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Determinants of postpartum depression among mothers: a mixed-method approach

Determinan Kejadian Depresi Postpartum pada Ibu dengan Pendekatan Mixed-Method

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ABSTRACT

***Background**: Postpartum depression is a growing global mental health problem with long-term impacts on both mothers and their children's psychological development. Various maternal, familial, and cultural factors may contribute to postpartum depression.*
***Objective:** This study aimed to identify risk factors that influence postpartum depression among postpartum mothers.*
***Methods:** This study employed a mixed-method design combining quantitative and qualitative approaches. The quantitative phase analyzed risk factors of postpartum depression, while the qualitative phase explored significant factors identified from the quantitative analysis. The study involved 70 postpartum mothers from the working area of Padangmatinggi Public Health Center, Padangsidimpuan City, selected using consecutive sampling. Quantitative data were collected through questionnaires and analyzed using multivariate logistic regression. Qualitative data were obtained via in-depth interviews and analyzed descriptively with thematic analysis.*
***Results:** Child's gender (p = 0.014; OR = 0.205; 95% CI: 0.0560–0.727) and Parity (p = 0.034; OR = 0.249; 95% CI: 0.069–0.903) were found to be significant determinants of postpartum depression. Mothers with high self-efficacy tended toward postpartum depression. Qualitative findings indicated that families prefer sons due to cultural influences. Multiparous mothers have experience caring for infants, making them more capable of managing emotions and seeking solutions when caring for infants. Maternal*
***Conclusion:** Child's gender, parity, and maternal self-efficacy were important factors influencing postpartum depression. Strengthening health promotion related to gender acceptance, newborn care, and maternal self-efficacy is recommended to improve the mental well-being of postpartum mothers.*

***Keywords:** mental health, mixed method, postpartum depression, postpartum mothers*

ABSTRAK

Latar Belakang: Depresi pascapersalinan merupakan masalah kesehatan mental global yang terus berkembang dengan dampak jangka panjang pada perkembangan psikologis ibu dan anak. Berbagai faktor maternal, keluarga, dan budaya dapat berkontribusi terhadap terjadinya depresi pascapersalinan.
Tujuan: Studi ini bertujuan untuk mengidentifikasi faktor risiko yang memengaruhi depresi pascapersalinan pada ibu pascapersalinan.
Metode: Studi ini menggunakan desain *Mixed-Method* yang menggabungkan pendekatan kuantitatif dan kualitatif. Fase kuantitatif menganalisis faktor risiko depresi pascapersalinan, sedangkan fase kualitatif mengeksplorasi faktor-faktor signifikan yang diidentifikasi dari analisis kuantitatif. Studi ini melibatkan 70 ibu pascapersalinan dari

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wilayah kerja Puskesmas Padangmatinggi, Kota Padangsidimpuan, yang dipilih menggunakan pengambilan sampel berurutan. Data kuantitatif dikumpulkan melalui kuesioner dan dianalisis menggunakan regresi logistik. Data kualitatif diperoleh melalui wawancara mendalam dan dianalisis secara tematik.
Hasil: Jenis kelamin anak (p = 0,014; OR = 0,205; 95% CI: 0,0560–0,727) dan paritas (p = 0,034; OR = 0,249; 95% CI: 0,069–0,903) ditemukan sebagai penentu signifikan depresi pascapersalinan. Ibu dengan efikasi diri tinggi cenderung mengalami depresi pascapersalinan. Temuan kualitatif menunjukkan bahwa keluarga lebih menyukai anak laki-laki karena pengaruh budaya. Ibu multipara memiliki pengalaman merawat bayi, sehingga lebih mampu mengelola emosi dan mencari solusi saat merawat bayi.
Kesimpulan: Intervensi yang bertujuan memperkuat promosi kesehatan terkait jenis kelamin anak, perawatan bayi baru lahir, dan efikasi diri ibu direkomendasikan untuk meningkatkan kesejahteraan mental ibu pascapersalinan.

***Kata kunci**: depresi postpartum, ibu nifas, kesehatan mental, mixed method*

INTRODUCTION

Mental health challenges are a worldwide concern that continues to rise each year. The likelihood of experiencing mental health problems is greater for mothers during the postpartum phase.[1] Depression is the most prevalent mental health issue faced by mothers in this period, yet its exact causes remain uncertain. It is essential to identify the risk factors associated with postpartum depression due to its considerable effects not only on the mother but also on the entire family, which includes the newborn, the partner, and the broader household.[2]

The prevalence of postpartum depression in low- and middle-income countries is approximately 19.8%, or one in five women, while in high-income countries it ranges from 10–15%, or one in ten women.[3] In Indonesia, the prevalence of depression during pregnancy has been reported at 59.7% in Jakarta and 12.5% in the third trimester in East Java. Meanwhile, in North Sumatra, the prevalence of postpartum depression reaches 26%[4,5]

Overall, an estimated one in five women experiences mental health problems after childbirth, and approximately 20% of them report suicidal ideation. Suicide is recognized as the second leading cause of maternal mortality during the postpartum period. Postpartum depression is also associated with impaired child mental development that may persist into late adolescence, and it negatively affects fathers' ability to provide optimal caregiving support.[6,7]

The results of previous research found Previous studies have demonstrated significant associations between functional and informal social support and postpartum depression, as well as lower parental self-efficacy among mothers experiencing postpartum depression.[8] However, although various risk factors for postpartum depression have been identified, findings across regions and socio-cultural settings remain highly variable.[9] Furthermore, most earlier research has been predominantly quantitative, limiting the understanding of mothers' lived experiences and psychological meanings related to postpartum depression.[10] In North Sumatra, particularly in Padangsidimpuan City and South Tapanuli Regency, research analyzing the determinants of postpartum depression remains limited, especially studies employing a mixed-methods approach that integrates statistical analysis with qualitative exploration.[11]

Postpartum depression is a significant public health concern, yet psychosocial risk factors remain underexplored in local contexts such as Padangsidimpuan. This study addresses this gap using a mixed-methods approach to provide comprehensive, locally relevant insights for preventive interventions.

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Therefore, this study aimed to analyze the risk factors for postpartum depression and to explore the psychosocial context in depth, serving as a foundation for designing preventive interventions.

METHODS

Study design

This study employed a mixed-methods research design, integrating quantitative and qualitative approaches. The quantitative component was utilized to examine risk factors associated with postpartum depression, while the qualitative component aimed to further explore key factors that emerged from the quantitative findings. The research was conducted from April to October 2025 in the working area of the Padangmatinggi Community Health Center, Padangsidimpuan City.

Data source and sampling procedure

The study used primary data collected directly from participants. The target population includes all postpartum mothers with infants aged 0–6 months residing in the coverage area of the Padangmatinggi Community Health Center, Padangsidimpuan City. The sampling technique used was consecutive sampling, resulting in a total sample of 70 participants.

Participants were selected based on predetermined inclusion and exclusion criteria. Inclusion criteria consisted of postpartum mothers with infants aged 0–6 months, from the Batak tribe, without severe mental disorders, who agreed to participate in the study, while exclusion criteria included mothers within the same postpartum period who had been diagnosed with severe mental disorders.

For the qualitative phase, six informants were purposively selected based on their relevance to postpartum depression, communication ability, and willingness to participate. Informants included one representative from the Health Office, one midwife, two postpartum mothers, and one husband.

Variables of the study

The dependent variable in this study was postpartum depression. Independent variables included maternal age, education, parity, infant gender, pregnancy status, socioeconomic status, occupation, comorbidities, self-efficacy, negative beliefs, attitudes, perceptions, family support, and access to health services.

Measurement and instruments

Quantitative data were collected using a structured questionnaire. Measurement instruments consisted of self-efficacy (6 items), negative beliefs (7 items), attitudes (6 items), perceptions (9 items), and family support (8 items).

Before data collection, the instruments underwent face validity assessment, followed by validity and reliability testing. All self-efficacy items were valid, with corrected item-total correlations ranging from 0.489 to 0.834, and demonstrated reliability with a Cronbach's alpha of 0.785 (>0.60). The negative belief scale (7 items) showed validity values between 0.496 and 0.770, and the attitude scale (6 items) from 0.581 to 0.714, both with Cronbach's alpha values of 0.757 (>0.60). The perception scale (9 items) had validity scores ranging from 0.518 to 0.766, with a Cronbach's alpha of 0.763 (>0.60). The family support scale (7 items) demonstrated validity values of 0.457 to 0.940, and a Cronbach's alpha of 0.899 (>0.60). Based on these results, the questionnaire was deemed valid and reliable. Quantitative data were analyzed through univariate, bivariate, and multivariate procedures using logistic regression.

For the qualitative component, data were collected through in-depth interviews using interview guidelines, with the researcher serving as the primary research instrument.

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Data collection

Quantitative data were collected through questionnaire administration to postpartum mothers who met the inclusion criteria. Participants were first provided with an explanation regarding the study objectives and procedures before completing informed consent forms. The questionnaires were then distributed and completed directly by participants.

The qualitative phase employed in-depth interviews, with the researcher serving as the primary instrument. Six participants were purposively selected based on relevance to postpartum depression, good communication ability, and willingness to participate. Interviews were conducted face-to-face using interview guidelines to explore cultural beliefs, maternal experiences, and factors influencing postpartum depression. Field observations were also conducted to support the interview findings.

Ethical considerations

This study received ethical approval from the Ethics Committee of the Ministry of Health, Medan Health Polytechnic, under approval number 01.26.1438/KEPK/ POLTEKKES KEMENKES MEDAN 2025.

Research respondents were given a full explanation of the study and asked to complete informed consent. Respondent privacy and confidentiality were maintained by anonymizing all data. This study ensured the safety of respondents, and participation was voluntary, allowing them to withdraw at any time.

Data analysis

Quantitative data were analyzed using univariate, bivariate, and multivariate analyses with logistic regression procedures. Bivariate associations between categorical independent variables and postpartum depression were examined using the Chi-square test, with Fisher's Exact Test applied for expected counts below five. Variables with p <0.25 were entered into a backward logistic regression model to identify independent predictors, with statistical significance set at p <0.05. Odds ratios (OR) and 95% confidence intervals (CI) were reported, and all analyses were conducted using SPSS version 25. Qualitative data were analyzed using thematic analysis, including coding, categorization, and theme development. To ensure data credibility, source triangulation was applied by comparing interview data with field observations and by using qualitative findings to further explain significant quantitative results.

RESULT

The study was conducted on 70 postpartum mothers in the Padangmatinggi Community Health Center, Padangsidimpuan City.

Table 1. Shows that most respondents are aged 21-35 years or low risk (78.6%), have low education (80%), have good economic status (61.4%), are of planned pregnancy status (82.9%), and are employed (57.1%). The characteristics of the respondents are shown in the following table:

Table 1. Respondent Characteristics

Characteristics	n	%
1. Age		
High risk	15	21.4
Low Risk	55	78.6
2. Education		
Low (primary and junior high school)	56	80.0
High (senior high school, college)	14	20.0
3. Parity		

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Characteristics	n	%
Primiparous	37	52.9
Multiparous	33	47.1
4. Child's Gender		
Female	42	40.0
Male	28	60.0
5. Pregnancy Intention		
Unplanned	12	17.1
Planned	58	82.9
6. Economic Status		
Low	27	38.6
Good	43	61.4
7. Occupation		
Employed	40	57.1
Unemploye	30	42.9
8. History of Comorbidities		
Yes	5	7.1
No	65	92.9
9. Access to Health Services		
Limited	35	50
Adequate	35	50
10. Postpartum Depression		
Yes	50	71.4
No	20	28.6
11. Self-Efficacy		
Low	32	45.7
High	38	54.3
12. Negative Beliefs		
Present	23	32.9
Absent	47	67.1
13. Attitudes		
Negative	27	38.6
Positive	43	61.4
14. Perceptions		
Negative	21	30.0
Positive	49	70.0
15. Family Support		
Inadequate	37	52.9
Adequate	33	47.1

Sources: Primary Data (2025)

Chi-square analysis to see the relationship between independent variables and the incidence of postpartum depression can be seen in the following table:

Table 2. Bivariate Analysis Results

	Postpartum Depression Incidence in Mothers						*p*	OR	IK (95%)	
	Yes		No						Min	Maks
	F	%	f	%	Total	%				
Age										
High risk	13	86.7	2	13.3	15	100	0.202	3.162	0.644	15,533
Low risk	37	67.3	18	32.7	55	100				
Education										
Low (Primary and	42	75.0	14	25.0	56	100	0.202	2.250	0.665	7.615
Junior high school)	8	57.1	6	42.9	14	100				

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High (Senior high school, college)										
Parity										
Primiparous	30	81.1	7	18.9	37	100	0.104	2.786	0.947	8.195
Multiparous	20	60.6	13	39.4	33	100				
Child's Gender										
Female	15	53.6	13	46.4	28	100	0.015	4.333	1.442	13.019
Male	35	83.3	7	16.7	42	100				
Pregnancy Intention										
Unplanned	10	83.3	2	16.7	12	100	0.487	2.250	0.447	11.334
Planned	40	69.0	18	31.0	58	100				
Economic Status										
Low	17	63.0	10	37.0	27	100	0.332	0.515	0.180	1.478
Good	33	76.7	10	23.3	43	100				
Occupation										
Employed	28	70.0	12	30.0	40	100	0.970	0.848	0.296	2.436
Unemployed	22	73.3	8	26.7	30	100				
History of Comorbidities										
Yes	3	60.0	2	40.0	5	100	0.619	0.574	0.089	3.727
No	47	72.3	18	27.7	65	100				
Self-Efficacy										
Low	26	81.3	6	18.8	32	100	0.160	2,528	0.837	7.637
High	24	63.2	14	36.8	38	100				
Negative Beliefs										
Present	8	34.8	15	65.1	23	100	0.001	0.063	0.018	0.225
Absent	42	89.4	5	10.6	47	100				
Attitudes										
Negative	20	74.1	7	25.9	27	100	0.907	1.238	0.421	3.642
Positive	30	69.8	13	30.2	43	100				
Perceptions										
Negative	16	76.2	5	23.8	21	100	0.773	1.412	0.437	4.565
Positive	34	69.4	15	30.6	49	100				
Family Support										
Inadequate	28	75.7	9	24.3	37	100	0.570	1.556	0.548	4.414
Adequate	22	66.7	11	33.3	33	100				
Health Services										
Access	26	74.3	9	25.7	35	100	0.791	1.324	0.467	3.750
Limited										
Adequate	24	68.6	11	31.4	35	100				

Sources: Primary Data (2025) *Chi-square test

Table 2 shows a significant relationship between the variables of child gender (p 0.015), negative beliefs (p 0.001), and the incidence of depression during the postpartum period. Postpartum mothers who only have daughters are at 4.333 times greater risk of experiencing depression than postpartum mothers who only have sons. Postpartum mothers with negative attitudes are at 1.238 times greater risk of experiencing depression than postpartum mothers with positive attitudes.

Table 3. Results of Multivariate Logistic Regression Analysis

Variables	Coefficient	S.E.	Wald	df	*p* value	OR	IK 95 % Min	Mak
Child's Gender	-1.583	0.645	6.022	1	0.014	0.205	0.056	0.727
Parity	-1.391	0.658	4.472	1	0.034	0.249	0.069	0.903
Self-Efficacy	-1.224	0.652	3.531	1	0.060	0.294	0.069	1.054
Constant	4.708	1.257	14.027	1	0.001	110.816		

Sources: Primary Data (2025)

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Table 3. Shows the results of the multivariate logistic regression test which aims to analyze the relationship between variables that have been selected based on the results of bivariate analysis with a p value <0,25, which will be included in the multivariate analysis using the backward logistic regression method, namely the variables of age, education, parity, child's gender, and self-efficacy with the incidence of depression in postpartum mothers; however, no variables met the removal criteria, and all variables were retained in the final model. The negative belief variable was excluded due to unstable estimates (extreme odds ratio). The variables that influenced the incidence of depression in the postpartum period were the child's gender(p=0.014) and parity (p=0.034). The self-efficacy variable showed a tendency toward a protective effect (p 0.060).

Qualitative Analysis

Qualitative analysis was conducted to further explore the variables influencing the incidence of depression in postpartum mothers, which were found to be significant in the quantitative test. The analysis of the findings obtained by the researcher was based on transcripts obtained during the study.

Data on informant characteristics were obtained from documents held by the informants and based on field observations. Five key informants served as subjects in this study: two postpartum mothers, one husband of a postpartum mother, one midwife, and one person from the health office.

Thematic analysis was conducted on the domains successfully constructed from each variable found to be significant in the quantitative analysis, which showed a tendency toward a protective effect that could not be separated from the variables that influence the incidence of postpartum depression. Child's gender and parity were the influential variables, while self-efficacy showed a tendency toward a protective effect.

Child's Gender

In the Batak tribe, boys are the successors to the family clan, so having a son is a family's desire. A son is considered a source of pride in the family, which affects the mother's mental well-being. If a family doesn't yet have a son, the family will continue to strive for one, as illustrated in the following interview

"...and ultimately, if the wife can't give birth to a son, she ends up changing partners..." (Informant 2)

The hope of having a son to carry on the family lineage to the next generation will lead the family to decide to remarry, and this will impact the mother's mental well-being. This is different from if the husband supports and accepts whatever gender the child is born, as illustrated in the following interview:

"...as far as I know, it's possible, and there's no problem with the husband remarrying even without the wife's permission..." (Informant 2)

"...no (the necessity of having a son) because my partner has been supportive and helpful from the beginning of the pregnancy until now..." (Informant 3)

The results of this study found that mothers who only have daughters had a greater risk of experiencing depression than postpartum mothers who only have sons. This finding supports the quantitative result indicate that the Child's Gender was associated with postpartum depression

Parity

Mothers with postpartum depression acknowledged that the postpartum period is inherently challenging. First-time mothers lack experience caring for a newborn, unlike mothers with previous children. This experience allows them to be better prepared, more adaptable, and better able to cope with stress when their next child arrives, preventing depression.

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"...*learning from the experience of our first child makes us feel more prepared and calmer when it comes to childcare. This way, we don't repeat the mistakes we made in our first experience*." (Informant 3)
"...with my first child, I was completely unsure, so if the child was fussy, I was immediately afraid and stressed. With my second child, I already know what a crying baby means, so I'm less tired and stressed, and I can relax during the postpartum period." (Informant 3)
"…*sometimes when I stay up late, my baby cries a lot… when I stay up late, he cries a lot, so when I'm breastfeeding, he cries a lot, which is when I get stressed because I don't know how to handle it. I want to breastfeed, but my baby refused*..." (Informant 4).

However, postpartum mothers with many children with close age gaps, if they experience pressure in caring for many children, will be at risk of facing stress and affecting their mental well-being, as illustrated in the following interview:
"…*it's double, because if you could say the first child is still a toddler, more attention needs to be given to the first child, because their fussiness is more fussy than their younger sibling, who is still a baby, still seeking attention*…" (Informant 4)

The results of this study found that Postpartum mothers with multiparity already have experience and care for newborns, and this would enable them to overcome the obstacles and stress that occur at the birth of the next child. This finding supports the quantitative result indicate that parity was associated with postpartum depression.

Self-Efficacy

Postpartum mothers with high self-efficacy have better abilities in managing depression and challenges in the postpartum period, such as physical changes, hormonal changes, and psychological changes, so that the risk of depression decreases. Interview results showed that postpartum mothers with high self-efficacy were better able to manage challenges, while postpartum mothers with low self-efficacy were less able to manage depression and the challenges of experiencing depressive symptoms during the postpartum period, as illustrated in the following interview:
"…mmm, because the postpartum period (difficulties) will be experienced in caring for the baby, but everything will pass (Informant 3)
"…*sude do halak maranak (everyone gives birth), everyone is treated the same, between ordinary people and postpartum mothers, there's nothing special about postpartum women*…" (Informant 2)

When problems or stress arise during the postpartum period, mothers with high self-efficacy will try to find ways to overcome them, as in the following interview:
"...*if you feel a little panicked, you'll talk about it and find out the solution*..." (Informant 3)
"...*it's normal to feel stressed, but it's how you deal with it that matters*..." (Informant 2)

When facing difficulties during the postpartum period, the ability to manage difficulties, maintain peace of mind, and practice prayer empowers mothers to navigate each phase of the postpartum period.
"...*for me, the most important treatment is comfort in the heart and mind*..." (Informant 1)
"...Yes, because if our hearts are calm, God willing, we can face anything, whether it's taking care of a child or a baby, God willing, we will be calm..." (Informant 2)

Support from the husband, family, and environment will increase the postpartum mother's ability to go through the postpartum period happily. Starting with attention, helping the mother with housework, and even accompanying the mother can increase the mother's ability to become stronger.
"...*the first thing during the postpartum period might be problems at home. Don't overwork yourself or whatever. The wife has a mental health problem too, maybe she's tired from taking care of the child*, *doing this and that all the time. To take care of that, right*..." (Informant 5)

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"...*there are still many people (husbands) who care, take their wives to the doctor's appointments, accompany them to medical services, exercise, and so on, so they're definitely ready*..." (Informant 1)

The results of this study found that mothers with high self-efficacy are aware of their ability to overcome the difficulties and problems they face during the postpartum period. Although support from those closest to her influences a mother's postpartum journey, it is her inner strength that ultimately empowers her to overcome her challenges.

DISCUSSION

The study revealed that postpartum mothers experienced depressive symptoms with characteristics of older age, lower educational levels, primiparous mothers, and mothers with unplanned pregnancies.

Bivariate analysis showed that the child's gender and parity had a significantly higher rate of postpartum depression. Mothers with low self-efficacy tended to experience depression postpartum with low support from family. These findings are consistent with previous research indicating that insufficient family support reduces a mother's ability to manage postpartum challenges.[12] Risk factors for postpartum depression are not only caused by demographic factors but are complex and include biopsychosocial factors that are interrelated.[6]

Multivariate logistic regression analysis identified the child's gender and parity as the dominant predictors of postpartum depression. Although self-efficacy was not a significant predictor in the final model, it showed a tendency toward a protective effect.

The birth of a son, although culturally valued, may place additional psychological stress on the mother due to higher expectations regarding childcare and family roles.[13]

In lineage-based cultures, sons are often considered the bearers of the family legacy, and parental expectations for sons to fulfill social and family roles may further increase maternal stress and vulnerability to postpartum depression.[14] Extended family involvement in childcare can also contribute to maternal depression, particularly when it limits maternal autonomy and creates conflict in parenting practices.[15] This stress, combined with insufficient emotional support, can lead to stress during the postpartum period and is a risk factor for postpartum depression.

These findings highlight that maternal psychological burden is shaped not only by biological factors but also by sociocultural expectations, including parental expectations for sons.[13] The findings in this study align with nurture theory, which states that a person's gender role is shaped by parental upbringing, personal experiences, and social cues.[16] Batak culture views sons as important as the next generation of the family. When there are no sons in the family, it is not uncommon for the husband to remarry, and this can affect the mental well-being of the mother.[17]

This study found that mothers with high self-efficacy were more likely to develop postpartum depression than mothers with low self-efficacy. Thus, self-efficacy functions as a protective factor. These findings correspond with Bandura's theory of self-efficacy, which posits that individuals with high confidence in their abilities are better equipped to manage stress and adversity.[18] During the postpartum period, mothers with strong self-efficacy are more capable of adapting to physical, hormonal, and emotional changes, thereby reducing the likelihood of depression. Prior studies support these results: Warren et al. (2012) reported lower depression scores in mothers with high self-efficacy, and Shin et al. (2018) found that improving self-efficacy through education and social support interventions reduced postpartum depression.[8,19]

Common postpartum challenges—including exclusive breastfeeding, breast care issues, infant care routines, role adjustment, and sibling rivalry—can be stressful for new mothers.[20] The skills a postpartum mother possesses will determine how she can

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overcome any challenges she faces during the postpartum period. When a postpartum mother has the skills and solutions to face her challenges, she will be more confident in her ability to overcome any difficulties and navigate each stage and process of the postpartum period successfully.[21]

First-time mothers face a particularly critical transition as they adapt to parenthood and infant care.[22] Tasks such as breastfeeding and responding to infant needs can feel overwhelming for mothers with low self-efficacy, potentially leading to depression if unaddressed. Although multiparous mothers benefit from prior experience, they also encounter increased parental responsibilities and possible sibling conflicts, which may add stress.

This study suggests the need for health promotion regarding gender equality in children, ensuring that boys and girls have equal value. Mothers should also be taught newborn care skills so that primiparous mothers can properly care for their newborns when they first start caring for them.

This study also suggests that strengthening maternal self-efficacy should be a central strategy in postpartum mental health interventions. Counseling, coping skills training, emotional support, and social support systems may effectively reduce depression risk.[23]

However, demographic and cultural factors should also be considered when developing intervention models, including education level, spirituality, geographical context, and cultural norms.[24,25]

This study provides novel evidence from an understudied setting by examining multiple psychosocial predictors of postpartum depression using multivariate regression. The mixed-methods approach further enriched the findings by combining quantitative and qualitative insights, allowing a more comprehensive understanding of maternal mental health.

However, the relatively small sample size may limit statistical power and generalizability, and the cross-sectional design does not allow causal conclusions. In addition, the use of self-reported measures may introduce response bias. These limitations should be considered when interpreting the findings.

The study highlights the role of a child's gender, parity, and self-efficacy in postpartum depression, indicating that both cognitive and social factors are important determinants of maternal mental health.

CONCLUSION

This study identified several key factors associated with postpartum depression, namely the child's gender. The desire for a son impacts a mother's mental well-being, but the way they raise and care for a son can also lead to feelings of stress and depression. Acceptance of both male and female genders should be continually promoted. Postpartum mothers caring for a newborn for the first time will experience greater stress due to their lack of experience compared to mothers with more than one child. Mothers who possessed higher levels of self-efficacy demonstrated better coping abilities in managing postpartum challenges, which in turn lowered their likelihood of experiencing depressive symptoms.

Based on these findings, interventions should focus on health promotion for both parents to accept their child's gender, newborn care skills, and enhancing maternal self-efficacy to reduce the risk of postpartum depression.

Future studies should use longitudinal designs, include larger and more diverse samples, and examine biological and environmental factors alongside psychosocial determinants to better understand postpartum depression.

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