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### RESEARCH ARTICLE

#### PREVALENCE OF HIGH RISK PREGNANCY - A DESCRIPTIVE STUDY.

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#### Abstract

A Descriptive study was conducted to assess the prevalence of high risk pregnancy among the antenatal mothers and to find their association with selected demographic variables. The study was conducted among 100 antenatal mothers chosen by Convenience sampling technique in Obstetrics and Gynaecological Out Patient Department, Chettinad Hospital and Research Institute, Kanchipuram district, India. Modified Hobel's high risk pregnancy risk assessment scale was used. The study reveals that 55% of the antenatal mothers have low risk, 20% of the mothers have moderate risk and 25% of the mothers were of high risk Pregnancy status. The mean value of Low risk, Moderate risk and High risk pregnancies are 1.58, 7.10 and 17.81 and their standard deviations are 1.81, 1.51 and 7.95 respectively. The findings shows that age, education, occupation and family income of antenatal mothers has significant association with the prevalence of high risk pregnancy.

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#### Introduction:-

"A High risk pregnancy is the one in which the life or health of the mother or fetus is jeopardised or endangered by a disorder coincidental with or unique to pregnancy. The risk factors may be pre - existing factors prior to or at the time of antenatal visit or may develop subsequently in the ongoing pregnancy. Almost 50 percentage of all maternal complications & 60 percentage of all primary cesarean section arise from high risk group of cases." **Ricci, S.S, Williams, L, Kyle, T. (2007).**

According to **World Health Organization. (2011)**, the prevalence of high risk pregnancy in Asia ranges from 20-30%.

70-80% of maternal mortality is due to:-

- Severe bleeding or haemorrhage (25%)
- Infections (15%).
- Unsafe abortions (13%)
- Eclampsia (12%)
- Obstructed labour (8%)
- Other direct causes (8%)
- Indirect causes like Malaria (20%).

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**Paudel, I.S, Singh, S.P, Jha, N, Vaishya, A and Mishra, R.N. (2008).** had reported in their study that the proportion of high risk pregnancies .i.e. below 17 years and above 35 years with spacing less than 24 months were 30%. Education of mothers showed high association with the prevalence of high risk pregnancies.

According to **Deccan chronical. (2015)**, the current maternal mortality rate in India is 167/1,00,000 live births.

A study conducted by **Hatez, S. K and et al. (2014)**, revealed that 44% of Saudi women with high risk pregnancies between 30-35 years of age, 60% had obesity, 62% had previous deliveries, 35% had previous abortions. Hypertensive disorders of pregnancy seem to be a major cause of mortality and morbidity leading to 10-15% of maternal death in world.

As most of the maternal mortality rate is caused by the high risk pregnancy and thus it is high time to assess the prevalence of high risk pregnancy. So that the antenatal mothers can identify their risk status and can manage accordingly.

#### **Problem statement:-**

A descriptive study to assess the prevalence of high risk pregnancy among antenatal mothers attending **OBG OPD**, in a selected Tertiary Care Hospital, Kanchipuramdist, Tamilnadu, India.

#### **Study objectives:-**

- To assess the prevalence of high risk pregnancy among the antenatal mothers.
- To associate the prevalence of high risk pregnancy with selected demographic variables.

#### **Review of literature:-**

**Jain, S, Anand, S and Aherwar, R. (2014)**, conducted a prospective study on High risk scoring for prediction of pregnancy outcome. The Objectives of the study were to detect high risk factors in pregnancy and to develop a simple scoring system to identify and categorize high risk pregnancies and to predict neonatal outcome by prospective multifactorial analysis of high risk factors. The methods used in this prospective study, antepartum, intrapartum and neonatal parameters were integrated into the clinical records and the relationship of risk score to outcome was evaluated for 415 randomly selected pregnant patients over a period of 1 year. Risk scoring was applied on selected mothers more than 28 weeks of gestation who presented in labour. The result was that out of 415 women, 59% were High Risk, 46% were Low risk and 31% were No risk. In High risk group there were 59 perinatal deaths and perinatal mortality rate was very high (614 per 1000 live births). The risk scoring system can thus be used not only as a test for predicting perinatal mortality but also as a simple and cost effective screening tool for identifying pregnancies at higher risk of perinatal mortality and morbidity so that these are subjected to the special high risk care they need.

**Olaku, D. (2014)**, conducted a study on high-risk pregnancies and perceptions of maternal mortality among women in plateau state of Nigeria. This study is based on high-risk pregnancies and perceptions of maternal mortality among women in Plateau State of Nigeria. The aim of the study is to explain the manifestations of maternal mortality to determine the extent to which socio-cultural factors are responsible for high-risk pregnancies and to investigate respondents the knowledge of high-risk pregnancies. Both primary and secondary data were explored for the study and quantitative and qualitative techniques of data collection were triangulated for analysis. Using the Yamane's sample size determination technique, 400 respondents were selected for the study. Questionnaires were administered on 300 respondents who were women within reproductive ages (15-49); in-depth interviews were conducted on 16 key informants. In addition, 7 focus group discussions (FGDs) consisting of 84 participants (12 in each group) were carried out. The findings revealed that high-risk pregnancies were major contributory factors to the high-rate of maternal mortality in Plateau state. Every pregnancy was found to be associated with high-risk due to obstetric factors, medical conditions and unpredicted outcomes. The results on the first objective indicated that high-risk pregnancies are practiced in Plateau state. This suggests that most women marry early and give birth before age 34. The second objective indicated that maternal mortality as a result of high-risk pregnancies is still a social problem in Plateau state. The third objective indicated that social factors like non-attendance of antenatal clinics, son preference, poverty and caesarean section (CS) predispose respondents to having high-risk pregnancies. Findings on the fourth objective indicate that respondents still indulge in high-risk pregnancies but early pregnancies were commonly practiced and most respondents have knowledge of maternal mortality.

**Bharti, Kumar, V, Kaur, A, Chawla, S and Malik, M. (2013).** conducted a community based study to determine the prevalence and correlates of high risk pregnancy in rural Haryana. The objectives of this study were to determine prevalence and correlates of high risk pregnancy in a rural block of Haryana. A cross-sectional study was carried out in all the 20 sub-centers under Community Health Centre (CHC) Chiri (Block Lakhnamajra), the rural field practice area of Department of Community Medicine, PGIMS, Rohtak during July 2011 to June 2012. Assuming prevalence of high risk pregnancy as 10%, a sample of 900 eligible subjects was taken into consideration. All registered pregnant women at the particular sub-center at that point of time were included. A pre-tested semi-structured interview schedule was used for interviewing the study subjects. Data so collected were compiled & analysed using statistical software (SPSS version 20.0). The result was that the prevalence of high risk pregnancy was found to be 31.4 %. Prevalence of high risk pregnancy was found significantly more in lower education group (36.7%) as compared to higher education group (24.9%). In the lower socio-economic group, prevalence of high risk pregnancy (33.4%) was found significantly higher than the upper socio-economic group (19.7%).

**Kumar, M. P, Gnanadeep, V. N, Dixit, U. R and Patil, P. S. (2013).** conducted a study to know the Prevalence Of High Risk Pregnancy In Rural Dharwad. Although only 10-30% of the mothers seen in antenatal period can be classified as high risk they account for 70-80% of perinatal mortality and morbidity. The aim of the study is to know the prevalence of high-risk pregnancies and its association with socio-demographic factors in rural field practice area, which are attached to Department of Community Medicine, SDM College of Medical Sciences and Hospital, Dharwad. Pregnant women who are attending health centers in that particular area are the participants of the study. Data was collected from 1st August – 31st October 2013. A pre-designed, pre-tested proforma was used to collect information regarding socio-demographic characteristics and obstetric history. Height, weight, BP was recorded, general physical and systemic examination was done. Haemoglobin estimation was done by Sahli's method. The result shows that the prevalence of high risk pregnancy was found to be 37%, comparatively higher than study done in rural Haryana. Hypertension was seen in 10.8% of high risk pregnancy cases in current study as compared to 22% reported in a study done in rural Haryana.

**Azevedo, R. O, Silvino, R. H and Campos, H. (2013).** conducted a descriptive study on Nursing guidelines with regard to high-risk pregnancy. The aim of the study is to describe the profiles of women with high-risk pregnancy receiving hospital treatment so as to provide nursing care procedure guidelines in order to improve the quality of care. To identify some relevant and adequate nursing procedures for dealing with pregnant women in hospital; to develop guidelines on how the healthcare providers should handle high-risk pregnancy. This is a descriptive exploratory study using a qualitative approach which involves documentary analysis, non-participant observation, and questionnaire to gather information from the nursing team members of a University Hospital which is reference in high-risk pregnancies. The participants will be nurses, nurse technicians and nursing assistants who provide direct assistance to the patients. The data collected will be analyzed using descriptive statistics and the discussion will be based on the literature on models of healthcare for women with high-risk pregnancies. The study result assumes that the nursing care provided to women with high-risk pregnancy at HUAP has to be systematized by guidelines in order to improve the quality of the care service delivered.

**Tei, A, Oiyama, H, Okawa, S, Saito, (2011)** conducted a study to assess the incidence of high risk pregnancy by clinical application of Hobel's high risk pregnancy scoring system. The objective of the study was to determine the incidence of high risk pregnancy by clinical application of Hobel's high risk pregnancy scoring system in an Out Patient Department, OBG, Bull Tokyo Med Dent University among 350 mothers pregnant mothers attending obgopd. The method used was Hobel's high risk pregnancy scoring system. The results show that the incidence of high risk pregnancy was nearly 21%, moderate risk pregnancy was 32% and low risk pregnancy was almost 47%.

## **Materials and methods:-**

### **Research design and approach:-**

A Descriptive research design using a quantitative approach was used in the study.

### **Research setting:-**

The research was conducted in **Obstetrics and Gynaecological Out Patient Department**, Chettinad Hospital and Research Institute, Kelambakkam, Kanchipuram district, Tamilnadu, India.

**Research population:-**

The target population for the study was all the antenatal mothers

**Study samples:-**

The study samples were all the antenatal mothers attending OBG OPD, Chettinad Hospital and Research Institute, Kelambakkam, Kanchipuramdist.,Tamilnadu, India.

**Sampling criteria:-****Inclusion criteria:-**

- Antenatal mothers irrespective of their period of gestation.
- Antenatal mothers who were willing to participate in the study.
- Antenatal mothers who can understand tamil/English.

**Sampling technique and size:-**

Convenience Sampling technique was used to select **100 samples** for the study.

**Description of the tool:-****Section A:-**

Section A of the tool is structured questionnaire for an interview schedule which consists of **Demographic variables** such as Age, Religion, Habitat, Educational status, Occupation, Family income, and Family history of Medical illness.

**Section B:-**

Section B of the tool is also a Structured interview schedule based on Modified Hobel's high risk pregnancy risk assessment scale.

**Ethical consideration:-**

- The research proposal was approved by the OBG department of Chettinad Hospital and Research Institute prior to conducting main study.
- Secondly, it was approved by institutional human ethical committee of Chettinad University.
- Finally, an informed consent was obtained from each antenatal mother for conducting the study.

**Data collection:-**

The researcher conducted a structured interview with the samples. The samples are instructed to answer all the questions that was put forth by the researcher.

**Distribution of the frequency, percentage, mean and standard deviation of the high risk status of the antenatal mothers**

SNO	PREGNANCY RISK STATUS	FREQUENCY	PERCENTAGE	MEAN	STANDARD DEVIATION
1	LOW RISK PREGNANCY	55	55%	1.58	1.81
2	MODERATE RISK PREGNANCY	20	20%	7.10	1.51
3	HIGH RISK PREGNANCY	25	25%	17.84	7.95

**Results and Discussion:-**

- It was observed that majority of the antenatal mothers 46% were in the age group of 21-25 years and 79% of the mothers were Hindu. 70% of their habitat was in urban, 94% of the mothers were educated and 72% were house wife. 66% of the mothers family income was above 10000 and 59% of the antenatal mothers has no family history of medical illness.
- The study reveals that 55% of the antenatal mothers have low risk, 20% of the mothers have moderate risk and 25% of the mothers were of high risk pregnancy status.
- The mean value of Low risk, Moderate risk and High risk pregnancies are 1.58, 7.10 and 17.81 and their standard deviations are 1.81, 1.51 and 7.95 respectively.
- The above results were supported by the study conducted by **Simarpreet, Mamta, Pooja et al. (2015)**, on the prevalence of high risk factors of pregnancy among 150 pregnant women selected by convenience sampling technique, visiting antenatal opd of a selected hospital in Punjab. A structured questionnaire was used to assess the socio-demographic variables along with the prevalence factors. It was found that more than one-third 35% of pregnant women had low risk, one-third of women 33% had moderate risk, 30% had high risk and only 2% had very high risk factors.

**Conclusion:-**

As the findings of the study reveals that nearly one third of the antenatal mothers were of high risk status, it's high time to screen all the pregnant mothers in their early trimesters of pregnancy to detect the mothers who are at high risk status so that, majority of the complications can be prevented which in turn helps to reduce maternal mortality rate. Also a structured teaching programme can be conducted for the antenatal mothers regarding the high risk pregnancies, its prevention, treatment and management.

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