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RESEARCH PAPER

Assessment of knowledge and practices of Anganwadi workers about integrated child development scheme services in rural Assam

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ABSTRACT

Background and aims: The Integrated Child Development Scheme (ICDS) was initiated in response to the evident problems of persistent hunger and malnutrition, especially among children under the age of 6 years. The Anganwadi workers (AWW) are the most important functionary of the ICDS scheme. The present study aims to assess the knowledge and practices of the AWWs about ICDS services and to find out the relationship between them. The study also determines the association between knowledge and practices and socio-demographic variables.

Materials and methods: A descriptive quantitative study was conducted in the Kamalpur-Rangia ICDS project. The investigators selected a sample of 70 AWWs using a multistage random sampling technique. A self-structured self-administered questionnaire and an observational checklist were developed to collect necessary data and analysed and interpreted using descriptive and inferential statistics.

Results: Out of 70 AWWs, the majority had moderately adequate knowledge (58.57%), and the majority had average practice (71.43%) regarding ICDS services. The study results showed a weak positive correlation between the knowledge and practices ($r=0.631$, $p<.00001$) of AWWs about ICDS services. The results also revealed a significant association between knowledge and socio-demographic variables like age, education and working experience. In the practice case, the socio-demographic variables, i.e., age and education, showed significant association with the practices of AWWs regarding ICDS services.

Conclusions: The study concluded that as the majority of the AWWs have moderately adequate knowledge and average practice, therefore attention should be given to strengthening the training quality provided to the AWWs to improve their knowledge and practices regarding ICDS services, which will lead to the achievement of the goals of ICDS scheme.

Keywords: Anganwadi worker; ICDS services; Knowledge; Practices.

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INTRODUCTION

According to the 2011 census, India has the largest child population, i.e., 158 million children under the age

group of 0-6 years. These children are the country's future generation and human resource, and their health status determines their development.¹

Some of the significant health challenges that the Government of India is addressing include the interlinked issues of poor maternal nutrition, low birth weight, and high child morbidity and mortality. Poor infant and young child feeding practices and high infection rates are the proximate cause of malnutrition.²

During 1975 the maternal and infant mortality rates were extremely high (MMR- 853 per 1,00,000 live births and IMR- 134 per 1,000 live births) due to the country's severe drought. To stop the soaring rate of MMR and IMR, the Prime Minister, the late Indira Gandhi, launched ICDS in a few places severely affected by the drought. ICDS was inaugurated in 33 blocks across the country on Oct 2, 1975. Among those 33 blocks, 19 were rural, ten tribal and four urban.³

In Assam, the ICDS scheme was introduced in the year 1975 in Dhakuakhana Development Block on an experimental basis, along with 32 other blocks in the country.⁴ Currently, 223 blocks comprising 230 ICDS projects and 62,153 AWCs are functioning in Assam (According to government data in 2015).

The ICDS seeks to lay a solid foundation for developing the nation's human resources by providing an integrated package of early childhood services. These consist of – (1) supplementary nutrition; (2) immunisation; (3) health check-ups; (4) medical referral services; (5) nutrition and health education for women; and (6) non-formal education for children up to the age of 6 years, and pregnant and nursing mothers in rural, urban, slums and tribal areas.⁵

The ICDS team comprises the AWWs, AWHs, Supervisors, CDPOs and District Programme Officers (DPOs). AWW is a community-based frontline worker of the ICDS Programme who is selected from the local community. She is also an agent of social change, mobilising community support for better care of young children, adolescent girls and women. Her educational qualification and nutrition knowledge are essential to her performance in AWCs.⁶

It's been more than 40 years since the ICDS scheme, and there's been a lot of improvement in all aspects of implementation by making the universal allocation of funds. However, still, there is a discrepancy in expected outcomes due to varied reasons like the poor infrastructure of the AWCs, poor logistics, inadequate knowledge, lack of proper and competent training, poor remuneration of AWWs, etc.⁷

A recent evaluation conducted by the planning commission reported poor coverage (41%) and quality of ICDS services. It was found that AWWs were mostly overburdened, underpaid and unskilled, affecting the overall effectiveness of the scheme.³

Ranjan R, Das M and Das S conducted a cross-sectional study on the knowledge of AWWs about ICDS services in the Sitamarhi district of Bihar, where the results showed 55% of the respondents were not aware of ICDS services, only half of the AWWs, i.e., 49.1% had their knowledge score for different components of ICDS services above the median. The study suggests that it is essential to assess the knowledge level of AWWs regarding ICDS services to improve their knowledge and help in effectively achieving the objectives of the ICDS scheme.⁸

Despite various schemes the government has implemented, the mortality rates are not decreasing and nutritional and health status needs to improve up to the expected level. The reason behind this may be the need for more knowledge and practice of ICDS services by the AWWs. Therefore, it is essential to assess the knowledge level of the AWWs and their practice pattern of the ICDS services, as they are the leading service provider under this scheme. The output of the ICDS scheme largely depends on the profile of the vital functionary, that is, AWWs, their qualification, experience, knowledge, skills, attitude, training, practising pattern, etc.

Therefore, we aim to assess the knowledge and practices of the AWWs regarding ICDS services and to find out the relationship between their knowledge and practices of them. The study also aims to determine the association between knowledge and practices with the socio-demographic variables, i.e., age, education, working experience, number of training, types of training and place of training.

MATERIALS AND METHODS

The present study was a descriptive quantitative study in the Kamalpur-Rangia ICDS project of Kamrup District, Assam. Out of 3 of the Kamalpur-Rangia ICDS project, the Kamalpur development block was selected randomly. 70 AWWs were selected randomly for data collection out of 165. A structured self-administered questionnaire and an observational checklist were developed to collect data

regarding knowledge and practices of ICDS services. Demographic information like age, education, working experience, number of training, types of training and place of training were taken using a socio-demographic proforma. Formal written permission was obtained from the CDPO of Kamalpur -Rangia ICDS project, Kamrup(R), Assam and informed consent from the respondents indicating their willingness to participate in the study. The collected data were coded and organised in a master sheet and analysed using the Statistical Package for the Social Science (SPSS).

RESULTS

The socio-demographic characteristics of the respondents are shown in **Table 1**. Out of 70 AWWs, the majority belong to the age group 41-50 years (45.71%), the majority were higher secondary passed (41.42%), most of them had above 15 years of working experience (35.71%), the majority had attended 1-5 numbers of training (50%), majority had attended job training (48.57%) and majority had attended district level and state level training each (38.57%).

Table 1 Frequency and percentage distribution of respondents according to socio-demographic variable

Sl. No.	Socio-demographic variables	Frequency	Percentage (%)
1	Age (in years)		
	20-30	5	7.14
	31-40	20	28.57
	41-50	32	45.71
	>50	13	18.58
2	Education		
	Upper Primary	3	4.29
	High School	24	34.29
	Higher Secondary	29	41.42
	Graduation and above	14	20.00
3	Working experience (in years)		
	0-5	10	14.29
	6-10	15	21.43
	11-15	20	28.57
	Above 15	25	35.71
4	Number of training		
	1-5	35	50.00
	6-10	13	18.58
	11-15	8	11.42
	Above 15	14	20.00
5	Types of training		
	Induction training	20	28.57
	Job training	34	48.57
	Refresher training	10	14.29
	Other training	6	8.57
6	Place of training		
	Block	16	22.86
	District	27	38.57
	State	27	38.57
	Total	70	100

n=70

Knowledge distribution of the AWWs showed that out of 70 Anganwadi workers, most had moderately adequate knowledge (58.57%), and only 24.29% had adequate knowledge (**Table 2**).

Table 2 Frequency and percentage distribution according to the grading of knowledge score

Knowledge score	Score range	Frequency (f)	Percentage (%)
Adequate knowledge	>17.763	17	24.29
Moderately adequate knowledge	14.177 to 17.763	41	58.57
Inadequate knowledge	< 14.177	12	17.14

n=70

Practice distribution showed that out of 70 AWWs, most had average practice (71.43%), and only 11.43% had good practice regarding ICDS services (**Table 3**).

Table 3 Frequency and percentage distribution of Anganwadi workers according to their grading of the practice score

Practice score	Score range	Frequency (f)	Percentage (%)
Good practice	>18.618	8	11.43
Average practice	15.242 to 18.618	50	71.43
Poor practice	< 15.242	12	17.14

n=70

As seen in **Table 4**, there is a weak positive correlation ($r^2=0.631$, p -value $<.00001$) between the knowledge and practices of AWWs regarding ICDS services which is significant at 0.01 level of significance. Thus, the higher the knowledge score, the higher the practice score of AWWs regarding ICDS services.

Table 4 Correlation between knowledge and practice of the Anganwadi workers

Variables	Mean	SD	Correlation coefficient(r)	p-value	Remarks
Knowledge	15.97	1.793	0.631	<.00001	S**
Practice	16.93	1.688			

**=significant at $p (<0.01)$

The results related to the association of knowledge with socio-demographic variables showed that there is a significant association between knowledge and socio-demographic variable like age ($\Phi = 0.924$, Cramer's $V = 0.654$, $p < 0.05$), education ($\Phi = 0.610$, Cramer's $V = 0.431$, $p < 0.05$) and working experience ($\Phi = 0.455$, Cramer's $V = 0.322$, $p < 0.05$). Thus, the knowledge of AWWs depends on their age, education and working experience.

The results related to the association of practice with socio-demographic variables showed that there is a significant association between practices and socio-demographic variables like age ($\Phi = 0.801$, Cramer's $V = 0.566$, $p < 0.05$) and education ($\Phi = 0.548$, Cramer's $V = 0.387$, $p < 0.05$). Thus, the practice of AWWs depends on their age and education.

DISCUSSION

The integrated child development services (ICDS) scheme is the largest programme for promoting maternal and child health and nutrition in India and the whole world. The Anganwadi worker (AWW) is the community-based voluntary frontline worker of the ICDS programme selected from the community, and she assumes a pivotal role due to her close and continuous contact with the beneficiaries.⁹

The present study showed that the majority had moderately adequate knowledge (58.57%), 24.29% had adequate knowledge, and 17.14% had inadequate knowledge regarding ICDS services. The present study's findings are supported by a study conducted by Sankangoudar S and Akshatha¹⁰ to know the knowledge level and job satisfaction of AWWs in the seven Northern Karnataka districts. Results revealed that 40% of AWWs had a medium level of knowledge, 36% of AWWs had high knowledge, and 24.22% of AWWs had a low level of knowledge regarding ICDS services.

The present study result showed that most AWWs had average practice (71.43%), 17.14% had poor practice, and only 11.43% had good practice. The present study findings are like a study conducted by Thakur K, Chauhan HS, Gupta NL, Thakur P, Malla D¹¹ on knowledge and practices of AWWs and the availability of infrastructure in the ICDS program at district Mandi of Himachal Pradesh. In the study, the results showed that 60% of AWWs provides quality food, 97% of AWWs used to do regular weight check-up, but only 3% maintained a growth chart. s, it is concluded that the practice pattern is average.

In the present study, the result showed a weak positive correlation ($r=0.631$, $p<0.00001$) between the knowledge and practices of AWWs regarding ICDS services. Contrary to these findings, a study conducted by B Sravani¹² on the knowledge and practices of AWWs on selected childcare activities in Bangalore Rural Community showed no significant correlation between the knowledge and practices of AWWs ($r=0.207$).

In the present study, the results showed a significant association between knowledge of AWWs and socio-demographic variables like age, education and working experience. On the other hand, no significant association

was found between knowledge of AWWs and the socio-demographic variable like number of training, types of training and place of training. The study results are like the findings of a study conducted by Sankangoudar S and Akshatha¹⁰ on knowledge and job satisfaction of AWWs of North Karnataka, where a significant association was found between knowledge of AWWs and age, education and working experience.

In the present study, the results showed a significant association between the practice of AWWs and socio-demographic variables like age and education. On the other hand, no significant association was found between the practice of AWWs and the socio-demographic variable like working experience, number of training, types of training and place of training. The study findings contrast with the findings of a study conducted by B Sravani¹² on knowledge and practices of AWWs on selected childcare activities in AWCs of Bangalore rural community, where no significant association was found between the practice of AWWs and age and education. The study's finding is similar: there was no significant association between practice and working experience.

Limitations: The study was limited to 3 weeks period of data collection. The number of subjects in the study was small. So, this is a limitation towards generalisation.

CONCLUSION

The findings of the present study indicated that the knowledge and practice of AWWs regarding ICDS services could be more satisfactory, which affects achieving the actual goal of the scheme. There is a solid and intense need to improve the training quality provided to the AWWs, and supervisors should be introduced to impart information and awareness.

AWWs are the key person who will promote the good practices of services related to ICDS to enhance the health and nutritional status of mothers and children. Hence, they should be equipped with better knowledge through regular and quality training programs. Considering these facts, the investigator has attempted a study to assess the knowledge and practice of AWWs regarding ICDS services with the hope that it will draw the government's attention to organising quality training programs for AWWs.

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