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Knowledge of Anganwadi workers about Supplementary Nutrition and Education components of ICDS Scheme: A study of rural and urban blocks of Punjab

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Abstract

Anganwadis are the epitome of Pre primary school education in India. These are the community centres which meet the nutritional needs of Pregnant and Lactating mothers as well as children below 06 years of age on one hand and on the other hand, also acts as an educational institution for kids of 3-6 years. More or less these centres are the backbone of Early childhood care and education in India. Hence it becomes imperative to assess how much knowledge of ICDS Scheme an anganwadi worker possess in order to see whether they know their job well or not. In this study, for this purpose, knowledge of 376 anganwadi workers of rural as well as urban blocks of Punjab is assessed and its association with other variables such as age, education, experience and training are being studied. Knowledge scale is also constructed. A significant positive association of knowledge is found with all the variables.

Keywords: Knowledge assessment, Knowledge scale, anganwadi workers, anganwadi centres, Punjab

Introduction

Holistic development of a child is quite essential for him/her to grow up as a responsible human being. The human being who becomes a responsible citizen and an active member of the society. This is also the reason why worldwide the stress has been given to provide much emphasis on early childhood care and education in every country of the World. India is also not apart.

In 1945, an organization took birth at San Francisco, United States of America which was named as United Nations Organization (then UNO, now UN). In June 1946, this organization (UN) approved the precedents of World Health Organization (WHO) in a Health Conference in New York. WHO was established to toil to achieve the sound health goals of the common people including children in the World. UNICEF was also established by United Nations

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

Reconstruction and Rehabilitation Agency (UNRRA) for implementing various programmes specifically focused on the emergency needs of the children in war ridden areas of Europe and China in 1946. In February 1949, UNICEF also established its office in India to help rural health centres, laboratories and public hospitals by providing various medical equipments, training of nurses and midwives, ensuring milk and other foods to combat malnutrition and diseases. The main focus area was maternal health and child health. ECCE was further reinforced by Millennium Development Goals (MDGs), 2000 exclusively through MDG 4 and MDG 5.

The concept of ECCE became popularised in India in second half of 19th century. But it really came into force when India launched its ECCE policy under the flagship of ICDS i.e. Integrated Child Development Services Scheme on October 2, 1975. Under this scheme, nutritional needs of Women and children (Below 6 years) are targeted to be satiated by providing supplementary nutrition on one hand. On the other hand, to achieve the targets of Pre primary education and health and hygiene education, 'Anganwadis' or 'Balwadis' were established. Anganwadis are nothing but a courtyard for the children below 6 years to get supplementary nutrition as well as to get Pre primary education.

The ICDS Scheme:

Integrated Child Development Services Scheme is aimed at providing early childhood care and education through nearly 40,000 community centres which are known as Anganwadi centres or Balwadi Centres in India. The scheme came into operations on October 2, 1975 and has gradually developed in the last 44 years as one of the largest Integrated Early care programmes in the World. This Scheme is also funded by UNICEF and World Bank to make it reach to the most disadvantageous groups in India. There are 05 objectives of the Scheme which are to achieved through its 06 main services as discussed below:

Targets of the Scheme:

I. Health and nutritional status of children in the age-group 0-6 years is to be improved;
II. The foundation for proper physical, social and psychological development of the child is to be laid down;
III. The incidence of malnutrition, morbidity, mortality and school dropout is to be reduced;

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

IV. Effective co-ordination of policy and its implementation among various departments so as to promote child development; and

V. The capability of mother to take care of nutritional needs and health of her child is to be enhanced through proper nutrition and health education.

All these objectives are to be achieved by providing six services namely Supplementary Nutrition, Nutrition and Health Education, Pre School education, Health check up, Immunization and referral services. Among these services, the former three services are provided directly through these community (Anganwadi) centres and are the responsibility of Department of Social Welfare/ Services under Ministry of Women and Child Development while the later three are provided by Ministry/Department of Health and Family Welfare as they are related with monitoring of health of community.

Functioning of Anganwadi Centres:

Every anganwadi centre is run by an anganwadi worker with the help of a helper in every village and nearly after a population of 1000 people in urban areas. There are mini anganwadi centres also where the population is just 800 people. The people who get benefits under this scheme are known as beneficiaries and here beneficiaries include Pregnant and Lactating mothers and Children below the age of 06 years. In order to provide different services, AWCs perform a no. of functions from the conception of a child in a womb till they attain the age of 06 years. After 06 years, they get their primary education. But till six years of their age, to provide supplementary nutrition such as milk, cereals and even health supplements are the duty of such anganwadi centres and of AWW in particular.

Materials and Methods:

At present there are 26656 anganwadi centres running in 155 ICDS blocks in Punjab, India. Out of these 155 blocks, 146 blocks are rural and 09 blocks are urban. Out of these blocks 353 rural and 23 urban anganwadi centres are taken by using stratified random sampling. In total, 376 anganwadi centres are selected by using Krejcie and Morgan (1970) approach for drawing samples from a known population. Each anganwadi centre is run by an anganwadi worker. Hence 353 anganwadi workers working in rural blocks and 23 workers working in urban blocks are assessed for their knowledge related to supplementary nutrition, pre school education and nutrition and health education with the help of a self devised questionnaire. Reliability (k-alpha

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

= 0.813) and validity (S-CVI=0.914) of questionnaire is determined before applying it on the sample.

Objectives:

- To study the personal profile of Anganwadi workers working in anganwadi centres with respect to their age, educational qualifications and experience.
- To assess the knowledge of AWWs working in AWCs with respect to delivery of services under Supplementary Nutrition and Education at AWCs.
- To study the association between age, education and experience of AWWs and their knowledge with respect to delivery of services under Supplementary Nutrition and Education at AWCs.

Hypothesis of the study:

1. No significant association between age and knowledge of AWWs about Supplementary Nutrition and Education component of ICDS Scheme exists.
2. No significant association between education and knowledge of AWWs about Supplementary Nutrition and Education component of ICDS scheme exists.
3. No significant association between experience and knowledge of AWWs about Supplementary Nutrition and Education component of ICDS scheme exists.

Analysis and Results:

Table 1 shows the personal profile of Anganwadi workers with respect to their age and their educational qualification. As is clear from the table that most anganwadi workers below 30 years belong to rural areas and that of most of 30-39 years and 40-49 years belong to urban areas. More of 50-59 years and above 60 age group anganwadi workers belong to rural areas.

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

Table 1 Showing Age and Educational qualifications of anganwadi workers of rural and urban blocks of Punjab

Blocks	AGE (in Percentage years)					Educational Qualifications (in Percentage)				
	Below 30	30-39	40-49	50-59	Above 60	Below Matric	Matric	Senior Secondary	Graduation	Post Graduation
Rural	3.9	12.9	10.1	13.5	3	0.3	27.8	23.1	4.6	3.5
Urban	1.2	23.2	26.3	5.9	0	0	9.7	10.3	15.3	5.4
Total	5.1	36.1	36.4	19.4	3	0.3	37.5	33.4	19.9	8.9

It is also evident from the Table 1 that rural areas also have few anganwadi workers below matriculation qualification. Most of anganwadi workers with matriculation and senior secondary educational qualification belong to rural areas whereas urban centres have more graduated and post graduated anganwadi workers.

Table 2 Showing Experience and Caste of anganwadi workers of rural and urban blocks of Punjab

Blocks	Experience (in Percentage years)					Caste		
	<=1 years	1.01-11.00	11.01-21.00	21.01-31.00	>31.00 years	General	SC	BC/OBC
Rural	0.8	15.79	9.7	8.24	5.86	11.5	8.11	9.15
Urban	0.85	36.78	19.6	2.27	0	54	6.90	10.26
Total	1.7	52.6	29.3	10.5	5.8	65.5	15.1	19.4

Table 2 reflects that in total there are only 1.6% anganwadi workers who have less than 01 years of experience in these centres. The Anganwadi workers who have experience ranging from 1 to 11 years and 11 to 21 years are more in urban areas. Whereas rural areas have more anganwadi workers with more than 21 years of working experience. On the other side, most of

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

general category and BC/OBC category anganwadi workers belong to urban areas whereas most SC category anganwadi workers belong to rural areas.

Moreover it has been found that nearly 98.8% anganwadi workers had already undergone training on the days of data collection. Nearly 99.6% anaganwadi workers in urban areas had already undergone training and 98% of rural areas anganwadi workers had received training.

In order to assess the knowledge of AWWs with respect to delivery of services of supplementary nutrition and preschool education under ICDS scheme at AWCs, block wise knowledge scores of Anganwadi workers were calculated and a knowledge scale is prepared.

Table 3 showing percentage correct responses to questions related to assess knowledge of anganwadi workers

Sr. Number	Q. Number	QUESTIONS RELATED TO KNOWLEDGE ASPECT	CORRECT RESPONSE (%)
		SUPPLEMENTARY NUTRITION	
1.	Q3	Name the criterion of enrolment of women and children beneficiaries for supplementary nutrition portion in your anganwadi centre?	3.2
2.	Q4	Tick the right nutritional norms for children as per ICDS Scheme?	13.9
3.	Q7	Enlist the nutritional norms for women beneficiaries as per the Scheme?	23.78
4.	Q9	Name the things to be distributed in SN to the women and Children beneficiaries?	27.7
		NUTRITION AND HEALTH EDUCATION	
5.	Q10	How frequently an NHED session are required to be organized under the Scheme?	31.7
6.	Q11	How frequently growth charts are prepared for the children enrolled in your anganwadi centre?	42.7
7.	Q14	Name the topics that are to be discussed during NHED sessions?	89.5

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

PRE SCHOOL EDUCATION			
8.	Q18	What do you understand by PSE kit?	5.3
9.	Q19	Is there any curriculum to teach Pre School kids in AWCs?	7.3
10.	Q20	Is National Anthem a part of curriculum for Pre School children studying in anaganwadi centres?	65.3

Table 4

DESCRIPTIVES ABOUT KNOWLEDGE SCORE					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Knowledge_score	**376**	**2.00**	**9.00**	**6.983784**	**1.797748**

It can be inferred from Table 3 that the right responses of anganwadi workers are ranging from 2 to 9. In order to construct knowledge scale, Median +/- S.D. have been used. Those AWWs who scored less than or equal to 6 marks were categorized as having low knowledge, those with 7 to 8 scores were categorized as having average knowledge and those with more than 8 scores were categorized as having high knowledge about Supplementary Nutrition, Pre School Education and Nutrition and Health Education components of ICDS scheme.

Table 5

Block wise Knowledge Scale of Anganwadi workers

	Low Knowledge	Average Knowledge	High Knowledge
Rural	12.6	11.9	4.1
Urban	25.72	33.4	12.3
Total	38.3	45.3	16.4

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

As is reflected in Table no. 5, 38.3% anganwadi workers have scored low on knowledge scale, 45.3% workers have scored average and only 16.4% scored high. Those who scored high belong to urban area the most.

Table 6 showing chi square test between age and knowledge scores of AWWs

χ^2 Tests			
	Value	**df**	**p**
χ^2	22.3	8	<0.004
χ^2 continuity correction	22.3	8	<0.004
Likelihood ratio	22.7	8	<0.004
N			376

Table 6 gives a description about the chi square test between the age and knowledge scores of anganwadi workers. As $p < 0.05$. Hence our hypothesis no. 1 is rejected at 0.05 level of significance. It means that age and knowledge of anganwadi workers have significant positive association. In other words, it can be said that as age of anganwadi workers increase, their knowledge also increases and vice versa.

Table 7 showing chi square test between educational qualification and knowledge scores of anganwadi workers

χ^2 Tests			
	Value	**df**	**P**
χ^2	17.096	8	< .029
χ^2 continuity correction	17.096	8	< .029
Likelihood ratio	15.994	8	< .042
N			376

Table 7 shows the result of Chi square test between educational qualifications and knowledge scores of anganwadi workers. As is clear from the table, $p < .05$ indicates that hypothesis no. 2 is rejected at 0.05 level of significance. Hence there exists a significant positive association between educational qualification and the knowledge of anganwadi workers about Supplementary Nutrition and Education component of ICDS scheme. It means that anganwadi

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

workers with more educational qualifications have more knowledge about the scheme and vice versa.

Table 8 showing chi square test scores between Experience and Knowledge scores of anganwadi workers

χ^2 Tests			
	Value	**df**	**P**
χ^2	37.6	8	< .001
χ^2 continuity correction	37.6	8	<.001
Likelihood ratio	39.0	8	< .001
N			376

As p < .05 (refer Table 8), we can say that there exists a significant positive association between knowledge and experience of anganwadi workers. The hypothesis no. 3 also get rejected at .05 level of significance.

Table 9 showing Chi square test values between training and knowledge of anganwadi workers

χ^2 Tests			
	Value	**df**	**P**
χ^2	16.096	8	< .019
χ^2 continuity correction	16.096	8	< .019
Likelihood ratio	14.994	8	< .042
N			376

As p < .05 (refer Table 9), we can say that there exists a significant positive association between knowledge and training of anganwadi workers. The hypothesis no. 3 also get rejected at .05 level of significance.

Conclusions and Suggestions:

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

- Nearly 1/3rd of the anganwadi workers belong to the age group of 40-49 years of age and most of them i.e. approximately 1/4th belong to urban areas. Urban areas also have more anganwadi workers of 30-39 years age group. Anganwadi workers of below 30 years, 50-59 years and above 60 years age group are more in rural areas.
- More than 1/3rd anganwadi workers have educational qualifications as matriculation or senior secondary. Whereas 1/5th anganwadi workers have graduation as their educational qualification. Only 1/10th anganwadi workers have post graduation as their qualification. As matriculation is the minimum qualification for anganwadi workers, having more qualified workers at anganwadi centres may point to the fact that educated unemployment is rising in India. Even during interview, anganwadi workers also said the same.
- Approximately half of the anganwadi workers have nearly 01 to 11 years of working experience and one fourth has 11 to 21 years of working experience. One fifth has 21 to 31 years of working experience. Excepting in less than one year category and 21-31 years category, urban area centres have more experienced anganwadi workers than rural areas. It may be due to the fact that above 60 years anganwadi workers are more in rural areas.
- Most anganwadi centres have anganwadi workers belonging to general category and nearly half of them belong to urban areas. Next highest number is of anganwadi workers belonging to BC/OBC category. SC category workers are more in rural area anganwadi centres.
- Nearly half of the anganwadi workers have average knowledge about the supplementary nutrition, pre school education and health and hygiene education of ICDS Scheme. About one third of the anganwadi workers who have average knowledge belong to Urban areas. Most anganwadi workers of rural areas have low knowledge scores.
- There exists significant positive association between age and knowledge of anagnwadi workers. Hence it can be concluded that as the age of anganwadi workers progress, their knowledge also increases.

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

- It has also been found out that there is significant association between educational qualifications and knowledge of anganwadi workers. More educated anganwadi workers have more knowledge.
- Experience and knowledge of anganwadi workers are also found to be significantly associated which means that as anganwadi workers spend more years in anganwadi centres, their knowledge increases. It may be due to the fact that they become more well versed with the system over a period of time.
- Training and knowledge scores of anganwadi workers are also found to be significantly positively associated. As it is compulsory for all anganwadi workers to have training in their first year. So all anganwadi workers who had training were having better knowledge of the scheme. But still lacunae was there.

Suggestions:

- As age and knowledge of anganwadi workers are found to be positively associated. Anganwadi workers with more age may be preferred for the job while doing recruitments for different centres.
- As education and knowledge are found to be positively associated, in order to promote higher education among anganwadi workers, those with higher education should be given some incentives. Moreover more educated anganwadi workers may be used for more higher category jobs in the Scheme.
- More experienced workers have more knowledge about supplementary nutrition, pre school education and health and hygiene education component of ICDS scheme. So more lucratives may be given to anganwadi workers to sustain them in job.
- Anganwadi workers with training had scored average in knowledge scores. Moreover training has been found to be significantly associated with knowledge of anganwadi workers. Hence on one hand, training should be enriched so that anganwadi workers could understand the objectives of the scheme more deeply. On the other hand, emphasis should be given on providing training on interval basis to keep them thorough with the upcoming changes in the scheme.

ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

Abbreviations used

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNICEF: United Nations International Children's Emergency Fund

MWCD: Ministry of Women and Child Development

WHO: World Health Organization

UNO: United Nations Organization

UNRRA: United Nations Reconstruction and Rehabilitation Agency

AWC: Anganwadi Centres

AWW: Anganwadi Workers

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ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

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ISSN: 0976-5425

Vol-5-Issue-6-November-December-2019

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