



THE ROLE OF PREDICTABILITY OF DELIVERY, AND STRESS AND ANXIETY MANAGEMENT IN SATISFACTION WITH CHILDBIRTH AND POSTPARTUM DEPRESSION

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In an online cross-sectional study of 371 Slovenian women, depressive symptoms were assessed using the Edinburgh Postpartum Depression Scale, and satisfaction with childbirth – including quality of care provision and stress and anxiety management – was measured with the Birth Satisfaction Scale. The prevalence of depression was 27.22% during pregnancy and 21.32% postpartum. Logistic regression identified significant predictors: stress and anxiety management of childbirth (significant in severe depression), a history of a depressive episode and depressive symptoms during pregnancy. More predictable deliveries were associated with higher satisfaction with childbirth. Results emphasize the importance of routine depression screening, support for stress and anxiety management, while predictable deliveries increase satisfaction with childbirth.

Keywords: postpartum depression, satisfaction with childbirth, depression history, stress and anxiety management, antepartum depression, predictability



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INTRODUCTION

Beck (1999) compares postpartum depression (PPD) to a thief who robs women of precious time with their newborn. According to the DSM-5 (American Psychiatric Association, DSM-5 Task Force, 2013), postpartum depressive symptoms are congruent with symptoms of depressive disorder with peripartum onset, a peripartum onset meaning that the symptoms occurred during pregnancy or in the four weeks after delivery. PPD is therefore known as the most common psychological condition following childbirth (Wang et al., 2021).

The prevalence of PPD varies around the world. This is likely due to the diagnostic methods used (De Albuquerque Moraes et al., 2017), different cut-off scores for the definition of depression (Safi-Keykaleh et al., 2022), the time period after childbirth and differences in the study population (De Albuquerque Moraes et al., 2017), such as economic situation and cultural background (Liu et al., 2022). Mughal et al. (2022) reported that 6.5-20% and Liu et al. (2022) reported that 5.0-26.32% of women are affected, more in the Middle East (Shorey et al., 2018) and in developing countries, especially China (Liu et al., 2022) and less in Europe (Shorey et al., 2018). In recent years, some studies on postpartum depression have been conducted on Slovenian samples. Studies in Slovenia found PPD rates of 21.3% (Koprivnik & Plemenitaš, 2005) and 16.2% six weeks postpartum in nulliparas (Rus Prelog, 2019). The prevalence of depression in the third trimester was 16% (Rus Prelog, 2019).

In May 2020, Covid-19 was declared a pandemic by the WHO (2024) and led to various containment measures, including in hospitals, such as mandatory masks, restricted attendance during childbirth and limited postnatal visits (Mesarič et al., 2020; Stephens et al., 2020). Safi-Keykaleh et al. (2022) found a prevalence of 28% for PPD during Covid-19, which varied from country to country (lowest in Hong Kong at 2.9% and highest in Saudi Arabia at 60.7% with EPDS ≥ 10). Similarly, Sahebi et al. (2024) found a higher PPD prevalence during Covid-19 (25.27%) compared to pre-pandemic times (17.22%; Wang et al., 2021).

Pregnancy and the postpartum period can be challenging due to hormonal, emotional, physical and psychological factors (Mughal et al., 2022). Many risk factors have been identified that increase the likelihood of developing PPD (Guintivano et al., 2018; Hutchens & Kearney, 2020; Liu et al., 2022; Usmani et al., 2021). In a comprehensive review Guintivano et al. (2018) concluded that several factors predict PPD without there being a single determinant. These factors were categorised into two groups: inherent or pre-pregnancy factors and perinatal risk factors. Inherent risk factors such as genetics, psychiatric history, and adverse life events showed evidence of a positive association with PPD. In contrast, perinatal risk factors such as

demographic variables (e.g. maternal age, race, socioeconomic status) and obstetric outcomes (e.g. preterm birth), showed a mixed and inconsistent association. Although a history of a depressive episode and antepartum depression are strong predictors of postpartum depression (Guintivano et al., 2018; Hain et al., 2016; Liu et al., 2022; Usmani et al., 2021), research has also found a link between satisfaction with childbirth and the occurrence of postpartum depression (Bell & Andersson, 2016; Urbanová et al., 2021). Preis et al. (2022) emphasised the importance of satisfaction with childbirth for mother-infant bonding, future pregnancy intentions and postpartum mood. Some studies assessed satisfaction with childbirth using a single global question, while others used more detailed measures that capture specific aspects of birth satisfaction (Bell & Andersson, 2016; Dencker et al., 2010; Hollins Martin & Fleming, 2011), such as the quality-of-care provision, the woman's personality trait and the stress experienced during childbirth (Hollins Martin & Fleming, 2011). Several studies have found an association between satisfaction with childbirth and PPD (Bell & Andersson, 2016), though findings suggest that not all aspects of satisfaction with childbirth are equally predictive (Gürber et al., 2012; Radoš et al., 2021). Bell & Andersson (2016) found a statistically significant association between PPD and women's perceptions of childbirth in 11 of 15 studies. Urbanová et al. (2021) also found that lower satisfaction with childbirth was a significant predictor of increased PPD. Gürber et al. (2012) found that some dimensions of birth satisfaction were associated with postpartum depressive symptoms; in particular negative emotional experiences and peritraumatic dissociative experiences were associated with increased depressive symptoms, while good emotional adaptation was associated with lower levels of depressive symptoms one week postpartum. Similar results were found by Radoš et al. (2021) where only certain dimensions of birth satisfaction, such as feelings of anxiety and loss of control during labour, were associated with postpartum depressive symptoms.

With regard to the type of delivery, the results are inconsistent. Some studies report no association between type of delivery and PPD risk (Sword et al., 2011), while others find a higher risk in women who deliver vaginally and were not trained about type of delivery during pregnancy (Atan et al., 2018). Conversely, other studies suggest that cesarean section (CS) may be associated with an increased risk of PPD (Ning et al., 2024; Urbanová et al., 2021).

Mental distress has consequences for the newborn, the women, the relationship between mother and newborn and the environment (Slomian et al., 2019; Wang et al. 2021). Postpartum depression not only affects the mother's physical health (Abdollahi & Zarghami, 2018) and self-esteem (Meireles et al.,

2022), but also disrupts social relationships within the maternal sphere and increases the likelihood of engaging in risky behaviours (Slomian et al., 2019). The severity of postpartum depression affects the child's physical, motor, cognitive, language and emotional development, and there is also an increased risk of developing an insecure attachment between mothers with postpartum depression and their children (Slomian et al., 2019). Therefore, attention must be paid to all factors that may play a protective role.

While many factors have been identified as predictors of PPD (Atan et al., 2018; Bell & Andersson, 2016; Guintivano et al., 2018; Hutchens & Kearney, 2020; Ning et al., 2024; Urbanová et al., 2021; Usmani et al., 2021), our study expands previous research by focusing on specific aspects of satisfaction with childbirth – namely quality of care provision and stress and anxiety management (factors adapted from BSS-R, Hollins Martin & Martin 2014). In addition, we included a combination of predictors that have been found to be significant or have shown mixed results in previous studies, including pregnancy characteristics, sociodemographic factors, and a history of depression, to assess their contribution to PPD risk. In addition, we examined four different types of births (vaginal delivery and planned cesarean section, categorised as more predictable; assisted vaginal delivery and emergency cesarean section, categorised as less predictable) in relation to satisfaction with childbirth. This approach extends previous research, which typically distinguishes between vaginal and operative deliveries (Urbanová et al., 2021) or between vaginal and planned or emergency CS (Ahmadpour et al., 2023; Ilška et al., 2020). The study addresses two main research questions:

- How do different predictors – such as a history of a depressive episode, treatment for mental health problems, aspects of satisfaction with childbirth, age, days since delivery, type of delivery, and difficulty getting pregnant – affect the likelihood of postpartum depression?
- How does the predictability of birth affect satisfaction with childbirth?

METHODS

Participants

The study was approved by the Research Ethics Commission of the Faculty of Arts, University of Maribor, (038-15-71/2020/3/FFUM), which classified it as posing minimal risk to the participants' health. Participation in the cross-sectional online study was voluntary and anonymous. Initially, 394 women agreed

to participate. However, 22 women were excluded due to incomplete responses (only completing the demographic section and pregnancy characteristics or only one of three questionnaires), and one woman was excluded because she was 990 days postpartum. The final sample included 371 women.

Measurements

Demographics and pregnancy characteristics. Participants provided information on age, any difficulties in getting pregnant, type of delivery, whether the birth was premature, days since delivery, history of a depressive episode, previous treatment for a mental health problems.

Satisfaction with childbirth. Participants completed the Birth Satisfaction Scale (BSS; Hollins Martin & Fleming, 2011) to measure satisfaction with various aspects of childbirth, including quality of care provision, woman's personality trait and stress experienced during childbirth. The BSS is a 30-item instrument in which the participant expresses her agreement on a 5-point Likert scale, with 5 being "strongly agree" and 1 being "strongly disagree". The total score ranges from 30 to 150, with higher scores indicating greater satisfaction. The BSS was translated into Slovenian using the back-translation method. The structure of the 3-factor model with 30 items proposed by Hollins Martin & Fleming (2011) was found to be a poor fit to our data. Hollins Martin & Martin (2014) later proposed the Birth Satisfaction Scale-Revised (BSS-R), a 10-item scale derived from the original 30 items, which was found to be appropriately internally reliable and valid (Hollins Martin & Martin 2014; Vardavaki et al., 2015). After conducting a further factor analysis with 10 items of the BSS-R scale, only 9 items of the BSS-R were used in the later analysis.

Depressive symptoms. The Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987) was used to assess postpartum depressive symptoms, as the EPDS is the most commonly used instrument to identify postpartum depression (De Albuquerque Moraes et al., 2017; Sit & Wisner, 2009). The Slovenian translation used in this study was translated and adapted by Koprivnik and Plemenitaš (2005). The self-assessment questionnaire consists of 10 items with 4 response options about the participant's feelings in the last seven days, which are rated on a scale from 0 to 3 depending on the severity of the response, with a score of 3 indicating a more severe response (Sit & Wisner, 2009). The highest possible score that can be achieved is 30 (Sit & Wisner, 2009). The questionnaire is appropriately sensitive and specific (Cox et al., 1987; Langan and Goodbred, 2016), internally reliable (Odalovic et al., 2015) and valid (Cox et al., 1987). Com-

mon cut-off scores for identifying potential depression are 10 or higher and 13 or higher (Cox et al., 1987; Levis, et al., 2020; Safi-Keykaleh et al., 2022). It is important to note that EPDS scores above and just below the cut-off score should be further investigated to confirm the presence of depression (Cox et al., 1987).

Procedure

We searched for online Facebook groups with new mothers as members by searching for the keywords "mom", "moms" or "mothers" in combination with the birth years 2019 and 2020. These were closed groups, usually titled "Mothers of 2019" or "Mothers of 2020" and were in Slovene. Permission to conduct the study was obtained from the group administrators. A link to the online survey was posted in seven groups, along with a brief invitation to participate and informed consent. We asked mothers who had given birth within one year prior to the survey period to complete the questionnaire. This period was chosen because postpartum leave in Slovenia is usually around one year. In particular, new mothers are entitled to maternity leave (105 days) and parental leave (160 days for each parent, with fathers being able to transfer up to 100 days to the mother). The leave can be further extended in the case of multiple births, premature births or if the child requires special care (Ministry of Labour, Family, Social Affairs and Equal Opportunities, 2025). The survey was launched on October 1 and remained active until October 12, 2020, as members no longer participated in the survey. Study included sociodemographic and pregnancy related questions, the EPDS before childbirth, the BSS to assess satisfaction with childbirth, and the EPDS after childbirth. Upon completion, participants received a leaflet titled "Mommy, it's OK if you're sometimes not OK!" The leaflet provided information on signs and symptoms of postpartum depression, self-help strategies, seeking support, and available professional resources.

Statistical analyses

Data analysis was conducted using SPSS Statistics 25.0 and JAMOVI 1.2.27. Descriptive statistics (means, standard deviations, minimums, maximums, skewness, and kurtosis) were computed, and normality was assessed. Although Tabachnick and Fidell (2018) suggest that deviations from normality in skewness and kurtosis may not significantly impact analysis with large samples (over 200 participants), Kline (2011) suggested that the absolute value of skewness should not exceed 3 and kurtosis should not exceed 10, otherwise the item should be rejected. Outliers were also identified (Field, 2009).

While the EPDS had previously been adapted for Slovenian use by Koprivnik and Plemenitaš (2005), the BSS (Hollins Martin & Fleming, 2011) had not yet been validated. Given the pre-existing structure of the BSS scale, a Confirmatory Factor Analysis (Brown, 2006) was first conducted. A good model fit is given if the Comparative Fit Index (CFI) is higher than 0.95, the values of the Root Mean Square Residual are close to 0.08 or below and the values of the Root Mean Square Error of Approximation (RMSEA) are close to 0.08 or below (Browne & Cudeck, 1993; Hu & Bentler, 1999). The scale's dimensionality was further explored using Exploratory Factor Analysis (EFA) to reduce the number of variables to a smaller set of factors (Tabachnick & Fidell, 2018). Promax rotation was used due to expected factor correlations, and Principal Axis Factoring was employed, as it is less sensitive to deviations from normality than other methods (Costello & Osborne, 2005). The suitability of EFA was confirmed by Kaiser-Meyer-Olkin values above 0.70 (Lloret et al., 2017) and significant Bartlett's Test of Sphericity results (Bartlett, 1954) indicating correlations among variables (Tabachnick & Fidell, 2018). To determine the number of retained factors, we looked at eigenvalues greater than 1. As eigenvalues > 1 tend to extract too many factors, we also considered the Scree plot (Costello & Osborne, 2005) and performed a parallel analysis using the online tool by Patil Vivek et al. (2017). Costello and Osborne (2005) suggested that item commonalities above 0.40 are good, and Tabachnick and Fidell (2018) items above 0.32. An item with a value of 0.32 or higher on two or more factors is a cross-loading item (Costello & Osborne, 2005; Tabachnick & Fidell, 2018). Factors with two items are also generally weak and unstable (Costello & Osborne, 2005). To assess the consistency and reproducibility of the instrument, the reliability of the coefficients was calculated using Cronbach's alpha, as this is the most commonly used measure (Litwin, 1995; Taber, 2017).

Since the assumption of multivariate normality and homoscedasticity for performing linear regression (Schreiber-Gregory & Bader, 2018) were violated, we performed a logistic regression, which is more flexible as it does not include assumptions about the distribution of the predictor variables, equality of variance within the group, and a linear relationship with the dependent variable (Tabachnick & Fidell, 2018). To identify predictors of PPD, a sequential logistic regression with three blocks was performed using the Enter method. The first block (1) was *history of mental health problems*, including score on EPDS before childbirth, history of depressive episode and history of treatment for mental health problems. The second block (2) was *satisfaction with childbirth*, including factors

"stress and anxiety management" and "quality of care provision". The third block (3) was *sociodemographic and pregnancy characteristic* including age, days since delivery, type of delivery, premature birth, difficulty getting pregnant. Of the 371 women, 277 were included in the logistic regression model due to missing data.

RESULTS

Descriptive statistics and reliability of the instruments

As shown in Table 1, 17.3% of women in our sample had a history of a depressive episode, most pregnancies were planned, and the majority delivered vaginally.

Based on a cut-off score of 10, 27.22% of participants were classified as potentially suffering from depression before childbirth and 21.32% after childbirth. Using a cut-off score of 13, 11.6% of women were classified as potentially suffering from depression before childbirth, and 11.1% after.

TABLE 1
Descriptive statistics

		N = 371
Age (years)		29.4 (SD = 4.2)
Days since delivery		125.3 (SD = 85.9)
History of a depressive episode		64 (17.3%)
Previous treatment for mental health problems		21 (5.7%)
Planned pregnancy		332 (88.8%)
Difficulty getting pregnant		64 (17.3%)
Type of delivery	Vaginal delivery	224 (60.4%)
	Assisted vaginal delivery	79 (21.3%)
	Planned cesarean section	27 (7.3%)
	Emergency cesarean section	38 (10.2%)
Premature birth		17 (4.6%)

Note. Some variables have missing values, so the N for each group do not match.

The Cronbach's alpha for all 10 items of the EPDS was 0.87 one week before childbirth and 0.89 after childbirth, indicating that the instrument is reliable (Taber, 2017).

Satisfaction with the childbirth

The structure of the 3-factor model with 30 items proposed by Hollins Martin and Fleming (2011) was found to be a poor fit to our data $\chi^2(402) = 2108, p < 0.001, CFI = 0.630, RMSEA = 0.107$. However, when we tested the 10-item, 3-factor model (BSS-R) proposed by Hollins Martin and Martin (2014), it demonstrated a good fit, $\chi^2(32) = 72.6, p < 0.001, CFI = 0.970, RMSEA = 0.0584$. We then later performed Exploratory Factor Analysis (EFA) on

TABLE 2
Results of the factor
analysis of satisfaction
with childbirth with 9
items

BSS-R using Principal Component Analysis for extraction and promax rotation with Kaiser Normalisation. The Kaiser-Meyer-Olkin value was 0.849 and the Bartlett's test of sphericity was $\chi^2(36) = 1308.57, p < 0.001$, indicating the suitability of the data set for EFA. As shown in Table 2, two factors were extracted based on eigenvalues greater than 1, the Scree plot, and parallel analysis. After excluding Q1 (with factor loadings below 0.32; Tabachnick & Fidell, 2018), the first factor "quality of care provision" explained 44.83 % of the total variance and included items 3, 5, 6 and 10. The second factor, "stress and anxiety management" explained 16.08 % of the total variance and included items 2, 4, 7, 8 and 9. Together, these factors explained 60.91% of the total variance. Cronbach's alpha for the 9 items was 0.83, with 0.82 for the first factor and 0.78 for the second, indicating good reliability (Taber, 2017).

BSS-R item	Factor loadings	
	1	2
Factor 1: Quality of care provision		
6. The staff communicated well with me during labour.	<i>0.901</i>	-0.024
5. I felt well supported by staff during my labour and birth.	<i>0.857</i>	-0.078
3. The delivery room staff encouraged me to make decisions about how I wanted my birth to progress.	<i>0.815</i>	-0.011
10. The delivery room was clean and hygienic.	<i>0.398</i>	-0.053
Factor 2: Stress and anxiety management		
9. I was not distressed at all during labour.	-0.131	<i>0.774</i>
7. I found giving birth a distressing experience.	-0.124	<i>0.741</i>
4. I felt very anxious during my labour and birth.	0.192	<i>0.669</i>
8. I felt out of control during my birth experience.	0.298	<i>0.512</i>
2. I thought my labour was excessively long.	0.192	<i>0.339</i>

Notes. $N = 362$, extraction method was principal axis factoring with an oblique (promax with Kaiser Normalisation) rotation. Factors loading above 0.32 are in italics. In the BSS-R (Hollins-Martin & Martin, 2014), items 4 and 8 were subscales of Women's personal attributes.

The correlation between the two factors was found to be 0.51 ($p < 0.001$), indicating a moderately positive relationship. Although the factors are related, they are distinct constructs that capture different aspects of satisfaction with childbirth.

Since the assumptions of normality distribution were not met, we performed the Kruskal-Wallis test. The Kruskal-Wallis test indicated that there was a significant difference in satisfaction with childbirth (9-item questionnaire) by type of birth: $\chi^2(3, 360) = 20.214, p < 0.001$. Post hoc comparisons were conducted using Mann-Whitney U tests with a Bonferroni adjusted alpha level of 0.0083 (0.05/6), as a series of tests were conducted (Armstrong, 2014). The results indicate that women who had vaginal deliveries were significantly more satisfied

with the childbirth than women who had an emergency cesarean section (CS), $U = 2338.5$, $p < 0.001$. Similarly, women who had assisted vaginal delivery were significantly more satisfied with the childbirth than women who had an emergency CS, $U = 934.0$, $p = 0.002$. We later combined vaginal birth and planned CS, as they are more predictable, and compared them with assisted vaginal birth and emergency CS. The Mann Whitney U Test indicates that women with a more predictable type of birth were significantly more satisfied with the birth, $U = 12276.5$, $p = 0.049$.

Prediction of postpartum depression

As our data were not normally distributed, logistic regression (Tabachnick & Fidell, 2018) was performed using the Enter method. Two models were developed based on EPDS scores of ≥ 10 and ≥ 13 , as these are the most commonly recommended and used for screening (Cox et al., 1987; Levis, et al., 2020; Safi-Keykaleh et al., 2022).

TABLE 3
Predictors of depressive symptoms with cut-off score 10 in the EPDS

For EPDS scores of ≥ 10 , the logistic regression model was statistically significant, $\chi^2(12, 277) = 81.472$, $p < 0.001$. The model explained 40.4% (Nagelkerke R) of the variance in postpartum depression and correctly classified 85.2% of cases.

Variable	B	SE	Wald	p	Exp (B)	95% CI for Exp (B)	
						LL	UL
Total score in the EPDS							
before childbirth	0.254	0.047	29.014	< 0.001	1.289	1.175	1.414
History of a depressive episode	1.432	0.472	9.213	0.002	4.187	1.661	10.555
History of treatment for mental health problems	0.434	0.750	0.334	0.563	1.543	0.355	6.706
Quality of care provision	-0.043	0.066	0.427	0.514	0.958	0.841	1.090
Stress and anxiety management	-0.054	0.050	1.183	0.277	0.947	0.859	1.044
Age	-0.059	0.047	1.567	0.211	0.942	0.859	1.034
Days since delivery	-0.001	0.002	0.073	0.788	0.999	0.995	1.004
Premature birth	-0.194	0.878	0.049	0.825	0.823	0.147	4.601
Vaginal delivery			2.008	0.571			
Assisted vaginal delivery	0.276	0.456	0.365	0.546	1.317	0.539	3.219
Planned cesarean section	0.558	0.670	0.694	0.405	1.746	0.470	6.487
Emergency cesarean section	-0.650	0.784	0.688	0.407	0.522	0.112	2.427
Difficulty getting pregnant	0.196	0.401	0.240	0.624	1.217	0.555	2.671

As shown in Table 3, each additional unit increase in points in EPDS before birth was associated with the increase of 1.289 in the odds of participant having postpartum depression. In addition, history of a depressive episode was associated with increase of 4.187 in the odds of participant having postpartum depression.

Variable	B	SE	Wald	p	Exp (B)	95% CI for Exp (B)	
						LL	UL
Total score in the EPDS							
before childbirth	0.235	0.063	13.802	< 0.001	1.265	1.117	1.432
History of a depressive episode	1.711	0.625	7.496	0.006	5.537	1.626	18.851
History of treatment for mental problems	-0.681	0.980	0.483	0.487	0.506	0.074	3.457
Quality of care provision	0.094	0.099	0.894	0.344	1.099	0.904	1.335
Stress and anxiety management	-0.213	0.070	9.252	0.002	0.808	0.705	0.927
Age	-0.116	0.064	3.316	0.069	0.891	0.786	1.009
Days since delivery	0.000	0.003	0.002	0.964	1.000	0.994	1.006
Premature birth	-0.011	0.944	0.000	0.991	0.989	0.155	6.293
Vaginal delivery			6.323	0.097			
Assisted vaginal delivery	0.700	0.591	1.403	0.236	2.013	0.632	6.411
Planned cesarean section	0.506	0.847	0.357	0.550	1.658	0.315	8.726
Emergency cesarean section	-2.098	1.129	3.453	0.063	0.123	0.013	1.122
Difficulty getting pregnant	-0.167	0.564	0.087	0.768	0.847	0.280	2.556

TABLE 4
Predictors of
depressive symptoms
with cut-off score 13
in the EPDS

For EPDS scores of ≥ 13 , the logistic regression model was statistically significant, $X^2(12, 277) = 62.135, p < 0.001$. The model explained 42.6% (Nagelkerke R) of the variance in postpartum depression and correctly classified 92.8% of cases.

As shown in Table 4, for each unit increase in stress and anxiety management (which is part of satisfaction with childbirth, where a higher score means that the person was better able to cope with stress and anxiety and was more satisfied with childbirth), the likelihood of depression decreased by 0.808 times. This means that people, who reported a higher level on stress and anxiety management as part of satisfaction with childbirth were less likely to have a depressive outcome. Each additional unit increase in points in EPDS score before childbirth was associated with a 1.265 increase in the odds of the participant having postpartum depression. In addition, history of depressive episode was associated with increase of 5.537 in the odds of the participant having postpartum depression.

DISCUSSION

The aim of the present study was to examine the association between various aspects of satisfaction with childbirth and the severity of postpartum symptoms, taking into account other factors that may affect the risk of developing postpartum depression. We also wanted to investigate how the predictability of childbirth affects satisfaction with childbirth.

In summary, individuals who reported higher levels on stress and anxiety management (indicating better coping with stress and anxiety and higher satisfaction with childbirth) were less likely to have a depressive outcome in severe forms of de-

pressive symptoms (but not for milder symptoms). A higher level of depressive symptoms before childbirth and a history of a depressive episode were also associated with PPD. We also observed significant differences in satisfaction with childbirth and type of delivery, with predictability of delivery being the determining factor – as it was important if delivery was predictable (vaginal and planned CS). Emergency CS or assisted vaginal delivery (meaning the vaginal delivery did not go as planned) predicted lower satisfaction with childbirth.

Our results suggest that better stress and anxiety management, as part of satisfaction with childbirth, was associated with lower levels of postpartum depressive symptoms (with a cut-off score ≥ 13). Stress and anxiety management was important for protecting maternal mental health after childbirth. This is consistent with the research findings of Sawatzky et al. (2012), who found that beliefs about coping well with stress were associated with reduced severity of depressive symptoms, indicating the significant impact of coping mechanisms on the relationship between stress and depression. Similarly, Alshowkan et al. (2023) also found that coping strategies are important in mitigating postpartum mental distress. Although quality of care provision is important for overall satisfaction with childbirth, it may not be as crucial in predicting depressive symptoms as the ability to cope effectively with stress and anxiety.

The prevalence of PPD was higher in our sample than in the sample of Rus Prelog (2019), but was consistent with the findings of Koprivnik and Plemenitaš (2005) in Slovenia. The prevalence of depressive symptoms decreases in the weeks after childbirth, which is also consistent with the study by Rabinowitz et al. (2023), in which women also reported lower levels of depressive symptoms one month after childbirth. A history of depression and depression during pregnancy were strongly associated with an increased likelihood of PPD, which is also consistent with previous research (Hain et al., 2016; Liu et al., 2022; Usmani et al., 2021).

As in many other studies, we found no significant association between maternal age, type of delivery, premature birth and difficulty getting pregnant and PPD (Carter et al., 2006; Goker et al., 2012; Guintivano et al., 2018). Days since delivery was also non-significant, as studies also show that there is an increased risk of developing PPD for six months or more after delivery (Liu et al., 2022), and days since delivery in our sample varied up to 367 days. A history of treatment for mental health problems was also not a significant predictor, suggesting that a specific depression diagnosis may be more predictive than a general history of treatment for mental health problems (Hain et al., 2016; Liu et al., 2022; Usmani et al., 2021).

In our study, vaginal delivery was the most common birth method. Women were more satisfied with the childbirth if they had a normal vaginal delivery than if they had a cesarean section (CS), which is consistent with previous research (Coates et al., 2019; Karoni et al., 2020; Kempe & Vikström-Bolin, 2020). Although the rate of cesarean section has increased in recent years (Coates et al., 2019), vaginal delivery is still preferred (Wu et al., 2014). When we grouped vaginal and planned CS as predictable type of delivery and assisted vaginal and emergency CS as not so predictable, we found statistically significant differences, with women being more satisfied with predictable methods. Although emergency CS is consistently associated with lower birth satisfaction, previous research also shows that the majority of women with planned CS were satisfied with the birth (Coates et al., 2019). Our findings therefore highlight the importance of predictability in childbirth. It is important to point out that the decision to undergo medical intervention cannot be solely in the hands of the individual, as it is a professional dilemma that is best addressed by medical experts, namely doctors. Since shared decision-making in an emergency can be complicated, there are usually ways to inform a woman step-by-step about what is happening or to debrief after the birth. Good communication is therefore important both during and after childbirth (Coates et al., 2019). As our findings show, women crave the opportunity to choose a birth method (Wu et al., 2014). As a compromise, we suggest leaving certain aspects of the childbirth method to the mother's choice, such as birth position (e.g., lying on the side, on all fours, bent forward, sitting, standing, supine, using a delivery chair, or a delivery ball; Mayo Clinic, 2023) and the freedom to change positions during labour.

Limitations

The current study was conducted during Covid-19 and has some limitations. One of the limitations is related to sampling. Participants were recruited via social media (specifically Facebook groups), as direct access to participants in hospitals was restricted due to pandemic-related measures in Slovenia (Mesarič et al., 2020; Ministry of Health, 2020). This approach resulted in a convenience sample, which limits the generalisability of the findings to the broader population, as not all women use social networks. Furthermore, not all invited users chose to participate, which may have introduced self-selection bias. Another limitation is that the EPDS, intended to measure depressive symptoms within the past 7 days, was used here to assess prenatal depression retrospectively over a period of up to 367 days postpartum, which may affect the accuracy and validity of the results. Although research shows that mothers have excellent recall of events during childbirth four months

after delivery (Bat-Erdene et al., 2013), the large postpartum span (6 to 367 days) may have affected participants' recall accuracy of their pre-birth experiences and satisfaction with childbirth, so a longitudinal study may be a better choice. Furthermore, as the EPDS is also a self-report questionnaire, additional clinical assessments should be used to diagnose depression more accurately, suggesting that the prevalence in the Slovenian sample may change. The study was limited to the variables included in the study, and we did not have information on whether the woman was positive to Covid-19, the presence of a companion and their support, the number of children and the duration of labour. Future studies should therefore access these and other important variables. A larger sample size could have revealed additional significant predictors.

CONCLUSION

Our study highlights that specific aspects of satisfaction with childbirth, particularly stress and anxiety management, play a key role in mitigating postpartum depressive symptoms. In contrast to previous studies, we provide a more detailed and holistic perspective by including several predictors, some of which have been previously associated with PPD. Some predictors were not significant in our sample, which is also consistent with the findings of previous studies. While, previous studies have focused on comparing vaginal or CS method of delivery in satisfaction with childbirth, our findings, however, indicate that the predictability of childbirth method is also an important factor in childbirth satisfaction. The results emphasise the importance of routine screening for depression during pregnancy and in the past. Based on these findings, we recommend guiding healthcare professionals to improve and support women in coping with stress and anxiety during childbirth. Providing clear, accessible information about the birthing process and hospital procedures may help women feel more prepared and confident. Additionally, when feasible, offering women a sense of control over aspects of their delivery may enhance their perception of predictability, thereby contributing to a more positive birth experience.

REFERENCES

- Abdollahi, F., & Zarghami, M. (2018). Effect of postpartum depression on women's mental and physical health four years after childbirth. *East Mediterr Health Journal*, 24(10), 1002–1009. <https://doi.org/10.26719/2018.24.10.1002>
- Ahmadpour, P., Faroughi, F., & Mirghafourvand, M. (2023). The relationship of childbirth experience with postpartum depression and anxiety: A cross-sectional study. *BMC Psychology*, 11, 58. <https://doi.org/10.1186/s40359-023-01105-6>

- Alshowkan, A., Shdaifat, E., Alnass, F. A., Alqahtani, F. M., AlOtaibi, N. G., & AlSaleh, N. S. (2023). Coping strategies in postpartum women: Exploring the influence of demographic and maternity factors. *BMC Women's Health*, 23, 582. <https://doi.org/10.1186/s12905-023-02751-z>
- American Psychiatric Association, DSM-5 Task Force. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™* (5th ed.). American Psychiatric Publishing, Inc. <https://doi.org/10.1176/appi.books.9780890425596>
- Armstrong, R. A. (2014). When to use the Bonferroni correction. *Ophthalmic and Physiological Optics*, 34(5), 502–508. <https://doi.org/10.1111/opo.12131>
- Atan, Ş. U., Ozturk, R., Satir, D. G., Çalim, S. I., Weller, B. K., Amanak, K., Saruhan, A., Şirin, A., & Akercan, F. (2018). Relation between mothers' types of labor, birth interventions, birth experiences and postpartum depression: A multicentre follow-up study. *Sexual & Reproductive Healthcare*, 18, 13–18. <https://doi.org/10.1016/j.srhc.2018.08.001>
- Bartlett, M. S. (1954). A note on the multiplying factors for various χ^2 approximations. *Journal of the Royal Statistical Society. Series B (Methodological)*, 16(2), 296–298. <https://doi.org/10.1111/j.2517-6161.1954.tb00174.x>
- Bat-Erdene, U., Metcalfe, A., McDonald, S. W., & Tough, S. C. (2013). Validation of Canadian mothers' recall of events in labour and delivery with electronic health records. *BMC Pregnancy and Childbirth*, 13, S3. <https://doi.org/10.1186/1471-2393-13-S1-S3>
- Beck, C. T. (1999). Postpartum depression stopping the thief that steals motherhood. *Liberty*, 3(4), 41–44. <https://doi.org/10.1111/j.1552-6356.1999.tb01115.x>
- Bell, A. F., & Andersson, E. (2016). The birth experience and women's postnatal depression. A systematic review. *Midwifery*, 39, 112–123. <https://doi.org/10.1016/j.midw.2016.04.014>
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. Guilford Publication.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.
- Carter, F. A., Frampton, C. M. A., & Mulder, R. T. (2006). Cesarean section and postpartum depression: A review of the evidence examining the link. *Psychosomatic Medicine*, 68(2), 321–330. <https://doi.org/10.1097/01.psy.0000204787.83768.0c>
- Coates, D., Thirukumar, P., & Henry, A. (2019). Women's experiences and satisfaction with having a caesarean birth: An integrative review. *Birth*, 47(2), 169–182. <https://doi.org/10.1111/birt.12478>
- Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1–9. <https://doi.org/10.7275/jyj1-4868>
- Cox, J. L., Holden, J. M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the 10-item Edinburgh postnatal depression scale. *The British Journal of Psychiatry*, 150(6), 782–786. <https://doi.org/10.1192/bjp.150.6.782>

- De Albuquerque Moraes, G. P., Lorenzo, L., Pontes, G. a. R., Montenegro, M. C., & Cantilino, A. (2017). Screening and diagnosing postpartum depression: When and how? *Trends in Psychiatry and Psychotherapy*, 39(1), 54–61. <https://doi.org/10.1590/2237-6089-2016-0034>
- Dencker, A., Taft, C., Bergqvist, L., Lilja, H., & Berg, M. (2010). Child-birth experience questionnaire (CEQ): Development and evaluation of a multidimensional instrument. *BMC Pregnancy and Childbirth*, 10, 81. <https://doi.org/10.1186/1471-2393-10-81>
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Sage Publications.
- Goker, A., Yanikkerem, E., Demet, M. M., Dikayak, S., Yildirim, Y., & Koyuncu, F. M. (2012). Postpartum depression: Is mode of delivery a risk factor? *ISRN Obstetrics and Gynecology*, 2012(1), 1–6. <https://doi.org/10.5402/2012/616759>
- Guintivano, J., Manuck, T., & Meltzer-Brody, S. (2018). Predictors of postpartum depression: A comprehensive review of the last decade of evidence. *Clinical Obstetrics & Gynecology*, 61(3), 591–603. <https://doi.org/10.1097/GRE.0000000000000368>
- Gürber, S., Bielinski-Blattmann, D., Lemola, S., Jaussi, C., Von Wyl, A., Surbek, D., Grob, A., & Stadlmayr, W. (2012). Maternal mental health in the first 3-week postpartum: The impact of caregiver support and the subjective experience of childbirth – A longitudinal path model. *Journal of Psychosomatic Obstetrics & Gynecology*, 33(4), 176–184. <https://doi.org/10.3109/0167482X.2012.730584>
- Hain, S., Oddo-Sommerfeld, S., Bahlmann, F., Louwen, F., & Schermelleh-Engel, K. (2016). Risk and protective factors for antepartum and postpartum depression: A prospective study. *Journal of Psychosomatic Obstetrics & Gynecology*, 37(4), 119–129. <https://doi.org/10.1080/0167482X.2016.1197904>
- Hollins Martin, C. H., & Fleming, V. (2011). The birth satisfaction scale. *International Journal of Health Care Quality Assurance*, 24(2), 124–135. <https://doi.org/10.1108/09526861111105086>
- Hollins Martin, C. J., & Martin, C. R. (2014). Development and psychometric properties of the Birth Satisfaction Scale-Revised (BSS-R). *Midwifery*, 30(6), 610–619. <https://doi.org/10.1016/j.midw.2013.10.006>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hutchens, B. F., & Kearney, J. (2020). Risk factors for postpartum depression: An umbrella review. *Journal of Midwifery & Women's Health*, 65(1), 96–108. <https://doi.org/10.1111/jmwh.13067>
- Ilska, M., Banaś, E., Gregor, K., Brandt-Salmeri, A., Ilski, A., & Cnota, W. (2020). Vaginal delivery or caesarean section – Severity of early symptoms of postpartum depression and assessment of pain in Polish women in the early puerperium. *Midwifery*, 87, 102731. <https://doi.org/10.1016/j.midw.2020.102731>
- Karoni, H. F., Bantie, G. M., Azage, M., Kasa, A. S., Aynie, A. A., & Tsegaye, G. W. (2020). Maternal satisfaction among vaginal and cesare-

an section delivery care services in Bahir Dar city health facilities, Northwest Ethiopia: A facility-based comparative cross-sectional study. *BMC Pregnancy and Childbirth*, 20, 473. <https://doi.org/10.1186/s12884-020-03170-w>

Kempe, P., & Vikström-Bolin, M. (2020). Women's satisfaction with the birthing experience in relation to duration of labour, obstetric interventions and mode of birth. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 246, 156–159. <https://doi.org/10.1016/j.ejogrb.2020.01.041>

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (5th ed., pp. 3–427). The Guilford Press.

Koprivnik, P., & Plemenitaš, A. (2005). Pojavnost depresij v poporodnem obdobju v slovenskem vzorcu. [Incidence of depression in the postpartum period – Slovene sample]. *Medicinski razgledi*, 44(2), 139–145.

Langan, R. C., & Goodbred, A. J. (2016). Identification and management of peripartum depression. *American Academy of Family Physicians*, 93(10), 852–858.

Levis, B., Negeri, Z., Sun, Y., Benedetti, A., & Thombs, B. D. (2020). Accuracy of the Edinburgh Postnatal Depression Scale (EPDS) for screening to detect major depression among pregnant and postpartum women: Systematic review and meta-analysis of individual participant data. *BMJ*, 371, m4022. <https://doi.org/10.1136/bmj.m4022>

Litwin, M. (1995). *How to measure survey reliability and validity*. SAGE Publications, Inc. <https://doi.org/10.4135/9781483348957>

Liu, X., Wang, S., & Wang, G. (2022). Prevalence and Risk factors of postpartum depression in women: A Systematic Review and Meta-analysis. *Journal of Clinical Nursing*, 31(19-20), 2665–2677. <https://doi.org/10.1111/jocn.16121>

Lloret, S., Ferreres, A., Hernández, A., & Tomás, I. (2017). El análisis factorial exploratorio de los ítems: análisis guiado según los datos empíricos y el software [The exploratory factor analysis of items: Guided analysis based on empirical data and software]. *Anales de Psicología*, 33(2), 417–432. <https://doi.org/10.6018/analesps.33.2.270211>

Mayo Clinic. (2023). *Labor positions*. Mayo Clinic. <https://www.mayoclinic.org/healthy-lifestyle/labor-and-delivery/in-depth/labor/art-20546804>

Meireles, J. F. F., Neves, C. M., Amaral, A. C. S., Da Rocha Morgado, F. F., & Ferreira, M. E. C. (2022). Body appreciation, depressive symptoms, and self-esteem in pregnant and postpartum Brazilian women. *Frontiers in Global Women's Health*, 3, 834040. <https://doi.org/10.3389/fgwh.2022.834040>

Mesarič, V. A., Košir-Pogačnik, R., Kavšek, G., Trojner-Bregar, A., Steblovnik, L., & Druškovič, M. (2020). Reorganizacija dela v Porodnišnici Ljubljana v času izrednih razmer zaradi pandemije virusa SARS-CoV-2. [Reorganization of the working process in Ljubljana Maternity Hospital during SARS-CoV-2 pandemic]. *Zdravniški vestnik*, 89(11/12), 671–679. <https://doi.org/10.6016/ZdravVestn.3098>

Ministry of Health. (2020). *Od jutri napre znova dovoljena prisotnost spremljevalca pri porodu* [Attendance at birth allowed again from tomorrow]. Ministry of Health. <https://www.gov.si/novice/od-29-4-2020-naprej/>

- Ministry of Labour, Family, Social Affairs and Equal Opportunities. (2025). *Family rights and benefits*. Ministry of Labour, Family, Social Affairs and Equal Opportunities. <https://www.gov.si/en/policies/family-children-and-marriage/family-rights-and-benefits/>
- Mughal, S., Azhar, Y., & Siddiqui, W. (2022, October 7). *Postpartum depression*. StatPearls – NCBI Bookshelf. <https://www.ncbi.nlm.nih.gov/books/NBK519070/>
- Ning, J., Deng, J., Li, S., Lu, C., & Zeng, P. (2024). Meta-analysis of association between caesarean section and postpartum depression risk. *Frontiers in Psychiatry*, 15, 1361604. <https://doi.org/10.3389/fpsy.2024.1361604>
- Odalovic, M., Tadic, I., Lakic, D., Nordeng, H., Lupattelli, A., & Tasic, L. (2015). Translation and factor analysis of structural models of Edinburgh Postnatal Depression Scale in Serbian pregnant and postpartum women – Web-based study. *Women and Birth*, 28(3), e31–e35. <https://doi.org/10.1016/j.wombi.2015.01.014>
- Patil, V. H., Singh, S. N., Mishra, S., & Donovan, T. D. (2017). *Parallel analysis engine to aid in determining number of factors to retain using R* [Computer software]. <https://analytics.gonzaga.edu/parallelengine/>
- Preis, H., Mahaffey, B., Heiselman, C., & Lobel, M. (2022). The impacts of the COVID-19 pandemic on birth satisfaction in a prospective cohort of 2,341 U.S. women. *Women and Birth*, 35(5), 458–465. <https://doi.org/10.1016/j.wombi.2021.10.004>
- Rabinowitz, E. P., Kutash, L. A., Richeson, A. L., Sayer, M. A., Samii, M. R., & Delahanty, D. L. (2023). Depression, anxiety, and stress in pregnancy and postpartum: A longitudinal study during the COVID-19 pandemic. *Midwifery*, 121, 103655. <https://doi.org/10.1016/j.midw.2023.103655>
- Radoš, S. N., Martinić, L., Matijaš, M., Brekalo, M., & Martin, C. R. (2021). The relationship between birth satisfaction, posttraumatic stress disorder and postnatal depression symptoms in Croatian women. *Stress and Health*, 38(3), 500–508. <https://doi.org/10.1002/smi.3112>
- Rus Prelog, P. (2019). *Individualni in kontekstualni psihosocialni dejavniki zaščite in ogroženosti duševnega zdravja prvesnic v nosečnosti in po porodu* [Individual and contextual protective and risk factors of primiparas' mental health in pregnancy and postpartum]. (Doctoral dissertation). Faculty of Medicine, University of Ljubljana. <https://repozitorij.uni-lj.si/IzpisGradiva.php?id=111846>
- Safi-Keykaleh, M., Aliakbari, F., Safarpour, H., Safari, M., Tahernejad, A., Sheikhbardsiri, H., & Sahebi, A. (2022). Prevalence of postpartum depression in women amid the COVID-19 pandemic: A systematic review and meta-analysis. *International Journal of Gynecology & Obstetrics*, 157(2), 240–247. <https://doi.org/10.1002/ijgo.14129>
- Sahebi, A., Kheiry, M., Abdi, K., Qomi, M., & Golitaleb, M. (2024). Postpartum depression during the COVID-19 pandemic: An umbrella review and meta-analyses. *Frontiers in Psychiatry*, 15, 1393737. <https://doi.org/10.3389/fpsy.2024.1393737>
- Sawatzky, R. G., Ratner, P. A., Richardson, C. G., Washburn, C., Sudmant, W., & Mirwaldt, P. (2012). Stress and depression in students. *Nursing Research*, 61(1), 13–21. <https://doi.org/10.1097/NNR.0b013e31823b1440>

Schreiber-Gregory, D., & Bader, K. (2018). *Logistic and linear regression assumptions: Violation recognition and control*. <https://www.lexjansen.com/scsug/2018/Shreiber-Gregory-SCSUG2018-Assumption-Violations.pdf>

Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 104, 235–248. <https://doi.org/10.1016/j.jpsychires.2018.08.001>

Sit, D. K. Y., & Wisner, K. L. (2009). Identification of postpartum depression. *Clinical Obstetrics & Gynecology*, 52(3), 456–468. <https://doi.org/10.1097/GRF.0b013e3181b5a57c>

Slomian, J., Honvo, G., Emonts, P., Reginster, J., & Bruyère, O. (2019). Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Health*, 15, 174550651984404. <https://doi.org/10.1177/1745506519844044>

Stephens, A. J., Barton, J. R., Bentum, N.-A. A., Blackwell, S. C., & Sibai, B. M. (2020). General guidelines in the management of an obstetrical patient on the labor and delivery unit during the COVID-19 pandemic. *American Journal of Perinatology*, 37(08), 829–836. <https://doi.org/10.1055/s-0040-1710308>

Sword, W., Landy, C. K., Thabane, L., Watt, S., Krueger, P., Farine, D., & Foster, G. (2011). Is mode of delivery associated with postpartum depression at 6 weeks: A prospective cohort study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 118(8), 966–977. <https://doi.org/10.1111/j.1471-0528.2011.02950.x>

Tabachnick, B. G., & Fidell, L. S. (2018). *Using multivariate statistics* (7th ed.). Pearson.

Taber, K. S. (2017). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>

Urbanová, E., Škodová, Z., & Bašková, M. (2021). The association between birth satisfaction and the risk of postpartum depression. *International Journal of Environmental Research and Public Health*, 18(19), 10458. <https://doi.org/10.3390/ijerph181910458>

Usmani, S., Greca, E., Javed, S., Sharath, M., Sarfraz, Z., Sarfraz, A., Salari, S., Hussaini, S., Mohammadi, A., Chellapuram, N., Cabrera, E., & Ferrer, G. (2021). Risk factors for postpartum depression during COVID-19 pandemic: A systematic literature review. *Journal of Primary Care & Community Health*, 12, 215013272110593. <https://doi.org/10.1177/21501327211059348>

Vardavaki, Z., Martin, C. J. H., & Martin, C. R. (2015b). Construct and content validity of the Greek version of the Birth Satisfaction Scale (G-BSS). *Journal of Reproductive and Infant Psychology*, 33(5), 488–503. <https://doi.org/10.1080/02646838.2015.1035235>

Wang, Z., Liu, J., Shuai, H., Cai, Z., Fu, X., Liu, Y., Xiao, X., Zhang, W., Krabbendam, E., Liu, S., Liu, Z., Li, Z., & Yang, B. X. (2021). Mapping

global prevalence of depression among postpartum women. *Translational Psychiatry*, 11, 640. <https://doi.org/10.1038/s41398-021-01663-6>

WHO. (2024). *Coronavirus disease (COVID-19) pandemic*. WHO. <https://www.who.int/europe/emergencies/situations/covid-19>

Wu, E., Kaimal, A. J., Houston, K., Yee, L. M., Nakagawa, S., & Kupermann, M. (2014). Strength of preference for vaginal birth as a predictor of delivery mode among women who attempt a vaginal delivery. *American Journal of Obstetrics and Gynecology*, 210(5), 440.e1–440.e6. <https://doi.org/10.1016/j.ajog.2013.11.021>

Uloga predvidljivosti porođaja i upravljanja stresom i anksioznošću u zadovoljstvu porodom i postporođajnoj depresiji

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U internetskoj presječnoj studiji na 371 Slovenki, depresivni simptomi procijenjeni su pomoću Edinburške ljestvice za postporođajnu depresiju, a zadovoljstvo porođajem – uključujući kvalitetu pružene skrbi te upravljanje stresom i anksioznošću – mjereno je ljestvicom zadovoljstva porođajem. Prevalencija depresije iznosila je 27,22 % tijekom trudnoće i 21,32 % nakon poroda. Logistička regresija identificirala je značajne prediktore: upravljanje stresom i anksioznošću pri porodu (značajno kod teške depresije), povijest depresivne epizode te depresivni simptomi tijekom trudnoće. Predvidljiviji porođaji povezani su s većim zadovoljstvom porođajem. Rezultati naglašavaju važnost rutinskog pregleda na depresiju, podrške u upravljanju stresom i anksioznošću, dok predvidljivi porođaji povećavaju zadovoljstvo porođajem.

Ključne riječi: postporođajna depresija, zadovoljstvo porođajem, povijest depresije, upravljanje stresom i anksioznošću, prenatalna depresija, predvidljivost



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