

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Prevention of Neural Tube Defect in Periconceptional Period among Female Student at Selected Nursing College at Udaipur

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Abstract

Introduction : Neural tube defects affect an estimated 3000,000 birth each year worldwide and in india 3.9-8.8 per 1000 birth. The center for disease control and prevention (CDC) estimates that 50% to 70% of all NTDs can be prevented with the maternal periconceptional consumption of the vitamin B and 400Mcg folic acid.

Material & Method : A two group pretest posttest experimental study was conducted to assess the effectiveness of planned teaching programme on prevention of Neural tube defects in periconceptional period among 60 female students were selected by random sampling technique in udaipur college of nursing umarda Udaipur.

Results : The result shows that the structured program was highly effective as the pvalue is <0.05 and the paired 't' value is 31.401. The mean difference of experimental group 18.6 is higher than the mean difference of the control group is 0.0667. It indicates that the experimental group has more knowledge than the control group after administering planned teaching programme.

Keywords : Experimental and control group, knowledge, neural tube defect, Planned teaching.

Introduction :

Neural Tube Defects (NTDs) anomalies in the world are the second most prevalent group of congenital, second only to cardiac malformations and areas associated with substantial morbidity and mortality. NTDs are congenital malformations occurring during early intrauterine life around 3-4 weeks of gestation by failure of closure of the neural tube which eventually forms the central nervous system. A baby's neural tube normally starts out as a tiny, flat ribbon that turns into a tube by the end of the first month of pregnancy. If the tube doesn't close completely, an NTD can happen. Neural tube defects are usually diagnosed before the infant is born, through labor imaging tests.

There is no cure for neural tube defects. Maternal Serum Alpha Fetoprotein (MSAFP), a screening test that is performed on a pregnant woman's blood at approximately 16-18 weeks of pregnancy. High Resolution Ultrasound, which may detect an NTD visually after approximately 18 weeks of pregnancy.

Maternal malnutrition is an important risk factor for development of Neural tube defect. folate poor diet, related lack of education in nutrition, poverty, poor eating habits,

prolonged cooking of vegetables and cultural factors (food-fads) etc. are the important risk factors. Indian Academy of pediatric (IAP) recommended that all women capable of becoming pregnant consume 400 microgram of folic acid daily prevent NTDs.

Objectives -

1. To assess the level of knowledge among female students regarding prevention of Neural tube defects in periconceptional period before and after planned teaching programme.
2. To determine the effectiveness of planned teaching programme.
3. To find out the association between socio-demographic variables and level of knowledge.

Materials Methods :

Research Approach : An Experimental approach was used to assess the effectiveness of the planned teaching programme on prevention of Neural tube defects in periconceptional period.

Research Design : The experimental two group pretest posttest design was selected for the study.

Population : The target population for the present study includes all the female students studying in B.sc Nursing and the accessible populations females students studying in nursing college were selected for the study.

Sample Size : The sample selected 60 female B.sc nursing students from selected Nursing college for the experimental group and for control group.

Sampling Technique : In this study, simple random sampling technique was adopted to select the 60 female

students based on sampling criteria from from selected Nursing college located at Udaipur.

Results : The result shows that the structured program was highly effective as the p value is <0.05 and the paired 't' value is 31.401. The mean difference of experimental group 18.6 is higher than the mean difference of the control group is 0.0667. It indicates that the experimental group has more knowledge than the control group after administering planned teaching program.

Description of frequency and percentage according to the demographic variables

VARIABLES		Group			
		Experiment		Control	
		N	%	N	%
Age	19	12	40.0	13	44.0
	20	13	43.3	15	50.0
	21	5	16.7	2	6.0
Religion	Hindu	22	73.3	23	76.6
	Muslim	1	3.4	0	0.0
	Christian	7	23.3	7	23.4
Type of family	Nuclear	15	50.0	15	50.0
	Joint	15	50.0	15	50.0
Marital status	Unmarried	30	100.0	30	100.0
	Married	0	0.0	0	0.0
	Divorce	0	0.0	0	0.0
Type of diet	Vegetarian	7	23.4	8	26.7
	Nonvegetarian	23	76.6	22	73.3
Area of residence	Urban	22	73.3	23	76.6
	Rural	8	26.7	7	23.4
Family history of congenital defect	Yes	7	23.4	8	26.7
	No	23	76.6	22	73.3
Recent exposure on NTD	Yes	11	36.6	11	36.6
	No	19	63.4	19	63.4
Source of Information	Nil	19	63.4	19	63.4
	Family and friends	2	6.6	0	0.0
	Printed copies	0	0.0	0	0.0
	Electronic media	3	10.0	5	16.6
	Health personnel	6	20.0	6	20

Experimental group: post-test knowledge score on subscale among female students

Sl.No.	Variables	No. of items	Mean	S.D	Mean%
1	Meaning	2	1.4000	.49827	70.00
2	General Information	3	3.0000	.00000	100.00
3	Types	3	2.6000	.49827	86.67
4	Causes	4	3.6333	.49013	90.83
5	Sign-Symptoms	2	1.8000	.40684	90.00
6	Investigation	2	1.6667	.47946	83.34
7	Prevention	14	12.8333	1.4403	85.56
8	Management	2	1.8000	.40684	90.00
9	Complication	2	.8000	.40684	80.00
	Over all Knowledge	34	29.5333	1.52527	86.86

Comparison of experimental group pretest and post-test of knowledge scores

Variables	Pretest		Posttest		t value	DF	P value Inference
	Mean	SD	Mean	SD			
Meaning	0.6000	0.49827	1.4000	0.49827	5.757	29	P<0.05*
General Information	1.3667	0.85029	3.0000	0.00000	10.521	29	P<0.05*
Types	1.4000	0.49827	2.6000	0.49827	16.155	29	P<0.05*
Causes	1.8000	0.76112	3.6333	0.49013	13.449	29	P<0.05*
Sign-Symptoms	0.6000	0.49827	1.8000	0.40684	16.155	29	P<0.05*
Investigation	0.4000	0.49827	1.6667	0.47946	7.990	29	P<0.05*
Prevention	4.0000	1.28654	12.8333	1.44039	23.968	29	P<0.05*
Management	0.5667	0.50401	1.8000	0.40684	8.729	29	P<0.05*
Complication	0.2000	0.40684	0.8000	0.40684	6.595	29	P<0.05*
Overall Knowledge	10.9333	2.25806	29.5333	1.52527	31.931	29	P<0.05*

* Is significant; NS is not significant

Effectiveness of planned teaching programme**N=60**

GROUP	MEAN DIFFERENCE	t-VALUE	P-VALUE
Experimental group	18.6	31.401	P<0.05
Control group	0.0667		Significant

Association of the level of knowledge and socio demographic variables for control group

VARIABLES		Overall Knowledge				Chisquare
		Median and below		Above median		
		Frequency	%	Frequency	%	
Age	19years	9	69.2	4	30.8	0.288NS DF=2
	20years	10	66.7	5	33.3	
	21years	1	50.0	1	50.0	
Religion	Hindu	16	69.6	7	30.4	0.373NS DF=1
	Muslim	0	0.0	0	0.0	
	Christian	4	57.1	3	42.9	
Typeof family	Nuclear	10	66.7	5	33.3	0.000NS DF=1
	Joint	10	66.7	5	33.3	
Maritalstatus	Unmarried	20	66.7	10	33.3	
	Married	0	0.0	0	0.0	
	Divorce	0	0.0	0	0.0	
Typeofdiet	Vegetarian	6	75.0	2	25.0	0.341NS DF=1
	Nonvegetarian	14	63.6	8	36.4	
Area of residence	Urb.an	16	69.6	7	30.4	0.373NS DF=1
	Rural	4	57.1	3	42.9	
Family history of	Yes	8	100.0	0	0.0	5.45*
congenital defect	No	12	54.5	10	45.5	DF=1
Recent exposure on NTDS	Yes	7	63.6	4	36.4	0.072NS
	No	13	68.4	6	31.6	DF=1
	Nil	13	68.4	6	31.6	
Source of Information	Family and friends	0	0.0	0	0.0	1.176NS DF=2
	Printed copies	0	0.0	0	0.0	
	Electronic media	4	80.0	1	20.0	

Conclusion

This chapter deals with the important part of concluding the finding of the study and their implication. In this study, total study, total of 60 female students were selected to assess the effectiveness of planned teaching programme regarding prevention of Neural tube defects in periconceptional period. The data was collected by using structured questionnaires, analyzed and interpreted by suitable and appropriate statistical method.

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