"Effect of Health Education on Prevention of Postpartum Psychosis among Primigravida Mothers residing in Urban regions, Maharashtra"

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***Abstract*—Background: The term "postpartum psychosis" is commonly used in clinical settings to describe a range of symptoms that appear suddenly, usually within the first two weeks after giving birth. Postpartum psychosis is a serious mental health disorder that occurs postnatal and impacts around 1-2 out of every 1000 births globally, yet it is not recognized within diagnostic classifications. Objective: To assess effectiveness of health education on prevention of postpartum psychosis among primigravida mothers. Methods: A quantitative, quasi-experimental research design with experimental and control groups was adopted. A total of 90 primigravida mothers (45 in the experimental group and 45 in the control group). Baseline knowledge was assessed using a Structured Interview Schedule (SIS). A post-test was conducted after seven days using the same tool. Results: Data were analysed using descriptive and inferential statistics. Before the intervention, the experimental group had a mean knowledge score of 9.13 ± 2.02, which increased to 21.31 ± 3.04 after health education. The control group's mean score changed only slightly from 7.55 ± 2.22 to 8.91 ± 2.63. The calculated t-value for the experimental group ($t = 23.34$, $p < 0.05$) indicates a highly significant improvement between pre-test and post-test scores. Similarly, the unpaired t-test value ($t = 16.37$, $p < 0.05$) demonstrated that the experimental group performed significantly better than the control group. Conclusion: The study concludes that structured health education is an effective strategy for increasing awareness and promoting early prevention of postpartum psychosis among first-time pregnant mothers. It recommends integrating mental health education into routine antenatal care to improve maternal mental health outcomes.**

***Index Terms*—Health education, primigravida mothers, knowledge, Postpartum psychosis, pregnancy, urban regions.**

I. INTRODUCTION

Pregnancy is the period when one or more babies develop inside a woman's uterus. When more than one baby is developing, it is called a multiple pregnancy, such as with twins. A woman who has never been pregnant is called a multigravida. A woman who is pregnant for the first time is referred to as a primigravida, and a woman who has had more than one pregnancy is called a multigravida or multiparous.[1] Postpartum psychosis is a rare but very serious mental illness that can affect a new mother within the first six months after giving birth.

Women may lose touch with reality and experience hearing voices or having false beliefs about the baby. Postpartum psychiatric illnesses are mainly due to physical changes, especially hormonal changes, that happen in the first few weeks after childbirth. Many women experience mild mood changes after giving birth, known as the "baby blues," which is normal and usually goes away within a few days.[2] Postpartum psychosis is very different from the baby blues. It is a serious mental illness and should be treated as a medical emergency. It is sometimes called puerperal

psychosis or postnatal psychosis.[3] The family also faces significant emotional and psychological challenges. Social isolation, financial stress, and family problems are common results of postpartum psychosis. Nurses have observed symptoms like delusions, emotional detachment, aggression, personality changes, self-centered behavior, sleeplessness, confusion, quietness, thoughts of suicide, and what they described as "strange eyes."[4]

II. OBJECTIVE

The objective of this study is:
To assess effectiveness of health education on prevention of postpartum psychosis among primigravida mothers.

III. METHODS

A quantitative approach was adopted, and a non-randomized control group design (quasi-experimental research design) was used for this study. The study was carried out in selected urban regions of Maharashtra. The settings were chosen based on accessibility, administrative support, and an adequate sample size. A convenient sampling technique was used to select primigravida mothers who met the inclusion criteria: those who were able to understand the Marathi language and gave written consent to participate in the study. Primigravida mothers currently involved in another similar type of research study were excluded. Written permission was obtained from concerned authorities, and written consent was taken from participants.

A Structured Interview Schedule (SIS) was developed for data collection, comprising 30 items on key areas including general information, signs and symptoms, complications, factors influencing, and prevention of postpartum psychosis. Content validity was established by psychiatric nursing experts, and the tool demonstrated high reliability, with a coefficient of 0.9929 for the experimental group and 0.9934 for the control group. Pre-test knowledge was assessed for both experimental and control groups using the SIS. Health education on postpartum psychosis was then administered to the experimental group only. After 7 days, a post-test was conducted for both groups, and the data were analyzed using SPSS software.

Statistical Analysis: The data were analyzed using descriptive and inferential statistics. Pre-test and post-test knowledge scores within groups were evaluated using paired t-tests, while unpaired t-tests were applied to compare knowledge score differences between the experimental and control groups. The association between demographic variables and knowledge scores was determined using the chi-square test. A p-value of less than 0.05 was considered statistically significant.

IV. RESULTS

Demographic Profile: Most participants were in the age group 22-25 years (42%), religion hindu (41%), marital status (73%), type of family (53%), educational status (42%), occupation (76%), monthly income (42%).

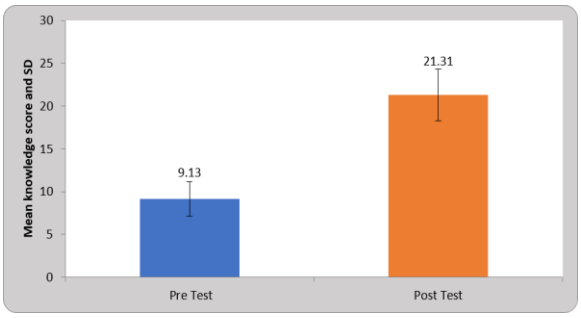
Knowledge Scores:

- Experimental group: Mean pre-test = 9.13±2.02; post-test = 21.31±3.04
- Control group: Mean pre-test =7.55 ± 2.22; post-test = 8.91 ± 2.63.

Graphical Representation:
This table shows the comparison of pretest and post-test knowledge scores of Primigravida Mothers regarding prevention of postpartum psychosis from selected urban area of Maharashtra. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=45-1 i.e. 44 degrees of freedom was 2.00. Hence it is statistically interpreted that the Health Education on knowledge regarding prevention of postpartum psychosis among Primigravida Mothers from selected urban area of Maharashtra was effective. Thus, the H_{11} is accepted.

Table 1: Significance of difference between knowledge score in pre and post-test of Primigravida Mothers of Experimental Group (n = 45)

Test	Mean	SD	Mean Difference	t-value	p-value
Pre Test	9.13	2.02	12.17±3.49	23.34	0.0001 S,p<0.05
Post Test	21.31	3.04			

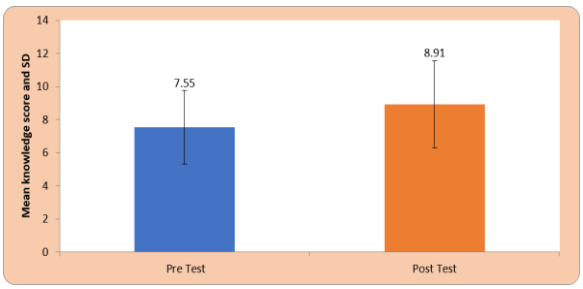


Graph 1: Comparison of mean difference between knowledge score in pre- and post- test of Primigravida Mothers of Experimental Group

This table shows the comparison of pretest and post-test knowledge scores of Primigravida Mothers regarding prevention of postpartum psychosis from selected urban area of Maharashtra. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=45-1 i.e. 44 degrees of freedom was 2.00. The calculated 't' value i.e. 23.34 are much higher than the tabulated value at 5% level of significance for overall knowledge score of Primigravida Mothers which is statistically acceptable level of significance. Hence it is statistically interpreted that the Health Education on knowledge regarding prevention of postpartum psychosis among Primigravida Mothers from selected urban area of Maharashtra was effective. Thus, the H_{11} is accepted.

Table 2: Significance of difference between knowledge score in pre and post-test of Primigravida Mothers of Control Group (n=45)

Test	Mean	SD	Mean Difference	t-value	p-value
Pre Test	7.55	2.22	135±2.72	3.33	0.002 S,p<0.05
Post Test	8.91	2.63			



Graph 2: Significance of difference between knowledge score in pre and post -test of Primigravida Mothers of Control Group

This table shows the comparison of pretest and post-test knowledge scores of Primigravida Mothers regarding prevention of postpartum psychosis from selected urban area of Maharashtra. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance.

The tabulated value for n= 45-1 i.e. 44 degrees of freedom was 2.00. The calculated 't' value i.e. 3.33 are much higher than the tabulated value at 5% level of significance for overall knowledge score of Primigravida Mothers which is statistically acceptable level of significance. Thus, the H_{11} is accepted.

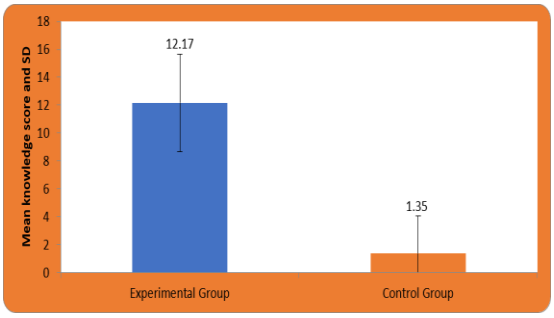
Table 3: Significance mean difference between knowledge score in pre and post-test of Primigravida Mothers of Experimental and Control Group (n = 90)

Group	Mean	SD	t-value	p-value
Experimental Group	12.17	3.49	16.37	0.0001 S,p<0.05
Control Group	1.35	2.72		

This table shows the comparison of mean difference pretest and post-test knowledge scores of Primigravida Mothers regarding prevention of postpartum psychosis from selected urban area of Maharashtra in experimental and control group. Mean, standard deviation and mean difference values are compared and student's unpaired 't' test is applied at 5% level of significance.

The tabulated value for n=45+45-2 i.e. 88 degrees of freedom was 1.98. The calculated 't' value i.e. 16.37 are much higher than the tabulated value at 5% level of significance for overall knowledge score of Primigravida Mothers which is statistically acceptable level of significance. Hence it is statistically interpreted that Health Education on knowledge regarding prevention of postpartum psychosis among Primigravida Mothers from selected urban area of Maharashtra was effective in experimental group. Thus, H_{12} is hypothesis is accepted.

Association with Demographic variables: Post-test knowledge scores were significantly associated with age of mother and educational status of mother.



Graph 3: Significance of mean difference between knowledge score in pre- and post- test of Primigravida Mothers of Experimental and Control Group

V. DISCUSSION

The present study was conducted to evaluate the effect of structured health education on knowledge regarding prevention of postpartum psychosis among primigravida mothers residing in selected urban regions of Maharashtra. The findings of the study clearly demonstrated that health education had a significant and positive impact on improving knowledge levels among primigravida mothers. After administration of structured health education, a remarkable improvement was observed in the experimental group. The post-test mean score increased to 21.31 ± 3.04, which was substantially higher compared to the pre-test score. In contrast, the control group showed only minimal improvement (8.91 ± 2.63).

VI. CONCLUSION

The study concluded that primigravida mothers had inadequate baseline knowledge regarding prevention of postpartum psychosis. After structured health education, there was statistically significant improvement in knowledge among experimental group ($p < 0.05$). Thus, health education is an effective, simple, and cost-effective nursing intervention to improve awareness and prevention of postpartum psychosis.

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