

Original Article

A CROSS-SECTIONAL STUDY TO ASSESS KNOWLEDGE AND ATTITUDE OF ANGANWADI WORKERS REGARDING SERVICES PROVIDED UNDER INTEGRATED CHILD DEVELOPMENT SERVICE SCHEME IN RATLAM CITY

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Received: 10 Dec 2024, Revised and Accepted: 22 Feb 2025

ABSTRACT

Objective: Anganwadi workers are the group of community health who are an integral part of the Integrated Childhood Development Services scheme throughout India. Apart from playing a crucial role in promoting children's and adolescent's growth and development and, they have been continuously getting involved in Govt. programs. So it is very important to assess their knowledge and attitude about services provided under the ICDS scheme and also about recent changes in the program. To assess knowledge and attitude of Anganwadi workers for services provided under the ICDS scheme.

Methods: A cross-sectional study was conducted among AWWs. The sample of 91 anganwadi workers of Ratlam city was selected through simple random sampling in equal proportion from sector 1 and sector 2 in Ratlam. We assessed their knowledge and attitude regarding ICDS services using a pretested semi-structured questionnaire.

Results: Anganwadi workers of Ratlam city has best knowledge about Supplementary nutrition services provided under ICDS while least knowledge about immunisation services. Anganwadi workers with more experience, high education standards, and recent training on the ICDS module outperformed their peers. AWWs, with recent training on the ICDS module, had significantly better knowledge about ICDS services than their counterparts (P Value-0.004).

Conclusion: The findings of the study reinforce the need for proper training with interactive sessions, which will enhance the knowledge and skills of AWW, for quality provision of services.

Keywords: Anganwadi workers, Attitude, ICDS, Knowledge

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INTRODUCTION

ICDS program launched on October 02, 1975, is one of the world's largest and unique programs for early childhood care and development ICDS program shows strong commitment of country to its children and lactating mothers at the top most priority [1]. ICDS is working in the rural as well as urban area. It is working through the Anganwadi workers. The objective of ICDS is to enhance the nutrition and health status of children of the age group of 0-6 y, pregnant and lactating women, and adolescent girls thereby creating a proper psychological, physical, and social development for the child [2].

The beneficiaries of Anganwadi centers are teenage girls, lactating women, pregnant mothers, and children between the ages of six months and six years. Supplemental nutrition, preschool non-formal education, nutrition and health education, immunization, health checkups, and referral services are among the main responsibilities of Anganwadi workers. The current study focuses on nutrition and health education, supplemental nutrition, health checkups, and referral services of AWWs for beneficiaries.

Anganwadi workers must meet three minimum requirements: they must be from a local village or community, have completed their 10th-grade education, and ideally be married.

In recent time, Anganwadi workers' responsibilities have been increased and become an integral part of the ICDS scheme. AWWs are engaged into multiple roles for providing services to catering population [3].

Children between the ages of six months and six years are among the beneficiaries of Anganwadi workers. These children belong to two vulnerable groups: infants and children under five. It many researches it was found that the infant mortality rate (IMR) and under-5 proportional mortality rate (Under-5 PMR) are good indicators of the nation's overall socioeconomic development.

According to the 2011 Census of India, there are 158 million children who fall under the age group of 0-6 y [4].

According to the SRS bulletin 2022 Infant Mortality Rate 35.2 % per 1000 live births in India while for MP it is significantly higher with an IMR of 41 per 1000 live births [5].

NFHS-5 survey state fact sheet Madhya-Pradesh documented high burden of under-5 mortality rate at 49.2 per 1000 live births in 2019-2020 where only 77.1 % of children aged between 12-23 mo were fully immunized [6].

The state of Madhya Pradesh is underperforming when it comes to providing maternal and child care services, as evidenced by these trends in IMR and under 5 PMR. Thus, it becomes crucial to evaluate the expertise and qualification/knowledge of Anganwadi workers in providing ICDS services, as they are essential to the provision of MCH services in India.

MATERIALS AND METHODS

A cross-sectional study was conducted from 1 May 2023 to February 2024, among the sample of 91 anganwadi workers of Ratlam city selected through simple random sampling to assess their knowledge and attitude regarding ICDS services using a pretested semi-structured questionnaire.

Ethical permission was obtained from the institutional ethical committee

Ratlam city was divided into Sector 1 and Sector 2. Written permission was obtained from the Women and Child Development officer of Ratlam city also from CDPOs of respective sectors. For collecting data anganwadi workers were selected in equal proportions from each sector. 45 anganwadi centre were selected from Sector 1 and 46 Anganwadi centers were selected from Sector 2. A pretested preassigned semi-

structured questionnaire was used to collect data regarding the knowledge of Anganwadi workers. Data was collected after obtaining written informed consent from Anganwadi workers. Anganwadi workers who gave written informed consent were included in the study. A pilot test was conducted among 9 Anganwadi workers and necessary and relevant corrections were made in the questionnaire.

Study variables

A total of 91 Anganwadi workers were randomly selected for the current study, which was conducted in Ratlam Urban, Madhya Pradesh. A semi structured pretested questionnaire combined with casual conversation allowed for the assessment of the socioeconomic background and level of knowledge of Anganwadi workers. Basic details such as the respondent's name, age, education, Past ICDS training, and length of service as an Anganwadi worker, were gathered in order to determine their socioeconomic profile.

A total 18 questions were asked to each Anganwadi worker regarding different services provided under ICDS which comprised of seven questions about Immunization, five questions about breastfeeding and its benefits, two questions each about growth chart and growth monitoring, malnourishment and supplementary nutrition and, ORS administration.

Each question had a prepared checklist. The score for each question was calculated in percentage using a checklist. Final score for each component was calculated in percentages for each AWWs out of 100. The final knowledge assessment score for AWWs was calculated by adding each component's score and converted into percentages to get the final score out of 100 for each Anganwadi worker. Minimum score obtained was 8, the maximum score obtained was 96.867, Range was 88.867, the median score-64.221, the mean score was 61.506. Mean+1 SD used to divide the knowledge score into categories poor, average and good score. Data was analyzed using Epi Info 7.

DATA ANALYSIS

Statistical techniques like, mean score, percentage, frequency, and Standard Deviation were employed to analyze the data. T tests and ANOVA were used to analyze continuous variables.

RESULTS

Sociodemographic profile

Of the 91 AWWs in the current study, 13 (14.28%) are working for ICDS for less than ten years, 47 (51.65 %) working for 10-20 y, 31 (34.07%) AWWs working for more than twenty years.

65 (71.43%) of AWWs in current study are graduates, and 26 (28.57%) had completed their education upto Higher Secondary School.

A total of 56 AWWs (61.53%) received refresher training on ICDS within the last ten years, whereas 35 AWWs (38.46%) received it over a decade ago.

Out of the 91 AWCs, 85 (93.41%) had Sahayika to help AWWs, and 5 (6.59%) did not have enough Sahayika.

Knowledge

The average knowledge assessment score score that AWWs in current study received was 61.506±18.506 out of 100. Anganwadi workers in Ratlam City were better informed about supplemental nutrition in the current study, as indicated by table 1. However, there is still room for improvement, particularly with regard to immunization and growth chart monitoring.

Anganwadi workers with high educational standards, more experience, and recent training on ICDS modules outperformed their peers (table 2). The mean knowledge assessment score obtained by AWWs who recently received training on ICDS module 56 (61.53%) was 62.909±17.652 as compared to scores obtained by AWWs who received training on ICDS module long back 35 (38.46 %) mean knowledge assessment score of 53.353±17.279 and this difference was statistically significant, (P value-0.004).

Similar differences were found in the Knowledge assessment score obtained by AWWs who were graduates and who were educated upto higher secondary. Graduate AWWs (65, 71.53 %) got the mean knowledge assessment score of 63.555±18.364 compared to that of AWWs (26, 28.57 %) who were educated up to higher secondary (56.383±18.765).

Table 1: Mean knowledge assessment score obtained by AWWs of Ratlam city in various components of ICDS

Component	Total no. of questions asked to each AWWs	Maximum score given to each component for individual AWW	Mean knowledge assessment score obtained by AWWs of Ratlam city
Breastfeeding	5	100	70.039±15.130
ORS administration	2	100	55.077±29.902
Immunization	7	100	51.617±25.813
Supplementary nutrition	2	100	75.824±23.994
Growth Monitoring	2	100	54.973±27.104
Mean Knowledge assessment score obtained by AWWs of Ratlam city (Total score-100) - 61.506±18.506			

Table 2: Association between various socio-demographic characteristics of AWWs of Ratlam city and their performance in overall knowledge assessment of various services provided under the ICDS scheme

Variables	Categories	Total N =100 n (%)	Mean score obtained (Total=100	P-value
Educational qualification	Graduate	65 (71.53 %)	63.555±18.364	0.098
	Higher secondary	26 (28.57 %)	56.383±18.765	
Experience	<10 y	13 (14.28 %)	53.926±22.519	0.063
	10-20 y	47 (51.65 %)	59.803±17.956	
	>20 y	31 (34.07 5)	67.266±16.846	
Time since ICDS's last training	<10 y back	56 (61.53%)	65.893±17.467	0.004
	>10 y back	35 (38.46 %)	54.486±18.597	

AWWs who got the training on ICDS module recently within 10 y showed better knowledge for each of the package of services provided under ICDS scheme, compared to those who got the training on ICDS module in remote past. There is a significant difference in the knowledge Of AWWs who got the recent refresher training regarding Immunization (P value 0.001), ORS administration (P value - 0.030), and growth monitoring (P value 0.010), compare to those who got refresher training in remote past (table 3).

Attitude

Sixty-four percent of Anganwadi workers expressed satisfaction with their job profile. 34% of anganwadi workers believe they don't

get enough time to spend with their families, compared to 67% who believe they do. A heavy workload was causing mental strain for 40% of Anganwadi workers. According to ICDS guidelines, 85.7% of Anganwadi workers believe that maintaining all records and

registers is imperative. The POSHAN tracker has proven to be an effective tool for Anganwadi workers to maintain their records, according to 59.3% of them; however, a sizable portion (40.7%)

disagree. Ninety percent of anganwadi workers believe that less time should be spent on paperwork so that they can concentrate more on providing ICDS services (table 5).

Table 3: Association between time since last training on ICDS module of AWWs of Ratlam city and their performance in knowledge assessment of various packages of services provided under the ICDS scheme

Variables	Score obtained		P-value
	ICDS workers who got training on ICDS<10 y back	ICDS workers who got training on ICDS>10 y back	
Breastfeeding	71.062±15.496	68.402±14.597	0.418
ORS administration	60.421±29.456	46.527±29	0.030
Immunisation	58.295±23.496	40.932±26.071	0.001
Supplementary nutrition	79.018±22.752	70.714±25.355	0.109
Growth monitoring	60.670±24.746	45.857±28.549	0.010

AWWs who were educated upto graduate showed better knowledge for various components of the package of services offered under the ICDS scheme (table 4). Significant difference was found for knowledge regarding Immunisation services offered under ICDS scheme between AWWs who were graduates and those who were educated upto higher secondary (P value 0.005).

Table 4: Association between education standard, s of AWWs of Ratlam city and their performance in knowledge assessment of various package of services provided under ICDS scheme

Variables	Score obtained		P-value
	AWWs who were graduate	AWWs who were educated upto higher secondary	
Breast feeding	71.643±15.039	66.027±14.890	0.110
ORS administration	56.748±29.119	50.901±31.981	0.402
Immunisation	56.384±23.672	39.698±27.518	0.005
Supplementary nutrition	76.923±21.789	73.077±29.089	0.493
Growth monitoring	56.077±27.884	52.212±25.361	0.542

Table 5: Attitude among AWWs regarding the services provided by them under the ICDS scheme

Questions	Responses	Number of anganwadi workers	%
Are you satisfied with the job	Yes	55	60.4 %
	No	36	39.6 %
Do you get sufficient time to spend with your family	Yes	61	67 %
	No	30	33 %
Do you feel any kind of sleep disturbances due to strain?	Yes	40	44 %
	No	51	56 %
Do you think it is necessary to maintain all the records and registers as per AWC/ICDS guidelines?	Yes	78	85.7 %
	No	13	14.3 and
Do you think the POSHAN tracker is beneficial and effective for maintaining records and delivering services?	Yes	54	59.3 %
	No	37	40.7 %
Do you think time should be reduced for paperwork so you could do your other work efficiently?	Yes	82	90.1 %
	No	9	9.9 %

DISCUSSION

This study found that Anganwadi workers with recent training on ICDS module, more experience and high education standards had better knowledge and understanding of the various ICDS services available.

AWWs of Ratlam city had better understanding of services like supplementary nutrition, ORS administration, breast feeding leaving the scope for improvement in knowledge regarding immunisation services and growth monitoring services. This could be because recent changes have been inducted in immunisation services and growth monitoring services.

Notably similar fig. were found in the study conducted in 2023 by Brahmacharimayum *et al.*, which indicated that although 72% of respondents had an overall medium level of knowledge on ICDS, 18% of anganwadi workers had a low level of understanding.⁷

Similar to current study findings, According to a 2018 study conducted by Bhattarai *et al.*, the average knowledge score of AWW regarding ICDS components was 19.67±2.789, with 68.3% of AWW having moderate knowledge, 18.3% having low level, and 13.3% having high knowledge regarding various ICDS components [8].

According to table 1, AWWs in this study had the least knowledge about immunization and growth monitoring and the most knowledge about supplemental nutrition, breastfeeding services, and ORS administration.

Of the 30 AWCs surveyed, a Kular study conducted in the Barnala in 2015 district found that 54.66% of AWWs had the best understanding of the vaccination component [9].

The present investigation yielded no statistically significant association between the educational background and work experience of AWWs and their comprehension of ICDS services. These results are consistent with those of studies conducted in 2019 by Andy *et al.* [10] and in 2017 by Baliga *et al.* [11]

However, AWW's knowledge of ICDS services and the amount of time since their last refresher training showed a significant correlation (P=0.004). This was consistent with the results (p-value<0.001) of the Ranjan *et al.* 2019 study [12].

Ninety percent of anganwadi workers believe that their paper and register work should be reduced in order to free up more time for them to focus on ICD services, despite the fact that 59.3% of them think POSHAN Tracker is a useful tool for keeping their records,

according to the current study. The results of a 2020 study by Jain *et al.* [13] support these findings, as they found that although AWWs have the option to use a smartphone application and do not have to use paper registers, they still dedicate a substantial amount of their workday to filling them out.

CONCLUSION

The findings of the study reinforce the need of proper training with interactive sessions, which will enhance the knowledge and skills of AWW, for quality provision of services. It is, therefore, suggested that Anganwadi workers should receive quality training on ICDS periodically, perhaps through mobile in-service training or refresher courses. Also, even though there is a smartphone-based application available and AWWs have the option to forego using the paper registers, we find that they devote a significant portion of their work time to filling them out. This is a problem that the government can solve, but it might interfere with their capacity to serve teenage girls, expectant mothers, and nursing mothers by spending the required amount of time on home visits.

ACKNOWLEDGMENT

Women and Child Development Officer Ratlam

Child Development Project Officer Ratlam

All Anganwadi workers of Ratlam city

FUNDING

Nil

AUTHORS CONTRIBUTIONS

All authors have contributed equally

CONFLICT OF INTERESTS

Declared none

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