Jurnal Bidan Cerdas
e-ISSN: 2654-9352 dan p-ISSN: 2715-9965
Volume 7 Issue 2, 2025, page 279-290
DOI: 10.33860/jbc.v7i2.4216
Website: https://ojs.polkespalupress.id/index.php/JBC
Publisher: Poltekkes Kemenkes Palu

Flash Card-Based Education on Maternal Depressive Symptoms and Breastfeeding Techniques on Postpartum Mothers' Motivation

Sumarni[1], Minarti[2]
[1]Department of Midwifery, Universitas Megarezky, South Sulawesi, Indonesia
[2]Department of Midwifery, Politeknik Baubau, Southeast Sulawesi, Indonesia
Corresponding author: sumarni@unimerz.ac.id

ARTICLE INFO

Article History:

Received: 2025-07-02
Accepted: 2025-09-24
Published: 2025-09-30

Keywords:

Breastfeeding Techniques; Maternal Depressive Symptoms; Motivation; Postpartum.

ABSTRACT

Background: Postpartum changes occur in the body and mind for six weeks. This study examines how flashcard-based instruction affects maternal depression and fosters breastfeeding in postpartum mothers. **Methods**: The method used was quantitative research using the pre-experimental research design in one group (one-group pretest-posttest). The intensity of education on maternal depression and breastfeeding techniques using flash cards was measured through a pre-test before the intervention and a post-test after education. The sample used was 62 postpartum mothers. The method of collecting data is observation and a questionnaire. Data analysis and presentation through univariate and bivariate analysis. **Results**: The results indicated that the majority of postpartum moms were aged 20–35 years, possessed a senior high school education, were housewives, had many previous births, and experienced a normal delivery. The motivation to breastfeed rose markedly from a modest level in the pre-test (mean 41.58) to a much greater level at the post-test (mean 88.16). The Wilcoxon test results ($p = 0.001 < 0.05$) validated that educating mothers about depression symptoms and nursing procedures through flashcards significantly enhanced their motivation for exclusive breastfeeding during the first 3–14 days postpartum. **Conclusion**: This study concludes that there is an influence of maternal depressive symptoms and breastfeeding techniques on the motivation to provide breast milk to postpartum mothers during 3-14 days. Practical application: Midwives can use flash card-based teaching in postpartum care to improve maternal understanding, minimize depression symptoms, and motivate exclusive breastfeeding, improving maternal and infant health.

INTRODUCTION

Globally, many moms stop breastfeeding early due to social, physical, and emotional difficulties, lowering global exclusive breastfeeding rates. Education, employment, and healthcare access are crucial, but maternal psychological disorders, particularly postpartum depression, are also linked to breastfeeding outcomes. Supportive interventions for mental well-being and breastfeeding skills may promote exclusive breastfeeding. Depression can lower a mother's confidence and enthusiasm to breastfeed. The success of maternal health programs can be measured through the main indicator of the Maternal Mortality Rate (MMR). Maternal mortality in this indicator is defined as all deaths during pregnancy, childbirth, and postpartum caused by its

management, but not due to other causes such as accidents or incidents. MMR is all deaths within this scope in every 100.000 live births. The postpartum period experiences physiological and psychological changes for every mother after giving birth (Camarneiro & De Miranda Justo, 2022; Syamsuriyati et al., 2025). The number of postpartum mothers in Indonesia was 4,984,432. In South Sulawesi province, there were 148,545 people, in Gowa Regency, 12.616 people, and in the UPT Bontonompo II Health Centre, there were 879 people. The World Health Organisation (WHO) recommends that all infants worldwide be exclusively breastfed for the first 6 months of life for optimal health and development (Mercan & Tari Selcuk, 2021; Yulianti et al., 2023). The Ministry of Health targets to increase the target of exclusive breastfeeding to 80%. Given the great benefits of breast milk for babies, families, communities, and the country, and related to the Sustainable Development Goals (SDGs), various efforts are made to increase exclusive breastfeeding in babies by paying attention to the growth and development of babies and providing support to mothers in providing exclusive breastfeeding (Weinberg, 2023;Khaeriyah et al., 2023).

At the global level, the prevalence of exclusive breastfeeding has increased this with exclusive breastfeeding for 6 months as recommended by the WHO (Cameron et al., 2022). In developing countries, it is around 57%. East Asia and the Asia-Pacific are the only regions that experienced a decline in exclusive breastfeeding coverage over 15 years, from 31% in 1995 to 29% in 2010. Meanwhile, based on the results of the 2018 Riskesdas, the proportion of breastfeeding patterns in infants aged 0-6 months in Indonesia was 37.3% exclusive breastfeeding, 9.3% partial breastfeeding, and 3.3% predominant breastfeeding. The provision of formula milk is still very high at 79.8%. In South Sulawesi, the achievement of exclusive breastfeeding in 2022 was 75.88%. in Gowa Regency in 2022, the achievement of exclusive breastfeeding was 79.58%.

Breast milk production is influenced by several factors, both direct factors such as breastfeeding behavior, maternal psychology, and maternal physiology, and indirect factors such as socio-cultural factors and the infants, which will affect the mother's psychology (Abuhammad et al., 2025; Siqueira et al., 2023). The mental and psychological factors of breastfeeding mothers have a very large influence on the breastfeeding process and the smooth production of breast milk. Feelings of stress, pressure, and discomfort experienced by a mother can inhibit the amount of breast milk that comes out (Henshaw et al., 2024). Breastfeeding can increase the risk of depression, which can cause symptoms of depression in mothers. The period of maternal depression symptoms is a transition period for mothers because many changes occur, both physically, psychologically, emotionally, and socially (Avalos et al., 2020). Symptoms of maternal depression are feelings that occur in mothers after giving birth, which are characterized by anxiety, panic attacks, fatigue, feelings of self-blame, and feeling unable to take care of their babies (Neupane et al., 2024). These difficulties include causing pain, fatigue, and mothers who dislike it. Other signs and symptoms of maternal risk depression include changes in eating patterns, disturbed sleep patterns, crying, feeling worthless, and feeling hopeless. Problems like this are often found in postpartum mothers. This disappointment can occur due to the transition period to becoming parents, anxiety during postpartum, which can be felt, is one of the factors that affect the smooth production of breast milk (Dagla et al., 2021). According to the WHO, it is estimated that women suffer from mild postpartum depression, ranging from 1% to moderate or severe postpartum depression at 3-20%. In Asia, the incidence of postpartum depression is quite high, varying between 70% of new mothers experiencing mild depressive symptoms, which usually peak 2-5 days after giving birth. The incidence of postpartum depression in Indonesia is around 50-70% of

women suffering from the syndrome, and this can cause postpartum depression from 5% to more than 25% after giving birth, higher than in other Asian countries, due to differences in psychocultural factors, difficulties in diagnosis, diagnostic tools, and ignorance of postpartum mothers (Dessì et al., 2024).

Good ability and motivation help a mother fulfill her breastfeeding responsibilities, thereby raising the rates of exclusive nursing. Maternal elements, including knowledge, education, age, exhaustion, family income, support, and employment, as well as newborn circumstances, including illness or twin status, affect motivation. Recovering postpartum women deal with stress from newborn care, role changes, and healing; this can cause depression and lower motivation for breastfeeding (Franco-Antonio et al., 2022). Particularly, first-time mothers commonly experience anxiety, tiredness, and self-doubt. Breastfeeding methods and flashcard health education can help lower depressive symptoms. Physiological stress can interfere with oxytocin release, leading to pain and lower motivation for breastfeeding.

This study has a gap in the limited research on how organized educational interventions, especially using easily available, visual media like flashcards, can directly reduce mothers' depressive symptoms and concurrently boost motivation for exclusive breastfeeding among postpartum women, especially in areas with suboptimal nursing rates despite sufficient knowledge. Postpartum depression affects nursing behavior; few studies have methodically investigated the impact of low-cost, basic educational tools on psychological recovery as well as breastfeeding motivation during the sensitive early postpartum period. Aiming to promote both emotional well-being and functional mother outcomes, this study fills in that need by concentrating on the combination of education about appropriate nursing practices and mother mental health care through flashcard-based interventions in a community context. Based on the description in the background, the problem that can be raised in the study How is the influence of maternal depression symptoms, education, and breastfeeding techniques using flash cards on the motivation of breastfeeding in postpartum mothers 3-14 days of Bontonompo II Public Health Center?. This study aims to investigate the effect of education on maternal depression symptoms and breastfeeding techniques using flash cards on the motivation to provide breast milk to postpartum mothers 3-14 days of the Bontonompo II Public Health Center.

METHODS

This study utilized a single-group pre–post-test design lacking a control group. This method was selected due to resource and logistical limitations in the study environment, despite its constraints on deriving robust causal inferences. The design still lets us look into how flash card-based education might affect maternal depressive symptoms and breastfeeding motivation, which lays the groundwork for studies that use stronger designs (Babii, 2020; Šuvaković, 2011). For the measurement of the intensity of education of depressed mothers and breastfeeding techniques using flash cards before and after being given Education. Before being given education on depressed mothers and breastfeeding techniques using flash cards in the group, participants will be measured (pre-test), then measured again after being given the intervention/Education (post-test). In this study, flashcards were the main way to teach, and the information was about how to deal with a mother's depressive symptoms and how to nurse properly. The flashcards were made to be simple, graphic, and easy to understand so that mothers could quickly learn important ideas. Postpartum women received one-on-one education one to two times a day for three to fourteen days, depending on their availability and health. Each session lasted about 15 to 20 minutes,

which ensured that the subject was conveyed well without tiring people out. The goal of this method was to help people remember what they learned, feel less depressed, and want to breastfeed exclusively more. The location of this research was carried out in the working area of UPT. Bontonompo II Health Centre. The time of this research was carried out from January 15 to April 15, 2024.

The population in this study was all postpartum mothers on days 3-14 postpartum in the working area of UPT. Bontonompo II Health Centre, totalling 68 people who visited in August 2023. In this research plan, the sample was all postpartum mothers on days 3-14 postpartum, a total sample of 62 people. The respondent criteria in this study consisted of inclusion criteria and exclusion criteria, namely: inclusion criteria consisted of postpartum mothers on days 3-14, able to communicate verbally and non-verbally, willing to be respondents, and willing to use flash care media. Exclusion criteria consist of postpartum mothers who are not sick and are not willing to be respondents. This study used purposive sampling, which the researcher carefully chose depending on particular factors. This method was selected due to the researcher's prior understanding of the population's characteristics and the selection of respondents who fulfilled specified criteria pertinent to the study's objectives. Purposive sampling guaranteed that the participants accurately represented the conditions necessary to assess the effect of maternal depressive symptoms and nursing approaches by concentrating on these specified variables. Utilizing flashcards for educating postpartum mothers about their incentive to supply breast milk.

The data collection technique used in this study was observation through a checklist/questionnaire for respondents related to research or the influence of Maternal Depressive Symptoms education and breastfeeding techniques with flash cards on Motivation for breastfeeding, while for secondary data, the researcher took data from patient medical records, where the data was first collected. And asked for permission with a letter of application to the UPT. Bontonompo II.

The data processing steps are carried out with the following steps:

Editing is an activity that aims to check the information in the questionnaire, whether the questionnaire has been filled in completely, and whether the respondent's answers are relevant to the questions. During the editing process, two tasks must be done. Coding is changing information in the form of letters into numbers. Processing/Entering Data. After doing the coding process, the next step is data entry, or entering data from the questionnaire into a computer program or SPSS program (Ong & Puteh, 2017; Arkkelin, 2014). Cleaning, which functions to recheck the entered data for errors. Presentation of data where information is presented in the form of a distribution table, with the table title written in the form of an inverted pyramid and attached with an explanation in the form of a narrative.

Univariate analysis aims to explain or describe the characteristics of each research variable (Thomas, 2021). The data will be presented in a table for each variable so that the distribution of the respondent data studied will be illustrated. The data includes describing the distribution of independent variables, Maternal Depression Symptoms, and breastfeeding techniques, and the dependent variable is the motivation to breastfeed. Bivariate analysis was conducted to determine the effect of education on depression symptoms and breastfeeding techniques on motivation to breastfeed. In this study, a non-normally distributed data analysis test was used, using the Wilcoxon Test.

Informed consent, respondents must sign a consent form for the research, and if the subject agrees, must still respect the respondent's rights. To protect respondents' personal information, researchers will not include their names on the sheet but will

provide a code. Confidentiality: Data collected from subjects is guaranteed confidentiality by the researcher.

However, the study has some limitations. The pre-experimental design without a control group limits causal inference, and the relatively small sample size from a single health center reduces generalizability. Additionally, the short intervention period may not fully capture long-term impacts on maternal motivation and breastfeeding behavior. Despite these limitations, the flashcard-based education demonstrated promise as a practical and innovative midwifery practice.

RESULTS

Univariate analysis provides descriptive statistics about the research variables, consisting of respondent characteristics such as age, education level, occupation, breastfeeding, delivery method, and number of parities. The data are presented in the form of a distribution.

An overview of the characteristics of respondents in this study can be seen in the following table.

Table 1. The characteristics of respondents

Variables	Category	n	%
Age	16–20 years	1	1.6
	20–35 years	56	90.3
	35–40 years	5	8.1
Education	Elementary School	3	4.8
	Junior High School	7	11.3
	Senior High School	46	74.2
	S1	6	9.7
Occupation	Housewife	57	91.9
	Civil Servant	4	6.5
	Private Sector Employee	1	1.6
Parity	G1	18	29.0
	G2	29	46.8
	G3	11	17.7
	G4	2	3.2
	G5	2	3.2
Childbirth History	Normal	47	75.8
	Cesarean (SC)	15	24.2

According to Table 1 show that most of the mothers who gave birth were between the ages of 20 and 35, had a high school education, and stayed at home to take care of their children. Most of them had more than one child (particularly G2) and had normal births. This profile shows that they are of working age, have a modest level of education, and are responsible for a lot of caregiving. This shows that they require focused support to help them want to breastfeed more and lower their stress after giving birth.

Table 2. Frequency Distribution of Pre-Test and Post-Test on Motivation of Breastfeeding in Postpartum Mothers

Motivation Category	Pre-Test n (%)	Post-Test n (%)
Low	3 (4.8%)	1 (1.6%)
Moderate	53 (85.5%)	33 (53.2%)
High	6 (9.7%)	28 (45.2%)
Total	**62 (100%)**	**62 (100%)**
Mean	**41.58**	**88.16**

The table 2 shows that the intervention greatly boosted the motivation of postpartum mothers to breastfeed. Before flashcard instruction, most of the people who answered (85.5%) were moderate, 9.7% were high, and the average score was 41.58. After the intervention, 45.2% of mothers were very motivated, 53.2% were somewhat motivated, and 1.6% were not driven at all. The average score went up a lot to 88.16, which shows that instruction with flashcards made parents want to breastfeed.

Bivariate analysis was conducted to determine the independent and dependent variables. So to assess the influence in this study, the researcher used the Wilcoxon Test statistical test. The Influence of Maternal Depressive Symptom Education on Breastfeeding Motivation in Postpartum Mothers 3-14 Days

Table 3. Wilcoxon Test Results on Maternal Depressive Symptoms and Breastfeeding Techniques

Variables	Test	N	Mean	ρ-value	α
Maternal Depressive Symptoms	Pre-test	62	4.56	0.001	0.05
	Post-test	62	3.26		
Breastfeeding Techniques	Pre-test	62	8.42	0.001	0.05
	Post-test	62	16.94		

The table reveals that both the mother's depression symptoms and her breastfeeding skills became a lot better after the flash card-based intervention. The average score for maternal depressive symptoms went from 4.56 in the pre-test to 3.26 in the post-test, while the average score for breastfeeding practices went from 8.42 to 16.94. The results, with a p-value of 0.001 (<0.05), show that the intervention worked to lower mothers' depression feelings and improve nursing practices, both of which are important for getting mothers to want to nurse more.

The Influence of Maternal Depressive Symptoms, Education, and Breastfeeding Techniques on Motivation to Provide Breastfeeding in Postpartum Mothers 3-14 Days

Table 4. Maternal Depressive Symptoms, Education, and Breastfeeding Techniques on the Motivation Test Result

Motivation Breastfeeding	n	Mean	Mean Rank	ρ
Pretest	62	41.58	15.50	0.001
Posttest	62	88.16		

Table 4 above serves to provide test results on whether there is an influence of variables X1 and X2 on Y. In other words, the analysis above aims to provide evidence of whether the hypothesis can be accepted or rejected. Based on the results of the

analysis above, it is known that the sig. value (2-tailed) or in the SPSS output table, it is written "significance two-sided p is 0.001. The results are based on the basic guidelines for previous decision-making, that if the sig. value is less than 0.05, then H0 is rejected and Ha is accepted. This means that the result is 0.001 <0.05, then this result states that there is an influence of Maternal Depressive Symptoms, education, and breastfeeding techniques on Motivation for breastfeeding.

DISCUSSION

Based on the results of the study conducted by the researcher, it was found that some of the respondents in the postpartum period of 3-14 days experienced depression, with a low depression category of 9 people and a moderate category of 1 person. In the results of the study conducted by researchers using the Wilcoxon test, an influence was obtained on the variables of maternal depressive symptoms and breastfeeding techniques, so Ha was accepted, indicating that there was an influence of maternal depressive symptoms and breastfeeding techniques after being given education on the motivation to provide breast milk. In the results of the study conducted by researchers using the Wilcoxon test, it was found that there was an influence with a value of ρ = 0.001 <0.05. Which means that the average result of the mother's motivation value to provide breast milk after education was 88.16. Because the average value shown above can be interpreted that after education, it is greater than before education, namely 88.16>41.58. Therefore, statistically, there is a difference between mothers' motivation to breastfeed before and after education.

Postpartum day 3-10 is a phase commonly called the taking hold phase, which usually occurs between day 3 to day 10, where the mother has started to do activities independently. In this phase, postpartum depression is prone to occur, caused by various factors, and some mothers find it difficult to adjust because they have to take care of the baby and do housework. Multiparas tend to suffer from depression in postpartum mothers, which is more complex than primiparas because they have to meet all the family's needs, do housework, take care of the baby, and breastfeed, which, of course, requires more energy than before (Weinberg, 2023).

Maternal Depressive symptoms caused by excessive mental and emotional stress will burden the adrenal glands. The adrenal glands are glands that are responsible for the body's adaptation to various types of stress. The more severe the stress and not handled properly, the more the adrenal glands will decline in performance due to being forced to work hard in producing cortisol. In mothers who have adrenal dysfunction, it will result in high or low cortisol levels, which results in the adrenals being unable to balance cortisol with the body's needs, thus having an impact on increased cortisol, which will result in adrenal fatigue, resulting in maternal depressive symptoms. Offering emotional and educational support tailored to various feeding methods may be a crucial protective factor against postnatal depression (Kossakowska & Bielawska-Batorowicz, 2022).

The provision of information regarding optimal breastfeeding techniques is frequently neglected, resulting in numerous nursing mothers lacking comprehension of the significance of breastfeeding, the physiological aspects of lactation, and the proper positioning and attachment necessary for effective infant suckling (Shiddiqoh et al., 2025). In addition, the mother's mind will be filled with everything related to the baby's needs. Most women may feel fine, but the energy that is drained physically and emotionally can cause extraordinary depression (Radzi et al., 2021). In the motivation for exclusive breastfeeding, the results of the study showed that all respondents had low, medium, to high motivation on average. This is related to filling out the

questionnaire, which considers breastfeeding very important, but some feel forced to do it because breastfeeding is the best way to feed (Kestler-Peleg et al., 2015), feel not good at breastfeeding, feel that breastfeeding is complicated and repetitive (Nilsson et al., 2020) so that most respondents have difficulty finding out whether it is going well or not.

Most respondents were multiparas with housewife status and aged between 20-35 years, but were unable to provide exclusive breastfeeding. Age 20-35 years is a very ideal age because the reproductive organs are mature and the strength of uterine contractions is maximal, so that the elasticity of the uterine muscles will not decrease. The nutritional status of the mother after childbirth also needs to be considered. After childbirth, which is then followed by a 6-month lactation period, if the mother's nutritional needs are lacking, the large number of parities with short pregnancy intervals causes suboptimal breastfeeding. In addition, the lack of knowledge of mothers about breast care and support from people around them will affect the mother's views on breastfeeding. Most respondents indicated that the views of peers or family members regarding breastfeeding were more trusted than asking midwives. So mothers prefer something that is practical and does not make the baby cry because of a lack of food.

From a health service perspective, the implications are substantial. Flashcard-based education can be adopted as part of routine postpartum care to enhance maternal knowledge, reduce depressive symptoms, and increase exclusive breastfeeding rates, thereby contributing to national and global maternal–child health targets, including the Sustainable Development Goals (SDGs). The practicality and scalability of this intervention suggest that midwives and primary health care workers can use it to complement existing programs with minimal additional resources. Future scaling and adaptation of this method could help bridge gaps in maternal support, particularly in low-resource settings.

Comparison with Previous Studies

Some previous studies supported that the study state positively influences the prevention of postpartum depression, mostly by enhancing the length of breastfeeding (Franco-Antonio et al., 2022). Discontinuation of breastfeeding is significantly correlated with postpartum depression symptoms in mother-infant pairs in Nevada. Timely recognition of postpartum depressive symptoms and the encouragement of breastfeeding can establish a beneficial feedback loop that enhances the well-being of both mothers and newborns (Neupane et al., 2024). As the severity of depression in women escalates throughout the postpartum period, the degree of nursing self-efficacy diminishes. nursing self-efficacy rises with enhanced social support and favorable shifts in attitudes toward nursing behavior (Mercan & Tari Selcuk, 2021). The FCMC method of structured educational assistance can enable health providers to enhance further education programs, hence improving maternal competence during the postpartum period (Bali et al., 2022).

Emphasizing the need for early identification of depressed symptoms and support for nursing behavior, various studies yield a strong theoretical basis for the association between breastfeeding and postpartum depression. According to the references given, successful nursing not only improves the psychological state of the mother but also strongly relates to her self-efficacy in caring for the child, which can be raised using social support and organized education programs. This paragraph would be better, though, if the logical flow between the results of several studies were more methodically and coherently linked, enabling readers to perceive a clearer cause-and-

effect relationship between education, social support, self-efficacy, and prevention of postpartum depression.

Implications for Public Health

This study applies the combination of an instructional approach based on flash card media that stresses two important components, namely, mother depression symptoms and optimal nursing procedures, to raise postpartum mothers' motivation to provide exclusive nursing. Unlike earlier studies emphasizing more on social support or psychological interventions in general, this study used an experimental pre-post-test design to statistically prove the efficacy of the visual and practical interventions in the postpartum depression-prone phase (taking hold phase). Particularly among multiparous women who have a more complicated household role burden, the notable results exhibited in the improvement in nursing motivation scores following education reflect that this approach can address the difficulty of low motivation and knowledge of mothers. For health professionals, particularly midwives, this method is a useful innovation in promoting the success of offering economical and simple-to-grasp organized instruction based on exclusive nursing. education; social support; self-efficacy; prevention of postpartum depression.

Limitations and Cautions

The limitation of this study is its utilization of a single-group pre–post-test design lacking a control group, which diminishes the capacity to draw robust causal inferences from the results. Without a comparison group, it is challenging to ascertain whether the observed enhancements in maternal motivation were exclusively attributable to the flashcard-based teaching or were affected by other external factors, such as natural recuperation, familial support, or the accumulation of mother experience over time. The small sample size and concentration on only one health facility also make it hard to apply the results to larger groups of people. To bolster the evidence base, subsequent research employing randomized controlled trials with larger and more heterogeneous groups is essential. However, it is yet unknown whether these changes were entirely the result of the intervention or were impacted by other variables. Furthermore, not reflecting long-term changes in nursing behaviour or motivation is the short follow-up period (3–14 days postpartum).

Using self-reported questionnaires adds still another restriction that could be influenced by erroneous self-assessment or social desirability bias. The study also neglected to account for any confounding factors, including past breastfeeding experience, emotional support from family, or socioeconomic circumstances, all of which can affect motivation. Moreover, even if flashcard-based learning was successful in the near run, the study did not assess long-term effects such as nursing exclusivity or length of use. To improve validity and offer a more complete knowledge of the efficacy of the educational intervention, future studies should combine randomised controlled trials, extended observation periods, and more varied participant populations.

Recommendations for Future Research

Future research should build on these results by using more rigorous designs, like randomized controlled trials or quasi-experimental studies with control groups, to make causal conclusions stronger. Quasi-experimental methodologies, especially non-equivalent control group designs, enable researchers to juxtapose outcomes between intervention and non-intervention groups while remaining practical in community health

contexts where randomization may pose challenges. To improve generalizability, larger and more diverse samples from several health centers or areas should be added. Longitudinal follow-up is also suggested to assess the persistence of enhanced motivation and nursing practices beyond the early postpartum period. Additionally, subsequent research may include digital or interactive flashcards, investigate their integration with family-centered education, and analyze moderating variables such as maternal age, parity, and social support to achieve a more thorough comprehension of intervention efficacy.

CONCLUSION

This study concludes that maternal depressive symptoms and breastfeeding strategies greatly affect postpartum moms' motivation to breastfeed in the first 3–14 days. Mothers exhibiting diminished depressive symptoms and receiving adequate instruction on breastfeeding procedures demonstrate increased motivation to breastfeed exclusively. These results show how important it is to act early by providing health education and support systems to boost women's confidence, enhance breastfeeding practices, and promote the best health outcomes for both mothers and babies. This innovation increases maternal awareness and motivation and may help basic health service exclusive breastfeeding initiatives succeed. Future research should examine factors connected to maternal depression symptoms and breastfeeding strategies in postpartum women and use observation to uncover enhanced maternal motivation to breastfeed exclusively.

Author's Contribution Statement: Sumarni: Conceptualization, design, analysis, writing, and critical revision of manuscript, editing/reviewing, supervision, technical or material support, and final approval. **Minarti**: statistical analysis, securing funding, and final approval, data analysis, interpretation, and admin

Conflicts of Interest: The authors state no conflict of interest.

Source of Funding Statements: The authors state no funding is involved.

Acknowledgments: The authors would like to express their gratitude to the postpartum mothers who participated in this study, as well as the midwives and health staff who provided support during data collection. Special thanks are also extended to Universitas Megarezky and Politeknik Baubau for granting ethical clearance and to colleagues who contributed valuable feedback throughout the research process.

REFERENCES

Abuhammad, S., Hamaideh, S., Almaaitah, R., Kharaba, Z., Alhawatmeh, H., Hijazi, H., Yateem, N. A., Seshan, V., Subu, M. A., & Mehrass, A. A.-K. O. (2025). Breastfeeding Experiences of Covid-19 Survivor Multipara Mothers During Pre- and Post-Covid-19: A Comparative Phenomenological Study. *BMC Pregnancy and Childbirth*, *25*(1), 502. https://doi.org/10.1186/s12884-025-07610-3

Arkkelin, D. (2014). Using SPSS to Understand Research and Data Analysis. *Psychology Curricular Materials*.

Avalos, L. A., Aghaee, S., Kurtovich, E., Quesenberry Jr, C., Nkemere, L., McGinnis, M. K., & Kubo, A. (2020). A Mobile Health Mindfulness Intervention for Women With Moderate to Moderately Severe Postpartum Depressive Symptoms: Feasibility Study. *JMIR Mental Health*, *7*(11), e17405. https://doi.org/10.2196/17405

Babii, A. (2020). Important Aspects of the Experimental Research Methodology. *Scientific Journal of the Ternopil National Technical University*, *97*(1), 77–87. https://doi.org/10.33108/visnyk_tntu2020.01.077

Bali, S. B. U., Bali, S. B. U., & Bali, S. B. U. (2022). Postnatal Education Package for Breastfeeding Motivation and Self- Efficacy among Mother with Early Stage Postpartum. *International Journal of Nursing and Health Services (IJNHS)*, *5*(2). DOI: https://doi.org/10.35654/ijnhs.v5i2.549

Camarneiro, A. P., & De Miranda Justo, J. M. R. (2022). Emotional States and Psychopathological Symptoms in Couples During Pregnancy and Post-Partum. Journal of Reproductive and Infant Psychology, 40(4), 384–398. https://doi.org/10.1080/02646838.2020.1814226

Cameron, L. D., Fleszar-Pavlović, S. E., Yepez, M., Manzo, R. D., & Brown, P. M. (2022). Beliefs About Marijuana Use During Pregnancy and Breastfeeding Held by Residents of a Latino-Majority, Rural Region of California. Journal of Behavioral Medicine, 45(4), 544–557. https://doi.org/10.1007/s10865-022-00299-1

Dagla, M., Mrvoljak-Theodoropoulou, I., Vogiatzoglou, M., Giamalidou, A., Tsolaridou, E., Mavrou, M., Dagla, C., & Antoniou, E. (2021). Association between Breastfeeding Duration and Long-Term Midwifery-Led Support and Psychosocial Support: Outcomes from a Greek Non-Randomized Controlled Perinatal Health Intervention. International Journal of Environmental Research and Public Health, 18(4), 1988. https://doi.org/10.3390/ijerph18041988

Dessì, A., Pianese, G., Mureddu, P., Fanos, V., & Bosco, A. (2024). From Breastfeeding to Support in Mothers' Feeding Choices: A Key Role in the Prevention of Postpartum Depression? Nutrients, 16(14), 2285. https://doi.org/10.3390/nu16142285

Dodt, R. C. M., Joventino, E. S., Aquino, P. S., Almeida, P. C., & Ximenes, L. B. (2015). An Experimental Study of an Educational Intervention to Promote Maternal Self-Efficacy in Breastfeeding. Revista Latino-Americana de Enfermagem, 23(4), 725–732. https://doi.org/10.1590/0104-1169.0295.2609

Franco-Antonio, C., Santano-Mogena, E., Chimento-Díaz, S., Sánchez-García, P., & Cordovilla-Guardia, S. (2022). A Randomised Controlled Trial Evaluating the Effect of a Brief Motivational Intervention to Promote Breastfeeding in Postpartum Depression. Scientific Reports, 12(1), 373. https://doi.org/10.1038/s41598-021-04338-w

Henshaw, E., Cooper, M., Wood, T., Krishna, S., Lockhart, M., & Doan, S. (2024). A Randomized Controlled Trial of the Happy, Healthy, Loved Personalized Text-Message Program for New Parent Couples: Impact on Breastfeeding Self-Efficacy and Mood. BMC Pregnancy and Childbirth, 24(1), 506. https://doi.org/10.1186/s12884-024-06684-9

Kestler-Peleg, M., Shamir-Dardikman, M., Hermoni, D., & Ginzburg, K. (2015). Breastfeeding motivation and Self-Determination Theory. Social Science & Medicine, 144, 19–27. https://doi.org/10.1016/j.socscimed.2015.09.006

Khaeriyah, H. N., Sudirman, S., & Hendriyani, H. (2023). Combination of Woolwich massage and hydrogel made from red ginger for breastfeeding mothers to increase baby weight. MEDISAINS, 21(3), 74. https://doi.org/10.30595/medisains.v21i3.18609

Kossakowska, K., & Bielawska-Batorowicz, E. (2022). Postpartum Depressive Symptoms and Their Selected Psychological Predictors in Breast-, Mixed and Formula-Feeding Mothers. Frontiers in Psychiatry, 13, 813469. https://doi.org/10.3389/fpsyt.2022.813469

Mercan, Y., & Tari Selcuk, K. (2021). Association Between Postpartum Depression Level, Social Support Level and Breastfeeding Attitude and Breastfeeding Self-Efficacy in Early Postpartum Women. PLOS ONE, 16(4), e0249538. https://doi.org/10.1371/journal.pone.0249538

Neupane, S., De Oliveira, C. V. R., Palombo, C. N. T., & Buccini, G. (2024). Association Between Breastfeeding Cessation Among Under Six-Month-Old Infants and Postpartum Depressive Symptoms in Nevada. PLOS ONE, 19(1), e0297218. https://doi.org/10.1371/journal.pone.0297218

Nilsson, I. M. S., Kronborg, H., Rahbek, K., & Strandberg-Larsen, K. (2020). The Significance of Early Breastfeeding Experiences on Breastfeeding Self-Efficacy One Week Postpartum. Maternal & Child Nutrition, 16(3), e12986. https://doi.org/10.1111/mcn.12986

Ong, M. H. A., & Puteh, F. (2017). Quantitative Data Analysis: Choosing Between SPSS, PLS and AMOS in Social Science Research. 3(1). https://www.iijsr.org/

Radzi, W. M. C. W. J. B., Salarzadeh Jenatabadi, H., & Samsudin, N. (2021). Postpartum Depression Symptoms in Survey-Based Research: A Structural Equation Analysis. BMC Public Health, 21(1), 27. https://doi.org/10.1186/s12889-020-09999-2

Shiddiqoh, F., Wijayanti, K., & Ramlan, D. (2025). The Impact of Breastfeeding Compenion to Increase Breastfeeding Self- Self-Efficacy and Motherly Ability to Breastfeed. Jurnal Aisyah: Jurnal Ilmu Kesehatan, 10(1), 01–11. https://doi.org/10.30604/jika.v10i1.3038

Siqueira, L. S., Santos, F. S., Santos, R. M. D. M. S., Santos, L. F. S., Santos, L. H. D., Pascoal, L. M., & Santos Neto, M. (2023). Factors Associated with Breastfeeding Self-Efficacy in the Immediate Puerperium in a Public Maternity Hospital. Cogitare Enfermagem, 28, e84086. https://doi.org/10.1590/ce.v28i0.88970

Šuvaković, U. (2011). On Exceeding Of Division For Qualitative And Quantitative Researches In Contemporary Scientific Methodology. Srpska Politička Misao, 34(4), 395–420. https://doi.org/10.22182/spm.3442011.20

Syamsuriyati, S., febiola, F. ., Syarief, S. ., & Husnah, R. . (2025). Pengaruh Pengetahuan Kesehatan Masa Nifas Berbasis Video Terhadap Kemampuan Perawatan Mandiri Ibu Nifas di TPMB Narfin Makassar. INHEALTH : INDONESIAN HEALTH JOURNAL, 4(1), 57~68. https://doi.org/10.56314/inhealth.v4i1.292

Thomas, C. G. (2021). Research Methodology and Scientific Writing. Springer International Publishing. https://doi.org/10.1007/978-3-030-64865-7

Weinberg, Y. (2023). The Impact of Maternal Health on Breastfeeding Duration. The Science Journal of the Lander The Science Journal of the Lander College of Arts and Sciences College of Arts and Sciences, 17(1), 107–116. https://touroscholar.touro.edu/sjlcas/vol17/iss1/14/

Yulianti, H., Mirong, I. D., & Kristin, D. M. (2023). The Influence Of Family Support In Exclusive Breastfeeding On Breastfeeding Self-Efficacy Status In Postpartum Mothers. Jurnal Health Sains, 4(9), 24–31. https://doi.org/10.46799/jhs.v4i9.1074