# TO EVALUATE THE EFFECTIVENESS OF SELECTED NURSING INTERVENTIONS IN PREVENTION OF PRE-ECLAMPSIA AMONG AT RISK PRIMIGRAVID MOTHERS AT GOVERNMENT HOSPITAL, JABALPUR

**Anamika Jenett Kirten**

Professor

Yogmani Institute of College of Nursing

## ABSTRACT

*Professor Anamika Jenett Kirten conducted a departmental study in the years 2020-2021, "This present study aimed to evaluate the effectiveness of selected nursing interventions in prevention of pre-eclampsia among at risk primigravid mothers at Government Hospital, Jabalpur," to meet the needs of community people in the adopted areas by Yogmani Institute of College of Nursing, Jabalpur.*

*Pre-eclampsia is regarded as a serious health problem, and effective preventative strategies are currently unavailable. Maternal age extremes (age 18 years vs. age > 30 years), obesity, and nulliparity have all been identified as risk factors for pre-eclampsia. Women who have been diagnosed as high risk can be targeted for more intense antenatal surveillance and preventive measures.*

*This present study was carried out with an aim "To evaluate the effectiveness of selected nursing interventions in prevention of pre-eclampsia among at risk primigravid mothers at Government Hospital, Jabalpur".*

*KEY WORDS: Primi Gravida mothers, pre-eclampsia, fetus , proteinuria, Surveillance.*

## Introduction:

The study's objectives were to examine and compare the post-interventional level and clinical parameters of pre-eclampsia, as well as the post-interventional level of maternal, fetal, and newborn outcome among at-risk primigravid mothers between the study group and the control group.

A literature review was compiled from several sources. This study's conceptual framework was based on Ernestine Widenbach's Helping Art of Clinical Nursing Theory (1964).

The study was a true experimental research design that included 211 mothers, 108 in the study and 103 in the control group who met the inclusion criteria. Proportionate stratified random sampling was used to select samples, which were divided into three groups: Group A - mothers aged less than or equal to 18 years, Group B - mothers aged 30 years and above, and Group C - pre-pregnancy BMI >27.5 (obese) in both the study and control groups.

Age, occupation, type of family, socioeconomic position, and pre pregnancy BMI were matched in both the groups. Ethical considerations of the investigation were considered throughout the study. A checklist for screening and sample selection, a structured questionnaire to assess socio-demographic and anthropometric variables, a tool for surveillance of pre-eclamptic features (systolic blood pressure, diastolic blood pressure, proteinuria, edema, weight gain), and a tool to assess the maternal, fetal, and

neonatal outcome of at-risk primigravid mothers for pre-eclampsia are all part of this study. The instruments were validated by the professionals in the field of Obstetrics & Gynecology. The tool's reliability for monitoring pre-eclamptic features was evaluated using the inter-rater observer method, which yielded a spearman's rank correlation co-efficient value of 0.8. Hence the tool was considered dependable.

Selected nursing interventions (increased calcium lactate supplement dose from 300 mg to 1200 mg and stretching exercises for 20 minutes a day, 5 days a week, from 17 weeks of gestation until the end of pregnancy) were given to at-risk primigravid mothers for pre-eclampsia in the study group, while routine measures were used in the control group.

Post-eclampsia clinical characteristics (systolic blood pressure, diastolic blood pressure, proteinuria, edema, and weight gain) were measured and scored for mothers in both groups at 16, 20, 24, 28, 32, and 36 weeks of gestation and at the end of pregnancy. The investigator's scale was used to interpret the scores. After delivery, both groups' maternal, fetal, and neonatal outcomes were evaluated by reviewing their records. Data was analyzed by statistical package for Social Sciences (SPSS) version 16 and Instate were used for data analysis.

**Major findings of the study**

◆    At the end of pregnancy, 18 (15.62%, 95% CI ±6.88, 8.96% - 23.12%) at-risk primigravid mothers out of 108 mothers in study group and 32 (29.66%, 95% CI ±8.72, 21.59% - 39.02%) mothers out of 103 mothers in control group (overall) developed pre-eclampsia at the end of pregnancy.

◆    Statistically significant difference was observed with all the clinical parameters of pre-eclampsia like systolic blood pressure, diastolic blood pressure, proteinuria at $p \leq 0.01**$ level (RR 1.899, 95% CI 1.128 – 3.52), edema (RR 5.758, 95% CI 1.695 - 20.015) and weight gain (RR 7.99, 95% CI 1.924 - 34.689) at $P \leq 0.001***$ level among the at-risk primigravid mothers between study and control group (overall) at the end of pregnancy.

◆    Overall, the at-risk primigravid mothers in control group had 2.9 times risk (OR 3.444, 95% CI 1.345 -7.854) at 28 weeks of gestation, 1.9 times risk (OR 2.624, 95% CI 1.321 -5.872) at 32 weeks of gestation, 2.8 times risk (OR 3.124, 95% CI 1.415-5.897) at 36 weeks of gestation, 2.2 times risk (OR 2.416, 95% CI 1.248-4.527) at the end of pregnancy in developing pre-eclampsia than the study group

◆    In overall, the comparison of the mean sum rank of the post interventional level of pre-eclampsia shows a statistically significant difference at t=4728.21, p=0.001*** at 24th week, t=5124.66, p=0.001** at 28th week, t=5124.22, p=0.001** at 32nd week, t=4895.55, p=0.001** at 36th

week of gestation and t=4784.25, p=0.001** at the end of pregnancy among the at risk primi gravid between the study and control group.

- There was no statistically significant association between the socio-demographic and anthropometric variables and the post-interventional level of pre-eclampsia among at-risk primigravid mothers in the study group at the $p \leq 0.05$ level, while socioeconomic status was statistically significant with the level of pre-eclampsia in the control group ($\chi 2=7.82$, P=0.001).

- At the $p < 0.01$** level, educational qualification was found to have a statistically significant association with the post interventional level of clinical parameter (weight gain) for pre-eclampsia among the at-risk primigravid mothers in the study group at $\chi 2=14.42$, p=0.006 and type of family at $\chi 2=13.25$, p=0.001.

- At risk factors for pre-eclampsia, age was found to be statistically significant at $\chi 2=16.24$, p=0.044, pre-pregnancy BMI was found to be statistically significant at $\chi 2=16.11$, p=0.011, at risk factors for pre-eclampsia were found to be statistically significant at $\chi 2=17.58$, p=0.001, with (oedema) among at-risk primigravid mothers in the control group.

- The at-risk primigravid mothers' maternal, fetal, and neonatal outcomes were statistically significantly different from the control group at the $p \leq 0.001$ level.

## CONCLUSION

The study finding showed that, there was 50 percent reduction in the incidence of pre-eclampsia in the study group compared to the control group, which supports the usefulness of chosen nursing interventions in prevention of pre-eclampsia. The study also shows that the control group has a higher risk of maternal, fetal, and neonatal outcomes than the study group.

Pre-eclampsia is a serious hazard to both the mother and the fetus, and this study found a way to identify risk variables at the booking visit so that the recommended nursing intervention can be adopted as a standard policy in the prevention of pre-eclampsia.

*REFERENCES:*

1. **Linda A. Fondjo, Vivian E. Boamah, Adelaide Fierti,(2019)** *Knowledge of preeclampsia and its associated factors among pregnant women* **https://pubmed.ncbi.nlm.nih.gov/317912 64/**BMC Pregnancy Childbirth 2019 Dec 2;19(1):456. doi: 10.1186/s12884-019-2623-x.

2. **Dagne Addisu, Minale Bezie, Abenezer Melkie, (2021)**. on Knowledge and attitude of pregnant women towards preeclampsia https://pubmed.ncbi.nlm.nih.gov/3366546 4/2021 Feb 22;7(2):e06323. doi: 10.1016/j.heliyon.2021.e06323. eCollectio n 2021 Feb.

3. **Dr. Bhuvaneshwari G and P Thaines Stephy (2020)** https://www.researchgate.net/publication/ 344046516_A_study_to_assess_the_level_ of_knowledge_regarding_Pre-Eclampsia_among_antenatal_mothers

4. **Rupinder Kaur[1], Usha Sharma[2] and Ravi Prakash Saxena[3](2021),** *A study to assess the knowledge and practices regarding prevention of pre-eclampsia among antenatal mother*

5. *Rosemary Townsend, Patrick O'Brien, Asma Khalil (2016): https://www.ncbi.nlm.nih.gov/pmc/articles /PMC6832549/Integr Blood Press Control. 2016; 9: 79–94.Published online 2016 Jul 27. doi: 10.2147/IBPC.S77344*

6. **Jussara Mayrink, Renato T. Souza, Francisco E. Feitosa,(2019)** *: https://pubmed.ncbi.nlm.nih.gov/3126698 4/Sci Rep 2019 Jul 2;9(1):9517.*

7. *doi: 10.1038/s41598-019-46011-3*

8. *Anuradha; Gomathi, B et. al (2017),north westRajasthan, September 04, 2017; Accepted: September 26, 2017https://www.ejmanager.com/mnstemp s/67/67-1505368311.pdf?t=1619482041*