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Knowledge assessment and socio-demographic profile of Anganwadi workers in Ghaziabad district of Uttar Pradesh

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Abstract

Anganwadi workers are the frontline workers of the Integrated Child Development Services (ICDS) scheme and link the community to essential services of nutrition, health and immunization, and non-formal education. The success of the scheme is largely dependent on the understanding and performance of the workers in their assigned roles and responsibilities. This study therefore, assessed the “knowledge of anganwadi workers in Razapur and Muradnagar Block of Ghaziabad on their roles defined in the scheme. A sample of 45 respondents was taken from each block and a survey was conducted. The results showed that the majority of anganwadi workers (53.34%) was in the middle age group, 33.34% had an education level up to high school, 62.22% had a medium family size, 63.34% had a low annual family income, 61.11% had a high level of work experience, 75.55% had undergone Orientation, Refresher and other trainings and 72.22% had a medium level of achievement motivation. The workers had a medium level of knowledge on supplementary nutrition (76.67%), non-formal education (81.11%), immunization (71.11%), health check-ups (51.11%), referral services (86.67%) and nutrition and health services (64.44%). On the knowledge of services offered under each component, the highest percentage (95.56%) was recorded for non-formal education, placing it first, followed by referral services (78.51%, second), nutrition and health services (77.94%, third), immunization (77.46%, fourth), supplementary nutrition (74.30%, fifth), and health check-ups (61.67%, sixth). In general, 72.22% of the workers had a medium level of knowledge about their responsibilities under ICDS. The study found a positive and significant relationship between the level of knowledge of anganwadi workers and their age, education, family size, family income, experience, and training, at the 0.01 level of significance. On the other hand, no significant relationship was found with achievement motivation. To improve the delivery of ICDS services at the grassroots level, regular refresher and orientation programs are needed in addition to the current capacity building programs.

Keywords: Integrated child development services, Anganwadi, knowledge, nutrition, immunization, Ghaziabad

Introduction

Women and children constitute approximately 67.70% of the total population of India as per the 2011 census. Often called the backbone of the society, women take care of the nutrition and education of the family members and ensure that they have all the necessities. Women also provide supplementary income to rural households by working in agricultural and animal husbandry jobs and other small industries. Children are the future of the nation. However, they face several challenges such as malnutrition, absence of education, and healthcare which restrict their growth and development. The Ministry of Women and Child Development (MoWCD) has initiated several programs and schemes to provide protection and development to children and women of India. Healthy women and children are essential for a healthy society. There are several other schemes of the MoWCD such as Anganwadi Services (Umbrella Integrated Child Development Services) (ICDS), POSHAN Abhiyaan, Pradhan Mantri Matru Vandana Yojana, Scheme for Adolescent Girls, National Creche Scheme, and Beti Bachao Beti Padhao, which also focus on the holistic development of children, especially pregnant women and lactating girls, and adolescent girls. These schemes improve the nutrition and healthcare of the beneficiaries and ensure the right to education. Anganwadi

workers are instrumental in the Women and Child Development programs of India. Children under the age of 6, expectant and nursing mothers rely on these workers for their health, nutrition and education. This study will assess the knowledge of Anganwadi workers on their functions in the center. This will help to ascertain the implementation of the ICDS scheme. The results of the study will provide information on the health and pre-school education services offered by the ICDS, across the country. The study is constrained by the shortage of time and finance, therefore it is limited to one district of Uttar Pradesh.

Objectives

1. To study the socio-economic condition of Anganwadi workers in Ghaziabad district of Uttar Pradesh.
2. To evaluate the knowledge of Anganwadi workers about their roles as defined in the ICDS.

Methodology

This study was conducted in Ghaziabad district of Uttar Pradesh. A descriptive research design along with a purposive sampling method was employed. A total of 90 Anganwadi workers from Muradnagar and Razapur blocks were selected for the study. To avoid a communication gap,

the interview schedule was first prepared in English and then translated to Hindi. Data was collected through face-to-face interviews conducted at various Anganwadi centers and Block meetings.

The data was analyzed using statistical tools such as frequency and percentage, mean and standard deviation, rank order and correlation coefficient. Data analysis was done using MS EXCEL, and the results were validated using SPSS.

Results and Discussion

1. Socio-demographic Profile of Anganwadi Workers was as follows

1.1. Age

Age was operationalized according to the socio-economic scale constructed by Singh *et al.* (2005), and respondents were classified into young, middle, and old age groups. It is seen in the present study (Table 1) that the middle age group was the most prevalent (53.34%), followed by the old age group (46.67%) respondents. One of the reasons for this could be that the minimum age requirement for the post of Anganwadi worker was 21 years. Dash and Priyadarshini (2018) ^[6], Andey *et al.* (2019) ^[2], More and Mallah (2022) ^[16], Nair & Hallad (2024) ^[18], Jaguri *et al.* (2025) ^[11], and Das *et al.* (2025) ^[5] have also reported similar findings in their studies.

Table 1: Distribution of respondents according to their age:

S. No.	Category	Frequency	Percentage
1.	Young age (below 25 years)	00	00.00%
2.	Middle age (26 to 50 years)	48	53.33%
3.	Old age (above 50 years)	42	46.67%
Total (n)		90	100.00%

1.2. Education

The level of formal education attainment of Anganwadi workers was used to assess their level of education. From the findings of this study (Table 2), the highest percentage (33.34%) of Anganwadi workers attained a high school education, followed by those who attained an intermediate education (32.22%). Those who attained a graduation education (13.33%), a post graduate education (12.22%), and a middle school education (8.89%) were also observed. The prevailing situation was attributed to the fact that the minimum education qualification for Anganwadi worker recruitment was attainment of the fifth class. Shilpa *et al.* (2014) ^[26], Hemamalini (2018) ^[10], Joshi (2018) ^[13], Nagaraja *et al.* (2019) ^[17], Sujatha and Brunda (2020) ^[28], More and Mallah (2022) ^[16], Preeti *et al.* (2025) ^[19] reported similar findings in their studies. Das *et al.* (2025) ^[5] reported opposite findings, which could be attributed to the different locations of their studies.

Table 2: Distribution of respondents according to their education

S. No.	Category	Frequency	Percentage
1.	Middle (Class 6-8)	08	08.89%
2.	High School (Class 9-10)	30	33.34%
3.	Intermediate (Class 11-12)	29	32.22%
4.	Graduate	12	13.33%
5.	Post Graduate and above	11	12.22%
Total (n)		90	100.00%

1.3. Family Size

The size of the family refers to the number of persons comprising a single household at the time of the study. From the results presented in Table 3, the largest percentage (62.22%) of the respondents was from a medium family size of 4 to 6 members, while 22.22% of the respondents was from a large family size of more than 6 members, and 15.56% was from a small family size of up to 3 members. Jain *et al.* (2020) ^[12] reported similar findings in their study.

Table 3: Distribution of respondents according to their family size

Sr. No.	Category	Frequency	Percentage
1.	Small (< 3 members)	14	15.56%
2.	Medium (4 – 6 members)	56	62.22%
3.	Large (> 6 members)	20	22.22%
Total (n)		90	100.00%

1.4. Family Income

Family income is the respondent's income as an Anganwadi worker, as well as the income of other family members, Farm, business, job, etc. annual income. As shown in table 4, the majority of respondents (63.34%) have an annual family income of less than Rs. 2 lakh, 33.33% have a medium family income, and only 3.33% of the respondents have a high family income of more than Rs. 4 lakh. It was found that Anganwadi workers have low salary, and the other earning members of the family are marginal farmers or laborers. These findings are in line with Taksande *et al.* (2020) ^[29] and Meshram *et al.* (2020) ^[15] in their study.

Table 4: Distribution of respondents according to their family income

S. No.	Category	Frequency	Percentage
1.	Low (<2,00,000)	57	63.34%
2.	Medium (2,00,000 – 4,00,000)	30	33.33%
3.	High (>4,00,000)	03	03.33%
Total (n)		90	100.00%

1.5. Experience

Experience of Anganwadi Workers was assessed by the number of years spent in the role, starting from their first employment as an Anganwadi Worker. As depicted in Table 5, the largest percentage (61.11%) had a high level of experience of more than 20 years, with 36.67% having a medium level of experience, and 2.22% having a low level of experience. Since the majority of the respondents fell in the medium age category, and the rest in the old age category, they had a long period of employment as an Anganwadi Worker. Thakur *et al.* (2015) ^[30], Ranjan *et al.* (2019) ^[23], More and Mallah (2022) ^[16] reported similar findings in their studies. Andey (2019) ^[2], Reddy (2020) ^[25], Nair (2024) ^[18] reported in their studies that the majority of AWWs had experience of more than 10 years.

Table 5: Distribution of respondents according to their experience

S. No.	Category	Frequency	Percentage
1.	Low (<10 years)	02	02.22%
2.	Medium (10-20 years)	33	36.67%
3.	High (>20 years)	55	61.11%
Total (n)		90	100.00%

1.6. Training

Represents the knowledge and skills gained by Anganwadi workers as a result of the training they attended, whether it be a job course or a refresher training. The results in table 6 show that 75.55% of Anganwadi workers had attended Orientation, Refresher, and other trainings. 18.89% had attended only Orientation and Refresher trainings, and 5.56% had attended only the mandatory Orientation training. Most of the Anganwadi workers had trained, and strict supervisors ensured the attendance of Anganwadi workers for all the short and long trainings. Kular (2015) ^[14], Dash and Priyadarshini (2018) ^[6], and Sujatha and Brunda (2020) ^[28] reported similar findings in their studies. Rathore *et al.* (2015) ^[24] and Gotarkar *et al.* (2018) ^[9] in their study reported that the Anganwadi workers had basic or refresher training, and other trainings that were topic-specific and in the minority.

Table 6: Distribution of respondents according to their training

S. No.	Category	Frequency	Percentage
1.	Orientation (Job) Training	05	05.56%
2.	Orientation + Refresher(s) Trained	17	18.89%
3.	Orientation + Refreshers + Others Trained	68	75.55%
Total (n)		90	100.00%

1.7. Achievement Motivation

This was measured by the desire to engage in behaviors that lead to personal excellence. The survey found that 98.89% of

the respondents believed that when participating in a group effort, one should strive to be superior to the other group members. It could be that in a low reward situation, the workers were focused on assisting the women and children of the village. From table 7, the majority of the respondents (72.22%) had a medium level of achievement motivation, while 16.67% had a high level, and 11.11% had a low level. Bhagat (2021) ^[3] reports similar findings in her study. Pandey *et al.* (2024) ^[20] found that the majority of AWWs had a high motivation level, while a slightly lesser number had a medium level motivation.

Table 7: Distribution of respondents according to their degree of achievement motivation

S. No.	Category	Frequency	Percentage
1.	Low achievement motivation	10	11.11%
2.	Medium achievement motivation	65	72.22%
3.	High achievement motivation	15	16.67%
Total (n)		90	100.00%
Mean = 19.67 and Standard Deviation (S.D.) = 1.79			

2. Knowledge assessment of Anganwadi workers:

2.1. Knowledge of Anganwadi workers regarding their roles as per ICDS

To measure this variable, 36 knowledge indicators were constructed based on 6 domains of ICDS services. The results are provided in figures 1 and 2.

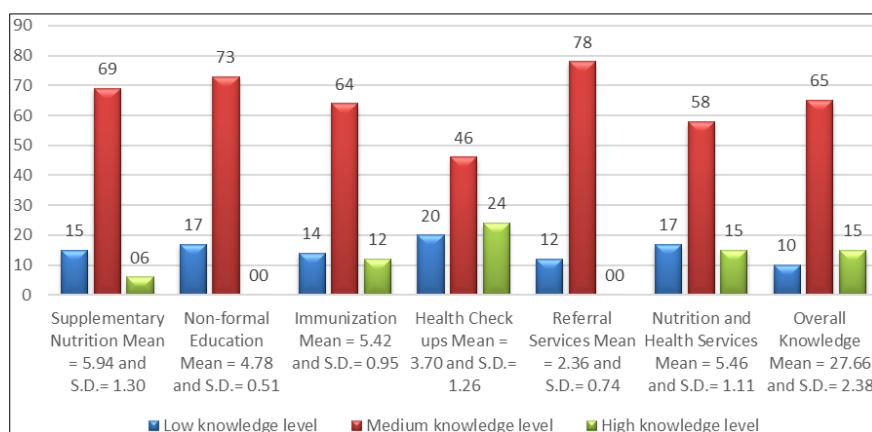


Fig 1: Frequency distribution of respondents according to their knowledge level for various services provided as per ICDS

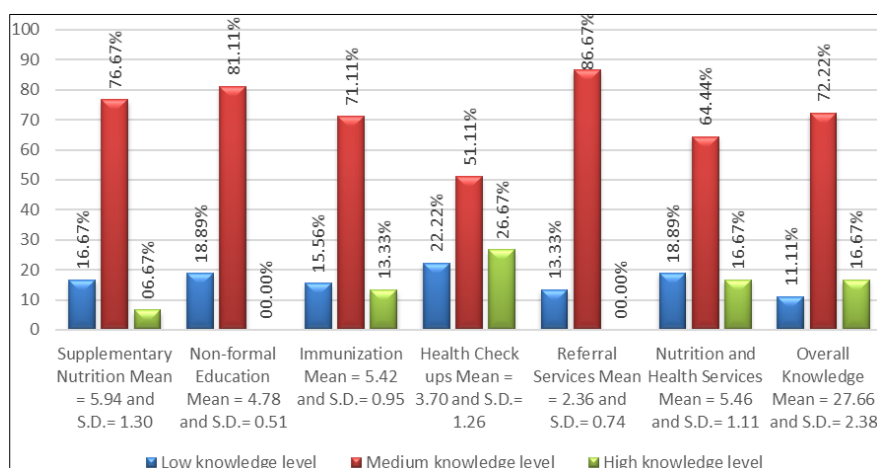


Fig 2: Percentage distribution of respondents according to their knowledge level for various services provided as per ICDS

2.2. Comparison of knowledge regarding different ICDS services provided at Anganwadi centres

Table 8: Comparison of knowledge regarding different ICDS services provided at Anganwadi centres

S. No.	ICDS Service	Correct Response	Incorrect Response	Rank
1.	Supplementary Nutrition (SNP)	74.30%	25.70%	V
2.	Non – formal Education	95.56%	4.44%	I
3.	Immunization	77.46%	22.54%	IV
4.	Health Check – ups	61.67%	38.33%	VI
5.	Referral Services	78.51%	21.49%	II
6.	Nutrition and Health Services	77.94%	22.06%	III

From table 8, the majority of respondents (95.56%) had correct knowledge about non-formal education services such as formative activities and grow chart sessions for children, as well as growth measurement using weight-for-age growth charts with new WHO Child Growth Standards, offered at Anganwadi centers. Only 61.67% of the respondents, however, had knowledge about health check-ups such as the use of an instrument for height measurement of infants, recording medical distribution at Anganwadi centers, and the proper dosage of Iron-Folic Acid tablets for pregnant women, and other health check-ups. Patil and Doibale (2013) ^[22] reported similar findings, which corroborate this study.

2.3. Degree of their overall knowledge regarding their roles as per ICDS provisions

According to the results in table 9, the majority of the respondents had a medium level of overall knowledge regarding their roles as per the provisions of ICDS, which was 72.22% followed by 16.67% having a high level and 11.11% having a low level of overall knowledge regarding their roles as per ICDS provisions. Bhattarai *et al.* (2017) ^[4] also reported similar findings in their study.

Table 9: Distribution of respondents according to the degree of their overall knowledge regarding their roles as per ICDS provisions

S. No.	Category	Frequency	Percentage
1.	Low knowledge level	10	11.11%
2.	Medium knowledge level	65	72.22%
3.	High knowledge level	15	16.67%
Total (n)		90	100.00%
Mean = 27.66 and Standard Deviation (S.D.) = 2.83			

2.4. Relationship between knowledge regarding their roles and independent variables related to socio – economical profile of the workers

This was analyzed using Pearson correlation co-efficient and the results of the analysis are in table 10. All the variables showed a positive and significant correlation with knowledge level except for achievement motivation. This might be because the other variables like age, education, family members, experience and training enhance the skills and knowledge necessary to take care of women and children, while achievement motivation does not influence that. Dubey and Chouhan (2014) ^[7] and Akshatha and Sankangoudar (2019) ^[1] also reported similar findings, except for family size. Akshatha and Sankangoudar (2019) ^[1] also reported a family size influence in the opposite direction.

Table 10: Correlation coefficients between overall knowledge and independent variables related to socio – economical profile of the workers

S. No.	Independent Variables	Correlation Coefficient (r) with overall knowledge
1.	Age	0.360**
2.	Education	0.318**
3.	Family Size	0.278**
4.	Family Income	0.302**
5.	Experience	0.327**
6.	Training	0.437**
7.	Achievement Motivation	0.152**

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Conclusion

The findings suggest that most respondents had a medium level of overall knowledge about their job roles under ICDS. This implies that there is a need for more regular monitoring and training to enhance their knowledge. Improved communication” between ANM and ASHA workers and Anganwadi workers at the center will help increase their knowledge of healthcare services.

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