type of food being served in Anganwadi centre	12	46.2	14	53.8
B.	Immunization				
7	Fear of vaccine side effects or adverse reactions	0	0	26	100
8	More preference to visit private doctor's clinic	0	0	26	100
9	Lack of knowledge about vaccine benefits and schedules	0	0	26	100
10	Inconvenient vaccination timings	19	73.1	7	26.9
11	Difficulty in maintaining vaccination records	0	0	26	100
12	Social or cultural misconceptions about vaccinations	0	0	26	100
13	Location of the Centre far from house	7	26.9	19	73.1
C.	Health Check-up				
14	Limited availability of healthcare professionals	0	0	26	100
15	Lack of awareness regarding health services in Anganwadi centres	0	0	26	100
16	More preference to visit higher health centre where Doctors and Nurses are available	26	100	0	0
17	More preference to visit doctor's private clinic	0	0	26	100
18	Difficulty in accessing health services due to lack of transportation	0	0	26	100
19	Long waiting times or inconvenient check-up schedules	0	0	26	100
20	Busy work schedule or other engagements	0	0	26	100
D.	Referral Services				
21	More preference to avail services directly from health centres where doctors are available	26	100	0	0
22	Lack of qualified healthcare professionals to manage child's worsening health condition	0	0	26	100
23	Lack of vehicle services for transporting the sick child to health centre	0	0	26	100
E.	Preschool Education (n = 13)				
24	Limited access to Anganwadi centres due to lack of transportation	0	0	13	100
25	Lack of awareness about the importance of early childhood education	6	46.1	7	53.9
26	Inadequate trained teachers and/or resources	0	0	13	100
27	More preference to admit the child into regular school instead of Anganwadi centre	7	53.9	6	46.1
28	Improper facilities for the child in Anganwadi centre (e.g., lack of drinking water, toilet facilities)	0	0	13	100
F.	Other Barriers				
29	Any other barrier (Please specify)	0	0	26	100





The barriers to non-utilization of ICDS services among 26 mothers. For supplementary nutrition, the major barriers were **poor quality of supplementary food (53.8%)** and **non-preference for the type of food served (46.2%)**. Regarding immunization, **inconvenient vaccination timings (73.1%)** and distance of the centre from home (26.9%) were reported as barriers. For health check-ups and referral services, **all mothers (100%) preferred to visit higher health centres where doctors and nurses were available**. Among 13 mothers eligible for preschool education, **53.9% preferred regular schools instead of Anganwadi centres**, while **46.1% lacked awareness regarding the importance of early childhood education**. No other major barriers were reported.

The association between the level of satisfaction regarding ICDS utilization and selected socio-demographic variables among 234 mothers. A **statistically significant association** was found between satisfaction level and **education of the mother ($\chi^2 = 16.41$, $p = 0.04$)** and **religion ($\chi^2 = 10.72$, $p = 0.005$)**. No statistically significant association was found with **age of the mother, gender and age of the child, occupation of the mother, education and occupation of the father, monthly family income, type of family, distance to the nearest Anganwadi centre, or decision-maker for the child's healthcare** ($p > 0.05$).

CONCLUSION:

The study concluded that mothers had adequate knowledge and good utilization of ICDS services, with a high level of satisfaction among users. However, poor food quality, inconvenient timings, and preference for higher health centres were identified as major barriers. Strengthening service quality and awareness may further improve ICDS utilization among mothers.

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