KNOWLEDGE LEVEL OF THE ANGANWADI WORKERS ON ICDS: A STUDY IN MANIPUR

Abstract

Integrated Child development Service (ICDS) is a Government program in India which mainly focuses on child and maternity health to address the health, nutrition and development needs of children, pregnant women, nursing mothers and adolescent girls.The Anganwadi workers are the front-line workers who are responsible for transferring the services of ICDS to children and the mothers. Their knowledge level has impact on implementation and output of the programme. This paper attempts to explore the knowledge level of AWWsregarding the activities of ICDS and the factors affecting their knowledge.The present study was carried out in Imphal East, Manipur where a total of 150 Anganwadi workers were selected randomly. The socio-economic profile and knowledge of Anganwadi workers was assessed by interviewing them with the help of structured interview schedule and informal discussion. The data were analysed using statistical methods including percentage, frequency, mean score, Standard Deviation and Pearson's Correlation Coefficient.The finding of the study revealed that majority of the AWWs had medium level of knowledge. Moreover, it was found that age and experience of the respondents had a negativelysignificant relationship with their knowledge while their educational qualification was correlated positively.Thus, the present study strongly felt the need of improving the quality of knowledge and awareness among Anganwadi workers about the various activities of ICDS. Regular training camps along withfrequent interactions among Anganwadi workers and supervisors can be organized to enhance their knowledge and awareness regarding different aspects, especially activities of ICDS and sources of nutrition.

Keywords: ICDS, Anganwadi worker, Knowledge, Activities

Abbreviations: AWW-Anganwadi workers, ICDS- Integrated Child Development Scheme

Introduction

The Government of India introduced Integrated Child Development Services (ICDS) Scheme on 2nd October, 1975. It stands for one of the biggest and most distinctive early childhood care and development projects in the country. There are six dimensions or services of ICDS scheme which are provided by AWCs. They are- Supplementary Nutrition, Immunization, Health check-up, Referral services, Non-formal Preschool education, Nutrition and health education.

ICDS has been providing commitment to children towards meeting the challenge of providing pre-school education and breaking the vicious cycle of malnutrition, morbidity, reduced learning capacity

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and mortality. It attempts to provide integrated services, supported by other related services like Mid-day Meal, Balwadi and Special Nutrition.The ICDS Scheme has been around for 40 years and as the government is spending a lot of money on ICDS on priority basis to reduce infant mortality and child morbidity.

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The primary goal of this ICDS is to meet the developmental needs of children in the 0–6 year old age range. One trained individual is chosen to concentrate on the health and educational requirements of children under the age group of 0 to 6. The Anganwadi workers are the most crucial components of ICDS scheme. Anganwadi workers are front-line workers who are responsible for conducting home visits, implementing program activities, counselling families and maintaining records. They also play a crucial role in promoting child growth and development and mobilizing community support. Utilising the Integrated Child Development Service (ICDS) programme, the family, especially the mothers, are assisted in ensuring appropriate health and nutrition care, early identification, and timely treatment of illnesses.

As the Anganwadi workers play a very important in role in implementation of ICDS activities, their knowledge on its objectives and functions, its activities is important in order to perform their activities effectively and efficiently. Keeping these points in view,this study was designed to document the knowledge level of the AWW on ICDS activities.

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Methodology

The present study was carried out in Imphal East, Manipur where a total of 150 Anganwadi workers were selected randomly. The socio-economic profile and knowledge of Anganwadi workers was assessed by interviewing Anganwadi workers with the help of structured interview schedule and informal discussion. For knowing their socio-economic profile, basic information was collected in terms of the respondent's name, age, education and experience as an Anganwadi worker. To assess the knowledge level, questions were set on knowledge on different nutrient sources, objectives and functions. Primary data was collected from the Anganwadi workers with the help of structured interview schedule. The data were analysed using statistical methods including percentage, frequency, mean score, Standard Deviation and Pearson's Correlation Coefficient.

Results and Discussion

1. Socio-economic profile

The data in table reveals that half of the respondents (50.00%) belonged to the age group 42-55 years. Also, more than half of the respondents (55.34 %) had an experience between 9-18 years. Further, 64.67 per cent of the respondents were graduates.

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Table 1 Distribution of respondents based on the socio economic profile n=150

Sl No.	Variables	Frequency (*f*)	Percentage (%)
1	**Age**		
	28-41	51	34.00
	42-55	75	50.00
	56-69	24	16.00
2	**Experience**		
	1- 9	44	29.33
	10-18	83	55.34
	19-27	23	15.33
3	**Education**		
	Secondary school passed	8	5.33
	Higher Secondary passed	42	28.00
	Graduate	97	64.67
	Post-Graduate	3	2.00

2. Knowledge on common sources of Vitamins and Minerals

The data in Table 2 revealed that around one fourth of the respondents (28.00%) had no knowledge regarding some of the common sources of Vitamin A. Again, a large proportion of the respondents (42.67 %) had mentioned carrot as a source of Vitamin A, followed by 23.33 per cent mentioned pumpkin, 20.00 per cent mentioned about egg, 2.00 per cent each mentioned broccoli and sweet potato, 1.33 per cent each mentioned papaya and meat as a source of Vitamin A.

Table 2 Distribution of respondents based on the knowledge of some common sources of Vitamins A n=150

Sl No.	Sources of Vitamin A	Frequency (*f*)	Percentage(%)
i.	No knowledge	42	28.00
ii.	Carrot	64	42.67
iii.	Pumpkin	35	23.33
iv.	Egg	30	20.00
v.	Broccoli	3	2.00
vi.	Sweet potato	3	2.00
vii.	Meat	2	1.33
viii.	Papaya	2	1.33
i.	Star fruit	2	1.33
ii.	Grapes	1	0.66
iii.	Apple	1	0.66
iv.	Strawberry	1	0.66
v.	Banana	1	0.66

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The data in Table 3 revealed that more than half (55.33%) of the respondents had medium level of knowledge on some of the common sources of Vitamin A.

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Table 3 Distribution of the respondents based on their knowledge on common sources of Vitamin A **n=150**

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (< 0.123)	43	28.67
2	Medium (0.12 - 1.72)	83	55.33
3	High (>1.73)	24	16.00

As far as sources of Iron are concerned, one third of the respondents (36.00%) had no knowledge on sources of Iron (Table 4). A large proportion of respondents (45.33%) mentioned Taro (Indo-Malayan Taro) as one of the common sources of Iron, followed by 10.00 per cent mentioned meat, 4.67 per cent mentioned spinach, 2.67 per cent each mentioned sweet potato and amla, 1.33 per cent each mentioned egg and broccoli.

Table 4 Distribution of the respondents based on their knowledge on some common sources of Iron **n=150**

Sl No.	Sources of Iron	Frequency (*f*)	Percentage (%)
i.	No knowledge	54	36.00
ii.	Taro (Indo-Malayan Taro)	68	45.33
iii.	Meat	15	10.00
iv.	Spinach	7	4.67
v.	Sweet potato	4	2.67
vi.	Amla	4	2.67
vii.	Egg	2	1.33
viii.	Broccoli	2	1.33

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The data in Table 5 revealed that more than half (59.33%) of the respondents had medium level of knowledge on some of the common sources of Iron.

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Table 5 Distribution of the respondents based on their knowledge on common sources of Iron **n=150**

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (<0.13)	54	36.00
2	Medium (0.13-1.24)	89	59.33
3	High (>1.24)	7	4.67

Though calcium is very important for bone, one fourth of the respondents (24.00%) had no knowledge regarding the sources of calcium (Table 6). Majority (72.66%) of respondents mentioned milk as one the source of calcium followed by 2.00 per cent mentioned broccoli and 0.66 per cent mentioned almond as a source of Calcium.

Table 6 Distribution of the respondents based on their knowledge on some common sources of Calcium **n=150**

Sl No.	Sources of Calcium	Frequency (*f*)	Percentage (%)
i.	No knowledge	36	24.00
ii.	Milk	109	72.66
iii.	Broccoli	3	2.00
iv.	Almonds	1	0.66

#Multiple response

The data in Table 7 revealed that majority (75.33%) of the respondents had medium level of knowledge on some of the common sources of Calcium.

Table7 Distribution of the respondents based on their knowledge level on common sources of Calcium **n=150**

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (<0.32)	37	24.67
2	Medium (0.32-1.18)	113	75.33
3	High (>1.18)	0	0

Regarding sources of Vitamin C, 30.67 per cent of the respondents had no knowledge regarding some of the common sources of Vitamin C (Table 8). More than one third (38.00%) of the respondents mentioned lemon as a source of Vitamin C, followed by 21.33 per cent mentioned orange, 14.67 per cent mentioned berries, 9.33 per cent mentioned amla,2.00 per cent each mentioned tomatoes and mango, 1.33 per cent who mentioned star fruit, 0.66 per cent each mentioned grapes, apple, strawberry and banana as common sources of Vitamin C.

Table 8 Distribution of the respondents based on their knowledge on some common sources of Vitamins C **n=150**

Sl No.	Sources of Vitamin C	Frequency (*f*)	Percentage(%)
i.	No knowledge	46	30.67

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ii.	Lemon	57	38.00
iii.	Orange	32	21.33
iv.	Berries	22	14.67
v.	Amla	14	9.33
vi.	Mango	3	2.00
vii.	Tomatoes	3	2.00
viii.	Star fruit	2	1.33
ix.	Grapes	1	0.66
x.	Apple	1	0.66
xi.	Strawberry	1	0.66
xii.	Banana	1	0.66

#Multiple response

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The data in Table 9 revealed that more than half (52.67%) of the respondents had medium level of knowledge on some of the common sources of Vitamin C.

Table9 Distribution of the respondents based on their knowledge on common sources of Vitamin C n=150

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (<0.07)	48	32.00
2	Medium (0.07-1.75)	79	52.67
3	High (>1.75)	23	15.33

3. Knowledge on identification of children and women at risk

It is depicted in Table10 that 20.00 per cent of the respondents had no knowledge on how to identify children at risk. Majority (76.67%) had mentioned reduction in weight as one of the indicators to identify children at risk, followed by delayed physical development (6.67 %) and delayed mental development (4.00%) as one of the indicators to identify children at risk.

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Table 10 Distribution of respondents based on the knowledge on how to identify children at risk n=150

Sl No.	Children at risk	Frequency (*f*)	Percentage (%)
i.	No knowledge	30	20.00
ii.	Reduce in weight	115	76.67
iii.	Delayed physical development	10	6.67
iv.	Delayed mental development	6	4.00
v.	Delayed walking	1	0.67
vi.	Delayed speech	1	0.67

#Multiple response

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The data in Table 11indicate that majority (66.67 %) of the respondents had medium level of knowledge towards identification of children at risk while 22.66 per cent of the respondents had low level of knowledge and the remaining 10.67 per cent of the respondents had high level of knowledge towards identification of children risk.

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Table 11 Distribution of the respondents based on their knowledge on identification of children at risk **n=150**

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (<0.31)	34	22.66
2	Medium (0.31-1.47)	100	66.67
3	High (>1.47)	16	10.67

Again, there were 24.00 per cent respondents who had no knowledge on how to identify women at risk (Table 12). Majority (74.66%) of the respondents mentioned reduction in weight during pregnancy as one the indicator to identify women at risk followed by 1.33 per cent mentioned diarrhoea and 0.67 per cent mentioned high blood pressure as indicators of women at risk.

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Table 12 Distribution of the respondents based on their knowledge on identification of pregnant women at risk **n=150**

Sl No.	Pregnant women at risk	Frequency (*f*)	Percentage (%)
i.	No knowledge	36	24.00
ii.	Reduce in weight during pregnancy	112	74.66
iii.	Diarrhoea	2	1.33
iv.	High blood pressure	1	0.67

#Multiple response

The data in Table 13 revealed that majority (75.33%) of the respondents had medium level of knowledge towards identification of pregnant women at risk while 23.34 percent had low level of knowledge and the remaining 1.33 per cent had high level of knowledge towards identification of pregnant women at risk.

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Table 13 Distribution of respondents based on the knowledge level of AWW on how to identify pregnant women at risk **n=150**

Sl No.	Knowledge Level	Frequency (*f*)	Percentage (%)
1	Low (<0.34)	35	23.34
2	Medium (0.34-1.22)	113	75.33
3	High (>1.22)	2	1.33

4. Knowledge of AWWs regarding activities of ICDS

The data in Table 14 revealed that 94.66 per cent of the respondents had knowledge that pre-school education should be given to a child till 6 years of age. Also, 92.00 per cent knew that pregnant women, lactating women and adolescent girls are the beneficiaries of nutrition and health education. Moreover,88 per cent of the respondents had knowledge that 500 calories and 12-15 grams of proteins should be given to each child through supplementary nutrition. On the other hand, it was revealed that only 2 per cent of the respondents had knowledge that fourth dose of OPV is to be given in 16-24 weeks while very few i.e.,1.33 per cent of the respondents had knowledge that second dose of OPV is to be given in 10 weeks and third dose of OPV is given in 14 weeks.

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Table 14 Distribution of the respondents based on their knowledge regarding the activities of ICDS **n=150**

Sl No	Knowledge statements	Categories					
		No response		Correct Response		Incorrect response	
		f	%	*f*	%	*f*	%
1	Pre-school education should be given to a child till 6 years of age	4	2.67	142	94.66	4	2.67
2	Pregnant women, lactating women and adolescent girls are the beneficiaries of nutrition and health education	0	0	138	92.00	12	8.00
3	500 calories and 12-15 grams of proteins should be given to each child through supplementary nutrition.	5	3.33	132	88.00	13	8.67
4	Growth monitoring of a child needs to be recorded from birth	1	0.66	132	88.00	17	11.34
5	Children below 6 years and adolescent girls are the beneficiaries of supplementary nutrition	18	12.00	123	82.00	9	6.00
6	600 calories and 18-20 grams of proteins should be received by pregnant women under ICDS.	1	0.66	85	56.67	64	42.67
7	600 calories and 18-20 grams of proteins should be receive by a lactating women under ICDS	1	0.66	94	62.67	55	36.67
8	Supplementary nutrition should be provided for 300 days under ICDS	4	2.66	129	86.00	17	11.34
10	ORS should be discarded if not used completely after 24 hrs.	0	0	113	75.33	37	24.67
11	For the age group of 3-5 years, the average weight gain per year should be 2-3kg	3	2.00	108	72.00	39	26.00
12	The first dose of measles vaccination is given between 9-12 months	29	19.33	94	62.67	27	18.00
13	First dose of vitamin A is given to a child in 9 month	54	36.00	76	50.67	20	13.33
14	Growth chart are visible display of child's physical growth and development	9	6.00	69	46.00	72	48.00
15	Breast feeding should be continued with complementary food till 2 years of age.	14	9.33	68	45.34	68	45.33

16	During 27-36 weeks, pregnant women are immunized against tetanus	68	45.34	59	39.33	23	15.33
17	A total of 11 registers are supposed to be maintained in the Anganwadi centre.	12	8.00	53	35.33	85	56.67
18	A minimum gap of 4 weeks should be kept between two successive dose of DPT.	66	44.00	44	29.33	40	26.67
19	First dose of OPV is given in 6 weeks.	0	0	17	11.33	133	88.67
20	Fourth dose of OPV is given In 16-24 weeks	0	0	3	2.00	147	98.00
21	Second dose of OPV is given in 10 weeks	0	0	2	1.33	148	98.67
22	Third dose of OPV is given in 14 weeks	0	0	2	1.33	148	98.67

The data in Table 15 revealed that majority (75.34%) of the respondents have medium level of knowledge towards the activities regarding the activities of ICDS.

Table 15 Distribution of the respondents based on theirlevel of knowledge regarding activities of ICDS n=150

Sl No.	Level	Frequency (*f*)	Percentage (%)
1	Low (<8.36)	20	13.33
2	Medium (8.36-14.23)	113	75.34
3	High (14.23)	17	11.33

The data in Table 15 revealed that majority (72.00%) of the respondents have medium level of knowledge regarding the activities of ICDS. This was followed by 18 per cent of the respondents having low level of knowledge while only 10 per cent had high level of knowledge.

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5. Overall knowledge level of the respondents and factors affecting their knowledge level

The data in table 16 revealed that majority of the respondents ((72%) had overall medium level of knowledge on ICDS.

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Table 16: Distribution of respondents based on theiroverallknowledge level on ICDS n=150

Sl No.	Levels of knowledge	Frequency (*f*)	Percentage (%)
1	Low level of knowledge (<12.15)	27	18.00
2	Medium level of knowledge (12.16-18.13)	108	72.00
3	High level of knowledge (>18.14)	15	10.00

The data in Table17 indicate that 38.67 per cent of the respondents belonging to the age group of 42-55 years had low level of knowledge regarding ICDS. Also, it was found that age of the respondents had a negative and significant correlation (r=-0.27, p<0.05) with their knowledge regarding functions and activities of ICDS. Similarly, a large proportion of the respondents (42%) having work experience of 9-16 years had low level of knowledge regarding ICDS. Interestingly, statistical analysis revealed that experience of the respondents had a negative and significant correlation (r=-0.22, p<0.05) with

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their knowledge regarding functions and activities of ICDS. Again, around half (48%) of the respondents who were graduates had low level of knowledge regarding ICDS. Analysis showed that educational level of the respondents had a positive and significant correlation (r=0.25, p<0.05) with their knowledge regarding functions and activities of ICDS.Similar findings were reported by Jena (2013) which revealed that women who were graduates had high level of knowledge compared to those with lower educational status. While in another study by Baliga and Walvekar (2017), it was found that no relationship was found between the educational or qualification of the worker and her knowledge about different ICDS services which is not in line with the present study findings.

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Table 17: Factors affecting overall knowledge level of the respondents on ICDS n=150

Sl No.	Parameters	High level		Medium level		Low level		r value	P value (5%)
		f	%	*F*	%	*f*	%		
1. Age									
	28-41	10	6.67	6	4.00	36	24.00	-0.27*	.0007
	42-55	4	2.67	12	8.00	58	38.67		
	56-69	1	0.66	9	6.00	14	9.33		
2. Experience of the AWW									
	1-8	9	6.00	5	3.33	30	20.00	-0.22*	.0054
	9-16	6	4.00	14	9.33	63	42.00		
	17-25	0	0.00	8	5.33	15	10.00		
3. Educational level									
	Secondary school passed	0	0.00	5	3.33	3	2.00	0.25*	.0019
	Higher Secondary passed	2	1.33	9	6.00	31	20.66		
	Graduate	12	8.00	13	8.66	72	48.00		
	Post-Graduate	1	0.66	0	0	2	1.33		

*5% level of significance

Conclusion

It can be concluded that a majority of the respondents had medium level of knowledge regarding the objectives and functions of ICDS. Thus, the present study strongly felt the need of improving the quality of knowledge and awareness among Anganwadi workers about the various activities of ICDS. Moreover, it was found that age and experience of the respondents had a negatively significant relationship with their knowledge while their educational qualification was correlated positively. Hence, regular training camps should be organized for AWWs to increase their knowledge regarding different aspects especially activitiesof ICDS and sources of nutrition. There is a strong and intense need for improving the training quality provided to Anganwadi workers to enhance their knowledge regarding various ICDS schemes. Therefore, frequent interactions among Anganwadi workers and supervisors should be introduced for imparting information and awareness.

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