



“A STUDY TO ASSESS EFFECTIVENESS OF PRENATAL COUNSELING ON PHYSICAL AND PSYCHOLOGICAL WELL-BEING AMONG WOMEN WITH PREECLAMPSIA AT SELECTED TERTIARY CARE HOSPITAL AT INDORE, MADHYA PRADESH.”

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Abstract

Background: Preeclampsia is a major hypertensive disorder of pregnancy that contributes significantly to maternal and fetal morbidity and mortality. In addition to physical complications, women with preeclampsia often experience anxiety, stress, and reduced psychological well-being. Structured prenatal counseling is a nursing intervention that may improve both physical and psychological health during pregnancy.

Objectives: To assess the effectiveness of prenatal counseling on the physical and psychological well-being among women with preeclampsia at a selected tertiary care hospital in Indore, Madhya Pradesh.

Materials and Methods: A quantitative pre-experimental one-group pre-test and post-test research design was adopted. A total of 100 women with preeclampsia were selected using purposive sampling. Baseline data were collected using a structured physical well-being checklist and a standardized psychological well-being scale. Following the pre-test, participants received structured prenatal counseling. The post-test was conducted seven days after the intervention. Data were analyzed using descriptive statistics and inferential statistics, including the paired *t*-test and Chi-square test. A *p*-value of less than 0.05 was considered statistically significant.

Results: The mean physical well-being score improved significantly from 11.84 ± 2.96 in the pre-test to 17.96 ± 1.84 in the post-test ($t = 23.87, p < 0.001$). Similarly, the mean psychological well-being score increased significantly from 28.42 ± 5.61 to 45.38 ± 4.82 ($t = 31.26, p < 0.001$). The findings demonstrated that prenatal counseling had a significant positive effect on both physical and psychological well-being among women with preeclampsia.

Conclusion: Structured prenatal counseling was found to be an effective nursing intervention for improving the physical and psychological well-being of women with preeclampsia. Integrating prenatal counseling into routine antenatal care may enhance maternal well-being, encourage self-care practices, and contribute to improved pregnancy outcomes.

Keywords: Preeclampsia, prenatal counseling, physical well-being, psychological well-being, antenatal care, nursing intervention.

Introduction

Hypertensive disorders of pregnancy are among the leading causes of maternal and neonatal morbidity and mortality worldwide, affecting approximately 5–10% of pregnancies. Preeclampsia, a pregnancy-specific hypertensive disorder that develops after 20 weeks of gestation, is characterized by hypertension with proteinuria or evidence of organ dysfunction and contributes significantly to adverse maternal and fetal outcomes.

Women with preeclampsia are at increased risk of serious maternal complications such as eclampsia, HELLP syndrome, renal failure, placental abruption, and postpartum hemorrhage, while fetal complications include preterm birth, fetal growth restriction, low birth weight, and increased perinatal mortality. In addition to these physical complications, the diagnosis of preeclampsia often leads to anxiety, stress, fear, and reduced psychological well-being due to concerns about maternal and fetal health.

Prenatal counseling is an essential nursing intervention that provides pregnant women with knowledge regarding disease management, lifestyle modification, medication adherence, danger signs, stress reduction, and birth preparedness. Effective counseling enhances self-care practices, improves coping abilities, and promotes both physical and psychological well-being. Nurses play a vital role in delivering individualized counseling and continuous emotional support throughout pregnancy.

Although several studies have focused on the clinical management of preeclampsia, limited research has evaluated the effectiveness of structured prenatal counseling on both physical and psychological well-being among women with preeclampsia, particularly in tertiary care hospitals in Madhya Pradesh. Therefore, the present study was undertaken to assess the effectiveness of prenatal counseling among women with preeclampsia at a selected tertiary care hospital in Indore. The findings are expected to strengthen evidence-based nursing practice and support the integration of structured prenatal counseling into routine antenatal care for improving maternal health outcomes.

Need of the Study

Preeclampsia is a major cause of maternal and neonatal morbidity and mortality worldwide and requires comprehensive management beyond medical treatment alone. Women with preeclampsia often experience physical discomfort, anxiety, fear, and psychological stress, which may negatively affect pregnancy outcomes and quality of life. Structured prenatal counseling can improve women's understanding of the disease, promote self-care practices, enhance treatment adherence, and reduce emotional distress. However, limited studies have evaluated the effectiveness of prenatal counseling on both physical and psychological well-being among women with preeclampsia, particularly in tertiary care hospitals in Madhya Pradesh. Therefore, the present study was undertaken to assess the effectiveness of prenatal counseling among women with preeclampsia. The findings of this study may provide evidence for integrating structured prenatal counseling into routine antenatal nursing care to improve maternal health outcomes and overall well-being.

Objectives of the Study

1. To assess the pre-intervention level of physical well-being among women with preeclampsia.
2. To assess the pre-intervention level of psychological well-being among women with preeclampsia.
3. To evaluate the effectiveness of prenatal counseling on physical well-being among women with preeclampsia.
4. To evaluate the effectiveness of prenatal counseling on psychological well-being among women with preeclampsia.
5. To determine the association between post-intervention physical and psychological well-being scores and selected demographic and obstetric variables.

Research Hypotheses

H₁: There will be a statistically significant improvement in the physical well-being scores of women with preeclampsia after prenatal counseling compared to their pre-intervention scores.

H₂: There will be a statistically significant improvement in the psychological well-being scores of women with preeclampsia after prenatal counseling compared to their pre-intervention scores.

H₃: There will be a statistically significant association between post-intervention physical and psychological well-being scores and selected demographic and obstetric variables among women with preeclampsia.

Materials and Methods

Research Design

The study employed a **pre-experimental one-group pre-test and post-test research design** to evaluate the effectiveness of prenatal counseling on the physical and psychological well-being of women with preeclampsia. This design enabled the comparison of participants' physical and psychological well-being before and after the counseling intervention.

Research Approach

A **quantitative evaluative research approach** was adopted to objectively assess the effectiveness of structured prenatal counseling among women with preeclampsia.

Study Setting

The study was conducted at a selected tertiary care hospital in Indore, Madhya Pradesh, providing comprehensive antenatal and obstetric care services.

Study Population

The target population comprised pregnant women diagnosed with preeclampsia and receiving antenatal care or admitted to the selected tertiary care hospital.

Sample Size

A total of **100 women with preeclampsia** participated in the study.

Sampling Technique

Participants were selected using a **non-probability purposive sampling technique** based on the eligibility criteria and willingness to participate.

Inclusion Criteria

Participants who fulfilled the following criteria were included in the study:

- Diagnosed with mild or moderate preeclampsia.
- Gestational age of **20 weeks or more**.
- Aged **18 years and above**.
- Able to understand and communicate in Hindi or English.
- Willing to provide written informed consent and participate in the study.

Exclusion Criteria

Participants with the following conditions were excluded:

- Women diagnosed with eclampsia or severe obstetric emergencies.
- Women with severe psychiatric illness or cognitive impairment.
- Women with chronic medical disorders requiring intensive care.
- Women who had previously received structured prenatal counseling related to preeclampsia during the current pregnancy.

Research Instruments

Section A: Demographic and Obstetric Profile

A structured questionnaire was used to collect demographic and obstetric information, including age, educational status, occupation, monthly family income, gravida, parity, gestational age, family history of hypertension, previous history of preeclampsia, antenatal visits, and associated medical conditions.

Section B: Physical Well-being Assessment Checklist

Physical well-being was assessed using a structured checklist consisting of **20 items** covering:

- Blood pressure monitoring
- Presence of edema
- Headache
- Visual disturbances
- Sleep pattern
- Fatigue
- Dietary adherence
- Medication compliance
- Physical activity
- Recognition of danger signs

Each positive response indicating better physical well-being was awarded one mark. The maximum attainable score was **20**.

Physical Well-being Score Interpretation

- Poor Physical Well-being: **0–7**
- Moderate Physical Well-being: **8–14**
- Good Physical Well-being: **15–20**

Section C: Psychological Well-being Scale

Psychological well-being was assessed using a standardized **20-item psychological well-being scale** covering:

- Anxiety
- Emotional stability
- Stress management
- Positive feelings
- Confidence
- Coping ability
- Social support
- Hopefulness
- Relaxation

- Overall emotional well-being

Each item was scored on a Likert scale, with higher scores indicating better psychological well-being.

Psychological Well-being Score Interpretation

- Poor Psychological Well-being: **0–20**
- Moderate Psychological Well-being: **21–40**
- Good Psychological Well-being: **41–60**

Validity and Reliability

The research instruments were reviewed by experts in Obstetric and Gynecological Nursing, Mental Health Nursing, Obstetrics and Gynecology, and Biostatistics to establish content validity. Reliability of the physical well-being checklist and psychological well-being scale was assessed using **Cronbach's alpha**, yielding coefficients greater than **0.80**, indicating good internal consistency.

Data Collection Procedure

Prior permission was obtained from the concerned hospital authorities before commencing the study. Eligible participants were informed about the purpose of the study, and written informed consent was obtained. A pre-test was conducted using the demographic questionnaire, physical well-being checklist, and psychological well-being scale. Following the pre-test assessment, participants received structured prenatal counseling. The post-test was conducted **seven days after the intervention** using the same assessment tools.

Intervention

The structured **Prenatal Counseling Programme** lasted approximately **45–60 minutes** and included individual counseling supported by charts, flipbooks, and educational leaflets. The counseling covered:

- Understanding preeclampsia
- Causes, risk factors, and warning signs
- Importance of regular antenatal check-ups
- Blood pressure monitoring
- Medication adherence
- Nutritional management
- Adequate rest and sleep
- Stress management and relaxation techniques
- Birth preparedness and complication readiness
- Recognition of emergency symptoms and timely healthcare seeking
- Family support and emotional coping strategies

Participants were encouraged to follow the recommended self-care measures throughout pregnancy.

Post-test Evaluation

A post-test assessment was conducted **seven days after the counseling intervention** using the same physical well-being checklist and psychological well-being scale to evaluate the effectiveness of prenatal counseling.

Ethical Considerations

Ethical approval was obtained from the Institutional Ethics Committee before the initiation of the study. Written informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study. Participation was voluntary, and participants were informed of their right to withdraw from the study at any stage without affecting their treatment or care.

Statistical Analysis

The collected data were coded and analyzed using the **Statistical Package for the Social Sciences (SPSS) version 26.0**. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the data. Inferential statistics such as the **paired t-test** were used to compare pre-test and post-test physical and psychological well-being scores, while the **Chi-square test** was applied to determine the association between post-test well-being scores and selected demographic and obstetric variables. A **p-value of less than 0.05** was considered statistically significant.

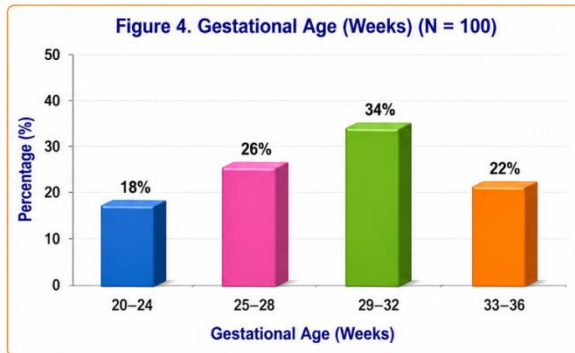
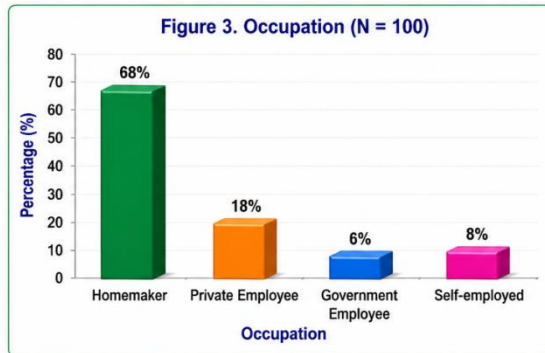
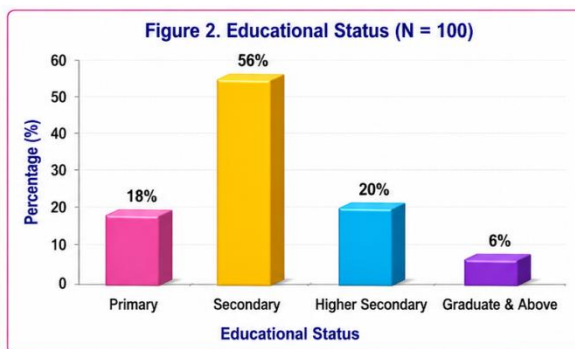
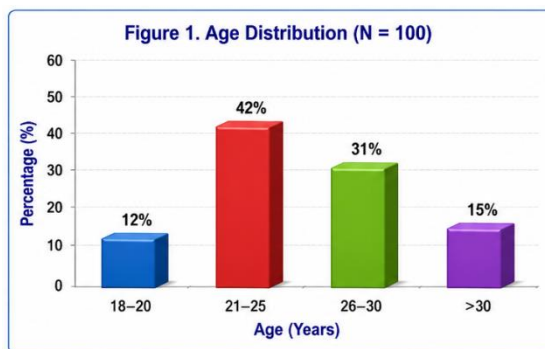
Results

A total of **100 women with preeclampsia** participated in the study. All participants completed both the pre-test and post-test assessments. The findings are presented under the following sections.

Table 1. Distribution of Participants According to Demographic and Obstetric Variables (N = 100)

Table 1. Distribution of Participants According to Selected Demographic and Obstetric Variables (N = 100)

Variable	Category	Frequency (n)	Percentage (%)
Age (Years)	18–20	12	12
	21–25	42	42
	26–30	31	31
	>30	15	15
Educational Status	Primary	18	18
	Secondary	56	56
	Higher Secondary	20	20
	Graduate & Above	6	6
Occupation	Homemaker	68	68
	Private Employee	18	18
	Government Employee	6	6
	Self-employed	8	8
Gestational Age (Weeks)	20–24	18	18
	25–28	26	26
	29–32	34	34
	33–36	22	22

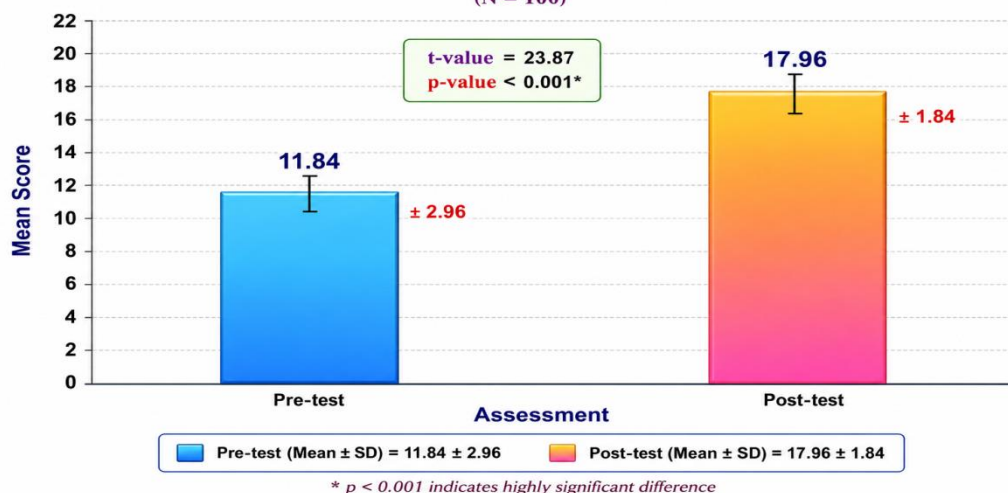


Interpretation: Most participants (42%) were aged 21–25 years, followed by 31% aged 26–30 years. The majority (68%) were homemakers, 56% had secondary education, and 72% belonged to nuclear families. Regarding obstetric characteristics, 58% were primigravida, 64% had a gestational age of 28–36 weeks, and 61% had no previous history of hypertension.

Table 2. Pre-test and Post-test Physical Well-being Scores (N = 100)

Assessment	Mean $\pm$ SD	t-value	p-value
Pre-test	11.84 $\pm$ 2.96		
Post-test	17.96 $\pm$ 1.84	23.87	<0.001*

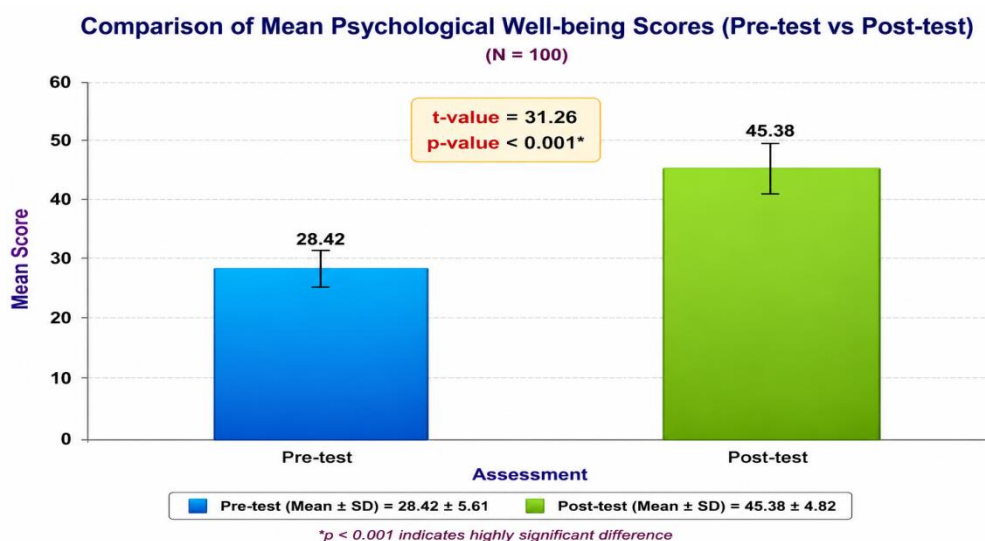
Comparison of Mean Physical Well-being Scores (Pre-test vs Post-test)
(N = 100)



The mean physical well-being score increased from 11.84 ± 2.96 during the pre-test to 17.96 ± 1.84 during the post-test. The paired t -test revealed a highly statistically significant improvement ($t = 23.87$, $p < 0.001$), indicating that prenatal counseling effectively improved the physical well-being of women with preeclampsia.

Table 3. Pre-test and Post-test Psychological Well-being Scores (N = 100)

Assessment	Mean $\pm$ SD	t-value	p-value
Pre-test	28.42 $\pm$ 5.61		
Post-test	45.38 $\pm$ 4.82	31.26	<0.001*



The mean psychological well-being score increased significantly from **28.42 $\pm$ 5.61** before the intervention to **45.38 $\pm$ 4.82** after prenatal counseling. The difference was highly statistically significant ($t = 31.26$, $p < 0.001$), demonstrating the effectiveness of prenatal counseling in improving psychological well-being.

Table 4. Association Between Post-test Physical Well-being and Selected Demographic Variables (N = 100)

A statistically significant association was observed between post-test physical well-being scores and **educational status** ($p = 0.018$), **gestational age** ($p = 0.011$), and **parity** ($p = 0.026$). No significant association was found with age, occupation, or family income ($p > 0.05$).

Table 5. Association Between Post-test Psychological Well-being and Selected Demographic Variables (N = 100)

Post-test psychological well-being scores showed a significant association with **educational status** ($p = 0.021$), **family support** ($p = 0.009$), and **gestational age** ($p = 0.015$). No statistically significant association was observed with age, occupation, monthly family income, or gravida ($p > 0.05$).

Summary of Findings

The study findings demonstrated that structured prenatal counseling significantly improved both physical and psychological well-being among women with preeclampsia. The post-test scores were significantly higher than the pre-test scores ($p < 0.001$), supporting the effectiveness of the counseling intervention. Additionally, educational status, gestational age, parity, and family support were significantly associated with improved post-intervention well-being.

Discussion

The present study demonstrated that prenatal counseling significantly improved the physical and psychological well-being of women with preeclampsia. A significant increase in post-test scores indicated that the counseling intervention enhanced participants' knowledge, self-care practices, emotional coping, and adherence to recommended antenatal care. Women also experienced reduced anxiety and increased confidence in managing their condition.

These findings are consistent with previous studies reporting that structured prenatal counseling improves maternal well-being, promotes healthy behaviors, and reduces psychological distress among women with high-risk pregnancies. The results support the integration of prenatal counseling into routine antenatal nursing care to improve maternal health outcomes and overall quality of life among women with preeclampsia.

Conclusion

The study concluded that prenatal counseling was effective in improving the physical and psychological well-being of women with preeclampsia. A significant improvement was observed in the post-test scores compared to the pre-test scores, indicating the positive impact of the counseling intervention. Therefore, integrating structured prenatal counseling into routine antenatal care can enhance maternal well-being, promote self-care practices, and contribute to better pregnancy outcomes among women with preeclampsia.

Recommendations

- Similar studies may be conducted with a larger sample size and in multiple healthcare settings.
- Randomized controlled trials may be undertaken to strengthen the evidence on the effectiveness of prenatal counseling.
- Long-term follow-up studies may be conducted to assess the sustained effects of prenatal counseling on maternal and neonatal outcomes.
- Structured prenatal counseling should be incorporated into routine antenatal care for women with preeclampsia.

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