



Psychological Intervention for Lactation Period in Postpartum Mother: Systematic Review

Reina Dhamanik^(✉), Machmudah, and Sri Rejeki

Nursing Department, Faculty of Nursing and Health Sciences, Muhammadiyah University of Semarang, Semarang, Indonesia
reina.dhamanik@unimus.ac.id

Abstract. Background: Obstacles encountered after childbirth and the time that follows are pressures for mothers that have an impact on the perinatal process and the mother's mental health. The psychological coping reaction of helplessness and despair in the lactation process is one of the psychological elements that has been demonstrated to have a substantial impact on the level of life and well-being of postpartum moms while breastfeeding.

Aim: To determine the efficacy of interventions utilizing relaxation therapy to enhance lactation outcomes and to determine the resulting impacts on child growth and behavior, we conducted a literature review.

Methods: The methodology in this study is a systematic review. In this method, it is carried out by conducting an analysis of psychological intervention for postpartum mothers during breastfeeding. The database used in compiling the literature review was obtained from the database PubMed, Scintdirect, Emerald, and Google Scholar. The search focuses on titles, keywords, and articles that are appropriate in predetermined journals and obtained from 2017–2022.

Results: The impact of psychological intervention effect breastfeeding content and infant outcomes was generally judged to have scant evidence. The analysis from this systematic review include Mindfulness-based of psychological intervention, Intervention Effect on Breastfeeding Support, Positive Psychological Experiences from Breastfeeding, Psychological in the Web/Internet-Based Interventions, and Breastfeeding Psychological Using a Psychoeducation Interventions.

Conclusion: The findings of this investigation can be used to develop prevention initiatives and new, theoretically sound research projects. It can be concluded that the accuracy of measuring body weight depends on gender.

Keywords: psychological · intervention · breastfeeding · lactation · postpartum

1 Introduction

The transformation to mother is an emotionally and physically demanding time that is marked by intensive phases of adjusting to parenthood and the development of the mother-infant bond. Mothers experience pressures during pregnancy, childbirth, and the breastfeeding process that are connected to the mother's mental health [1]. The strength of the mother-infant bond is influenced by psychological flexibility, which is a strong

predictor of both individual and shared adjustment. In order to maintain or alter behavior while fully cognizant of the present and the surrounding environment and in service of the desired ideals, psychological flexibility is required [2].

Emotional availability, which refers to the mother-infant pair's capacity to embrace satisfaction and harmony, will be impacted by psychological flexibility. Self-compassion does not affect the quality of the mother-infant bond, but it does predict mutual harmony, therefore psychological therapies are required [2–4].

Types of psychological interventions, such as individual or group counseling, supportive-expressive group therapy, psycho-educational interventions, supportive discussions and cognitive behavioral therapy can significantly improve quality of life, reduce depression, anxiety, and functional disorders. One of the psychological factors that has been shown to have a significant effect on the quality of life and survival of postpartum mothers during breastfeeding is the psychological coping response of helplessness and hopelessness during the lactation process [5, 6].

A step-by-step psychological and breastfeeding support program is an example of an effective solution for the prevention, diagnosis and treatment of psychological problems for breastfeeding mothers. Psychotherapy and psychosocial interventions such as psychodynamic therapy and cognitive behavior can reduce symptoms of psychological problems in breastfeeding mothers by providing an improvement in the mother-infant relationship. However, failure to breastfeed is a triggering factor for psychological problems in the mother.

Previous studies have reported that breastfeeding mothers have a higher risk of depression. Depression originating in the postpartum period can last for months [7]. This is very closely related if during pregnancy and postpartum, psychological problems are not handled immediately and have an impact on the welfare of the mother and baby and are at risk of complications of preeclampsia, birth complications, baby weight, and poor baby development [5, 6].

Anxiety is the beginning of the risk of complications causing psychological problems for breastfeeding mothers. The US reports that 13% of pregnant and postpartum women have experienced anxiety within one year of change. Psychological intervention is needed in order to prevent complications of postpartum depression in breastfeeding mothers including anxiety [8].

To try and ensure that the relevant psychological interventions are efficient and effective, nonpharmacological interventions are crucial. Although it has been stated that mindfulness-based interventions present a novel strategy for treating problems with psychological health, nothing is known about how effective their application is. The definition of a mindfulness intervention is awareness that develops via focus on objectives to be attained with individual capabilities [9] (Fig. 1).

2 Methods

The methodology in this study is a *systematic review*. In this method, it is carried out by conducting an analysis of psychological intervention for postpartum mothers during breastfeeding. The database used in compiling the literature review was obtained from *the database PubMed, Scientdirect, Emerald, and Google Scholar*. The search focuses on

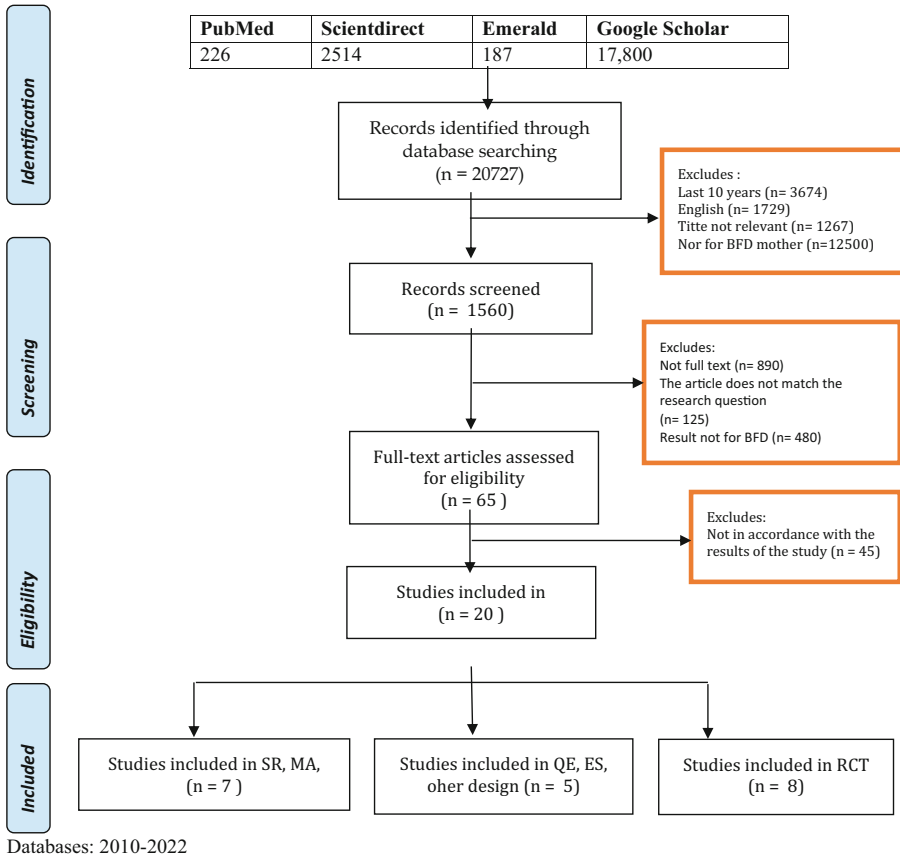


Fig. 1. Algorithm article research

titles, keywords, and articles that are appropriate in predetermined journals and obtained from 2017–2022.

The keywords used in the article search used psychological intervention, breastfeeding mother, lactation and postpartum. Search results on PubMed 2 articles, on Emerald 2 articles, and on Google Scholar 4 articles, and Sciencedirect 12 articles. Articles discussed in a literature review that get *open access*, relevant and *free full text* with the theme of *psychological intervention* in breastfeeding mothers (Table 1).

3 Results

3.1 Mindfulness-Based of Psychological Intervention

Mindfulness-based intervention is a relatively new psychological approach that has potential in perinatal to postnatal care [8]. The most commonly available and researched Mindfulness-Based Intervention (MBI), considered the ‘gold standard’, are mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT).

Table 1. Data extraction and assessment of articles' quality

No	Author (year)	Method	Psychological BFD support	Web/internet-Based BFD	Positive experience	Mindfulness	BFD psychoeducation	Level of evidence	Summary Quality of article
1	Taylor at all 2016	SR & MA				✓		2	Good
2	Lau at all 2017	SR&MA		✓				2	Good
3	Ahmed at all 2018	QE		✓				1	Good
4	Ansari at all 2019	RCTs			✓			1	Good
5	Detkos all 2020	ICE	✓		✓			1	Good
6	Zhao at all 2020	RCTs						2	Good
7	Branquinho at all 2021	SR&MA	✓					2	Good
8	Jiao at all 2019	RCTs		✓				1	Good
9	Motrico at all 2019	RCTs		✓				2	Good
10	Melnik at all 2020	RCTs			✓			2	Good
11	Yasmin at all 2020	QE	✓					3	Fair
12	Suloseari at all 2022	SR				✓		2	Good

(continued)

Table 1. (continued)

No	Author (year)	Method	Psychological BFD support	Web/internet-Based BFD	Positive experience	Mindfulness	BFD psychoeducation	Level of evidence	Summary Quality of article
13	Tola at all 2022	SR	✓					2	Good
14	Gu Li at all 2022	QE	✓					3	Fair
15	Wen at all 2021	RCTs			✓			2	Good
16	Tseng at all 2020	ICE					✓	3	Fair
17	Abuidhail at all 2019	RCTs					✓	2	Good
18	Jiao at all 2019	RCTs		✓				2	Good
19	Hanach at all 2021	SR&MA		✓				2	Good
20	Almohanna at all 2020	SR		✓				2	Good

Annotation: RCT: Randomized controlled trials.

SR: Systematic Review.

MA: Meta-Analysis.

QE: Quasy-Experimental.

ES: Experimental Study.

Note: The summary of the types of articles is adjusted to the method used, if the RCT means the article is good.

This eight-week group intervention consists of weekly meetings lasting 2–3 h in length as well as extended sessions throughout the day. Participants in MBSR and MBCT practice mindfulness for approximately 30 to 40 min in group sessions, followed by conversations led by trainees. In individuals who were clinically obese but had a life story of three or more depressive episodes, including postpartum mothers with significant changes, MBCT was successful in lowering the risk level of depressive recurrence by 43% when compared to the control condition, according to a meta-analysis of six randomized controlled trials. The UK national clinical recommendations advise MBCT for this group in addition to physical and psychological treatment. Previous research has also speculated that MBI may enhance early parent-infant interactions by increasing the ability to care for the infant without being preoccupied with negative or self-critical thoughts and may help postpartum mothers deal with pain differently thereby reducing anxiety associated with labor and the process. Breastfeeding adaptation [8].

Mindfulness training sessions in psychological interventions for breastfeeding mothers begin with sessions of mothers and partners who are mutually motivated to share anticipatory worries and anxieties about caring for the baby but must also be able to provide psychological strategies, such as attention, relaxation during breastfeeding, which are used in order to control anxiety about lactation process [10].

3.2 Intervention Effect on Breastfeeding Support

One of the best indicators of children developing positively in terms of their emotionally, psychosocial, and behavioral outcomes is responsive and supportive parenting. To recognize and assist families in comprehending the nursing phase, knowledge of post-natal psychological adaption is required. It is believed that breastfeeding improves the mother's sensitivity to her child and the quality of their mother-child bond. The mother's psychological well-being and social background are crucial for the welfare of both the mother and the child.

Breastfeeding difficulties also play a role in breastfeeding behavior in the early postpartum period, where fears or perceptions of breastfeeding, such as latching difficulties or low milk supply, are a significant source of maternal stress. Interventions that focus on counseling are needed in the process of achieving breastfeeding coverage in postpartum mothers [11].

The results of the study explain that psychological interventions with breastfeeding support “step by step support” can reduce the severity of symptoms of complications of psychological problems by 30%. Comparison of counseling, psychodynamic and cognitive behavioral therapy and standard care shows the highest effectiveness of psychotherapy which is able to influence support from both partners and families [12].

3.3 Positive Psychological Experiences from Breastfeeding

Psychological experiences appear to be personal and internally generated, but feelings can originate from surrounding affective states. Peripheral physiological responses offer a rapid response to affective changes and allow resolution. Positive breastfeeding experiences have been observed when mothers feel that they have more time to be mothers or negative breastfeeding experiences have been observed when mothers struggle with breastfeeding. Breastfeeding is often a challenging experience for mothers because of the psychological difficulties or discomfort of breastfeeding. Availability of support, professional care, is often critical to success in the lactation process [13].

3.4 Psychological in the Web/Internet-Based Interventions

Interactive web-based breastfeeding monitoring followed by lactation support in describing innovative components, theories, and assessments capable of managing psychological problems in postpartum mothers. The LACTOR system uses a developed and tested diary system. The system provides notifications via reminders that are displayed on the screen. Notification notifications send intervention steps for both physical and psychological problems for mothers who have read the reminder messages [14].

Compared to face-to-face interventions, web- and mobile-based psychological interventions are increasingly attracting interest and provide flexible opportunities and affordable costs [15]. The results of research studies show that COPE -P web-based psychological interventions focus on how to build self-esteem, positive self-talk and how to change unhealthy habits to be healthy. This psychological intervention also focuses on planning, setting goals, and solving processes, as well as handling emotions in a healthy way through positive thinking and effective communication in overcoming stressful situations faced by breastfeeding mothers to cultivate the ability to think, feel and behave to change [16].

In contrast, the use of the internet and technology to educate mothers from the antenatal to postnatal period provides better outcomes for mothers and newborns, especially during the lactation process. This is because internet-based interventions can combine words, images, videos, animations with multimedia. Web-internet based intervention is a teaching method that is flexible and allows mothers to find the necessary information according to their needs and has a positive effect on the level of breastfeeding and psychological development in the breastfeeding process. Psychological interventions are applied in the first two weeks after giving birth, because during this period difficulties regarding the breastfeeding process which affect psychological conditions begin to appear, such as, irregular milk ejection, breast swelling, baby's refusal to breastfeed and mother's fatigue. The results of this study indicate that the effectiveness of a web education-based psychological intervention program for breastfeeding mothers must be interesting enough to encourage mothers to use it effectively so as to improve evaluations related to the psychological aspects of postpartum mothers, especially in the breastfeeding process [17].

3.5 Breastfeeding Psychological Using a Psychoeducation Interventions

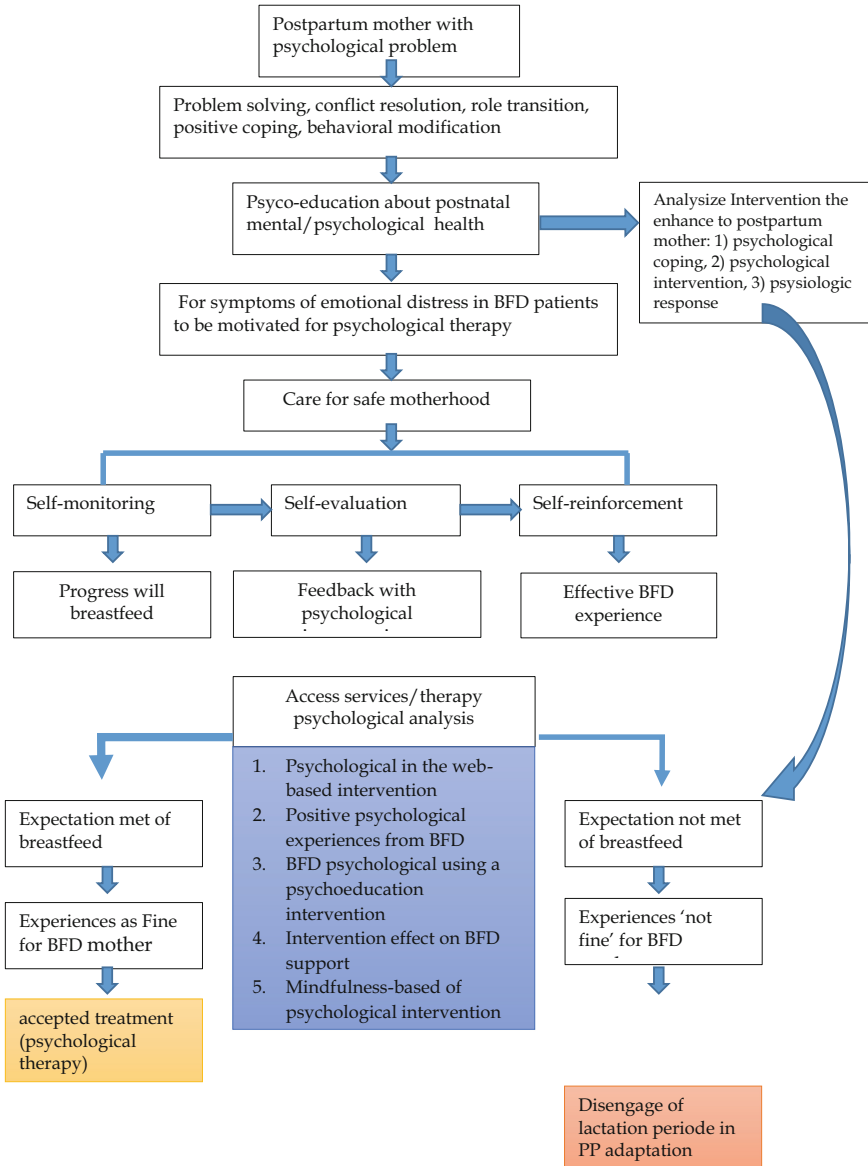
Psychological interventions in breastfeeding during the postpartum process can help relieve depressive symptoms in the long term to achieve exclusive breastfeeding. Thus, these concerns need to be considered in providing health services to mothers. Research shows that early breastfeeding experience can change the outcome of breastfeeding behavior and breastfeeding difficulties in early postpartum will have pressure and resistance to breastfeeding. Therefore, it is necessary to be prepared to overcome the challenges of breastfeeding during pregnancy and prenatal related to lactation education and psychological interventions for emotional well-being. Based on research showing that mixed psychological management interventions are delivered through a 4-session face-to-face psycho-education program for the first time to parents that focus on perinatal mental health to breastfeeding. This intervention combines psycho education and breastfeeding education where it is hoped that with proper and strong support for mothers during the early difficulties of the breastfeeding process can be overcome so as to avoid the risk of complications [18].

Cognitive behavioral therapy and interpersonal therapy are the most widely used and effective modalities of psychological intervention to treat mental problems in the perinatal period. Interventions focus on internet-based “compassion” to increase the accessibility and cost-effectiveness of such interventions [19, 20].

Home-based postpartum psychoeducation programs are effective in increasing self-efficacy and social support for mothers and reducing the risk of psychological problems [21]. Easily accessible psychological interventions are needed to reduce psychological pressure related to breastfeeding mothers’ problems [20]. Cognitive behavioral therapy and interpersonal psychotherapy have been extensively researched and reported to be effective among psychoeducational interventions [22]. Psychoeducational interventions involve general problems, discussing principles of problem solving, understanding the importance of interpersonal relationships, describing simple cognitive strategies and discussing specific behavioral emotional strategies for the problems posed. Positive control educational interventions in reproductive sessions include pregnancy, childbirth, breastfeeding, immunization, development, nutritional needs and personal hygiene [7].

4 Discussion

4.1 Synthesis Analysis



From the results of a *literature review* of 20 journal articles, it can be explained that psychological intervention plays a role in the psychological condition of postpartum mothers, especially during the lactation process. Breastfeeding mothers who are able

to adapt and carry out psychological treatment should have “experiences as fine for breastfeeding mothers”.

The synthesis analysis in the literature review revealed that psychological intervention influences the psychological aspects of breastfeeding mothers, namely 1) experiences as ‘Fine’ for Breastfeeding mother with accepted treatment and 2) experiences ‘not Fine’ for Breastfeeding mother with disengage of lactation period in PP adaptation, whereby two analyzes of intervention evaluation results that can be formed from psychological intervention in breastfeeding mothers which can be a consideration for providing intervention management on psychological aspects for breastfeeding mothers.

The discussion about the description of psychological intervention in breastfeeding mothers is summarized in the following points:

4.1.1 Psychological Coping

Psychological therapy helps individuals to reframe experiences in the context of judgment and coping skills. Access to psychological therapy provides services to psychological therapy for those who experience depression, mild to moderate anxiety, and various other psychological problems. Psychological therapy access services aim to provide psychological interventions that are not hindered by ethnicity, culture and individual language. Even though the use of psychological therapy services is still not widely used, there is a significant change if one can explore appropriate therapy so that they are free from the obstacles they may face [23].

Postpartum mothers with lactation problems can express their experiences with psychological therapy services by choosing the appropriate method of assistance to referral services. In psychological therapy services, the therapist’s characteristics are also described as knowledgeable, warm, trusting, empathetic, non-judgmental, and as a good listener and good at offering practical advice to clients to manage psychological problems. Positive therapeutic experience is supported by factors of building a relationship of mutual trust, hope, good communication styles can increase access to and involvement in treatment related to psychological problems experienced. The counseling approach is perceived more positively and individuals tend to prefer telling stories rather than treating their symptoms, so that psychological therapy can be well understood through health models to control or eliminate symptoms by targeting individual cognitive and behavioral coping [24].

Mindfulness-based interventions have the potential to improve coping with psychological well-being in postpartum mothers. The outcome measures obtained included stress, anxiety, fatigue, resilience, quality of life, affection, happiness, and awareness of tasks during the postnatal period. Postpartum mothers experience levels of fatigue and stress that trigger psychological conditions. Mothers are faced with stressors related to challenging new roles and tasks such as breastfeeding, waking up at night to give breast milk, feelings of helplessness regarding the control of new roles are sometimes a trigger factor for mental problems experienced by breastfeeding mothers. Stress alters human hemostasis and hormonal and physiological balance. Long-term stress and fatigue contribute to physical and psychological health problems including endocrine disorders, immune system disorders, insomnia, and postpartum depression [25].

There are many techniques to reduce fatigue and stress that trigger psychological problems in breastfeeding mothers and improve coping psychological well-being, including progressive muscle relaxation, biofeedback, deep breathing, autogenic exercises, cognitive behavioral therapy and health education. One of the modern practices is mindfulness-based intervention where this exercise is defined as a self-directed therapeutic exercise with the aim of increasing awareness which can result in better perceptions, reducing the negative effects of breast milk that have not yet gone smoothly, increasing energy to keep trying to expedite milk production, as well as improve the ability to overcome problems related to lactation. This exercise can be combined with mindfulness which can have an impact on brain areas to control attention, awareness, and emotions in nursing mothers. Mindfulness significantly improves mental health coping and effectively reduces psychological stress in dealing with a new role as a postnatal breastfeeding mother [26].

In addition to the physical changes since giving birth, new mothers are faced with challenges associated with the demands of adapting to parenthood. The positive effects of home-based psychoeducational interventions for mothers have been shown to be more economical and easier to implement. Web-home-based psychological interventions have a better effect on increasing self-control, self-efficacy, and preventing the risk of postpartum depression which must be introduced to first-time mothers for a better postpartum adaptation process. Theory-based psychoeducation programs are carried out at home in the early postpartum period with the core of the method being provided by direct exploratory experiences involving mothers to improve coping skills and behavior of mothers with breastfeeding problems [21].

4.1.2 Psychological Interventions

Psychoeducational interventions may also be effective in overcoming psychological problems in postpartum mothers and facing the new role of having to breastfeed. The transition to parenthood is an important life event that involves both the partner and the baby. Pregnancy is often associated with problems that affect the psychological functioning of new mothers. This is because the period of pregnancy is usually associated with ambivalence and frequent mood swings, varying from anxiety, fatigue, sleepiness, and depression to excitement. For some individuals, thoughts about postnatal life raise a number of concerns that affect the process of adaptation and physical and psychological health care in the postpartum period. Psychoeducational interventions refer to activities that combine education and counselling. Psychoeducational interventions can be carried out individually and in groups by incorporating activities into daily plans to increase self-efficacy, increase psychological support, and equip postpartum mothers with realistic things they will be facing such as the obligation to breastfeed. These findings further confirm that psychoeducational interventions can be provided during the antenatal period to control psychological problems to mothers in the postpartum period [27].

Psychological interventions are interpersonal or informational activities that target biological, behavioral, cognitive, emotional, interpersonal, social, or environmental [28]. Writing-based psychological interventions have been widely applied to generate adaptive change, for example through self-assignment. Writing-based psychological

interventions have been used to address social and psychological problems including intergroup and interpersonal conflicts [5].

Brief psychological interventions are focused and not specialized in therapy alone, but can be applied to anyone, including individuals with mild mental disorders. Psychological interventions are promoted by the world health organization because they are transdiagnostic, maintain cultural relevance, use direct access to mental services, and have proven effectiveness, feasibility, and scalability [6].

4.1.3 Psychological Response (Accepted and Disengaged)

Anxiety, stress, worry is called psychological pressure, where this is often a period of vulnerability for problems in postpartum mothers caused by new challenges and physiological and psychological changes [29].

Consistent with the literature, the results of previous research show that high breastfeeding self-efficacy has been shown to predict positive breastfeeding outcomes and individual psychological management interventions can improve new mothers' breastfeeding behavior leading to good early success in the process of lactation experience and good breastfeeding patterns. The combination of psychoeducation and health education regarding breastfeeding is used for an individual approach in the context of the success and physical and psychological well-being of breastfeeding mothers [18].

Psychological skills training has been suggested to help cope with challenges better and to improve performance with support. One of the psychological skill techniques is mindfulness training where full attention is defined as a structured mindset to be aware of the current moment of experience in a non-judgmental way, not avoiding and trying to accept the role of new parents who have a duty in the breastfeeding process. Mindfulness is considered to have the potential to affect physiological and psychological states through various processes in postpartum mothers [30].

Common stressors accompany the postnatal period in the first year after birth. The most common stressors include recovery from suturing wounds, breastfeeding challenges, bottle feeding, lack of sleep, hormonal changes, dealing with restless babies, and disturbances in the parent-infant bond. This stressor manifests in addition to ongoing household chores and also the response of mothers who continue to work outside the home. To reduce anxiety that causes stress, psychological intervention is needed that can reduce the risk of mental and emotional disorders after childbirth. Postpartum mothers can show responses to impaired decision making and decreased social functioning, for example, in some cases, mothers experience feelings of panic, sometimes accompanied by severe and repetitive disturbing thoughts so they don't focus on caring for their babies. The *smiling mind method* used in mindfulness psychology therapy offers guided mindfulness meditation that is able to influence psychological responses and reduce stress levels in postpartum mothers [31].

5 Conclusion

Results literature review this show that psychological in the web-based interventions, positive psychological experiences from Breastfeeding, Breastfeeding psychological

using a psychoeducation interventions, interventions effect on psychological Breast-feeding support, and mindfulness-based of psychological intervention are proven could psychological improvement in postpartum mothers during the breastfeeding period. Application The types of psychological interventions for breastfeeding mothers are classified easy, *low cost*, and can be done independently. *Psychological in the web-based intervention* is an intervention that is currently widely used because it is effective and can be reached by all mothers independently via smartphones or the internet. The latest approach by taking a personal approach has become a trend and needs further research in the future.

6 Suggestions

With the limited number of studies using the best research methods, future research with better quality will have a greater effect and impact on the development of future types of psychological interventions for mothers in the postpartum period. If there is new evidence with better quality studies, this literature review can be updated as a guide in providing services to increase the effectiveness of the lactation process in mothers who experience breastfeeding problems.

References

1. I. Zakarija-Grković, D. Puharić, M. Malički, and P. Hoddinott, "Breastfeeding booklet and proactive phone calls for increasing exclusive breastfeeding rates: RCT protocol," *Matern. Child Nutr.*, vol. 13, no. 1, pp. 1–13, 2017, doi: <https://doi.org/10.1111/mcn.12249>.
2. S. Rejeki, F. Y. Pratama, E. Ernawati, A. Yanto, E. Soesanto, and S. Pranata, "Abdominal stretching as a therapy for dysmenorrhea," *Open Access Maced. J. Med. Sci.*, vol. 9, pp. 180–183, 2021, doi: <https://doi.org/10.3889/oamjms.2021.6711>.
3. D. Mulianda, A. Rahmanti, M. Margiyati, N. W. Sari, E. Haksara, and S. Pranata, "Behavioral Activation, Mindfulness Exercises, and Loving-Kindness Meditation Exercises as Effective Therapies to Reduce Stress among Nursing Students' during COVID-19 Pandemic," *Open Access Maced. J. Med. Sci.*, vol. 10, no. G, pp. 228–232, 2022, doi: <https://doi.org/10.3889/oamjms.2022.8695>.
4. S. Pranata, A. Vranada, Y. Armiyati, A. Samiasih, and S. Aisah, "Inflammatory markers for predicting severity , mortality , and need for intensive care treatments of a patient infected with covid-19 : a scoping review," vol. 12, no. 1, pp. 324–330, 2023, doi: <https://doi.org/10.15562/bmj.v12i1.3751>.
5. UNICEF, "Breastfeeding: A mother's gift, for every child," *Unicef*, pp. 1–13, 2018.
6. M. Y. Chan, W. Y. Ip, and K. C. Choi, "The effect of a self-efficacy-based educational programme on maternal breast feeding self-efficacy, breast feeding duration and exclusive breast feeding rates: A longitudinal study," *Midwifery*, vol. 36, pp. 92–98, 2016, doi: <https://doi.org/10.1016/j.midw.2016.03.003>.
7. C. George, "Effectiveness of a group intervention led by lay health workers in reducing the incidence of postpartum depression in South India," *Asian J. Psychiatr.*, vol. 47, no. October 2019, p. 101864, 2020, doi: <https://doi.org/10.1016/j.ajp.2019.101864>.
8. B. L. Taylor, K. Cavanagh, and C. Strauss, "The effectiveness of mindfulness-based interventions in the perinatal period: A systematic review and meta-analysis," *PLoS One*, vol. 11, no. 5, pp. 1–29, 2016, doi: <https://doi.org/10.1371/journal.pone.0155720>.

9. V. Benuyenah and P. B. Tran, "Postpartum psychological pressure on single mothers: an interpretative phenomenological analysis," *J. Humanit. Appl. Soc. Sci.*, vol. 3, no. 3, pp. 199–216, 2021, doi: <https://doi.org/10.1108/jhass-12-2019-0089>.
10. J. F. Tseng *et al.*, "Effectiveness of an integrated breastfeeding education program to improve self-efficacy and exclusive breastfeeding rate: A single-blind, randomised controlled study," *Int. J. Nurs. Stud.*, vol. 111, p. 103770, 2020, doi: <https://doi.org/10.1016/j.ijnurstu.2020.103770>.
11. A. K. Aarestrup, M. Skovgaard Væver, J. Petersen, K. Røhder, and M. Schiøtz, "An early intervention to promote maternal sensitivity in the perinatal period for women with psychosocial vulnerabilities: Study protocol of a randomized controlled trial," *BMC Psychol.*, vol. 8, no. 1, pp. 1–13, 2020, doi: <https://doi.org/10.1186/s40359-020-00407-3>.
12. M. Chrzan-Dętko, A. Pietkiewicz, J. Zołnowska, and D. Pizuńska, "The program of psychological and breastfeeding support 'maternity step by step': An example of effective solution for the prevention, diagnostics and treatment of prenatal and postpartum depression," *Psychiatr. Pol.*, vol. 54, no. 3, pp. 613–629, 2020, doi: <https://doi.org/10.12740/PP/105494>.
13. F. Pacheco, M. Sobral, R. Guiomar, A. de la Torre-Luque, R. A. Caparros-Gonzalez, and A. Ganho-ávila, "Breastfeeding during covid-19: A narrative review of the psychological impact on mothers," *Behav. Sci. (Basel)*, vol. 11, no. 3, 2021, doi: <https://doi.org/10.3390/bs11030034>.
14. A. Ahmed and M. Ouzzani, "Development and assessment of an interactive web-based breastfeeding monitoring system (LACTOR)," *Matern. Child Health J.*, vol. 17, no. 5, pp. 809–815, 2013, doi: <https://doi.org/10.1007/s10995-012-1074-z>.
15. E. Motrico, S. Conejo-Cerón, C. Martín-Gómez, I. Gómez, A. Fonseca, and P. Moreno-Peral, "Effectiveness of web-based and mobile-based psychological interventions to prevent perinatal depression: Study protocol for a systematic review and meta-analysis of randomized controlled trials," *Internet Interv.*, vol. 26, 2021, doi: <https://doi.org/10.1016/j.invent.2021.100471>.
16. B. M. Melnyk *et al.*, "Randomized controlled trial of the COPE-P intervention to improve mental health, healthy lifestyle behaviors, birth and post-natal outcomes of minority pregnant women: Study protocol with implications," *Contemp. Clin. Trials*, vol. 98, no. April, p. 106090, 2020, doi: <https://doi.org/10.1016/j.cct.2020.106090>.
17. J. Abuidhail, L. Mrayyan, and D. Jaradat, "Evaluating effects of prenatal web-based breastfeeding education for pregnant mothers in their third trimester of pregnancy: Prospective randomized control trial," *Midwifery*, vol. 69, pp. 143–149, 2019, doi: <https://doi.org/10.1016/j.midw.2018.11.015>.
18. Y. Zhao, Q. Lin, J. Wang, and J. Bao, "Effects of prenatal individualized mixed management on breastfeeding and maternal health at three days postpartum: A randomized controlled trial," *Early Hum. Dev.*, vol. 141, no. 128, p. 104944, 2020, doi: <https://doi.org/10.1016/j.earlhumdev.2019.104944>.
19. M. Branquinho *et al.*, "Effectiveness of psychological interventions in the treatment of perinatal depression: A systematic review of systematic reviews and meta-analyses," *J. Affect. Disord.*, vol. 291, pp. 294–306, 2021, doi: <https://doi.org/10.1016/j.jad.2021.05.010>.
20. N. A. Brog, J. K. Hegy, T. Berger, and H. Znoj, "Effects of an internet-based self-help intervention for psychological distress due to COVID-19: Results of a randomized controlled trial," *Internet Interv.*, vol. 27, 2022, doi: <https://doi.org/10.1016/j.invent.2021.100492>.
21. N. Jiao *et al.*, "Web-based versus home-based postnatal psychoeducational interventions for first-time mothers: A randomised controlled trial," *Int. J. Nurs. Stud.*, vol. 99, p. 103385, 2019, doi: <https://doi.org/10.1016/j.ijnurstu.2019.07.002>.
22. N. Yasuma *et al.*, "Antenatal psychological intervention for universal prevention of antenatal and postnatal depression: A systematic review and meta-analysis," *J. Affect. Disord.*, vol. 273, no. November 2019, pp. 231–239, 2020, doi: <https://doi.org/10.1016/j.jad.2020.04.063>.

23. W. Jonas and B. Woodside, "Physiological mechanisms, behavioral and psychological factors influencing the transfer of milk from mothers to their young," *Horm. Behav.*, vol. 77, pp. 167–181, 2016, doi: <https://doi.org/10.1016/j.yhbeh.2015.07.018>.
24. S. Yasmin-Qureshi and S. Ledwith, "Beyond the barriers: South Asian women's experience of accessing and receiving psychological therapy in primary care," *J. Public Ment. Health*, vol. 20, no. 1, pp. 3–14, 2021, doi: <https://doi.org/10.1108/JPMH-06-2020-0058>.
25. G. N. Wambua, F. Falkenström, M. Kumar, and P. Cuijpers, "Outcome evaluation of psychological interventions offered to adolescents seeking mental health services at the national referral and teaching hospital in Nairobi, Kenya," *SSM - Ment. Heal.*, vol. 2, no. March, p. 100137, 2022, doi: <https://doi.org/10.1016/j.ssmmh.2022.100137>.
26. V. Sulosaari, E. Unal, and F. I. Cinar, "The effectiveness of mindfulness-based interventions on the psychological well-being of nurses: A systematic review," *Appl. Nurs. Res.*, vol. 64, no. January, p. 151565, 2022, doi: <https://doi.org/10.1016/j.apnr.2022.151565>.
27. Y. O. Tola *et al.*, "Psychoeducation for psychological issues and birth preparedness in low- and middle-income countries: a systematic review," *AJOG Glob. Reports*, vol. 2, no. 3, p. 100072, 2022, doi: <https://doi.org/10.1016/j.xagr.2022.100072>.
28. J. Lopez-Alcalde *et al.*, "The RIPI-f (Reporting Integrity of Psychological Interventions delivered face-to-face) checklist was developed to guide reporting of treatment integrity in face-to-face psychological interventions," *J. Clin. Epidemiol.*, vol. 151, pp. 65–74, 2022, doi: <https://doi.org/10.1016/j.jclinepi.2022.07.013>.
29. C. A. Obrochta, C. Chambers, and G. Bandoli, "Psychological distress in pregnancy and postpartum," *Women and Birth*, vol. 33, no. 6, pp. 583–591, 2020, doi: <https://doi.org/10.1016/j.wombi.2020.01.009>.
30. P. Yu, W., Ramanathan, R. and Nath, "Northumbria Research Link (www.northumbria.ac.uk/nrl)," *Acad. Manag.*, vol. 51, no. September, pp. 1–51, 2017.
31. S. N. Awaliyah, I. N. Rachmawati, and H. Rahmah, "Breastfeeding self-efficacy as a dominant factor affecting maternal breastfeeding satisfaction," *BMC Nurs.*, vol. 18, no. Suppl 1, pp. 1–8, 2019, doi: <https://doi.org/10.1186/s12912-019-0359-6>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

