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Knowledge perception of Anganwadi workers regarding overall development of children

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Abstract

The research study was conducted in Dharwad taluk of Dharwad district of Karnataka state during 2016-17 to know the knowledge of Anganwadi workers regarding overall development of children. Co-relation research design was employed in the present research study. Total 150 rural Anganwadi workers (AWWs) were selected randomly for the study. The data was collected from the selected sample through questionnaire. The collected data were tabulated and analyzed by using suitable statistical tools. The results showed that, knowledge level statements regarding overall development of children were divided into three aspects viz. immunization, nutrition and growth monitoring. Among these, AWWs had high knowledge regarding immunization and medium knowledge about nutrition and growth monitoring. AWWs had good knowledge about developmental activities like physical, cognitive, emotional, language and social development. In case of respondent's age, education, socio-economic status, experience and training were positively and significantly related with knowledge level. Size of family and job performance were non-significantly related with knowledge level of AWWs.

Keywords: ICDS, Anganwadi workers (AWWs), Knowledge, Immunization, Nutrition, Growth monitoring, Developmental activities

Introduction

India has the largest child population in the world. As per 2011 census, India has 158.7 million children in the age group of 0-6 years. Children constitute principle assets of any country. Children's Development is as important as the development of material resources. The responsibility of their health and well-being rests on the nation. Any national plan on Human Resource Development should have a prominent place for child-health programmes. For children to grow into healthy and well-adjusted adults, the most important thing is that they need a good start in life. This in turn depends on the good health of their mothers. Children born unhealthy are likely to suffer from diminished chances of survival. Hence early stages of development are very important. Early childhood developments constitute the foundation for the human development. Early years (first six years) of the life are the most crucial period for the physical, mental, social, emotional and language development. In malnourished child, developmental milestones are delayed.

Health and nutrition are the most important contributory factors for human resource development. Good nutrition is the fundamental basic requirement for maintenance of positive health. A proper diet is essential from the very early stages of life for growth, development and active life. The early years of zero to three years are crucial periods for brain development which may be adversely affected by malnutrition. India ranked 2nd in the world with over 47 per cent of its children exhibiting some degree of malnutrition. Malnutrition tends to have a detrimental impact on the economic growth of nation and affects the overall productivity.

Malnutrition results in increased morbidity and mortality in zero to six years of age, to reduce these problems and to provide all basic services to the child for proper growth and development, the scheme of Integrated Child Development Services (ICDS) was initiated on 2nd October 1975. It is the single most important national mother and child health programme. It was launched under the women and child development department on a pilot basis. It is one of the largest multidimensional welfare programme intended to reach millions of children and their mothers who are caught in the grip of malnutrition, diseases, illiteracy, ignorance and poverty. The main objective of this programme is to cater to the needs of the development of children in the age group of 0-6 years.

The sub-schemes of ICDS are supplementary nutrition, non-formal pre-school education, nutrition and health education, immunization, health check-up and referral services. The Anganwadi is the main centre for the delivery of ICDS services at rural areas. An Anganwadi normally covers a population of 1000 in rural or urban slums area and 700 in tribal areas.

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It provides services to bridge the caloric gap between the national recommended and average intake of children and women.

Anganwadi is having a anganwadi worker selected from within the local community. The basic work of anganwadi worker is to take care of neonatal, children, adolescent girls, pregnant women and lactating mothers. Attainment of ICDS programme goals depends heavily upon the effectiveness of the Anganwadi workers, which in turn depends upon their knowledge, attitude, performance and practice. Hence, present study was conducted with the objective of to know the knowledge of Anganwadi workers regarding overall development of children.

Methodology

The study was conducted in Dharwad taluk of Dharwad district during the year 2016-17. The Dharwad taluk comprised of two Integrated Child Development Services (ICDS) projects. One is rural based another one is urban based ICDS project. Among two, rural based ICDS project was selected since college of Rural Home Science and University of Agricultural Sciences, Dharwad is working for rural folk. A list of all anganwadis in the rural area of Dharwad taluk was obtained from the Child Development Project Office at Dharwad. It was found that there were 302 rural anganwadi centres and 302 rural Anganwadi workers in the 108 villages of Dharwad taluk. Among 302 AWWs, 150 rural AWWs were randomly selected as sample for the study.

In the light of objectives set for the study, variables such as knowledge was taken as the dependent variable and variables such as age, education, marital status, caste, type of family, size of family, socio-economic status, experience, training and job performance were taken as independent variables.

The data was collected from the selected sample with the help of questionnaire. The collected data were tabulated and analyzed by using suitable statistical tools. In the present study a teacher made test technique was followed to measure the knowledge level of an Anganwadi worker about overall development of children. According to English and English (1958) knowledge as a body of information possessed by an individual which is in accordance with established fact. Accordingly statements based on certain important aspects of children's growth and development were formulated. Knowledge on three aspects were immunization, nutrition and growth monitoring. They were presented with multiple choice type of questions. A score of one was given to the right answer and zero to the wrong answer. Based on the total scores, the respondents were classified into low, medium and high knowledge level based on class interval method for each aspect.

Results and Discussion

Anganwadi workers knowledge regarding overall development of children

Table 1: Developmental activities conducted by Anganwadi workers for pre-school children n = 150

Sl. No.	Area of development	Frequency	Percentage
1.	Physical development	139	92.67
2.	Cognitive development	137	91.33
3.	Emotional development	127	84.67
4.	Language development	107	71.33
5.	Social development	104	69.33

Multiple responses possible

Anganwadi workers provide some of the activities to the anganwadi children through pre-school education, these activities helps in development of the children. The data projected in Table 1 shows that, 92.67 per cent of AWWs used outdoor games and exercises for physical development, 91.33 per cent of AWWs were expressed the techniques for cognitive development were providing knowledge regarding sizes, shapes and story-telling technique. For emotional

development, 84.67 per cent of AWWs were mentioned the story telling techniques and information about colors were provided to the children, 71.33 per cent of AWWs used songs and stories for language development followed by 69.33 per cent used techniques of moral stories and narrating the simple environmental issues like water, soil, air, tree, animals and birds.

Table 2: Playing and drawing tools provided to the children in anganwadi by Anganwadi workers n = 150

Sl. No.	Materials provided	Frequency	Percentage
1.	Paper	143	95.33
2.	Mud	140	93.33
3.	Color pencils	109	72.67
4.	Color	94	62.67

Multiple responses possible

Playing and drawing tools provided to the children in anganwadi by Anganwadi workers was shown in Table 2. It revealed that, 95.33 per cent of AWWs were expressed paper was provided to the children for doing some craft materials like boat, flower, ball etc, which helps in cognitive development, 93.33 per cent of AWWs were expressed mud was given to the children to make playing materials, 72.67 per

cent were provided color pencils for coloring the drawing and 62.67 per cent were provided color for coloring the drawings, doing the activities like finger painting and thumb painting. Overall these activities helps in fine motor development of a child and their creativity is triggered. Learning by observing concepts was used by the respondents.

Table 3: Knowledge of Anganwadi workers regarding immunization n = 150

Sl. No.	Statements	Frequency	Knowledge index
1.	Immunization given during birth of a child	148	98.67
2.	Immunization given at 1-2 months of a child	146	97.33
3.	Immunization given at 2 - 3 months of a child	147	98.00
4.	Immunization given at 3-4 months of a child	144	96.00
5.	Immunization given at 9-10 months of a child	143	95.33
6.	Immunization given to a child between 1.5 to 2 years of a child	145	96.67
7.	Nine doses of measles with vitamin A is given to the child	53	35.33
8.	Medicines provided to a child except immunization	130	86.67
9.	Four weeks is the gap between two successive doses of Penta (DPT) vaccine	122	81.33
10.	Twice in a year deworming is given to the children	139	92.67
Overall knowledge Index			87.80

Table 3 shows the knowledge of AWWs regarding immunization. Majority of the AWWs had sufficient good knowledge regarding immunization. Their knowledge regarding immunization given during birth of a child was possessed by 98.67 per cent followed by immunization given at 2 - 3 months of a child (98.00 %) and immunization given at 1-2 months of a child (97.33 %), similarly we can observe in Table 6 that, majority (92.67 %) of the AWWs belonged to high knowledge level followed by medium (5.33 %) and low (2.00 %) knowledge level about immunization.

The reason for high knowledge was due to AWWs who are responsible for providing immunization to the beneficiaries. Immunization is one of the service of ICDS in collaboration

with health department. AWWs are responsible for identifying the child to be immunized and suppose to maintain record on it. So on a fixed day in a month ANM's (Auxiliary Nurse Midwife) from the health department visit the anganwadis and conduct mothers meeting with the co-operation of AWWs. Compulsory immunization is provided to children according to their age. This will be also checked by her superiors and medical officers during the monthly PHC meeting. Hence AWWs were directly involved in immunization, the knowledge regarding immunization found in high category. Thakare *et al.* (2007)^[5] in their study found that AWWs had 67.85 per cent of knowledge regarding immunization.

Table 4: Knowledge of Anganwadi workers regarding nutrition n = 150

Sl. No.	Statements	Frequency	Knowledge index
1.	Consumption of junk food is one of the reason for malnutrition	112	74.67
2.	Vitamin 'A' responsible for good vision	124	82.67
3.	Vitamin 'C' responsible to increase immunity power	46	30.67
4.	Calcium responsible for strengthening of the bone	125	83.33
5.	Potassium responsible for balancing the water in the body	52	34.67
6.	Sprouted pulses are rich sources of vitamin 'C'	38	25.33
7.	Intake of iron rich foods prevents anemia	116	77.33
8.	ORS is preferred at the time of dysentery	142	94.67
9.	Green leafy vegetables and sprouted pulses are protective foods	90	60.00
10.	Protein rich foods help in growth and development and protects the body	59	39.33
11.	Carbohydrates and fat are energy giving nutrients	56	37.33
Overall knowledge Index			58.18

The data from the table 4 indicated the knowledge of AWWs about nutrition. It revealed that, AWWs had good knowledge regarding ORS is preferred at the time of loose motion (94.67 %), followed by calcium responsible for strengthening of the bone (83.33 %) and vitamin 'A' responsible for good vision (82.67 %). ORS packets were distributed by AWWs in case of dysentery and vitamin 'A' drops put by AWW to all children at age of three and also she provides calcium tablets to the pregnant women. In these cases AWW involved, so we can observe high level of knowledge in these aspects. Whereas, they had less knowledge about potassium responsible for balancing the water in the body (30.67), followed by vitamin 'C' responsible to increase immunity power (30.67 %) and sprouted pulses are rich sources of vitamin 'C' (25.33). Though AWWs provide sprouted grains to children, doesn't know the purpose to supply prim importance sprouted grains. They knew that sprouted grains are good for health. This type of knowledge is very much necessary, which can be provided through training or literature, so AWW can update her knowledge.

Similarly we can observe from the Table 6 that, 58.67 per cent of respondents possessed medium level of knowledge, 31.33 per cent were belonged to high level and 10.00 per cent were belonged to low knowledge level category regarding nutrition. The same thing we found in the study conducted by Salutagimath and Nithya Shree (2013)^[2]. Supplementary nutrition is one of the major component of ICDS, which helps to improve the nutritional status of the children. Beneficiaries of this component/ service are children in the age group of zero to six years, pregnant women and nursing mothers. According to the menu chart provided by the department AWW has to distribute the food to the beneficiaries. She also conducts mothers meeting and home visits, during this she transfers nutrition knowledge. Apart from this, AWW undergone some of the training programmes on nutrition given under ICDS. These might be probable reason for medium level of knowledge of AWWs regarding nutrition aspect. Majority of AWWs had average knowledge regarding basic nutrition in another study by Sharma and Jain (2014)^[4].

Table 5: Knowledge of Anganwadi workers regarding growth monitoring n = 150

Sl. No.	Statements	Frequency	Knowledge index
1.	Rapid growth of child is observed during fetus	85	56.67
2.	Exclusive breast feeding up to 6 months	125	83.33
3.	Blue color indicates boy child in growth chart	84	56.00
4.	Green color indicates normal grade children in growth chart	140	93.33
5.	Yellow color indicates moderate grade children in growth chart	104	69.33
6.	Orange color indicates severe grade children in growth chart	102	68.00
7.	Some factors like food and games helpful in children growth	102	68.00
8.	Average birth weight of a child - 2.5 to 3 kg	135	90.00
9.	Average weight of one year old child - 9 kg	68	45.33
10.	By providing toys to the children helps in cognitive, physical and emotional development	78	52.00
Overall knowledge Index		68.20	

Table 6: Overall knowledge level of Anganwadi workers n = 150

Components	Category	Frequency	Percentage
Immunization	Low	3	2.00
	Medium	8	5.33
	High	139	92.67
	Total	150	100.00
Nutrition	Low	15	10.00
	Medium	88	58.67
	High	47	31.33
	Total	150	100.00
Growth monitoring	Low	11	7.33
	Medium	77	51.34
	High	62	41.33
	Total	150	100.00

With regard to growth monitoring (Table 5), majority of the AWWs had high knowledge regarding green color indicates normal grade children in growth chart (93.33 %), followed by the average birth weight of a child is 2.5 to 3 kg (90.00 %) and exclusive breast feeding up to six months (83.33 %). Similarly a close review of Table 6 revealed that, half of the AWWs (51.34 %) had medium level of knowledge while, 41.33 per cent and 7.33 per cent of them found in high and low level of knowledge category respectively about growth monitoring.

Medium level of knowledge about growth monitoring (Table 6) could be due to AWWs are responsible for providing

service of growth monitoring to the children in the age group of zero to six years. In anganwadi centre AWW should take height and weight of each child and records in a register. Along with this she has to identify grade children (grade I-normal grade children, II- moderate grade children and III-severe grade children) in the anganwadi and puts a graph of weight and height in growth chart register. She also discuss with ANM's and medical officers (MO's) during their regular visits to anganwadis. During her training programmes also she might have gained some knowledge regarding growth monitoring. The findings are similar with the finding of Sanjiv *et al.* (1994).

Table 7: Correlation coefficients between selected factors and knowledge of Anganwadi workers regarding overall development of children n = 150

Sl. No.	Independent variable	Pearson correlation coefficient 'r' value
1.	Age	0.271**
2.	Education	0.494**
3.	Size of family	0.037
4.	Socio-economic status	0.219**
5.	Experience	0.161*
6.	Training	0.171*
7.	Job performance	0.022

** Significant at 0.01 level

* Significant at 0.05 level

The data from the table 7 indicated the relationship between selected factors and knowledge of AWWs regarding overall development of children. Age was positively and significantly correlated with knowledge level of AWWs at one per cent level. The reason might be that, most of the AWWs were belonged to young and middle age group. Because of young and middle age they were more enthusiastic in acquiring knowledge and participating in all activities or services of ICDS. The other reason might be that, as the age increases their experience also increases, hence as experience increased knowledge of the respondents also increased.

Education was positively and significantly correlated with knowledge level of AWWs at one per cent level. The probable reason might be that, formal education widens the horizons of knowledge of an individual and they have ability to acquire skill and knowledge. Minimum educational eligibility of AWWs is SSLC, approximately 38.00 per cent of AWWs had more formal education than requirement for joining as AWW. Formal education of the AWWs might have helped them in understanding the concepts of nutrition, health, growth monitoring and in turn increased in understanding the activities of ICDS. The findings of the

study are in line with the findings of Salutagimath and Nithya Shree (2013) [2].

Socio-economic status also positively and significantly correlated with knowledge level of AWWs. The reason could be, individual having good socio-economic status, they had better opportunities, better exposure to the new things in their job. Majority of the AWWs were belonged to low medium economic status, they had basic necessities in home to acquire some information and they had better access for information. This might helped them to increase their knowledge.

Further, the knowledge was tested with job experience of AWWs. It was found that, this variable was positively and significantly correlated at five per cent level. This might be due to that, as experiences increases AWW face different situations, which in turn taught lessons to gain knowledge, skill and to have better attitude. Their involvement and to solve the problems in their job was more compared to less experienced AWWs, hence this results.

And training was also positively and significantly correlated with knowledge level of AWWs at five per cent level. This could be due to trainings which help to update AWWs knowledge by different subject matter specialist, who had delivered guest lecturer in the training programme. Training helps to improve the knowledge, skill, attitude and social behavior of employees for doing a particular job.

Size of family and job performance showed a non-significant relation with knowledge level of Anganwadi workers.

Conclusion

It was observed from the study that majority of AWWs (92.67 %) had high knowledge regarding immunization since they practically involved in this activity they could tell the names of immunization and which age it has been given to a child. More than half of the respondents had medium knowledge with regard to nutrition and growth monitoring. Since these activities were mandatory and followed without having required knowledge. Overall knowledge index was to the extent of 87.80 per cent in immunization, 68.20 per cent in case of growth monitoring and 58.18 per cent in nutrition.

AWWs cater to the overall development of 0-6 year children and this is the age where we can observe more development of a child. AWWs had good knowledge regarding developmental activities provided to the children like outdoor games and exercises for physical development, providing knowledge regarding sizes, shapes and story-telling technique used for cognitive development, story telling techniques and information about colors for emotional development, songs and stories for language development, moral stories and narrating the simple environmental issues like water, soil, air, tree, animals and birds for social development. They followed the principle '*Learn while Play*'. To enhance AWWs knowledge providing periodic training programme and suitable literature are necessary.

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