A study to assess the effectiveness of Structured Teaching programme on knowledge regarding prevention of vitamin deficiency among mothers of under five children in a selected community area at Bareilly, U.P.

ABSTRACT

"A Vitamin is a substance that makes you ill if you don't eat it."

INTRODUCTION: It is universally recognized that good nutrition means maintaining a nutritional status that enables us to grow well and enjoy good health (S`waminathan 2000). Vitamins are organic compounds that are essential in small amounts for body process. Vitamin themselves do not provide energy. They enable the body to use the energy provided by fats, carbohydrates and proteins (Townsend E. Cerelynn 2003). Inadequate intake of vitamins leads to some specific disorders. Globally about 21% of children suffer from vitamin A deficiency with a highest prevalence being in South East Asia (Pandav C.S. 2004). Health education is concerned with establishing or inducing changes in the attitudes and behaviour of individuals and groups that promote healthier living. Venkatachalam S.R. (2003) stated that the ignorance about correct dietary practices and dietary requirements has been recognized as an important cause of nutritional problem. To compact this problem nutrition education in the communities has been identified as an important long-term measures.

METHODS: Quasi-Experimental Design was used to conduct this study, using One group pre and post test design without control group approach on 50 participants. Theoretical framework selected for this study was based on General Systems Theory by Bertanlaffy (1968). Convenient sampling was used to select the sample. Structured interview schedule and structured teaching programme with flash cards was used to collect data.

FINDINGS: Majority of the mothers were 21 to 30 years of age. Fifty one percentage of mothers were from joint family. **Only** Thirty-nine percentage of mothers got previous sources of information from health personnel. Over all pretest knowledge score was 29.28 and post test knowledge score was 82.85 which is around 53% of difference in mean percentage reveals the effectiveness of STP on mother's knowledge regarding prevention of vitamin deficiency disorders. Area wise post-test highest mean percentage score 100% was obtained by the mothers for vitamin A and lowest mean percentage score 37.5% for Vitamin B_6 shows effectiveness 45% and 15%.

CONCLUSION: From the findings it can be concluded that Prior to implementation of STP, mothers had poor knowledge (29.28%) on prevention of vitamin deficiency. After implementation of STP, mothers had Excellent knowledge (82.85%) on prevention of vitamin deficiency disorders with mean percentage difference of around 53.57% shows the effectiveness of STP on mothers knowledge regarding prevention of vitamin deficiency disorders. Significant difference was found between pre and pest-test knowledge scores and no significant association between post-test knowledge scores with demographic variables of the mothers.

KEYWORDS: Access, Effectiveness, Vitamins, Prevention, Knowledge, Structured Teaching Programme.

OBJECTIVES

1. To evaluate the pre-test knowledge regarding prevention of vitamin deficiency among mothers of under five children.
2. To gain the post-test knowledge regarding prevention of vitamin deficiency among mothers of under five children.
3. To evaluate post- test knowledge regarding prevention of vitamin deficiency among mothers of under five children.
4. To compare the pre-test & post-test knowledge regarding prevention of vitamin deficiency among mothers of under five children.
5. To find out association between the post-test knowledge score with their selected demographic variables. (PHC Bithri Chainpur, Bareilly)

HYPOTHESES

H_1 : There will not be a significant difference between the pre and post test knowledge scores among mothers of under five children regarding prevention of vitamin deficiency.

H_2 : There will not be a significant association between the post test knowledge scores among mothers of under five children regarding prevention of vitamin deficiency and the selected demographic variables.

REVIEW OF LITERATURE

Incidence of vitamin deficiency among children.

Keith and West (2002) reported that globally 127.2 million pre school children are affected by Vitamin A deficiency, which represents 25% of preschool children in high-risk regions of the developing countries. Forty four percent of them live in South and South East Asia, whereas 26% and 10% living in the African and Eastern

Mediterranean regions respectively. In Indonesia 12.6 million pre school children are affected by vitamin A deficiency whereas in China 11.4 million and in Ethiopia 6.7 million pre-school children are affected by vitamin A deficiency.

Oregon et.al., (2002) stated that rickets is a serious health problem in developing countries and also reported that the prevalence of ricket was 40.7% among children in China and 23% of children are affected by rickets in Ulus Health Centre, in Turkey.

Importance of vitamins

Mahajan and Gupta (2002), Stanfield .P.S, (2003) and Benedicts .H (2004) stated that vitamin A is essential for body growth and for the integrity of epithelial tissues. Dark vision depends upon the availability of vitamin A. Vitamin A enables the eyes to adjust to changes in light, maintain healthy skin and mucous membranes, cornea of eye, healthy teeth and bones.

Prevention of vitamin deficiency, disorders

Stanfield .P.S, (2003), stated that for prevention of vitamin A deficiency give vitamin A rich food items such as liver, kidney, egg yolk, fortified milk, carrots, sweet potatoes, quash, apricots, cantaloupe, spinach, collards, broccoli and cabbage

Chellappa .M.J. (2000) stated that by giving adequate dietary intake, oral administration of vitamin A solution and health education about vitamin A rich food items to the mother and family, and by encouraging the mother to give breast feeding continuously, can prevent the vitamin A deficiency among children.

Effectiveness of Structured Teaching Programme (STP)

NCERT (1978), quoted that a module is a self contained unit with a definite set of expected behavioural outcome providing as experience or as series of experiences resulting into learning of problem solving.

Mukbopathyay (1982) programme as a small booklet on any subject which ranges the instructional activities for an individual learner to progress with respect to predetermined objectives.

Hopper (1992), stated that programme could be conceived self-container and self-sufficient unit development for a target population of learning for realizing selected specific instructional objectives.

FINDINGS

Regarding demographic variables of the mothers

- Majority of the mothers were 21 to 30 years of age
- Highest percentage (46% and 53%) of mothers had primary school education and family per capita income group of Rs. 150-299 respectively.

- Fifty one percentage of mothers were from joint family
- Highest percentage (59% and 51%) of mothers were house wives and having children with second birth order respectively.
- Thirty-nine percentage of mothers got previous sources of information from health personnel.

Findings regarding knowledge on prevention of vitamin deficiency disorders prior to implementation of STP

- In pre-test overall knowledge score was 29.28%. It shows that mothers having poor knowledge on prevention of vitamin deficiency disorders.

Findings regarding effectiveness of STP

- Over all pretest knowledge score was 29.28 and post test knowledge score was 82.85 which is around 53% of difference in mean percentage reveals the effectiveness of STP on mothers knowledge regarding prevention of vitamin deficiency disorders.
- Area wise post-test highest mean percentage score 100% was obtained by the mothers for vitamin A and lowest mean percentage score 37.5% for Vitamin B_6 shows effectiveness 45% and 15%
- Item wise comparison of knowledge scores of mothers according to each area of prevention of vitamin deficiency disorders.
- In the area of meaning and classification of vitamins during pretest none of the mothers correctly responded for the item "vitamin is an organic compound" whereas in post-test 31.86% of mothers correctly responded to the same item.
- In the area of vitamin A, only 6% of mothers responded correctly for the item "vitamin A solution is to be administered at 6 month of age" whereas in post test all mothers responded correctly for all the items.
- In the area of vitamin D, during pretest below 15% of mothers correctly responded for all items whereas in posttest above 85% of mothers correctly responded for all items.
- In the area of vitamin C during pre test less than 25% of mothers responded correctly for all items whereas during post test above 80% of mothers responded correctly for all items.
- In the area of vitamin B_1 during pretest less than 30% of mothers responded correctly for all items whereas during posttest above 50% of mothers responded correctly for all items.
- In the area of vitamin B_2 during pretest less than 22% of mothers responded correctly for all items whereas, during posttest above 70% of mothers responded correctly for all items.
- In the area of Niacin, during pretest less than 10% of mothers responded correctly for all items whereas during posttest around 49% of mothers responded correctly for al items.
- In the area of vitamin B_6, during pre test less has 32% of mothers responded correctly for all items whereas during posttest around 37% of mothers responded correctly for all items.

- In the area of vitamin B_{12}, during post test below 27% of mothers responded correctly except for the items "important sources are liver, meat, fish and egg which is 61% whereas during post test above 61% of mothers responded correctly for all items.
- In the area of method of cooking, during pretest none of the mothers correctly responded to the item steaming is best method to cook meat, fish and liver" whereas during post test above 70% of mothers responded correctly for all items.

Comparison of post test knowledge scores related to demographic variables shows that

- Mothers in the age group of 21-30 years obtained highest mean score (84.05%) whereas lowest percentage (80.35%) obtained by the mothers in the age group of below 21 years.
- Around 82% of the mean score was obtained by mothers with various educational status.
- Based on the per capita monthly income all the mothers obtained around 82% of mean score.
- More or less similar mean percentage (83.57 and 82.25%) obtained by mothers from joint and nuclear family.
- Above 80 mean percentage obtained by mothers with children of first, second and third birth order.
- More or less similar percentage (82.97, 82.86 and 82.65%) obtained by mothers with all groups of occupation.
- Above 80 mean percentage score obtained by mothers with previous sources of information from various sources about vitamins.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations have been made for further study.

- Teaching module can be prepared on each vitamin and tested for illiterate to assess the knowledge on prevention of vitamin deficiency disorders.
- Same study can be conducted by using large samples to generalize the findings
- Certain items of the STP in the present study were less effective. Hence, the same study conducted on similar samples to assess the effectiveness of STP after modification of STP.
- A comparative study can be conducted on knowledge of prevention of vitamin deficiency disorders between rural and urban mothers.

IMPLICATIONS

Based on the findings the implications are as follows

1. **Nursing Practice**- Nursing professionals working in hospital and community to help the mothers regarding knowledge of prevention of vitamin deficiency disorders among children. STP can be used by the nursing student to educate the mothers on prevention of vitamin deficiency disorders during their clinical posting and field visit
2. **Nursing Education**- Nurse educator can use STP to educate the peripheral level health workers to improve mothers knowledge and motivate them for participating in nutrition intervention program.
3. **Nursing research**- The findings of the study can be utilized for conducting further study on prevention of vitamin deficiency disorders among children and adolescents. The items on various areas, which have 60 percent, or less in the post-test can be modified and retested to find out the effectiveness.

CONCLUSION

From the findings it can be concluded that most of the mothers (70%) were from the age group of 21-30 years, 46% of them had primary school education. 53% of mothers were belonged to the income group of Rs. 150-299, 51% of mothers from joint family and 51% of mothers were having children with second birth order and 39% of mothers got information previously from health personnel.

Prior to implementation of STP, mothers had poor knowledge (29.28%) on prevention of vitamin deficiency. After implementation of STP, mothers had Excellent knowledge (82.85%) on prevention of vitamin deficiency disorders with mean percentage difference of around 53.57% shows the effectiveness of STP on mothers knowledge regarding prevention of vitamin deficiency disorders.

Significant difference was found between pre and pest-test knowledge scores and no significant association between post-test knowledge scores with demographic variables of the mothers.

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