EVALUATE THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING TERATOGENS AND ITS EFFECTS ON FETUS AMONG FIRST TRIMESTER ANTENATAL MOTHERS AT SELECTED HOSPITAL AT NAMAKKAL

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ABSTRACT

Every antenatal mother and their family looking forward the birth of a healthy Newborn without any defect. The fetal period is a crucial period of growth. If the antenatal mother exposed to any harmful substances during pregnancy it may cause some birth defect. **Objectives:** To assess the level of knowledge regarding teratogens and its effects on fetus among first trimester antenatal mothers. To evaluate the effectiveness of video assisted teaching programme regarding teratogens and Its effects on fetus among first trimester antenatal mothers. To determine the association between pre-test knowledge score with selected socio demographic variables of first trimester antenatal mother. **Methodology:** Quantitative approach, pre- experimental one group pre- test and post- test design. The study was conducted at Thangam Hospital, Namakkal. 60 first trimester antenatal mothers were selected by using Non Probability convenient sampling technique. Pretest was given with structured knowledge questionnaire. Video assisted teaching was given for 25- 30 minutes. Post test was given after 7 days. **Results:** Post-test mean knowledge score was found to be 24.12(80.4%) and SD 4.76. Moreover, the pre-test knowledge scores was14.24 (42.8%) and SD 3.77. It reveals that the post-test mean knowledge score were found higher than the pre-test knowledge score. The statistical paired 't' test value is 23.55(P<0.01) is greater than the table value at 0.01 level of significance. The chi-square analysis revealed that there was significant association established with Parity, educational

status. The study concluded that video assisted teaching on teratogens and its effects on fetus was effective in increasing the knowledge of first trimester antenatal mothers.

Keywords: Teratogens, video assisted teaching, knowledge, first trimester antenatal mothers

INTRODUCTION

Pregnancy is a precious period, where the mother prepares herself physically and psychologically for birth and parenthood. From social and medical point of view, pregnancy is a very important event. However, some problems or complications which are life threatening both for the mother and fetus may be anticipated during pregnancy. **(Banhidy F 2017) [8]**.

According to Indian Journal of Human Genetics, 2017, countries like India birth defects prevalence was alarmingly high, stretching from 61 to 69.99/ 1000 live births. Birth defects can be structural or functional abnormalities with or without metabolic disorders. Some of the major birth defects are the contributors to over 20% of infant mortality and substantial number of childhood hospitalizations. The one of the cause of these birth defects are exposure to harmful teratogens **[10]**.

Brittney D Bastow (2017) reported that source of information about medication use in pregnancy. The purpose of this article is to provide an up to date source of information about medication use in pregnancy and its effects on fetal health. The drug use is an uncommon cause of birth defects, but certain medications can increase the likelihood of developing a birth defect. Additionally, more women taking any kind of medication has more than doubled in the last 30 years. Current evidence suggests that between 65%-94 % of women take at least one prescription drug during pregnancy. Approximately 3-5% of live births are complicated by a birth defect each year totalling around 120,000 babies. Nearly 70% of women are taking a medication in the first trimester during organogenesis. On average, women are taking 3 medications in pregnancy. With over 50% of women using four or more. This includes over the counter medications and herbal supplements **[9]**.

Sheveta Dureja (2019) carried out a cross-sectional observational study on awareness among pregnant women regarding the use and safety of drugs during pregnancy in various antenatal clinics of the state of Punjab. 500 pregnant women were enrolled in the study and the questionnaire was prepared in the local language to assess the knowledge and beliefs of pregnant women. Data analysis was done using Chi-square test. The study results indicate that a very few pregnant women had knowledge that drugs have any effect on the fetus and less than half believe

that drugs should be taken only by consultation by the doctor. Majority pregnant women believe that sufficient time and attention are not given by a doctor during an appointment. Only 2% of women had the idea of antenatal sessions. More than half of the pregnant women considered alternative remedies to be more safe in pregnancy while a very few had the idea that cosmetics are safe in pregnancy. The study Concluded that the majority of participants in the study have poor knowledge regarding benefits and adverse effects of the use of drugs and cosmetics during pregnancy **[11]**.

METHODOLOGY

The research approach used for this study was quantitative evaluative approach. The research design used for the present study was Pre experimental one group pre-test post-test design.

Independent variable refers video assisted teaching programme on knowledge regarding teratogens and its effects on fetus. The dependent variable refers to the knowledge of first trimester antenatal mothers regarding teratogens and its effects on fetus. Attributed or demographic variables are age, parity/gravida, educational status, socio-economic status, occupation, income, religion, type of family, diet, living area and sources of information regarding teratogens.The study was conducted in Obstetrics and gynaecological OPD at Thangam Hospital, Namakkal district, Tamilnadu. The target populations for the present study were the first trimester antenatal mother. The accessible population for the present study includes the first trimester antenatal mother who meets the inclusive criteria. Sample size of the present study consists of 60 First trimester antenatal mothers in1st week to 12th week of gestation. Non Probability Convenient sampling technique was adopted to select the samples for the present study based on inclusion criteria. Semi Structured knowledge questionnaire regarding teratogens and its effects on fetus was used as a research tool in this study.

INSTRUMENT:

Section A- Socio demographic status: Consists of items on demographic variables like, age, education, occupation, religion, family income, gravida, type of family, type of diet, living area and sources of information regarding teratogens.

Section B- Knowledge Questionnaire: Consists of 30 knowledge items related to teratogenic effects on fetal development, which include general concept, maternal condition, and exposure to radiation, exposure to drugs and exposure to chemicals.

✓ Scoring key is prepared for section-I by coding the demographic variables.

✓ For Section -II score '1'was awarded to correct response and '0' was awarded to wrong response. Thus the Maximum score is 30.

To interpret the level of knowledge the scores subjected as follows:

Level of Knowledge	Percentage of score	Actual score
Inadequate Knowledge	0-50 %	0-15
Moderate Knowledge	51-75%	16-22
Adequate Knowledge	76-100%	23-30

Section –C – VIDEO ASSISTED TEACHING PROGRAMME

Video Teaching Programme was prepared which consists aspects such as maternal conditions, effects of alcohol, smoking,food, radiations and drugs on fetal development and management of those aspects.

ETHICAL CONSIDERATION

Prior to the collection of data, written permission was obtained from the managing director in Thangam hospital, Namakkal. 60 first trimester ante natal mothers were selected by using Non Probability convenient sampling technique. The first trimester ante natal mothers were assured that anonymity of each individual would be maintained and informed consent was obtained from mothers. The investigator given self introduction, explained the purpose of the study, subject's willingness to participate in the study was ascertained.

RESULTS

Table 1: Frequency and percentage distribution of socio demographic variables of first trimester antenatal mothers N=60

S. No.	Demographic Variables	Criteria	Frequency	Percentage (%)
1	Age in years	18-27	28	47
		28-37	27	45
		38-45	5	8
2	Parity	Primigravida	30	50
		Multigravida	25	42
		Grand multi gravida	5	8
3	Educational status	Primary	9	15
		Secondary	17	28
		Higher secondary	23	38
		Graduate	11	18
4.	Occupation	House wife	29	48
		Daily wages	9	15
		Employees	11	18
		Self employed	11	18
5	Religion	Hindu	45	75
		Christian	7	12
		Muslim	8	13
6.	Family income	Below 5000	27	45
		5001-10000	11	18
		10001-15000	9	15
		15001-20000	5	8
		20001 and above	8	13
7.	Type of family	Nuclear	42	70
		Joint	10	17

		Extended	8	13
8.	Type of diet	Vegetarian	38	63
		Non vegetarian	22	37
9.	Living area	Urban	8	13
		Rural	52	87
10.	sources of information regarding teratogens	Mass media	11	19
		Family members/ Relatives/ Friends	14	23
		Health personnel		
		None	18	30
			17	28

Table 2.1: Comparison of pre-test and post-test knowledge scores regarding teratogens and Its effects on fetus among first trimester antenatal mothers: N=60

S. No.	Level of knowledge	Pretest		Post test	
		Number	Percentage	Number	Percentage
1	Inadequate knowledge (<50%)	45	75	6	10
2	Moderate-knowledge (51-75%)	15	25	34	57
3	Adequate knowledge (>75%)	0	-	20	33
	Total	60	100	60	100

Table 2.2: Pre-test and post-test mean knowledge score regarding teratogen and its effect on fetus among first trimester antenatal mothers:- N=60

Aspect	Max Score	Range score	Respondent of Knowledge			Paried 't' test
			Mean	Mean %	SD	
Pre-test	30	5-21	14.24	42.8%	3.77	
Post-test	30	17-19	24.12	80.4	4.76	23.55*
Enhancement	30	12-8	11.88	39.6	1.01	

P<0.01

Table 3: Association between pre-test knowledge score with their selected socio demographic variables of first trimester antenatal mother; N=60

S. No.	Demographic variable	Category	Pre-test Knowledge				χ^2 value
			Inadequate		Moderate		
			No (45)	%	No (15)	%	
1.	Age in years	18-27 years	21	47	7	47	3.859
		28-37 years	22	49	5	33	Df=2
		38-45 years	2	4	3	20	(t=5.99)
							NS
2.	Parity	Primigravida	25	54	5	33	9.188*
		Multi gravida	19	43	6	40	Df=2
		Grand multi gravida	1	3	4	27	(t=5.99)
							S
3	Educational status	Primary	8	18	1	6	11.453*
		Secondary	13	29	4	27	Df=3
		Higher secondary	20	44	3	2	(t=7.815)
		Graduate	4	9	7	47	S
4	Occupation	House wife	25	55	4	27	6.399
		Daily wages	7	16	2	13	Df=3
		Employees	7	16	4	27	(t=7.815)
		Self employed	6	13	5	33	NS
5	Religion	Hindu	37	82	8	53	4.296
		Christian	5	11	2	13	Df=2
		Muslim	3	7	5	33	(t=5.991)
							NS
6	Family income	>5000 Rs	21	47	6	41	1.312
		5001-10000 Rs	9	20	2	13	Df=4
		100001-15000 Rs	6	13	3	20	(t=9.488)
		150001-20000 Rs	3	7	2	13	NS
		20001 and above	6	13	2	13	
7	Type of family	Nuclear	36	80	6	40	4.569
		Joint	5	11	5	33	Df=2
		Extended	4	9	4	27	(t=5.991)
							NS
8	Type of diet	Vegetarian	28	62	10	67	0.097

		Non vegetarian	17	38	5	33	Df=1 (t=3.841) NS
9	Living area	Urban Rural	5 40	11 89	3 12	20 80	0.767 Df=1 (t=3.841) NS
10	Source of information	Mass Media Familymembers/Relatives/Friends Health Personnel None	8 10 15 12	18 22 33 27	3 4 3 5	20 27 20 33	0.965 Df=3 (t=7.815) NS

S=Significant; NS= Not Significant

Table 3, presents substantive summary of chi-square analysis which was used to bring out the association between the pre-test knowledge score and the selected socio demographic variables. The analysis revealed that there was significant associated established with Parity, educational status. There was no statistically significant association found with the demographic variables of age, occupational status, family income per month, type of diet, type of family, religion, Living area and source of information regarding teratogenic effect on fetal development.

DISCUSSION

The present study revealed that, there is a significant association was found between pre-test knowledge score and demographic variables of parity ($\chi2=9.188*$) and educational status ($\chi2=11.453*$).

CONCLUSION

The results revealed that there was a significant difference in pre- test and post-test scores of knowledge and no significant association between pre-test knowledge with selected demographic variables except the education status and parity.

The present study shows that majority of them 34(57%) had moderate knowledge, 20(33%) had adequate knowledge regarding teratogens and its effect on fetus. The obtained t value 23.55 is greater than the table value therefore, "t" value is found to be significant in improvement in the level of knowledge of first trimester antenatal mothers which indicates that the video assisted teaching was effective.

The result of the present study was also supported by the study of **Shaik Ameen Fatima (2013)** *et al* conducted a quasi experimental one group pre test and post test design to assess the effectiveness of Video assisted teaching programme on effects of teratogens on fetal development. 60married women of reproductive age group (18-45yrs) study subjects at Doddhanalli rural community Kolar, who were selected by Purposive sampling technique and The tool used to collect data was structured interview schedule. The

collected data was analyzed and interpreted using descriptive and inferential statistics.Results indicates that the overall mean knowledge scores in the pre test were 43.67% with standard deviation 4.72. The overall mean knowledge scores in post test were be 67.5 % with standard deviation 4.76. The obtained 't' value 15.68 was greater than the table value and found to be highly significant at the level of $p<0.005$. The findings evidenced the Video assisted teaching programmeon knowledge regarding the effects of teratogens on fetal development was effective in improving the knowledge of married women of reproductive age [13].

LIMITATION

Study was limited to

1. First trimester antenatal mothers who were attended in Thangam hospital Namakkal

2. Data collection period was 4 weeks.

3. Only those first trimester antenatal mothers were willing to participate in the study.

4. First trimester antenatal mothers who were present at the time of data collection.

CONFLICTS OF INTEREST

No conflicts of interest

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