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Original Research Paper

Nursing

TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING ON KNOWLEDGE REGARDING IMPORTANCE OF FOLIC ACID IN PREVENTION OF NEURAL TUBE

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ABSTRACT

Background: Maternal and infant health is an important goal for all health care systems and is emphasized in the WHO Millennium Development Goals. Today, congenital anomalies are among the major causes of perinatal and infant mortality and morbidity in developed countries1

Research Approach: Evaluatory approach.

Research Design: Quasi experimental one group pre test post test design.

Setting of the Study: This study was conducted in hospital. Sample: First trimester mothers.

Sampling technique: Samples was selected by Non-probability purposive sampling technique.

Sample size: 40 first trimester mothers.

Tool: Structured knowledge questioner including demographic variables and planned teaching was used for the study.

Result: This study shows that 19-23 years, 9(22.5%) belongs to the age group of 24-28 years, 14(35%) belongs to the age group of 29-33 years, 9(22.5%) of the subject belongs to the age group of 34-above years. The subjects, 6(15%) had primary education, 10(25%) had high school education, 18(45%) is under graduate and 6(15%) is graduated and more. Most of them, 19(47.5%) were belong to hindu religion, 4(10%) was muslim, 11(27.5%) were Buddhist, and 6(15%) was other. With regards to occupation of mother, 10(25%) had private sector, 4(10%) had government service, most of the subject 20(50%) had worked in daily wages and 6(15%) was housewife Type of family, 18(45%) was belonging to joint family, 9(22.5%) was from nuclear family and 13(32.5%) was from extended family. The residential areas of the subjects, 15(37.5%) was from rural area and 25(62.5%) was from urban area. In the monthly area, 3(7.5%) was having below 2000 Rs, 12(30%) was having 3000-5000 Rs., 13(32.5%) was having 6000-7000Rs. And 12(30%) has above 9000. The gravida, 16(40%) was primigravida and 24(60%) was multigravida mother. In the parity of mother, 13(32.5%) was the primipara mother, 8(20%) was the multipara mother and 19(47.5%) was the nullipara mothers.

Conclusion: There was significant increase in the knowledge scores of the study participants after giving planned teaching. This shows that, all women had positive effectiveness of planned teaching regarding importance of folic acid in prevention of neural tube defect .

KEYWORDS : Knowledge , Effectiveness, Folic acid, Prevention of neural tube defect

INTRODUCTION

A woman's risk of having a fetus or infant with a neural-tube defect can be reduced by the consumption of a multivitamin containing folic acid during the periconceptional period — before and during the first 28 days after conception. Neural-tube formation is completed during these 28 days, before most women begin taking prenatal vitamins. In 1980, the results of a nonrandomized trial revealed that taking multivitamins during the periconceptional period reduced the risk of having a fetus or infant with a neural-tube defect. Since then, observational studies demonstrated a reduced risk among women who took multivitamin supplements containing folic acid and those who had higher dietary intakes of folate during early pregnancy.

The efficacy of folic acid in preventing a subsequent occurrence of neural-tube defect among the fetuses or infants of women with a previous affected fetus or infant was first conclusively demonstrated by a Medical Research Council randomized study in the United Kingdom. Women who took 4000 µg of folic acid daily during the periconceptional period in a subsequent pregnancy had a 72 percent reduction in the risk of having an affected fetus or infant. multivitamin supplements containing 800 µg of folic acid taken periconceptionally reduced the risk of a first occurrence of neural-tube defect. The Public Health Service has recommended that all women who could become pregnant take 400 µg of folic acid daily, and other countries have also adopted this recommendation.[2]

- **Problem Statement** Assess the effectiveness of planned teaching on knowledge regarding importance of folic acid in prevention of neural tube defect among first trimester mothers

- **OBJECTIVES**
- To assess the existing knowledge regarding importance of folic acid in prevention of neural tube defect among first trimester mothers
- To assess effectiveness of planned teaching regarding importance of folic acid in prevention of neural tube defect among first trimester mothers.
- To find the association between knowledge score with selected demographic variables regarding importance of folic acid in prevention of neural tube defect among first trimester mothers.

METHODOLOGY

Research approach- Evaluatory approach

Research design-Quasi experimental one group pretest-posttest design

Setting of study- Selected hospitals

Sample- First trimester mothers

Sample size- 40 First trimesters mothers

Sampling techniques- Non probability purposive sampling

Tool- Structured knowledge questionnaire including demographic variables will be used for the study.

Independent variable- planned teaching regarding importance of folic acid in prevention of neural tube defect.

Dependent variable- knowledge of first trimester mothers regarding importance of folic acid in prevention of neural tube defect.

SAMPLING CRITERIA

INCLUSION CRITERIA:. 1.Mothers who are present at the time of data collection. 2.Mothers who can speak and read Marathi and English. 3Mothers are in first trimester.

EXCLUSION CRITERIA:.1. Mothers who are not willing to participate. 2.Mothers who are multi gravid 3.Mothers who are in high risk pregnancy. 4.Mothers who are in second and third trimester. 5.Those are in health professionals

RESULT:

This section deals with assessment of pre-test knowledge scores regarding importance of folic acid in prevention of neural tube defect among subjects in selected hospital. The level of knowledge scores is assessed categorilly as poor, average, good, very good and excellent.

Table no.1 Pretest knowledge scores of subjects regarding importance of folic acid in prevention of neural tube defect

Level of knowledge	Score range	Frequency / percentage
Poor	1-4 (1-20%)	20(50%)
Average	5-8(21-40%)	19(47.5%)
Good	9-12(41-60%)	1(2.5%)
Very good	13-16(61-80%)	0(0%)
Excellent	17-20(81-100%)	0(0%)
Minimum score	2	
Maxi Maximum score	9	
Mean score	4.72±1.826	
Mean percentage	11.8	

Above table shows that in pretest 20(50%) of subjects are having poor level of knowledge score, 19(47.5%) were having average level of knowledge score, 1(2.5%) were having good knowledge regarding importance of folic acid in prevention of neural tube defect. And the minimum score is 2, maximum score is 9, mean score is 4.72±1.826 and mean percentage is 11.8 %.

Table 2: level of knowledge scores of subjects regarding importance of folic acid in prevention of neural tube defect in post test.

Level of knowledge	Score range	Post test percentage (%)
Poor	1-4 (1-20%)	0(0%)
Average	5-8(21-40%)	1(2.5%)
Good	9-12(41-60%)	3(7.5%)
Very good	13-16(61-80%)	22(55%)
Excellent	17-20(81-100%)	14(35%)
Minimum score	8	
Maximum score	19	
Mean score	15.55±2.171	
Mean percentage	38.875	

In post test 1(2.5%) of subjects were having average level knowledge score, 3(7.5%) were having good level knowledge score, 22(55%) were having very good level of knowledge score and 14(35%) were having excellent level of knowledge score regarding importance of folic acid in prevention of neural tube defect. And the minimum score is 8, maximum score is 19, mean score 15.55±2.171 and the mean percentage is 38.875 %.

- **DISCUSSION**

This study, shows that there is a significant difference between pretest and post test knowledge scores interpreting effective planned teaching on knowledge regarding importance of folic acid in prevention of neural tube defect. Mean value of pre test is 4.72 and post test is 15.55 and standard deviation values of pre test is 1.826 and post test is 2.171. The calculated t-value is 31.525 and tabulated t- value 2.02 and p-value is 0.000. Hence it is statistically interpreted that the planned teaching on knowledge regarding importance of folic acid in prevention of neural tube defect was effective.Findings were supported by, A case control study was conducted on neural tube defect of neonate and folic acid awareness and conducted the teaching hospital in Sri Lanka, during the study period 14,580 live births took place at GH Kandy and twenty of them had NTDs. The number of babies with NTDs transferred from other hospitals was 30. The control group comprised 150 mothers with normal babies. Fourteen (28%) of the affected group were able to identify folic acid tablet as a vitamin taken during pregnancy, in comparison to 87 (58%) of the control group. One (2%) from the affected group and 70 (46%) from the control group knew about the value of pre-conceptional FA .None of the affected mothers had used FA pre-conceptionaly where as 54 (26%) of the control group mother believed that folic acid helped in preventing birth defects. 12As the inadequate knowledge regarding folic acid may be because of ignorance and lacking of training program me among pregnant women. Hence. It was necessary for investigator to improve the subject knowledge by giving specific teaching programmers on importance of folic acid in prevention of neural tube defect among first trimester mothers.

- **CONCLUSION**

There was significant increase in the knowledge scores of the study participants after giving planned teaching. This shows that, all women had positive effectiveness of planned teaching regarding importance of folic acid in prevention of neural tube defect .

- **Recommendation**

Keeping in view the findings of the study, the following recommendations are made:

1. A similar study can be done on a larger sample for generalization of findings.
2. A study to assess attitudes and knowledge about risk of neural tube defect in first trimester mother.
3. A study to evaluate the effectiveness of information booklet versus other methods of teaching on importance of folic acid in prevention of neural tube defect.
4. A study to assess the effectiveness of Self Instructional Module regarding management of neural tube defect and associated quality of life among mother.
5. A study to assess the prevalence of neural tube defect and related complications in mother.
6. A study to assess prevalence of neural tube defect in ambulatory mother and fetus.

A comparative study can be conducted on knowledge regarding importance of folic acid in prevention of neural tube defect between urban and rural among first trimester mother.

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