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A DESCRIPTIVE STUDYTO ASSESS KNOWLEDGE REGARDING TERATOGENS AND THEIR EFFECTS AMONG ANTENATAL MOTHERS DURING FIRST TRIMESTER IN SELECTED HOSPITALS AT KOLLAM

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Abstract : The research project undertaken was "A study to assess the knowledge regarding teratogens and their effects among antenatal mothers during first trimester in selected hospitals at Kollam." The objectives of the study were to assess the knowledge regarding teratogens and their effects among antenatal mothers in selected hospitals and to find out the association between knowledge and demographic variables regarding the teratogens and their effects Non experimental research design was adopted for the study. The study was conducted among 100 antenatal mothers in selected hospitals at Kollam. In order to assess the knowledge of antenatal mothers, a non probability convenience sampling technique was used. The tool used for the data collection consisted of demographic proforma and structured knowledge questionnaire. Basic introduction of the study was given to the subjects. The analysis of the data was based on the objectives of the study using descriptive and inferential statistics. The findings of the present study revealed that 1% had poor knowledge, 52% had average knowledge, 42% had good knowledge and 5% had excellent knowledge regarding teratogens and their effects. There was no significant association between knowledge and demographic variables such as age, years of married life, type of family, number of pregnancy, habits, educational status, occupational status, area of residence, source of information, family history of challenged children

Key words: Assess, knowledge, structured questionnaire, teratogens , first trimester, antenatal mothers, selected hospitals.

INTRODUCTION

Pregnancy gives a whole new meaning to the word "beautiful" and is a time of enormous delight and anticipation. The sensation of nurturing a little life within you and experiencing the labor and delivery process after nine months is truly remarkable. Pregnancy is the period during which a fetus develops inside a woman's womb. Pregnancy usually lasts about 40 weeks, or just over 9 months, as measured from last menstrual period to delivery. Pregnancy is broken into three time periods, called trimesters. Most women feel differently, both physically and mentally, during each trimester. In addition to weight and body shape, other alterations in body and function also take place during pregnancy. Prenatal development is one of the most significant segments of our development. Throughout nine months, prenatal development is constantly under strong influences, largely governed by genetics and external factors. Pragmatically, there are some external and internal influences that can have serious and debilitating effects on the life of unborn human beings. The unborn child, although seem to live in a protected, comfortable environment is not totally immuned to the

larger world surrounding the mother. The environment can affect the child in many well-documented ways. These agents affect genes and protein production in several ways. They may damage genes and make them incapable to operate by substituting themselves in the genetic code. It is observed that thousands of babies born deformed or mentally retarded every year are the results of events that occur in the mother's life and such events are classified as teratogens.

Teratogens can potentially harm the embryo/foetus throughout the whole of development; however, the period between the second and eighth weeks of Teratogens are a variety of substances found in the environment and, they are dangerous when a pregnant woman is exposed to them. Teratogens include radiation, certain antibiotics, street drugs, prescribed drugs, alcohol, or even an infection within the mother's body. The effects of teratogens include a host of birth defects and even the possibility of fetal death.Development is particularly susceptible damage as this is when the majority of the tissues and organs are forming and taking on the final, adult patterns This period is also known as the 'critical period' of development, and interference in these major tissue patterning events can result in birth defects .Teratogen is a substance or process that can harm or cause defect in fetus during pregnancy time. There are various types of teratogens that cause defects in fetus during pregnancy. Previously, it was believed that congenital anomalies were only genetic until Murphy discovered that environmental agents can also cause congenital defects. Recently, it is known that a majority of the congenital anomalies have a multifactorial pathogenesis, implicating both genetic and environmental basis namely different type of chemicals, physical agents, metabolic conditions or different infections. They include physical, chemical, infectious agent.

NEED AND SIGNIFICANCE:

An estimated 6% of babies worldwide are born with a congenital disorder, resulting in hundreds of thousands of associated deaths. However, the true number of cases may be much higher because statistics do not often consider terminated pregnancies and stillbirths. About 60% of babies with serious birth defects were born in poor countries, 34% in middle income countries and 6% in rich countries.14According to global report on birth defect , at least 3.3 million children under five years of age die from birth defects each year .An estimated 3.2 million of those who survive may be disabled for life, five common serious birth defects of genetic or partially genetic origin in 2001 were: congenital heart defects (1,040,835 births); neural tube defects (323,904 births); the hemoglobin disorders, thalassemia and sickle cell disease (307,897 births); Down syndrome (trisomy 21) (217,293 births); and glucose-6-phosphate dehydrogenase (G6PD) deficiency (177,032 births). Combined, these five conditions account for about 25 percent of all of birth defects of genetic or partially genetic origin.In developing countries like India, where there is high birth rate; the annual birth defect prevalence is also high around 6-7%which can have a significant impact on many health indicators of the country.

In 2019 birth defects accounted for more than 117 000 deaths in WHO South-East Asia Region – around 22% of the global total. Birth defects were the third most common cause of child mortality in the Region, and the fourth most common cause of neonatal mortality, constituting 12% of all neonatal deaths. Nearly 94% of severe cases occur in middle- and low-resource settings. In a review of more than 3 million pregnancies, University of Florida researchers found 1 in 16 women were exposed to harmful teratogenic drugs — medications that can cause pregnancy loss, birth defects and other health problems for the unborn child.19 Teratogens are a variety of substances found in the environment and, they are dangerous when a pregnant woman is exposed to them. Teratogens include radiation, certain antibiotics, street drugs, prescribed. The effects of teratogens include a host of birth defects and even the possibility of fetal death.

OBJECTIVES

1. To assess the knowledge regarding teratogens and their effects among antenatal mothers others during first trimester in selected hospitals at kollam.

2. To find out the association between the knowledge regarding teratogens and their effects among antenatal mothers during first trimester and selected demographic variables.

POPULATION: In this study target population comprised of antenatal mothers during first trimester.

SAMPLE AND SAMPLING TECHNIQUES: In this study, sample were the antenatal mothers during first trimester in selected hospitals at Kollam. The sample size was 100. The study samples were selected by non probability convenient sampling technique.

TECHNIQUE

Structured interview method

SETTING OF THE STUDY :The study was conducted in antenatal clinics of Bishop Benziger Hospital and AGC Hospital at Kollam.

CRITERIA FOR SAMPLE SELECTION:

These are the certain criteria, which is used for selecting the samples suitable for conducting the study. It includes inclusion criteria & exclusion criteria.

Inclusion Criteria

The samples are selected with the following predetermined criteria. The study includes,

Antenatal mothers

*Who were belonging to the age group of 18-35years

*Who were attending antenatal clinics.

*Who are willing to participate in study

Exclusion Criteria

The study exclude the sample who are,

Antenatal mothers

*Who are under the age of 18 years and above the age of 35 years

*Who were medically advised for teratogen exposure.

*Who were diagnosed with infections.

TOOLS OR INSTRUMENTS

Tool used for the study was:

Tool 1 Demographic data –

It included age, years of married life, type of family ,no.of pregnancies, habits, educational status, occupational status, area of residence, source of information regarding effects of teratogens on fetus, family history of challenged children

Tool 2 Self structured knowledge questionnaire

It consisted of 20 items of multiple choice questions with 4 alternative responses for assessing the knowledge regarding teratogens and their effects among antenatal mothers during first trimester with only one appropriate answer.

The maximum score for the correct answer was one and zero for wrong answer.

DESCRIPTIVE STATISTICS

The investigator adopted

•The selected demographic variables were analyzed by using frequencies and percentages.

INFERENTIAL STATISTICS

The investigator adopted

• Chi square test, to determine the association between the knowledge regarding teratogen and their effects among antenatal mothers during first trimester and the selected demographic variables under study

THE RESULTS ARE PRESENTED IN

SECTION A: Description of demographic variables.

SECTION B: Assessment of level of knowledge regarding teratogens and their effects among antenatal mothers.

SECTION C: Association between knowledge regarding teratogens and their effects among antenatal mothers and selected demographic variables.

SECTION A : Description of demographic variables.

The characteristics of the study population were as follows:

N=100

Sl. No.	Variables	Frequency	Percentage
1.	***Age in years***		
	a.18-24 years	33	33%
	b.25-30 years	50	50%
	c.31-35 years	17	17%
2.	***Years of married life***		
	a.0-2 years	41	41%
	b.3-5 years	35	35%
	c.6-8 years	24	24%
3.	***Type of family***		
	a. Joint family	52	52%
	b. Nuclear family	48	48%
	c. Blended family	0	0%
4.	***Number of pregnancy***		
	a. One	46	46%
	b. Two	43	43%
	c. Three or above	11	11%
5.	***Habits***		
	a. Cigarette smoking	0	0%
	b. Alcohol consumption	0	0%
	c. Tobacco chewing	1	1%
	d. None of the above	99	99%

Sl. No.	Variables	Frequency	Percentage
6	***Educational status***		
	a. Primary education	2	2%
	b. Secondary education	24	24%
	c. Graduate or above	74	74%
7	***Occupational status***		
	a. House maker	51	51%
	b. Private sector	38	38%
	c. Government sector	11	11%
	d. Semi government	0	0%
8	***Area of residence***		
	a. Urban	63	63%
	b. Rural	37	37%
9	***Source of information***		
	a. Magazine and books	5	5%
	b. Social media	51	51%
	c. Health professionals	24	24%
	d. Friends and relatives	20	20%
10	***Family history of challenged children***		
	a. Yes	4	4%
	b. No	96	96%

SECTION B : Assessment of level of knowledge regarding teratogens and their effects among antenatal mothers.

N=100

	Score Range	Frequency	Percentage
0-25%	Poor	1	1%
26-50%	Average	52	52%
51-75%	Good	42	42%
76-100%	Excellent	5	5%

The data in Table 2 shows that 1% of antenatal mothers had poor knowledge, 52% of antenatal mothers had average knowledge, 42% of antenatal mothers had good knowledge and 5% of antenatal mothers had excellent knowledge regarding teratogens and their effects.

SECTION C: Association between knowledge regarding teratogens and their effects among antenatal mothers and selected demographic variables.

Sl No.	Variables	Poor	Average	Good	Excellent	Chi square	Table value	df	Significance
1.	**Age**								
	18-24	0	19	14	0				
	25-30	1	23	23	3	6.21	12.59	6	NS
	31-35	0	10	5	2				
2.	**Years of married life**								
	0-2years	0	21	19	1				
	3-5years	1	16	16	2	4.94	12.59	6	NS
	6-8years	0	15	7	2				
3.	**Type of family**								
	Joint family	0	26	25	1				
	Nuclear family	1	26	17	4	4.12	12.59	6	NS
	Blended family	0	0	0	0				
4.	**Number of pregnancy**								
	One	0	23	21	2				
	Two	1	24	16	2	2.40	12.59	6	NS
	Three and above	0	5	5	1				
5.	**Habits**								
	Cigarette smoking	0	0	0	0				
	Alcohol consumption	0	0	0	0	0.9	16.92	9	NS
	Tobacco chewing	0	1	0	0				
	None of the above	1	51	42	5				

Sl. No.	Variables	Poor	Average	Good	Excellent	Chi square	Table value	df	Significance
6.	**Educational status**								
	Primary education	0	2	0	0				
	Secondary education	0	12	12	0	4.18	12.59	6	NS
	Graduate and above	1	38	30	5				
7.	**Occupational status**								
	House maker	0	28	21	2				
	Private sector	1	16	20	1				
	Government sector	0	8	1	2	11.55	16.92	9	NS
	Semi government	0	0	0	0				
8.	**Area of residence**								
	Urban	0	36	24	3				
	Rural	1	16	18	2	3.207	7.82	3	NS
9.	**Source of information**								
	Magazine and books	0	3	2	0				
	Social media	1	28	20	2				
	Health professionals	0	12	10	2	2.7	16.92	9	NS
	Friends and relatives	0	9	10	1				
10.	**Family history of challenged children**								
	Yes	0	1	2	1				
	No	1	51	40	4	4.16	7.82	3	NS

CONCLUSION

The present study was conducted to assess the knowledge regarding teratogens and their effects among antenatal mothers during first trimester in selected hospitals at Kollam.. Nursing implication of the study included in the area of nursing practice, nursing education, nursing administration and nursing research are given below:

NURSING PRACTICE

- The study findings revealed the importance of in providing knowledge regarding teratogens and their effects among antenatal mothers during first trimester by the nurse communities

NURSING EDUCATION

- In nursing education ,it is very essential and appropriate to give emphasis on topics related to teratogens and their effects among antenatal mothers during first trimester by nursing educators.

NURSING ADMINISTRATION

These findings help the nursing administration to encourage and plan for staff training programme on health education regarding teratogens and .their effects among antenatal mothers during first trimester.

NURSING RESEARCH

- The findings of the present study had added knowledge to the already existing literature and the implication for nursing research are given in the form of recommendations.
- The study can be a baseline for future studies to build up on and motivate other investigators to conduct further studies.

RECOMMENDATION

Based on the findings of the study, it is recommended that:

- A similar kind of study can be conducted for large groups.
- As study can be conducted to assess knowledge, practice and attitude regarding teratogens and their effects among antenatal mothers during first trimester in selected hospitals at Kollam.

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