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"A STUDY TO ASSESS THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE REGARDING ASSESSMENT AND PREVENTION OF PROTEIN ENERGY MALNUTRITION IN CHILDREN UNDER FIVE YEARS OF AGE AMONG ANGANWADI WORKERS AT SELECTED ICDS CENTRE AT JAIPUR."

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ABSTRACT

Protein energy malnutrition is a major health and nutrition problem in India. It occurs particularly in weaklings and children in the first year of life. It is not only an important cause of childhood morbidity and mortality but leads to permanent impairment of physical and possible of mental growth of those who survive. The current concept of protein energy malnutrition is that of clinical forms Kwashiorkor and Marasmus. The aim of study was to (1) To assess the pre-test knowledge of anganwadi workers regarding assessment and prevention of protein energy malnutrition among children under five years of age. (2) To evaluate the effectiveness of self-instructional module for anganwadi workers regarding assessment and prevention of protein energy malnutrition among children under five years of age. (3) To find out association between selected demographic variables with knowledge score of anaganwadi workers regarding assessment and prevention of protein energy malnutrition under five year of age.

Methods: A pre experimental pre-test-post-test research design was adopted. Non-probability convenient sampling technique was used with sample size of 50 anganwadi workers. Demographic scale and structured interview schedule were formulated to assess the effectiveness of self-instructional module.

Results: The finding show that majority of anganwadi workers according to their age shows that majority 16(32.00%) of anganwadi workers were in the age group of 26-30 years, 15 (30.00%) of them belong to the age group of 21-25 years, remaining both age group of up to 31-35 years and more than 36 years 13 (26.00%) and 6 (12.00%). Their educational status shows that majority 14 (36.00%) of anganwadi workers

were in up to secondary category, 18 (32.00%) had up to senior secondary category, 10 (28.00%) of anganwadi workers were in middle education and 8 (16%) were graduate and post graduate. majority of 20 (40 %) of the Anganwadi workers have below one years of experience worker, 18 (36%) have 1-2 years of experience, 07 (14%) have more than 3 years of experience and 05 (10%) have 2-3 years. area of working shows that majority 28 (56%) of urban area, 22 (44%) of rural area. the sources of information show that majority 24(48.00%) of health information, 9 (18%) of mass media, 15 (12%) of peer group and 02 (04%) of others. The maximum mean percentage obtained by the Anganwadi workers is found in the aspect of Introduction PEM (46.25%), followed by Introduction of ICDS (45.00%), Types, causes, clinical manifestation of PEM (42.02%) and least mean percentage obtained in the aspect of diagnosis, prevention, management & complication (36.28%). The overall Mean±SD of pre-test knowledge score was 12.07± 4.94and mean percentage of 42.33%. That the maximum mean percentage obtained by the Anganwadi workers is found in the aspect of Types, causes, clinical manifestation of PEM (82%), followed by diagnosis, prevention, management & complication (79.71%), Introduction PEM (75.75%) and least mean percentage obtained in the aspect of Introduction of ICDS (74.4%). The overall Mean±SD of post-test knowledge score was 23.36± 4.77and mean percentage of 78.86%. Hence pre-test post-test knowledge score was significant at 0.05% level of significance. However significant association was found in knowledge score with selected demographic variable.

Conclusion: The study revealed that the level of knowledge score was high with respect to Protein energy malnutrition among the subjects.

Keyword: Protein energy malnutrition, knowledge, self-instructional module, anganwadi workers.

INTRODUCTION

Kumar, 1989 stated that children represent the wealth of the country a nation is built on the bricks of Today's children. The business of the young one is to grow and the process of growth requires good nutrition. India's Integrated Child Development Services (ICDS) was first implemented in October 1975, in 33 experimental blocks and expanded to include 2499 projects by March 1991. Program responsibility is vested in the women and child development department at the Centre level and at a variety of different departments at the state level. The target population is children under 6 years of age and lactating women aged 15-44 years. Anganwadi workers functions at the grass root level and she is the first contact to the community from the health sector. Her trust worthiness is important to provide comprehensive care to the under six-year-old children. Journal of Indian Medical Association 2000 Integrated Child Development Services Scheme (ICDS) provides an integrated approach for converging all the basic services for improved child care, early stimulation and learning, health and nutrition, water and environmental sanitation aimed at the young children, expectant and lactating mothers, other women and adolescent girls in a community. Indian Journal of Maternal and Child Health. 1993 anganwadi workers at the local level and supportive personnel from health departments administer services, which include the following: supplementary nutrition, immunization, health check-ups, referral services, treatment of minor illnesses, nutrition and health education for women, preschool education for children aged 3-6 years, and cooperation with

improvement in supportive service such as water supply and sanitation. Food is an important and basic biological need of man. It is essential for life, growth and repair of the human body, regulation of body mechanisms and production of energy for work. The nutrition of people on a global level is of great concern today particularly in developing nations. A fair section of the population does not get enough food to eat and their diets are deficient in enough food to eat and there are deficient in calories also; the children in the developing countries suffer from malnutrition.

The survey conducted by national institute of nutrition at Hyderabad showed that 4 out of 10 homes in rural areas consume diet with low calories. The nutritional point of view the India society is a dual society, consisting of a small group of well fed and a very large group of undernourished. In India the people are affected with malnutrition and this is found to be one of the greatest health problems facing our communities today. It is reported that 60-70% of young children today have nutritional deficiencies. Nutritional disorders may result from either deficiency or excess of any of the nutrients like protein, fat, carbohydrates, vitamin, minerals and salt. In India, the majority of problems are related to deficiency status rather than excesses, the most important reasons being poverty, ignorance and illiteracy. Under nutrition includes both protein-energy malnutrition and micronutrient deficiencies. Undernourishment not only affects physical appearance and energy levels, but also directly affects many aspects of the children's mental functions; growth and development which has adverse effects on children's ability to learn and process information grow into adults that are able to be productive contributing members of society. Protein energy malnutrition is a major health and nutrition problem in India. It occurs particularly in weaklings and children in the first year of life. It is not only an important cause of childhood morbidity and mortality but leads to permanent impairment of physical and possible of mental growth of those who survive. The current concept of protein energy malnutrition is that of clinical forms Kwashiorkor and Marasmus.

Protein energy malnutrition is defined as a range of pathological conditions arising from coincident lack of varying proportions of proteins and calorie, occurring most frequently in infants and young children and often associated with infection. Protein Energy Malnutrition (PEM) is a deficiency disease caused in the infants due to Food Gap between the intake and requirement. It affects children under 5 mostly belonging to the poor under privileged communities. PEM is particularly serious during the post-weaning stage and is often associated with infection. K.K. Gulani, 2007, good nutrition is very important to promote health of children Inadequate and improper nourishment of children leads to Protein energy malnutrition.

NEED OF THE STUDY

Children are the treasures of our nation they are to develop into its citizen and leaders of tomorrow. Healthy children are the greatest resource and pride of any nation. Investment in the children, development is an investment in the future of the nation. Their health and development must be monitored at every step of their life. According to world health statistics 2014 by WHO in India the under-five mortality is about 47 per 1000 live births and in 2015 is about 45 per 1000 birth and in 2016 is about 43 per live births. according WHO in Rajasthan under five mortality rates in 2015 is about 43 per 1000 live births and in 2016 is about

41 per 1000 live births. According to 2011 census of India shows that 24% of the population of India comprises of children, between the age of 5-14 years. School children constitute a large pool of children of this age group. The 5-16 years old children are on the threshold of adulthood. If they are to reach adulthood in a healthy state, then it is necessary to provide targeted and concern services to improve their health status. According to USAID 2009 more than one-half of the 9.7 million child deaths worldwide are linked to under nutrition. Malnutrition alone not only kills, but also exacerbates the burden of infectious diseases.

Indian Journal of Community Medicine July - September, 2006, among the under five children attending the Pediatric OPD of Medical College, Kolkata, 51% were seen malnourished as per IAP classification. Out of them 29% were suffering from grade I, 14% from grade II, 6% from grade III and 2% from grade IV malnutrition. On clinical examination, it was observed that 52.7% children were suffering from pallor, 13.3% from angular stomatitis and 1.3% from night blindness. According to NFHS 2006 Underweight prevalence in children under five is 34% in Urban and 47% in rural area in India.Kobe, Japan, June 2005, Protein energy malnutrition (PEM) is a global problem. Nearly 150 million children under 5 years in the world and 70-80 million in India suffer from PEM, nearly 20 million in the world and 4 million in India suffer from severe forms of PEM, viz., marasmus, kwashiorkor and marasmic kwashiorkor. S. Chakraborty 2005 conducted a Study of Protein Energy Malnutrition (PEM) in Children (0 to 6 Year) in a Rural Population of Jhansi District (U.P.) suggest that the overall occurrence of PEM in under 6-year children was observed to be 67%, however it was found to be significantly higher (80.9%) in the age group of 1-3 years as compared to other age groups. This age group also exhibited significantly higher prevalence ($x2=14.67$, $p<0.05$) of Grade I, II, III PEM.

SP Mitra 2004, it was found that only 38.9% of the under five children were within the normal limit while 61.1% were in different grades of malnutrition. 2% of them were suffering from Grade III & IV malnutrition together whereas 37.6% and 21.6% were in Grade I & II respectively. Children under the age of five years are most vulnerable group succumb to nutritional diseases and these children constitute about 17% of the total population. In India, as many as 1000 million children are suffering from malnutrition. Moreover, out of 1000 live births about 100 die before celebrating their first birthday. Malnutrition is preventable well in advance with adequate nutrition to children which needs rigorous and comprehensive approach. One of the principles of primary health care is multisectoral approach and ICDS is the best multisectoral approach for child protection as well as development. Tauro (1998) a study conducted was reported that there were no significant differences in the nutritional status of ICDS children and non ICDS children. Balwinder Sidhu et al (1993) a study conducted was reported that Anganwadi workers distributed supplementary feed less than recommended. Further many authors. Ghosh, 1994 and 1998, Walia & Manthri, 1991 Madam, 1998 have criticized that Anganwadi workers are not competent to identify malnutrition and do not have adequate knowledge and training in care of malnourished children. Inadequate knowledge is more hazardous than ignorance because an ignorant person may seek help but not a person with inadequate knowledge as he / she is not able to identify the deficiency he / she has. Thus, it may lead to poor services, resulting in serious consequences. Similarly, an anganwadi worker with deficient knowledge may provide poor service. Sidhu et al (1993) had reported that Anganwadi workers were

providing poor service. Sadka, 1984 stated that ICDS is a holistic approach to the child and attempts to improve both his intra natal and post-natal environment. Prevention of malnutrition is the important activity of ICDS programme through nutritional education, weight monitoring and distribution of supplementary food. All these functions are carried out by anganwadi workers. Chauhan, 1994 a self-instructional module is a teaching strategy, which can be given to a learner with some knowledge and the learner can proceed learning in his/her own pace and speed. It is felt that being a trained professional a nurse can contribute here knowledge to help anganwadi workers function better towards health and development of the children. Nutrition is considered to be one of the important areas to be taken care by improving knowledge of the anganwadi workers.

STATEMENT OF THE PROBLEM:

"A study to assess the effectiveness of self-instructional module regarding assessment and prevention of protein energy malnutrition in children under five years of age among anganwadi workers at selected ICDS centre at Jaipur."

OBJECTIVES:

1. To assess the pre-test knowledge of anganwadi workers regarding assessment and prevention of protein energy malnutrition among children under five years of age.
2. To evaluate the effectiveness of self-instructional module for anganwadi workers regarding assessment and prevention of protein energy malnutrition among children under five years of age.
3. To find out association between selected demographic variables with knowledge score of anaganwadi workers regarding assessment and prevention of protein energy malnutrition under five year of age.

HYPOTHESIS

H1: There will be significance difference in the pre-test and post-test knowledge level of anganwadi workers after self-instruction module.

H2: There will be significant association between knowledge and selected demographic variable of anganwadi workers regarding prevention of protein energy malnutrition.

ASSUMPTIONS

The study assumes that- 1. Anganwadi workers may have some knowledge regarding prevention of protein energy malnutrition.

2. Anganwadi workers having some knowledge regarding prevention of protein energy malnutrition may reduce the risk of complications.

3.Self-instructional module will enhance the knowledge of anganwadi workers.

DELIMITATION

The study is delimited to: 1. The study is limited to the Anganwadi workers. 2.Willing participate in the study. 3. This study is limited to the sample size of 50 Anganwadi workers.4. Available during data collection.

RESEARCH METHODOLOGY: -

Quantitative approach was used to achieve the objectives of the study. The research design used for the study was pre-experimental one group pre-test and post- test design. The setting of present study was ICDS Centre at Jaipur. In this study sample consists of 50 Anganwadi workers. Non-probability convenient sampling technique was used in the age group between 26 to >36 years was done with an inclusion criterion - (1) Who are willing to participate in the study? (2) Who are available at the time data collection and exclusion criteria-(1) Who are not willing to participate? A formal written permission was obtained from the Principal of Institute of medical technology and nursing education Sitapura Jaipur. In view of nature of the problem and to accomplish the objectives of the study a structured interview schedule was prepared and thirty questions were formulated to assess the effectiveness of self-instructional module on knowledge regarding assessment and prevention of protein energy malnutrition in children under five years of age among anganwadi workers at selected ICDS centre at Jaipur. Reliability and validity of the tool was ensured in consultation with guide and experts in the related field. The data was collected and analysed by using descriptive and inferential statistics according to objectives and hypothesis of the study. Data was collected within 6 weeks.

ANALYSIS AND INTERPRETATION

Table 1: Assessment of Knowledge of the Anganwadi workers regarding Prevention of protein energy malnutrition.

Knowledge level	Score	Pre-test		Post-test	
		Frequency	Percentage	Frequency	Percentage
Poor knowledge	0-14	33	66 %	04	08 %
Average knowledge	15-23	13	26 %	16	32 %
Good knowledge	24-30	04	08 %	30	60 %
Total		**50**	**100**	**50**	**100**

Table 2: Mean, Mean percentage and standard deviation for the pre-test knowledge of Anganwadi workers

S. No	Aspects	Max. score	Knowledge Of Respondents		
			Pre-Test		
			Mean	SD	Mean%
1	Introduction of ICDS and Malnutrition	5	2.24	1.25	45 %
2	Introduction about PEM and Nutrient	8	3.70	1.78	46.25 %
3	Types, causes, clinical manifestation of PEM	10	4.22	2.40	42.2 %
4	Diagnosis, prevention, management and complication of PEM	7	2.54	2.27	36.28 %
	Overall	30	12.7	4.94	42.33 %

Table 3: Mean, Mean percentage and standard deviation for the post-test knowledge of Anganwadi workers

Sl No	Aspects	Max. score	Knowledge of Respondents		
			Post test		
			Mean	SD	Mean%
1	Introduction of ICDS and Malnutrition	5	3.52	1.16	70.4 %
2	Introduction about PEM and Nutrient	8	6.06	1.65	75.75 %
3	Types, causes, clinical manifestation of PEM	10	8.2	1.67	82 %
4	Diagnosis, prevention, management and complication of PEM	7	5.58	1.21	79.71 %
	Overall	30	23.36	4.77	78.86 %

Table: 4.: Comparison of pre-test and post-test knowledge early diagnosis and prevention of malnutrition

Sl.No.	Knowledge assessment	Sample Size	Mean	SD	Mean difference	Df	t-value
1.	Pre- test	50	12.7	6.76	10.66	49	13.07
2.	Post- test	50	23.36	4.77			

***** Significant at 5% level

DISCUSSION

The result showed that majority of anganwadi workers according to their age shows that majority 16(32.00%) of anganwadi workers were in the age group of 26-30 years, 15 (30.00%) of them belong to the age group of 21-25 years, remaining both age group of up to 31-35 years and more than 36 years 13 (26.00%) and 6 (12.00%). Their educational status shows that majority 14 (36.00%) of anganwadi workers were in up to secondary category, 18 (32.00%) had up to senior secondary category, 10 (28.00%) of anganwadi workers were in middle education and 8 (16%) were graduate and post graduate. majority of 20 (40 %) of the Anganwadi workers have below one years of experience worker, 18 (36%) have 1-2 years of experience, 07 (14%) have more than 3 years of experience and 05 (10%) have 2-3 years. area of working shows that majority 28 (56%) of urban area, 22 (44%) of rural area. the sources of information show that majority 24(48.00%) of health information, 9 (18%) of mass media, 15 (12%) of peer group and 02 (04%) of others. The maximum mean percentage obtained by the Anganwadi workers is found in the aspect of Introduction PEM (46.25%), followed by Introduction of ICDS (45.00%), Types, causes, clinical manifestation of PEM (42.02%) and least mean percentage obtained in the aspect of diagnosis, prevention, management & complication (36.28%). The overall Mean±SD of pre-test knowledge score was 12.07± 4.94and mean percentage of 42.33%. That the maximum mean percentage obtained by the Anganwadi workers is found in the aspect of Types, causes, clinical manifestation of PEM (82%), followed by diagnosis, prevention, management & complication (79.71%), Introduction PEM (75.75%) and least mean percentage obtained in the aspect of Introduction of ICDS (74.4%). The overall Mean±SD of post-test knowledge score was 23.36± 4.77and mean percentage of 78.86%. It is evident that the obtained "t" value 13.07 is greater than the table value at 0.05 level of significance. Therefore, "t" value is found to be significant. It means there is gain in knowledge level of Anganwadi workers regarding prevention of protein energy malnutrition. This supports that self-instructional module on prevention of protein energy malnutrition is effective in increasing the knowledge level of Anganwadi workers. Shows $\chi 2$ value computed between the knowledge level of Anganwadi workers regarding prevention of protein energy mal nutrition and selected demographic variables. Variables such as type of family, History and Years of experience were significant at 0.05 level. Variables such as Education status year of experience, and source of information were significant at 0.05 level Therefore the hypothesis stated there will be significant

association between knowledge of Anganwadi workers regarding prevention of mal nutrition and selected demographic variables is accepted

CONCLUSION

The following conclusions were drawn on the basis of the present study to assess the effectiveness of self-instructional module on knowledge regarding assessment and prevention of protein energy mal nutrition studying ICDS centre at Jaipur. This section brings about the limitations of the study into practice. The findings of the study have several implications on nursing practice, nursing administration, nursing education and nursing research.

The study shows that the anganwadi workers are having inadequate knowledge of Anganwadi workers regarding prevention of protein energy mal nutrition.

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