

COMPARISON OF POSTPARTUM DEPRESSION IN C-SECTION AND NORMAL DELIVERY WITH RESPECT TO DIFFERENT AGE GROUPS IN RAWALPINDI AND ISLAMABAD HOSPITALS

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Abstract

Background: Postpartum depression is also a common psychological complication that impacts a mother's mental condition and her adaptation to the new changes in her life following childbirth, rendering the postpartum period vulnerable for mothers both physically and mentally.

Objective: To compare the severity of Postpartum Depression (PPD) between women who had C- Section and those who had Spontaneous Vaginal Delivery (SVD).

Methodology: It is an observational cross-sectional study in which the data was collected from the gynecology and obstetrics OPD through the Edinburgh Postpartum Depression scale. The questionnaire consists of 10 questions and women are asked to answer each question in terms of the past seven days. The Edinburgh Postnatal Depression Scale (EPDS) is a screening tool that was employed to find pregnant and postpartum women who may be depressed.

Results: This study showed risks of developing postpartum depression with cesarean section vs normal delivery. The risk of PPD depends upon the mode of delivery.

Conclusion: Mode of delivery constitutes a high-risk group for postpartum depression. The risk of PPD is higher in the C-section than in normal delivery. We have to need intensive monitoring.

INTRODUCTION

Childbirth is one of the most profound biological and social transitions in a woman's life. For many women, the postpartum period brings joy and relief, however, it is a period of psychological vulnerability characterized by mood disturbances, loss of interest, and impaired functioning^{1,2}.

Postpartum depression (PPD) is a mood disorder that occurs in the weeks and months after delivery and can range from transient "baby blues" to severe, persistent major depressive episodes that impair maternal caregiving and infant development. The public-health

importance of postpartum depression is substantial: PPD affects maternal well-being, family functioning, breastfeeding success, and child developmental outcomes including emotional regulation, cognitive functioning, and attachment security^{3,6}.

Pooled estimates from large meta-analytic work indicate that 15–20% of postpartum women experience clinically meaningful depressive symptoms, with higher rates in LMICs and settings with limited psychosocial resources^{7,8}. Meta-analyses and country-level syntheses confirm PPD's prevalence and heterogeneity, emphasizing the need for contextualised research that considers local obstetric practises, social determinants, and demographic factors like maternal age⁹.

The anxiety for a healthy and intelligent baby may have elevated the likelihood of PPD in women who had a cesarean delivery, rather than the surgery or the underlying medical problem. The study on baby sex and PPD suggests that cesarean sections may be more effective in certain ethnic/cultural groups. In India, women who had girls had a far higher risk of PPD than those who delivered boys¹⁰.

Younger moms often suffer socioeconomic deprivation, lesser social and spousal support, disrupted education or career ambitions, and increased caregiving stress. Teenage moms may be more susceptible to postpartum mental disorders due to a lack of secure housing, finances, or coping skills. In contrast, older mothers may have higher rates of cesarean delivery, pregnancy complications, infertility histories, and concerns about mother and baby health outcomes. They may also struggle to balance career and parenting and face social isolation. 2023¹¹⁻¹³.

This study examines the relationship between postpartum depression and delivery style and maternal age. The study will compare cesarean section versus spontaneous vaginal delivery across age groups to determine if mode of delivery and age significantly alter postpartum depression risk. The findings will help healthcare providers construct age- and delivery-specific screening, counseling, and support methods for postpartum maternal mental health.

Research Methodology

Type of Study

Observational cross-sectional study design was employed.

Study Setting

Data was collected from different hospitals of Islamabad and Rawalpindi. Data was collected from gyne OPD from these two cities hospitals.

POPULATION AND SAMPLING:

The target population of this study was female patients after cesarean and normal delivery and non-probability convenient sampling was used in this research.

Sample Size

A total of 200 postpartum women were recruited consecutively from the gyne outpatient department. This sample size provides acceptable precision for prevalence estimates (95% CI half-width $\approx \pm 5.5\%$ if true prevalence $\approx 20\%$) and allows detection of moderate absolute differences (≈ 15 percentage points) in postpartum depression between cesarean and vaginal delivery groups with modest power.

Inclusion and Exclusion Criteria:

Inclusion

- Female population after C-section
- 20-40 age group
- Female population after SVD

Exclusion:

- Patients below the age of 20 and above the age of 40

DATA COLLECTION TOOL:

Edinburgh Postnatal Depression Scale (EPDS), created by Cox et al., is one of the most well-known and frequently used screening instruments for identifying postpartum depression (1987). Around the world, this scale is accessible in a number of languages. The Edinburgh Postnatal Depression Scale (EPDS) is a screening tool that is frequently employed to

find pregnant and postpartum women who may be depressed.

DATA ANALYSIS:

Data were coded, entered, and analyzed using the Statistical Package for the Social Sciences (SPSS), version 26. Prior to analysis, data cleaning was performed to identify and correct errors, remove duplicates, and handle missing values. Descriptive and inferential statistics were used to address the study objectives.

Results

This study was conducted to compare the prevalence and severity of postpartum depression (PPD) between women who delivered through cesarean section (C-section) and those who delivered via spontaneous vaginal delivery (SVD), while also examining differences across maternal age groups. A total of 200 postpartum women attending the gynecology outpatient department were included.

Table: 1 Frequency of Age Group

Age Groups	Frequency	Percent	Cumulative Percent
20-29	96	48 %	48 %
30-40	104	52 %	100 %
Total	200	100 %	

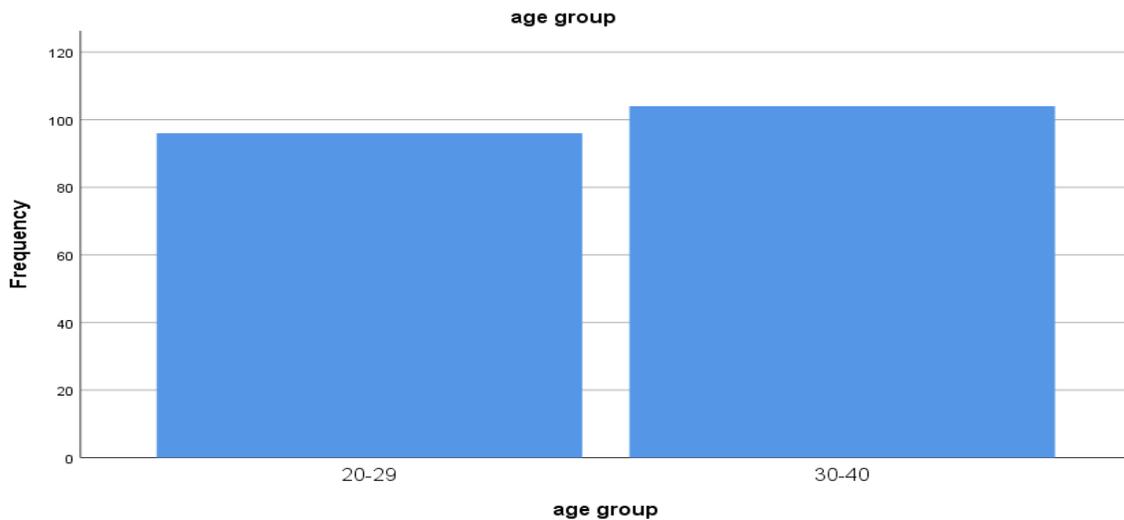


Figure: 4.1 Comparison between the age limit

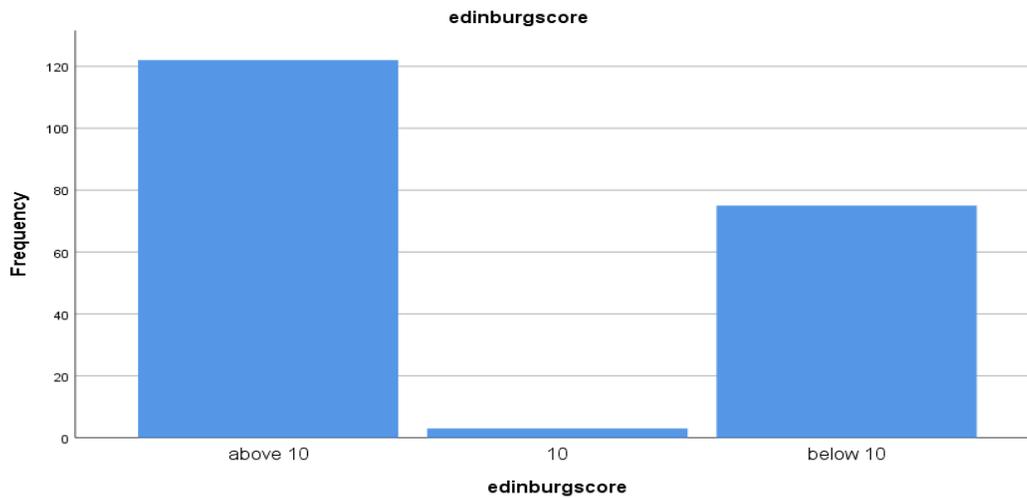
The cross-sectional of 4 months was conducted in the department of gynecology in a different hospital in Rawalpindi and Islamabad there is two age group the first group is between 20 to 29 and the second group is between 30 to 40 the frequency

of this table and graph that there are 96 patients included in the study and 104 patients are present in the second group there are 48% patients are in the first group and 52% are in the 2nd group.

Table 2 EDINBURG POSTNATAL DEPRESSION SCALE (EPDS)

Age Groups	Frequency	Percent	Cumulative Percent
Above 10	122	61 %	61 %
10	3	1.5 %	62.5 %
Below 10	75	37.5 %	100 %

Total	200	100 %	
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Graph 4.3 Frequency of patients according to Edinburg score

This study is a cross-sectional study and we use EDINBURG POSTNATAL DEPRESSION SCALE (EPDS) discovered by Cox. There are 3 groups present in the Edinburg score the first 1 is above 10 the score above the own depression but less (possible depression) and the second one is 10 so the 10 score is show severe depression and the 3rd group is below 10 the score below the 10

in the EPDS is shown suicidal depression in the female patient after delivery. The table shows that there are 122(61%) patients present in group one above the 10 and 3 (1.5%) present are in the second group 10 score and 75 (37.5%) patients are present in the 3rd group from which we took data. The total number of patients is 200.

Table 3 Independent T-Test was applied to analyze the comparison of PPD between SVD vs. C-Section

EPDS Questions	Mode of Delivery	N	Mean	Std-Deviation	P-Values
Q1	SVD	100	2.34	.913	.000
	C-section	100	1.57	.714	.000
Q2	SVD	100	2.63	1.012	.000
	C-section	100	1.72	.805	.000
Q3	SVD	100	1.8100	.83720	.000
	C-section	100	3.0400	.81551	.000
Q4	SVD	100	2.9200	.87247	.000
	C-section	100	2.1300	.96038	.000
Q5	SVD	100	2.4800	.73140	.000
	C-section	100	3.1200	.87939	.000
Q6	SVD	100	1.8400	.82536	.000
	C-section	100	3.0400	.69515	.000
Q7	SVD	100	1.7200	.73964	.000
	C-section	100	3.1800	.78341	.000
Q8	SVD	100	2.0300	.78438	.000
	C-section	100	3.2600	.73333	.000

Q9	SVD	100	2.2700	.98324	.000
	C-section	100	3.3000	.70353	.000
Q10	SVD	100	2.1200	1.02770	.000
	C-section	100	3.3700	.78695	.000
Edinburg Score	SVD	100	1.1100	.44710	.000
	C-section	100	2.4200	.90095	.000

The statistical analysis for the current study was carried out with the help of SPSS version 26. Data were presented using descriptive statistics, which included counts, percentages, means, and standard deviations. PPD was examined between women who had a caesarean section versus a normal delivery. Independent T-tests were employed to compare groups. The above table shows the statistical result of our study. In this study we use EPDS to measure Depression rate between C section and normal delivery. EPDS contains 10 questions through, the help of this we collect data. The total mean of SVD 1.1100 and total mean of C section is 3.3700 this means to express PPD is more common in C section than normal delivery.

DISCUSSION

our study found a difference in the incidence of postpartum depression between moms who delivered vaginally and those who underwent LSCS. Sword et al investigations of the relationship between the technique of delivery and PPD led to the conclusion that the incidence rate of PPD was not dependent upon delivery mode. (38) However, our study indicates that PPD is linked to the delivery method, with LSCS mothers showing to have higher melancholy than vaginal delivery due to the many reasons given by the mothers, such that they desired a natural birth, pain at the suture site, and feeding issues in mothers. According to our study, the chance of postpartum depression is greater and high in c-section is compared to normal delivery. In order to more easily record information on emotional and psychological characteristics, the current study used personal interviews rather than telephonic interviewing to diagnose PPD. It forced the participants to discuss their postpartum-related discomforts and stressors in

detail. The frequency of postpartum depression varies greatly among women from various

nations. According to a recent analysis of 143 studies from forty different nations, postnatal depression was shown to be prevalent in anywhere between 0% and 60% of cases.

CONCLUSION

In this research, we conclude that PPD is more common in mothers of LSCS babies than in mothers of vaginal babies. This finding suggests that more funding should be allocated for PPD research, detection, and treatment. And the study also shows postpartum depression is significantly influenced by the method of delivery. Severe postpartum depression is more common in women who give birth via cesarean section, particularly those who do so in an emergency cesarean. Women who had cesarean deliveries should have fast access to mental healthcare, and we should closely monitor the development of postpartum mental illnesses in these women the women who gave birth normally are less prone to develop PPD. We also conclude that PPD depend on age and the development of PPD was high in group A 20-29 age as compare to group B age 30-40.

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