A Study to Assess the Knowledge Regarding Torch Infection and Its Prevention Among the Pregnant Women Attending Antenatal OPD, At Era Lucknow Medical College and Hospital

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ABSTRACT
STATEMENT: A study to assess the knowledge regarding TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital.

INTRODUCTION
Pregnancy is the most fascinating and delicate experience for a woman. Reproduction though considered to be a usual process in the life of a women, is stressful and can lead to the threats in reproductive age group women unless, appropriate measures are taken in time, it may reach its peak and endanger the life of mothers. The primary infections include TORCH infections an acronym of Toxoplasma, Other infections (like varicella, syphilis, hepatitis, Rubella, Cytomegalovirus and Herpes.

OBJECTIVES
• To assess the knowledge regarding TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital.
• To find out association between TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital, with the selected demographic variable.
• To develop and distribute information booklet for increased knowledge regarding TORCH infection and its prevention.

RESEARCH METHODOLOGY
This study was conducted using descriptive research approach at Era college of nursing, Lucknow. The total sample size was 50 sample selected by convenience sampling technique. The data was collected by administering structured knowledge questionnaire.

RESULT
The Data obtained are tabulated and analyzed by using descriptive and inferential statistics. The statistical analysis of samples 72% antenatal women good knowledge, 0% average of antenatal women and 28% poor knowledge of antenatal women.

Finding related to assessment of level of knowledge on TORCH infection and its prevention among pregnant women.
50% pregnant women having adequate knowledge regarding TORCH infection and its prevention. 
30% pregnant women having moderate knowledge regarding TORCH infection and its prevention. 
20 % pregnant women having poor knowledge regarding TORCH infection and its prevention.

Result: The majority of pregnant women having adequate knowledge 50% regarding TORCH infection and its prevention.

INTRODUCTION

“Pregnancy is special, let make it as safe.”

- WHO theme.

Pregnancy is the most fascinating and delicate experience for a woman. Not only the health of the baby in the womb but also the woman's health is of equal importance to all her friends’ well-wishers and family members. Every pregnancy is unique experience for the women experiences will be new and uniquely different.

The state of carrying a developing embryo or fetus within the female body. This condition can be indicated by positive results on an over-the-counter urine test, and confirmed through a blood test, ultrasound, detection of fetal heartbeat, or an X-ray. Pregnancy lasts for about nine months, measured from the date of the woman's last menstrual period (LMP). It is conventionally divided into three trimesters, each roughly three months long.

Reproduction though considered to be an usual process in the life of a women, is stressful and can lead to the threats in reproductive age group women unless, appropriate measures are taken in time, it may reach its peak and endanger the life of mothers. Some infections are more common than usual but all of them need to be prevented at best or at worst nipped in the bud for sure. The primary infections include TORCH infections an acronym of Toxoplasma, Other infections (like varicella, syphilis, hepatitis B, etc Rubella, Cytomegalovirus and Herpes. The impact and diagnosis of the disease just mentioned have been touched upon as well as the vaccination strategies to prevent them have been important.

As everyone waits with bated breath for the new arrival, any signs of illness in the mother can throw a spanner in the celebrations. So, it is Imperative that all care is taken to avoid anything untoward from happening and prime concern is to avoid infection at any cost. However, much may a born them, we cannot deny that infections have become part of our normal life. But pregnancy and infections not a great combo by any standards! Infections during this period can pose a risk not only to the mother but the child too and infants may also pose a great risk to the pregnancy itself.

Maternal infections are now being increased and recognized as a major cause of birth defects in new born babies. In pregnant women the virus can cross placenta and result in fetal infections.

TORCH is common in all socio-economic groups but congenital infections with significant impairment is seen at highest rate in population in which women in child bearing age have highest risk of acquiring primary infections. In addition to placental route, TORCH can be transmitted at delivery via the maternal genital tract, during the post-partum period in breast milk and transfused blood products.

All of the TORCH infections can affect people of any age or sex. However, the term TORCH is only used when it applies to pregnant women and their unborn or new born children. As a group, TORCH infections represent a common cause of birth defects. They can cause still births in the delivery of a dead baby.

Recurrent pregnancy loss is defined as three or more consecutive spontaneous losses of pregnancy. Despite the tremendous scientific and technological advances, it has remained a dilemma. It’s still
remaining a diagnostic challenge and frustrating therapeutic experience to most obstetricians. It is a highly frustrating experience for the patient. Despite great advances made by the modern science and cutting-edge technology, the large number of cases, almost 43% are still classified as due to unknown etiology. Known etiological factors include anatomical defects in Mullerian tract, TORCH infections, immunological problems. Many modern therapies, which are in 2 current use, do not lead to a successful pregnancy outcome, resulting in great frustration to the patient and also to the obstetrician. Immunology plays a significant role in the pregnancy. There are many placenta-mediated mechanisms that prevent the immune response of the mother against the fetus, which is foreign body. In normal pregnancy, asymmetrical antibodies develop resulting in T helpers’ cell 2 type responses. It is associated with good progesterone secretion from the placental tissue resulting in a successful outcome of pregnancy. The immunological response from the mother is blocked by progesterone and if this progesterone –blocking factor is suppressed, it lead to unsuccessful pregnancy outcome.

NEED OF THE STUDY
Pregnancy is a period of great anabolic activity, when the most rapid rate of growth takes place. It is a condition in which the fetal growth is accompanied by extensive changes in the maternal body composition and metabolism. Mother and children not only constitute a large group, but they are also a “vulnerable” or special risk group, the risk is connected with Childbearing in the case of women. Certain infections collectively called TORCH infections can produce Stillbirths, congenital anomalies, abortions, blindness, severe deafness, and mental retardation in the offspring. That may be acquired in utero or during the birth process causing heavy morbidity to both mother and child. The first trimester is usually the most dangerous time for the mother to catch these infections quite a great risk of the fetus also being affected during this stage. The risk to baby depends on the particular stage of pregnancy and for each infection it varies e.g., first trimester for rubella or at delivery for herpes simplex virus etc, with such a serious implication it becomes important to diagnose TORCH infections so as to treat as well as help to decide about termination of pregnancy. The onus is therefore not only to detect the maternal infections but once detected it is important to know whether the fetus is also infected or not.
A pilot study was conducted on TORCH infections among antenatal mothers to analyse TORCH infections in mothers are transmissible to fetus in the womb or during the birth and cause a cluster of symptomatic birth defects.
A study was conducted on Primary TORCH infections in the mother can lead to severe fetal anomalies or even fetal loss. A prospective study was designed to detect the seroprevalence of IgM antibodies to Toxoplasma gondii, rubella virus and cytomegalovirus and IgG antibodies to Herpes simplex virus type 1 and 2. one hundred and twenty pregnant woman presenting to the antenatal clinic of a tertiary health centre were included in this study. Out of these 120 women, 112 (93.4%) had evidence of one or more infections. Prevalence pf IgG antibodies to HSV was 70% seropositive for toxoplasmosis, rubella and CMV respectively were 11.6, 8.3 and 20.8%. Our data demonstrating high frequency of primary infections during pregnancy support the conclusion that routine prenatal TORCH screening is justified. In a study the researcher says that primary infections caused by TORCH can lead to serious complications in pregnant women and suggested that consequently, because of high seropositivity 4 of TORCH in pregnant women, the country’s health authorities should be alerted, and preventive measures
should be taken.
All of the TORCH infections can be spread to other persons. The infections usually cause few, if any symptoms in the pregnant women. On the other hand, babies risk serious birth defects if they catch one of these infections during pregnancy or delivery. Babies are usually most severely affected when the mother gets the infection in the first trimester, or first three months of pregnancy. This is the time of pregnancy when the baby’s organs are first starting to form.

TORCH can cause serious, permanent birth defects. They can leave a child with severe communication, behavioural, or learning disorders. Some children appear normal at birth, only to have behavioural, emotional, or learning problems arise later in life. Hepatitis B can cause severe ongoing liver cancer.

A study was conducted on perinatal viral infections among the TORCH agents, occurrence of rubella and human T-lymphotropic virus type 1 (HTLV-1) were studied. Rubella epidemics occurred throughout. These conditions could be explained by the lower rate of rubella H1 antibiotics in the female population.

All TORCH infections have been associated with varying degrees of pregnancy loss. The magnitude of the risk is somewhat related to the severity of the maternal illness.

In an Article regarding TORCH infections, it states the prenatal infections accounts for 2% to 3% of all congenital anomalies. TORCH are some of the most common infections associated with congenital anomalies.

Most of TORCH infections causes’ mild maternal morbidity but has serious fetal consequences and treatment of maternal infections frequently has no impact on fetal outcome.

Therefore, recognition of maternal disease and fetal monitoring once disease is recognized are important for all clinicians. Knowledge of these disease will help the clinician appropriately counsel mothers on preventive measures to avoid these infections and will aid in counselling parents on the potential for adverse fetal outcomes when these infections are present. The healthy mother brings forth the healthy child. TORCH infections can be screened and prevented during pregnancy. Even non-pregnant woman and adolescent girls can get TORCH tests done so they can be well treated in advance and can enjoy a TORCH infection-free pregnancy.

Investigator in her own experience found that the Antenatal mothers have inadequate knowledge regarding remedial measures for screening and prevention of TORCH infections during pregnancy. So, the researcher is interested in providing teaching programme for all antenatal mothers regarding prevention of TORCH infections during pregnancy.

PROBLEM STATEMENT
A study to assess the knowledge regarding TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital.

AIM OF THE STUDY
The aim; To assess the knowledge regarding TORCH infection and its prevention among the pregnant women attending antenatal OPD.

OBJECTIVE OF THE STUDY
• To assess the knowledge regarding TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital
To find out association between TORCH infection and its prevention among the pregnant women attending antenatal OPD, at Era Lucknow Medical College and Hospital, with the selected demographic variable.

To develop and distribute information booklet for increased knowledge regarding TORCH infection and its prevention.

OPERATIONAL DEFINITION
Assess - in this study it refers to determined outcome of assessing knowledge regarding TORCH infection and its prevention during pregnancy among the pregnant women attending OPD with their existing knowledge
TORCH - it refers to infections which occurs during pregnancy includes TOXOPLASMOSIS other (syphilis hepatitis B) RUBELLA, CYTOMEGALOVIRUS, HERPES SIMPLEX VIRUS.
Prevention - it refers to precautionary a measure which is taken by the antenatal mother to prevent TORCH infections during pregnancy.
Pregnancy - it prefers to the period from conception to delivery of the fetus
Knowledge - In this study it refer to a form of awareness or familiarity.

Hypothesis
H₁ There will be a significant association between knowledge regarding TORCH infection with the selected demographic variable.

Assumption
Pregnant women may have some knowledge regarding TORCH infection and its prevention.

Delimitation of the study
Study is delimited to pregnant women attending Antenatal OPD Era Lucknow Medical Coll and Hospital
- Pregnant women present at the time of study
- Pregnant women who are willing to participate

Projected outcome
This study reveals the existing knowledge of TORCH infection and its prevention among the pregnant women.

CONCEPTUAL FRAME WORK
MODIFIED CONCEPTUAL FRAMEWORK WORK BASED ON HEALTH BELIFE MODEL
“Rosenstock’s and Becker’s (1974) and Mainman’s(1975)
RESEARCH METHODOLOGY
The research methodology of investigation is of vital importance. Research methodology involves the systematic procedure by which the research starts from the initial identification of the problem to its conclusion. Methodology gives a descriptive of research design. Setting, population, sample and sample size, sampling, data collection procedure and plan for data analysis.

Research Approach
According to Polit and Hungler, (2004), the research approach is general set of orderly discipline procedure used to acquire information”
In this quantitative research approach was used since the study aimed at assessing the knowledge regarding TORCH infection and its prevention among Pregnant women.

Research design
The research design refers to the researcher’s overall plan for obtaining answer to the research questions and it spells out strategies that the research adopted to develop information that is accurate, objective and interpretable.
The research design selected for the present study was descriptive research design.

Descriptive research design
According to Aquino descriptive research is used to describe characteristics of a population or phenomenon being studied.
Research setting
Setting refers to the area where the study is conducted. It is the physical location and condition in which data collection takes places in study. The study was conducted in Era Lucknow Medical Collage and Hospital, which is located in the Sarfaraz Ganj Hardoi road, Lucknow. The reason for selecting was the investigator in improving knowledge to the Pregnant women who in turn would educate many others.

Population
Population is defined as the entire set of individual or objects having some common characteristics for a research study.

Target population:
The target population of this study will be Pregnant women at attending antenatal OPD at Era Lucknow Medical college and Hospital

Accessible Population:
The accessible population of the study is Pregnant women who come under the age of 21-35 years above and attending antenatal OPD, at Era Lucknow Medical college and Hospital.

Sampling technique
Convenience sampling technique will be used in this study.

Sample and sample size
A sample is small proportion of a population selected for observation and analysis. Sample in this study refers to the Pregnant women who fulfil the inclusion criteria, at Era Lucknow Medical college and Hospital.

Sample: Pregnant Woman
Sample size: 50

Sample Calculation: -
According to Morgan statistical calculation the sample size is 50

\[
\frac{X^2 \times N \times P(1-P)}{\sqrt{N-1} + X^2 \times P(1-P)}\\
\]

\[
e^{\frac{3.841 \times 60 \times 0.5(1-0.5)}{\sqrt{60-1} + 3.841 \times 0.5(1-0.5)}}\\
\]

= 52.0108

CRITERIA FOR SAMPLE SELECTION
Inclusion criteria:
Pregnant woman who are willing participate who know Hindi Pregnant woman who are data at the time data collection
Exclusion criteria:
- Pregnant women who have complications
- Pregnant women who are not present at the time of data collection

Research variables
Research variables are qualities, attributes, properties or characteristics that are observed or measured in a natural setting without manipulating and establishing cause and effect relationship.

Description of Tools

<table>
<thead>
<tr>
<th>SECTION</th>
<th>NUMBER OF QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TORCH</td>
<td>4</td>
</tr>
<tr>
<td>Toxoplasmosis</td>
<td>2</td>
</tr>
<tr>
<td>Rubella</td>
<td>5</td>
</tr>
<tr>
<td>Cytomegalovirus</td>
<td>3</td>
</tr>
<tr>
<td>Herpes simplex virus</td>
<td>2</td>
</tr>
<tr>
<td>Other (syphilis and hepatitis B)</td>
<td>4</td>
</tr>
</tbody>
</table>

Table-1

Demographic variables:
In present study the demographic variables taken in to consideration are Age, Educational status, No of gravida, Type of family, Previous knowledge.

Development of the tool
A structured questionnaire was prepared to assess the knowledge regarding TORCH infection and its prevention. The tool was selected based on the research problem; review of the related literature and with suggestions and guidance of experts in the obstetric and gynaecology, and statistician. The tool was prepared on the basis of objectives of the study. The final tool was prepared with guidance and suggestion of the guide.

Review of literature to provide adequate content area and information.
Consultation and discussion with expert from obstetrics and gynaecology, statistician.
Reviewing of text books.
Discussion and consultation with the statistician.
The final tool was prepared with guidance and suggestion of the guide.

Description of tool
the researcher used are tool which is use to collect the demographic data or samples and self-structured questionnaire is develop by researcher to assess the level of knowledge regarding
TORCH infection its prevention among pregnant woman in this way one tool were used by the researcher for the study

Section 1: Socio demographic Variables
In present study the demographic variables taken in to consideration are Age, Educational status, No of gravida, Type of family, Previous knowledge.

Section 2: Self Structured questionnaires
self- structured questionnaire were use to assess the knowledge regarding TORCH infection and its prevention among pregnant woman which consist of 20 question each has four option, for each right answer one marks. Is given and for wrong 0 is given. The maximum score was 20.

<table>
<thead>
<tr>
<th>LEVEL OF KNOWLEDGE</th>
<th>SCORE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADEQUATE</td>
<td>16-20</td>
<td>50%</td>
</tr>
<tr>
<td>MODRATE</td>
<td>9-15</td>
<td>30%</td>
</tr>
<tr>
<td>INADEQUATE</td>
<td>0-8</td>
<td>20%</td>
</tr>
</tbody>
</table>

SCORING KEY: Each correct answer caries – 1 mark, each incorrect answer – 0 mark
ANALYSIS AND INTERPRETATION

Analysis is the examination and evaluation of the relevant information to select the best course of action from various alternative systematic investigation to establish facts or principles or to collect information on a subject to carry out investigation into a particular sequence, analysis is the process of carefully scrutinizing the data by placing it in categories and applying the statistical procedure.

The data was obtained from the sample of 50 pregnant women and compiled in a master data sheet. Then it was analysis by using descriptive statistics by calculating frequency and percentage; mean, standard derivation (SD) and t-test.

Objective

1. To assess the knowledge on selected TORCH infection in pregnancy and its prevention among the pregnant women.
2. To find out the association between knowledge score with selected socio-demographic variable.

The analysed data was organized according to the objective and presented under the following measures heading.

Section 1: Description of the socio demographic variables of the subjects
Section 2: Finding the knowledge regarding TORCH infection and its prevention among the pregnant women
Section 3: Deals with association between knowledge of TORCH infection and its prevention among pregnant women.
SECTION -1
Association between knowledge of TORCH infection and its prevention

TABLE-3 Frequency and percentage distribution of pregnant woman according to socio demographic variables

<table>
<thead>
<tr>
<th>DEMOGRAPHIC VARIABLES</th>
<th>PREGNANT WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR.NO.</td>
<td>Frequency (n)</td>
</tr>
<tr>
<td>1. Age (in years)</td>
<td></td>
</tr>
<tr>
<td>a) 21-25 years</td>
<td>20</td>
</tr>
<tr>
<td>b) 26-30 years</td>
<td>18</td>
</tr>
<tr>
<td>c) 31-35 years</td>
<td>9</td>
</tr>
<tr>
<td>d) 36 above</td>
<td>3</td>
</tr>
<tr>
<td>2. Educational status</td>
<td></td>
</tr>
<tr>
<td>a) Illiterate</td>
<td>4</td>
</tr>
<tr>
<td>b) Primary education</td>
<td>8</td>
</tr>
<tr>
<td>c) Secondary education</td>
<td>15</td>
</tr>
<tr>
<td>d) Graduate above</td>
<td>23</td>
</tr>
<tr>
<td>3. Number of Gravida</td>
<td></td>
</tr>
<tr>
<td>a) First</td>
<td>27</td>
</tr>
<tr>
<td>b) Second</td>
<td>12</td>
</tr>
<tr>
<td>c) Third</td>
<td>8</td>
</tr>
<tr>
<td>d) Fourth and above</td>
<td>3</td>
</tr>
<tr>
<td>4. Type of family</td>
<td></td>
</tr>
<tr>
<td>a) Nuclear family</td>
<td>9</td>
</tr>
<tr>
<td>b) Joint family</td>
<td>41</td>
</tr>
<tr>
<td>5. Previous knowledge about TORCH infection and its prevention</td>
<td></td>
</tr>
<tr>
<td>a) Yes</td>
<td>19</td>
</tr>
<tr>
<td>b) No</td>
<td>31</td>
</tr>
</tbody>
</table>

If yes, then source of information regarding TORCH infection and its prevention
Table 3: Reveal the frequency and percentage distribution of demographic characteristics. A total of 50 pregnant women attending antenatal OPD of Era hospital Lucknow were selection as sample to assess the knowledge on TORCH infection and its prevention. The demographic characteristics were analysed and present in table 1.

Distribution of study subject according to age revealed that majority (40%) of pregnant women were in the age group of 21-25 years (36%) were in the group of 26-30 years followed by 31-35 years (18%) and (6%) were in 36 and above. As per their educational status majority (46%) of pregnant women had graduate and above followed by secondary education (30%) primary (16%) illiterate (8%).

In context to number of gravida of pregnant women majority (54%) of then were in first gravida followed by second gravida (24%) followed by third gravida (16%) followed by fourth and above (6%).

In context to type of family of pregnant women majority (82%) of then were in joint family followed by nuclear family (18%).

In context to previous knowledge of pregnant women majority (62%) were in no previous knowledge followed by yes previous knowledge (38%).

In context to if yes source of information regarding TORCH infection of pregnant women majority (42%) were in family /friends followed by mass media (32%) followed by Hospital /Health care provider (26%).

**Age (in year)**

![Percentage Distribution of pregnant women according to age (in year)](image)

**Figure No3:** Percentage Distribution of pregnant women according to age (in year)
Educational status

Figure No.4: Percentage Distribution of Pregnant women according to education status

Number of Gravida

Figure No5: Percentage distribution pregnant women according to No. of gravida.

Types of Family

Figure No. 6: percentage distribution of pregnant women according to Types of Family
Previous Knowledge

![Figure No. 7: Percentage distribution of pregnant women according to previous Knowledge](image)

Source of information

![Figure No. 8: Percentage distribution of pregnant women according to source of information](image)

**SECTION-2**

**MAIN ANALYSIS**

**Objective 1:** To assess the knowledge of TORCH infection in infection and its prevention among pregnant women

**TABLE-4**

<table>
<thead>
<tr>
<th>Knowledge on TORCH infection</th>
<th>N</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good knowledge (16-20)</td>
<td>15</td>
<td>30</td>
<td>17.73</td>
<td>1.06</td>
</tr>
</tbody>
</table>
Table-2 depicts the frequency percentage and mean, distribution of knowledge of TORCH infection among pregnant women. The majority (50%) of pregnant women were average knowledge followed by (20%) were having poor knowledge and (30%) only good knowledge regarding TORCH infection and prevention. Hence, it was concluded the majority of pregnant women were had average knowledge regarding TORCH infection and prevention.

Knowledge of TORCH infection and its prevention

Figure No.7: Distribution of knowledge on TORCH infection and its prevention among pregnant women with age

Objective: To find out the association between knowledge score with selected sociodemographic variable.

Table 5: Association of knowledge on TORCH infection and its prevention among pregnant women with selected demographic variables

<table>
<thead>
<tr>
<th>S.NO</th>
<th>DEMOGRAPHIC VARIABLE</th>
<th>Inadequate</th>
<th>Moderate</th>
<th>Adequate</th>
<th>Df</th>
<th>Chi Square</th>
<th>P value</th>
<th>INFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>6</td>
<td></td>
<td></td>
<td>11.31</td>
<td>0.079</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Year Range</td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
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<td>-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25 in year</td>
<td>5</td>
<td>13</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30 in year</td>
<td>1</td>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-35 in year</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36 Above</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>27</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Educational status

<table>
<thead>
<tr>
<th>Status</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Primary education</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Secondary education</td>
<td>2</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Graduate and above</td>
<td>2</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>29</td>
<td>14</td>
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</table>

3. Number of gravida

<table>
<thead>
<tr>
<th>Gravida</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>4</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Second</td>
<td>1</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Third</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Fourth and above</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>27</td>
<td>14</td>
</tr>
</tbody>
</table>

4. Type of family

<table>
<thead>
<tr>
<th>Family</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear family</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Joint family</td>
<td>8</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>27</td>
<td>14</td>
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</tbody>
</table>

5. Previous knowledge about TORCH infection

<table>
<thead>
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<th>Knowledge</th>
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6. If yes then

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| Significant P Value | 0.642 | NS |

| Total              | 9   | 27 | 14 |

| If yes then        | 4   | 2  | 2.513 | 0.642 NS |
CHAPTER - 5

DISCUSSION

The meaning of research in simple language is to explore or discover new things and concepts. People do research in the same issues again to find a gather number of facts to compare and discuss their results with the previous findings or to provide a base for future research in same subject. By doing this, it helps to make the objectives, theoretical based literature and formulated research hypothesis. The major findings of the study were:

1. Findings related to demographic variables.
   Majority of respondent were in the age group 21-25 in pregnant women.
   Majority of respondent are primi gravida.
   Majority of respondent are graduate.
   Majority of respondent are joint family.
   Majority of respondent are no any previous knowledge.

2. Finding related to assessment of level of knowledge on TORCH infection and its prevention among pregnant women.
   50% Pregnant women having adequate knowledge regarding TORCH infection and its prevention.
   30% Pregnant women having moderate knowledge regarding TORCH infection and its prevention.
   20% Pregnant women having poor knowledge regarding TORCH infection and its prevention.

3. Finding related to assess the level of knowledge regarding TORCH infection and its prevention among pregnant women with the selected demographic variables.
   There is significant association between the level of knowledge regarding TORCH infection and its prevention and age of the pregnant women.
   The find objective of the study was to assess the level of knowledge regarding TORCH infection and its prevention among pregnant women.
   The standardized perceive knowledge of TORCH infection and its prevention questionnaires used for study investigated the level of knowledge among pregnant women.
   In the study 50% pregnant women were having adequate knowledge, 30% pregnant women were having moderate knowledge and 20% pregnant women were having poor knowledge regarding TORCH infection and its prevention.
   The second objective of the study to find out of the association between the level of knowledge among pregnant women and its prevention with the selected demographic variables like age, educational status, number of gravidas, type of family, previous knowledge.
Most of the pregnant women between 21-25 years of age 50\%, most of the pregnant women are educational status (graduate women) 46\%, most of the women is primi gravida 54\%, most of the type of joint family were 82\%, most of the pregnant women having previous knowledge 62\%.

Result: The majority of pregnant women having adequate knowledge 50\% regarding TORCH infection and its prevention.

SUMMARY, CONCLUSION AND RECOMMENDATIONS
The main focus of the study was to evaluate the level of knowledge regarding TORCH infection and its prevention among the pregnant women at Era College and Hospital Lucknow. The samples were selected by non-probability convenient sampling technique the data was collected from 50 antenatal mother.

The tool used in this study consist of sections. Section A was demographic variables. And section B was questionnaire.

The major findings of this study were:
Out of 50 samples 40\%belong 21-25 age group, 36\%belong to 26-30 age group, 18\%belong to 31-35 age group and 6\%belongs to 36 above age group.
Out of 50 samples 54\% are gravida (first baby), 24\% are (second baby),16\% are (third baby) and 6\% are (fourth and above).
Out of 50 samples 8\% are illiterate, 16\% are primary education, 30\%secondary education and 46\% are graduated and above.
Out of 50 sample 38\% are having previous knowledge and 62\% are having no any previous knowledge.

NURSING IMPLICATIONS
The present study emphasized to assess the knowledge regarding TORCH infection and its prevention among the pregnant women.
The finding of the study has implication for nursing service, nursing education, nursing administration and nursing research.
These finding will help the nursing professional to identify the causes of TORCH infection and its prevention.
The result could help to diagnose the rare condition is occur of TORCH infection in pregnant women.

NURSING EDUCATION
Nurse should have thorough knowledge regarding various aspects of health in order to provide comprehensive care to society. Nurses need to have in depth knowledge regarding TORCH infection so that they can motivate the pregnant women about TORCH infection and its prevention. The findings of the study would help the nurses to develop an in -sight into the prevention of TORCH infection.
The study outlines, the significant of short time course and in -services education to quite nurses with the current knowledge on TORCH infection and prevention.
Nurse educators when planning and instructing the pregnant women should provide opportunities for pregnant women to gain knowledge in TORCH infection and its prevention.
Nursing personnel should be given in service education to update their knowledge.
Nurse educator when instructing the pregnant women should provide adequate opportunity for pregnant
women.

NURSING SERVICE
Nurse the key person of the health team, who play a major role in health promotion and maintenance. Nurse should be update with knowledge and competence in providing quality care.
The nurse personnel need to prepare teaching and learning material like information guide which can be study at nursing college.

NURSING RESEARCH
The finding of the study will act as catalyst to carry out more extensive research. A very limited research studies conducted to assess knowledge on selected TORCH infection and its prevention among the pregnant women. Pregnancy and child birth is a precious journey, every pregnant woman faces the risk of sudden, unpredictable complication that could injury herself and its baby. The nurse should provide knowledge and encourage pregnant women to utilize knowledge related selected TORCH infection and its prevention.

LIMITATION OF THE STUDY
The study was limited
• 50 pregnant women.
• Attending antenatal OPD at Era Lucknow Medical College and Hospital.
• Those who are willing to participate in the study.
• Only knowledge was considered in the present study.

Recommendations:
On the basis of the present study the following recommendations have been made for further studies.
The same study can be conducted by using a control group non experimental group to determine the level of knowledge regarding TORCH infection and its prevention.
A descriptive study can be undertaken to determine the level of knowledge among the pregnant women attending antenatal OPD at Era Lucknow Medical College and Hospital.
A similar study can be done in various other settings with large samples.
The study can be done on large population.

CONCLUSION
We have done the research level of knowledge regarding TORCH infection and its prevention among pregnant women. TORCH infection affects the health of pregnant women. The study concluded that 50% had adequate knowledge, 30% had moderate knowledge and 20% had poor knowledge of pregnant women regarding TORCH infection. It shows the majority of the sample had adequate knowledge of the pregnant women regarding TORCH infection and its prevention.

REFERENCES
BOOKS:

Journals