



Research Article

Assessment of Knowledge and Utilization of ICDS Services among Mothers of Under Six Children in Selected ICDS Centers, South 24 Parganas, West Bengal

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A B S T R A C T

Introduction: The lives of children and women are the true indicators of the strength of communities and nations. Therefore health and welfare of children and their mothers is the top priority of any nation to build a strong society. The first six years of child's life are most crucial. Inadequacies during this vulnerable period result in hampering of development and growth faltering.

Government of India launched the Integrated Child Development Service scheme on 2nd October 1975 in 33 (4 rural, 18 urban, 11 tribal) blocks to ensure the holistic development of the child with a package of services aimed at reducing child malnutrition, morbidity and mortality.

Materials and Methods: A non - experimental descriptive research was conducted to assess the knowledge of ICDS services and to determine the utilization of ICDS services among 100 mothers of under six years children in selected ICDS centers, South 24 Parganas, West Bengal. Non - probability purposive sampling technique was adopted. The tool consisted of 8 items in socio-demographic profile, a 14 - item structured interview schedule for assessing knowledge of ICDS services and a 12 - items structured interview schedule for assessing utilization of ICDS services.

Results: The study findings reveal that maximum mothers (43%) have average knowledge score regarding ICDS services. Most of the mothers (82%) utilize immunization services. There are variations in knowledge as well as utilization level among mothers regarding ICDS services. The results also indicate that knowledge is positively correlated with utilization ["t" df (98) = 1.96; p<0.05].

Conclusion: There is urgent necessity of meaningful exclusion and execution of factors responsible for lack of knowledge and underutilization of services at the national level.

Keywords: Knowledge, Utilization, Mother, ICDS Service



Introduction

Children are the most vulnerable; they are our supreme assets and the future human resources of the country.¹ The first six years of child's life are most crucial as the foundations for cognitive, social, emotional, physical, motor and psychological development are laid down at this stage.² Government of India initiated the effort of rendering one of the most comprehensive child welfare services by launching the Integrated Child Development Service Scheme (ICDS) on 2nd October 1975. The main thrust of the scheme is on the villages where over 75 percent of the population lives.¹ Since then various services are provided to the children to meet the whole sphere of their needs such as physical, social and emotional care. It also provides support to children living within the families, so the involvement of family in the ICDS services is an important responsibility of society and state.³ Over the last two decades the health scenario in India has improved substantially but still the maternal and child health indicators are not satisfactory. According to Rapid Survey On Children (2013-2014) India, about 18.5% of children are born with low birth weight, 29.4% are underweight (weight for age < 5 years of age), 38.7% are stunted (height for age < 5 years), 15.1% are wasted (weight for height) and <1% children under 5 years are having Kwashiorkor/ Marasmus. The survey also showed that the awareness of mother about ICDS services was very poor. Only about 9.3% of mother of children were aware of all services provided by ICDS.

According to the results of the National Family Health Survey (NFHS 4), 36% of Indian children were underweight, 38% were very small according to age and 21% were too thin for their height. NFHS 4 also reported that India's under-five mortality rate was 50 in 2015 - 16. The mortality rate for children under the age of 5 was 56 in rural areas and 34 in urban areas. This clearly shows that under-five mortality rates are higher in rural areas than in urban areas.⁴ Paul TF and Paul N⁵ (2017) conducted a study to determine the use of Anganwadi services in the rural population of Kerala. 136 out of 352 households were randomly selected for data collection. According to the survey, all respondents knew Anganwadi, but only 8.5% of the respondents had sufficient knowledge, and 71.4% of the respondents had average about services for children under 3 years old. Only 70 percent families of children under the age of 3 and 54 percent families of children under the age from 4 to 6 years used the Anganwadi facility. This study shows that Anganwadi services for children are underutilized.

A cross-sectional research on usage and parental notion toward Anganwadi services in rural regions of Lucknow on 314 randomly chosen fathers and mothers of all the registered child (3-6 years) was investigated by Rehman HM, Patel SP, Agarwal M et al.⁶ 2017. The research additionally

concluded lack of usage of Anganwadi service. According to another investigation findings of Ahmad E, Khan Z et al.⁷ (2005), usage of each supplementary nutrients and non-formal pre schooling revealed poor result.

In a cross-sectional research amongst 500 numbers of children performed by Kshirsagar VY et al.⁸ (2019) found that children who attended Anganwadis have lesser morbidities in comparison with those not attending Anganwadis and also their mothers had sufficient knowledge about these services.

The ICDS scheme utilization depends upon the communities involved as well as differs from place to place. Several researches carried out urban and rural settings which evidenced in rural areas mothers showed poor knowledge and usage in this regard. The investigator of this study thought that there might be a link between knowledge of mother and health of the child through her professional observations and experiences.

In ICDS scheme, knowledge of the mothers of the beneficiaries plays a critical function in enhancing the growth, nourishment and normal improvement in their child. Adequate literacy level regarding ICDS scheme among mothers of the beneficiaries is the only mean to lead them towards proper utilization of the available services. This existing background compelled the investigator of the present study to make an effort to identify knowledge as well as utilization level of mothers of ICDS beneficiaries in selected block of West Bengal.

Objectives

- To assess the knowledge of ICDS services among mother in selected ICDS centers, South 24 Parganas, W.B
- To determine the utilization of ICDS services among mother in selected ICDS centers, South 24 Parganas, W.B
- To find out correlation between the knowledge and utilization of ICDS services among mother in selected ICDS centers, South 24 Parganas, W.B

Material and Methods

Quantitative research approach and descriptive design was selected. The study settings were two selected ICDS center in South 24 Parganas, West Bengal. Non-probability purposive sampling technique was adopted to select 100 (one hundred) mothers of under six years children. The tool comprised of three parts.

Part 1 - Socio - Demographic Proforma consists of 08 items. These are age of mother, mother's education, religion, mother's occupation, monthly income of family, type of family, number of under six years children, age of under six years children.

Part 2 - Structured interview schedule for assessment of knowledge of ICDS services includes domain on general information about ICDS services, supplementary nutrition, growth monitoring, health check-up, immunization, non-formal pre-school education, referral services and having knowledge score - 57.14%, understanding - 35.71%, application - 7.14%. It consisted of 14 items and each item has 3 options, containing one correct response. Each correct response was scored as 1 and incorrect response as 0. Knowledge categories based on scores were as; very good- $\geq 80\%$, good-60%-79%, average-40%-59%, poor- $<40\%$. Part 3 - Structured interview schedule for assessment of utilization of ICDS services consisted of 12 items, each item having 3 options. For each service utilization a score of 1 and for no utilization 0 score was given. Utilization categories based on scores were as; very good- $\geq 80\%$, good-60%-79%, average-40%-59%, poor- $<40\%$.

Reliability of the tools are ranging from 1 for socio-demographic proforma, 0.89 for knowledge assessment tool & 0.84 for utilization of services (test-retest method). Institutional ethical clearance was obtained. Informed consent was taken from willing participants. Anonymity and confidentiality were ensured by coding. Data were analyzed using descriptive and inferential statistics.

Results

Section I: Findings Related to Demographic Characteristics.

This section highlights the demographic characteristics of the mothers of under six years children.

Table 1. Findings Related to Demographic Characteristics

Demographic characteristics		Frequency	Percentage
Age of the mothers in years	<20	20	20%
	21-25	48	48%
	26-30	32	32%
Educational status of mother	Primary	33	33%
	Secondary	48	48%
	Graduation & above	19	19%
Occupation of mother	Housewife	74	74%
	Business	26	26%
Type of family	Joint	24	24%
	Nuclear	76	76%
Monthly family income	<5000	49	49%
	5000-10000	51	51%

Number of under six children of the mother	One	79	79%
	Two	21	21%

The data presented in Table 1, depicts that majority of the mothers were within the age group of 21- 25 years (48%), majority of the mothers had secondary education (48%), most of the mothers were housewife (74%) and majority of them (76%) belonged to nuclear family. Majority of the respondents (51%) have monthly family income within Rs. 5000-10000. Most of the mothers (79%) have only one under six-year child.

Section 2: Finding Related to the Knowledge of ICDS Services among Mothers of under six Children in Selected ICDS Centers.

This section highlights the knowledge score among mothers of under six children.

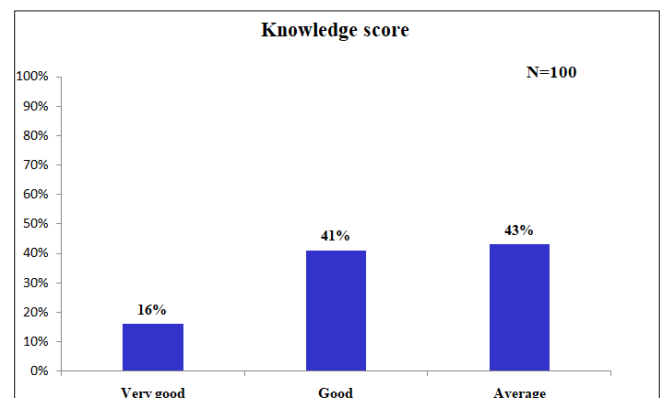


Figure 1. Column Diagram Showing Percentage Distribution of Knowledge Scores among Mothers of Under Six Children

Table 2. Mean and Standard Deviation of Knowledge Scores of Mothers of under six Children Regarding ICDS Services

Variable	Range of Scores (Mean Score)	SD
Knowledge score	0-14 (9.52)	1.59

The data presented in Figure 1, shows that most of the mothers (43%) have average knowledge, 41% have good knowledge and only 16% have very good knowledge regarding ICDS services. The data in Table 2, indicates that mean of knowledge score of mothers regarding ICDS services is 9.52. The standard deviation (SD) is 1.59 which indicates that there is knowledge variation among mothers.

Section 3: Finding Related to the Utilization of ICDS Services among Mothers of under six Children in Selected ICDS Centers

This section shows the findings related to the utilization of ICDS services among mothers of under six children in selected ICDS centers in figure 2 and table 3.

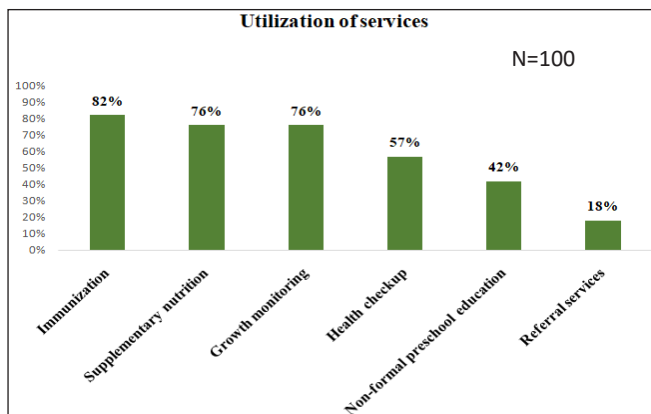


Figure 2. Column Diagram Depicting Percentage Distribution of the Utilization of ICDS Services among Mothers of under six Children

Figure 2 shows that most of the mothers (82%) used immunization services, 76% mothers both supplementary nutrition and growth monitoring services, 57% mother’s health checkup services, 42% used non-formal preschool education and only 18% mothers used referral services.

Table 3. Mean and SD of Utilization Scores of ICDS Services among Mothers of under six Children in Selected ICDS Centers

Variable	Range of Scores (Mean Score)	SD
Utilization score	(0-12) 7.82	1.25

The data presented in Table 3, indicates that mean utilization score of mothers regarding ICDS services is 7.82. The standard deviation (SD) is 1.25 which indicates that there is variation in utilization of ICDS services among mothers under study.

Section 4: Finding Related to Correlation Between Knowledge and Utilization Score of ICDS Services among Mothers of under six Children in Selected ICDS Centers

This section presents the relationship between knowledge and utilization score of ICDS services among mothers of under six children in selected ICDS centers in table 4.

The data presented in the table 4, depicts that there is significant positive correlation between knowledge and utilization of ICDS service [r=0.89, t=19.15 for df (98) at 0.05 level].

Table 4. Correlation between Knowledge and Utilization Score of ICDS Services among Mothers of under six Children in Selected ICDS Centers

Mean knowledge Score	Mean utilization Score	Pearson Correlation Coefficient ('r')	't' value	*S/NS
9.52	7.82	0.89	19.15	*S

't' df (98) = 1.96; p<0.05; *significant

Discussion

The overall study results reveal that maximum mothers (43%) have average knowledge, 41% have good knowledge and only 16% have very good knowledge regarding ICDS service with a mean value of 9.52. The standard deviation (SD) is 1.59 which indicates knowledge variation regarding ICDS service among mothers of under six children. This study findings are consistent with the studies conducted by Prabhavathi C and Kokilamma B et al.⁹ (2015), Nirmal G et al.¹⁰ (2013) and Jawahar P et al.¹¹ (2011). Prabhavathi C and Kokilamma B et al.⁹ (2015) conducted a descriptive cross-sectional study on 100 mothers of under five children at Tirupati, Andhra Pradesh which reported that 53% mothers had moderate, 38% mothers had adequate and 9% mothers had inadequate knowledge regarding ICDS services. Nirmal G et al.¹⁰ (2013) revealed that 60.5% of mothers had average knowledge, 25.5% of mothers had good knowledge and 14% had poor knowledge regarding ICDS services. Another descriptive study by Jawahar P et al.¹³ (2011) on 225 women in Udupi, Karnataka revealed that 49.3% mothers had average knowledge and 46.7% mothers had poor knowledge about ICDS services. Nath LR¹⁴ (2015) showed that majority of mothers (61%) had average awareness, 34% mothers had good awareness and only 5% mothers had poor awareness regarding Anganwadi services. A latest descriptive study, conducted by Patel P et al.¹⁵ (2019) on 300 parents in Pune, Maharashtra, revealed that 74% parents had inadequate awareness, 19.3% had lack of awareness and only 6.7% parents had adequate awareness regarding selected child welfare service.

The current study also identifies that most of the mothers (82%) utilize immunization services, 76% supplementary nutrition, 76% growth monitoring, 57% health checkup, 42% non-formal preschool education and only 18% mothers utilize referral services. The mean value of utilization score among mothers regarding ICDS services is 7.82. The standard deviation (SD) is 1.25 which highlights that there is variation in utilization of various available services among the samples under study. The study findings are

congruent partially with the studies conducted by Jawahar P et al.¹¹ (2011), Sivanesan S et al.¹⁴ (2016) and Dandotiya D et al.¹⁵ (2018). Jawahar P et al.¹¹ (2011) conducted a descriptive study on 225 women in Udipi, Karnataka which revealed that 71.1% mothers were utilizing supplementary nutrition, 69.3% non-formal preschool education, 58.3% health checkup and 50.5% were utilizing immunization services. Study result by Sivanesan S et al.¹⁴ (2016) partly supported this result that among total 95.9% registered child beneficiaries in costal Karnataka, 73.6% utilized growth monitoring service. The result of a cross-sectional study by Dandotiya D et al.¹⁵ (2018) in urban Bhopal also matched partially this result, which concluded that 99.39% beneficiaries utilized the immunization services and 83.7% supplementary nutrition. Study findings are inconsistent with those of a descriptive cross-sectional study by Helena K et al.¹⁶ (2014), which revealed utilization rate that 99.2% immunization services, 92% supplementary nutrition, 59.7% growth monitoring and 93.6% preschool education by anganwadi worker.

Present study finds that there is a statistically significant positive correlation between knowledge and utilization of ICDS service [$r=0.89$, $t=19.15$ for $df(98)$ at 0.05 level] which is consistent with the study conducted by Nath LR¹² (2015) and Patel P et al.¹³ (2019). Nath LR¹² in a community based cross-sectional study on 332 mothers having under five children, in Kerala in 2015, identified the rate of regular utilization of ICDS services 59%, showing significant association with utilization and awareness of ICDS services. Similar results revealed by another descriptive study upon 300 parents in Pune, Maharashtra, in 2019, conducted by Patel P et al.¹³, reported 79.7% respondents were aware about available services and among them 82.6% shown average utilization of services. It also showed statistically significant association with utilization and awareness of ICDS services. The study also explored the reasons of affected utilization like 'non-availability of health workers at health Centre', 'lack of proper pre-school education for children'. Both studies concluded that beneficiaries had inadequate awareness as well as utilization of ICDS services with average utilization rate.

Study was limited to selected rural setting, non-probability purposive sampling technique, limited number of samples, only Bengali speaking respondents and only mothers of under six children as sample. For better generalizations of the findings, similar study can be replicated on large sample for generalization, in different settings (rural-urban-suburban) among different population, across religions, different languages. An exploratory study can be conducted to identify factors associated with lack of knowledge and utilization of ICDS services. Satisfaction/dissatisfaction among beneficiaries regarding available services with reasons can be included as additional variable.

Experimental and longitudinal study can be conducted to assess effectiveness on knowledge and utilization of ICDS services and with an aim to formulate booklet or any awareness improving tool. A comparative study can be conducted in ICDS and Non ICDS blocks to assess the health status of children.

Conclusion

The study shows that majority of the mothers have average knowledge regarding ICDS services. Most of the mothers utilize immunization services, but utilization of referral services is very poor though there are variations in their utilization of ICDS services. A significant positive correlation between knowledge and utilization is evident. Initiation of a well-organized, holistic child development programme at national level took another 30 years after independence in India. Optimum improvement in Indian health scenario is only possible through extensive implementation and utilization of national services. Simultaneously persistent national propagation is required to minimize knowledge gaps among beneficiaries.

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Conflict of Interest None

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