

**A PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED  
TEACHING PROGRAMME ON KNOWLEDGE REGARDING ECTOPIC PREGNANCY  
AMONG NURSING STUDENTS AT SELECTED NURSING  
COLLEGES OF MEHSANA DISTRICT**

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**ABSTRACT**

*INTRODUCTION: Ectopic pregnancy or Extra uterine pregnancy, accepted from the Greek word “ektapos” meaning out of the place, refers to the blastocyst implantation outside the uterine cavity endometrium with over 95.5% implanting in the fallopian tube. Overall, ectopic pregnancies annually affect less than 2% of pregnancies worldwide. Most ectopic pregnancies (90%) occur in the fallopian tube, which are known as tubal pregnancies, but implantation can also occur on the cervix, ovaries, caesarean scar, or within the abdomen. DESIGN: A quantitative approach using pre-experimental one group pre-test post-test design. PARTICIPANTS: 60 Nursing students were selected using Probability- Simple Random sampling technique in selected colleges of Mehsana district. INTERVENTIONS: Structured teaching programme was given to the Nursing students. TOOL: Self Structured Questionnaire was used to assess the level of Knowledge on Ectopic Pregnancy among Nursing students. RESULTS: In this study overall Among the 60 Nursing students, the majority of 57(95%) Nursing students belong to the age group 18-20 years, majority 32(53%) of Nursing students were female, majority 58(97%) were belongs to hindu religion, equally ratio 30(50%) of ANM stream students and 30(50%) of GNM stream students, majority 44(74%) of Nursing students living in joint family, majority 41(68%) Nursing students were not attended Ectopic pregnancy programme, majority 23(39%) Nursing students had previous information about Ectopic pregnancy through source of part of curriculum. CONCLUSION: The findings of the study revealed that Structured teaching programme helps in improving knowledge regarding Ectopic Pregnancy among Nursing students.*

**Keywords:** Assess, Knowledge, Prevalence, Structured teaching programme, Nursing students, Ectopic Pregnancy.

## INTRODUCTION

**“A MOTHER IS NEVER DEFINED BY THE NUMBER OF CHILDREN YOU CAN SEE, BUT BY THE LOVE THAT SHE HOLD IN HER HEART.”**

**-FRANCESCA COX**

Ectopic pregnancy is a known complication of pregnancy that can carry a high rate of morbidity and mortality when not recognized and treated promptly. It is essential that providers maintain a high index of suspicion for an ectopic in their pregnant patients as they may present with pain, vaginal bleeding, or more vague complaints such as nausea and vomiting. 1

Fertilization and embryo implantation involve an interplay of chemical, hormonal, and anatomical interactions and conditions to allow for a viable intrauterine pregnancy. [3] Much of this system is outside the scope of this article but the most relevant anatomical components to our discussion on the ovaries, fallopian tubes, uterus, egg, and sperm. Ovaries are the female reproductive organs located to both lateral aspects of the uterus in the lower pelvic region. Ovaries serve multiple functions, one of which is to release an egg each month for potential fertilization. 2

The fallopian tubes are tubular structures that serve as a conduit to allow transport of the female egg from the ovaries to the uterus. When sperm is introduced, it will fertilize the egg forming an embryo. 3 The embryo will then implant into endometrial tissue within the uterus. An ectopic pregnancy occurs when this fetal tissue implants somewhere outside of the uterus or attaching to an abnormal or scarred portion of the uterus. 4

Ectopic pregnancy is the leading cause of maternal death in early pregnancy. In a normal pregnancy, the fertilized egg moves from the fallopian tube into the uterus, where the pregnancy develops. In a small percentage of pregnancies, however, the embryo implants in extra uterine locations leading to an ectopic pregnancy. In ectopic pregnancy as the pregnancy continues, it can cause the tube to rupture with internal bleeding. This situation can be life threatening and needs to be treated as medical emergency. Many risk factors like pelvic inflammatory disease, intrauterine device, tubal surgeries, sexually transmitted diseases, infertility are associated with ectopic pregnancy. 5

The incidence of ectopic pregnancy among all pregnancies is about 0.25-2.0% worldwide and can occur in any sexually active woman of reproductive age. Ectopic pregnancy was reported in 0.91% of pregnant women (with no maternal deaths) in a study done at tertiary care centre in South India. Globally the incidence of ectopic pregnancy has been on the rise over the past few decades because of increased incidence of salpingitis (infection of fallopian tubes mostly due to sexually transmitted infections), induction of ovulation, and tubal surgeries; and improved ability to detect ectopic pregnancy. The incidence of ectopic pregnancy has risen from 4.5 cases per 1,000 pregnancies in 1970

to 19.7 cases per 1,000 pregnancies in 1992 in North America. 6

Though the cases of ectopic pregnancy are on rise; the incidence of rupture of ectopic pregnancy and maternal deaths has declined because of early diagnosis and management. 7

Ectopic pregnancy still accounts for 4% to 10% of pregnancy-related deaths and leads to a high incidence of ectopic site gestations in subsequent pregnancies. Ectopic pregnancy accounts for 3.5-7.1% of maternal deaths in India. 8

Suspicion of an ectopic pregnancy in women of reproductive age group presenting with lower abdominal pain or vaginal bleeding with timely case management can prevent the maternal deaths and future fertility problems in women. 9

There are two types of ectopic pregnancy. The classic symptom triad of ectopic pregnancy is amenorrhea followed by vaginal bleeding and ipsilateral abdominal pain. International Journal of Clinical Obstetrics and Gynaecology ~ 11 ~ Shock index is used to evaluate the severity of ectopic pregnancy. It is heart rate divided by systolic blood pressure which helps assess hypervolemia and septic shock.10

Acute Ectopic Pregnancy:-High Serum Beta HCG Levels, Associated With greater invasion of trophoblastic invasion in tubal Wall. Higher risk of rupture compared to chronic ectopic pregnancy. 11

Chronic Ectopic pregnancy:-Due to minor repeated ruptures or tubal abortion that incites inflammatory response leading to a pelvic mass. Negative, lower, rupture late and form a typical pelvic mass. 12

## NEED OF THE STUDY

In this study, the first two steps out of four in the process of guideline implementation for Ectopic Pregnancy were completed. indicator development and measurement of actual care. The developed 12 quality indicators enabled the assessment of Ectopic Pregnancy care. The overall adherence was found to be 75%, but also revealed room for improvement, especially in the adherence to the diagnostic algorithm. In general, deviations from a guideline are difficult to explain from a retrospective collection of clinical data. 13

Specific reasons for not following the guideline are usually not stated in the medical charts. In a sub-analysis, we did not find that the serum HCG level influenced the adherence to the diagnostic algorithm. 13

Whether or not the level of evidence of an indicator influenced the level of adherence could not be analysed since these evidence levels are not reported in this guideline. Disagreement, unfamiliarity with the content of the guideline or the fact that the diagnostic algorithm might be regarded as complicated by its users, might also be the explanations for non-adherence. 14 However, identification

of these barriers was beyond the scope of this study and needs to be further investigated in qualitative research. Therefore, the next steps to be taken are the identification of barriers and facilitators and the development of an implementation strategy to improve guideline adherence in Ectopic Pregnancy care.

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Ectopic pregnancy may occur at any age from menarche to menopause. A study by Rose et al found maximum cases in age group of 21-30 years (43%) which corroborated with the present study (55.6%). 15

To study the magnitude of the problem of tubal pregnancy in The Netherlands, we performed a population based study to explore whether changes in the incidence pattern of Chlamydia and pelvic inflammatory disease have had an impact on the incidence of tubal pregnancy in The Netherlands in a 25-year period. 16

In addition, we investigated whether we can expect a trend change in the incidence of tubal pregnancy in The Netherlands in the near future due to changes in demography, life style or sexual behaviour. 16

From the guideline and the systematic reviews an apparent evidence gap was recognized in the field of surgical management; the two commonly used interventions had not been evaluated and a randomised controlled trial was desirable. These interventions were conservative surgery by removing the ectopic pregnancy only and thus saving the tube for future reproduction (salpingotomy) or radical surgery by removing the tube including the ectopic pregnancy (salpingectomy) leaving only one tube for future reproduction. Salpingotomy preserves the tube, but bears the risks of both persistent trophoblast and repeat ectopic pregnancy. Salpingectomy, minimizes these risks, but leaves only one tube available for future reproduction. In view of this trade off and evidence gap, we started a randomised controlled trial to study the impact on future fertility in women with tubal pregnancy and a normal contralateral tube. 17

Our study describes the first steps in the process of guideline implementation in the management of women with EP. We developed a set of quality indicators according to the standard implementation format of the systematic RAND-modified Delphi method, and put this set through a practice test. 18

The overall adherence to the guideline ranged from 21 to 98%. Concerning the diagnostic process, we found that the adherence was particularly low in haemodynamically stable 5 women with an inconclusive scan and serum hCG levels under the cut off levels of the algorithm. In these women, only 34% had the recommended follow-up visit, 37% had (potential over-) treatment, 22% had a delayed follow up and 7% were evaluated too soon. 19 A higher adherence was observed for women diagnosed with EP, 75% had treatment as recommended by the guideline; thus the other 25% did not receive appropriate care, i.e. expectant management. A high adherence was found for successful laparoscopy, but salpingotomy was only attempted in the minority of women with contralateral tubal

pathology. 20

The conversion rate to salpingectomy was high, leaving these women with a successful salpingotomy rate of only 21%, independent of the time of the day. A persistent trophoblast was observed in only 10 women and overall well treated with systemic MTX. On the other hand, the detection of persistent trophoblast by serum hCG follow up was not complete in 22%. Only half of the women with a negative blood type received anti-D to prevent erythrocyte immunisation. 21

Characteristics of our study were that we included women who were surgically treated for tubal EP, which represent the mainstream treatment in The Netherlands; MTX as primary treatment is estimated to be as low as 5% (17, 18). 21

Limiting the study to women surgically treated for EP also ensured complete coverage considering the precise surgical registry in The Netherlands. In other words, our study population is representative for the majority of EP patients and with a complete coverage. Of the women, 8% presented with signs of hypovolemic shock. It is not clear whether this percentage is high or not, as only women who were surgically treated for EP were included in the current study. 22

This percentage, which reflects clinical practice, is not comparable with other data as most studies on EP report on haemodynamically stable women only or describe women with tubal rupture without mentioning the presence of hypovolemic shock. By including women with EP from different hospital types in three different cities in both urban and suburban areas in the actual assessment of care, the whole range of hospital settings and professionals involved in early pregnancy care were covered. 23

## **STATEMENT OF THE PROBLEM**

A pre-experimental study to assess the effectiveness of structured teaching programme on knowledge regarding Ectopic Pregnancy among Nursing students at selected nursing colleges of mehsana district.

## **OBJECTIVE OF THE STUDY**

- To assess the level of knowledge regarding ectopic pregnancy among nursing students at selected nursing colleges of mehsana district.
- To assess the effectiveness of structured teaching programme on knowledge regarding ectopic pregnancy among nursing students at selected nursing colleges of mehsana district.
- To find -out the association of pre-test knowledge score with selected demographical variables.

## HYPOTHESES

H0: - There will be no significant difference between pre-test and post test level of knowledge score regarding Ectopic pregnancy among nursing students.

H1: - There will be significant difference between pre-test and post test knowledge score after administration of structured teaching programme regarding Ectopic pregnancy among nursing students.

## MATERIAL AND METHOD

Pre-experimental one group pre-test post-test research design and Quantitative Approach. Effectiveness of Structured teaching programme on knowledge regarding Ectopic Pregnancy among Nursing students at selected colleges of Mehsana district. The data was collected from 60 Nursing students. “Probability Purposive” sampling technique were used. A Structured knowledge questionnaire was selected to assess the knowledge regarding Ectopic Pregnancy.

## RESULT

Demographic data was analyzed using frequency and percentage. Frequencies, percentage, mean, mean percentage (%) and standard deviation was used to determine the knowledge score. The “t” value was computed to show the effectiveness of Structured teaching programme and chi-square test was done to determine the association between the pre-test knowledge of office employees with selected demographic variables.

### □ Finding related to demographic data

In this study overall Among the 60 Nursing students, the majority of 57(95%) Nursing students belong to the age group 18-20 years, majority 32(53%) of Nursing students were female, majority 58(97%) were belongs to hindu religion, equally ratio 30(50%) of ANM stream students and 30(50%) of GNM stream students, majority 44(74%) of Nursing students living in joint family, majority 41(68%) Nursing students were not attended Ectopic pregnancy programme, majority 23(39%) Nursing students had previous information about Ectopic pregnancy through source of part of curriculum.

### □ Finding related to pre and post knowledge score

Pre-test prior to the administration of Structured teaching programme, 92% of Nursing students poor knowledge (score:0-10) and 8% Nursing students had average knowledge (score:11-15) regarding Ectopic Pregnancy among Nursing students.

Post-test that was marked improvement in the knowledge of Nursing student with (66%) of Nursing students gained good knowledge (score 16-25) and (32%) gained average knowledge (score 11-15)



regarding Ectopic Pregnancy among Nursing students. It was inferred from the below table that the Structured teaching programme was effectiveness in improving knowledge on Ectopic Pregnancy among Nursing students.

□ **Finding related to effectiveness of structured teaching programme**

Table 1: Distribution of subject on paired ‘t’ test between pre-test and post-test knowledge score regarding Ectopic Pregnancy.

PARAMETER	MEAN	SD	MEAN %	‘t’ VALUE
Pre-test	06.82	2.38	11.37	20.57
Post-test	16.87	2.48	28.11	

□ **Finding related to association between pre-test knowledge score of Nursing students with their selected demographic variables:**

To find out the pre-test knowledge score with selected demographic variables were found by using chi-square test. The results of the present study showed that there is no any significant association found between pre-test knowledge score and selected demographic variables like Age, gender, religion, stream of education, type of family, have you attend any Ectopic pregnancy programme, Previous source of information and evaluate the knowledge regarding Ectopic Pregnancy. So, the research fulfills study objective.

**CONCLUSION**

The present study aims to evaluate the effectiveness of Structured teaching programme on Knowledge regarding Ectopic Pregnancy among the Nursing students at selected colleges. The study conducted by using a pre-experimental one group pretest-posttest Research Design. Selected area is there in study for sample collection at Mehsana. The sample size was 60 college Nursing students. The tool used for the study is self structured knowledge questionnaire. The response was reanalyzed through descriptive (mean, frequency, percentage distribution, standard deviation) and inferential statistics (t test, Chi square). The findings were completed on the objective of the study.

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