

SYSTEMATIC REVIEW: DYNAMICS OF POSTPARTUM MENTAL HEALTH: RISK FACTORS, INTERVENTIONS, AND THE ROLE OF SOCIAL SUPPORT

Fonny Kurnia Purti¹, Nurfitri^{2*}, Norma Jeepi Margiyanti³

^{1,2,3}*Institut Kesehatan Mitra Bunda Batam, Kepulauan Riau*

**Corresponding author: fitriaminuumar@gmail.com*

Abstract

Postpartum mental health is an important issue that affects the well-being of mothers and children. Mental health disorders such as depression and anxiety are at high risk for mothers after giving birth. Risk factors, interventions, and social support play an important role in the dynamics of postpartum maternal mental health. This study aims to evaluate the factors that influence postpartum mental health as well as interventions that can be applied to overcome this problem. This research used a systematic review that examined 42 journals related to postpartum mental health. A literature search was conducted via PubMed and Google Scholar with relevant keywords such as postpartum mental health, risk factors, interventions, and social support. Studies that met inclusion criteria were analyzed to evaluate risk factors, interventions, and the role of social support in maternal mental health after childbirth. The results of the review show that the main risk factors for postpartum mental health disorders include hormonal changes, history of mental disorders, psychosocial stress, and lack of social support. Effective interventions include cognitive and behavioral therapy, psychosocial support, as well as holistic approaches such as yoga. Social support from partners, family and community has been proven to improve maternal emotional well-being and reduce stress. Postpartum mental health dynamics are influenced by risk factors that can be managed with appropriate interventions and social support. This research suggests a multidisciplinary approach to support postpartum maternal mental health, and further research is needed to evaluate the long-term effectiveness of such interventions.

Keyword: Mental Health, Postpartum, Risk Factors, Intervension, Social Support.

1. INTRODUCTION

Postpartum mental health is a crucial aspect of maternal well-being and child development. The postpartum period is characterized by significant hormonal, physical, and psychological changes, which can increase the risk of mental disorders such as postpartum depression. According to WHO data, around 13% of women who have just given birth experience mental health problems, especially depression [1,2].

Various risk factors have been identified as contributing to the emergence of postpartum mental disorders. These factors include a history of previous psychiatric disorders, anxiety during pregnancy, lack of social support, poor marital relationships, and stressful life events. In addition, complications during pregnancy or childbirth, such as emergency caesarean section or premature birth, can also increase the risk of postpartum [3,4,5].

Interventions to address postpartum mental health problems focus on early detection and appropriate treatment. Common approaches include psychological counseling, cognitive behavioral therapy, and, in some cases, the use of antidepressant medications. Studies show that social support, especially from a partner, has an important role in preventing and reducing symptoms of postpartum depression. Emotional and practical support from her husband can help mothers adjust to their new role and reduce the stress they experience [6].

Social support does not only come from your partner, but also from family, friends and community. Research shows that mothers who receive adequate social support tend to have better mental health status after giving birth. Conversely, a lack of social support can increase the

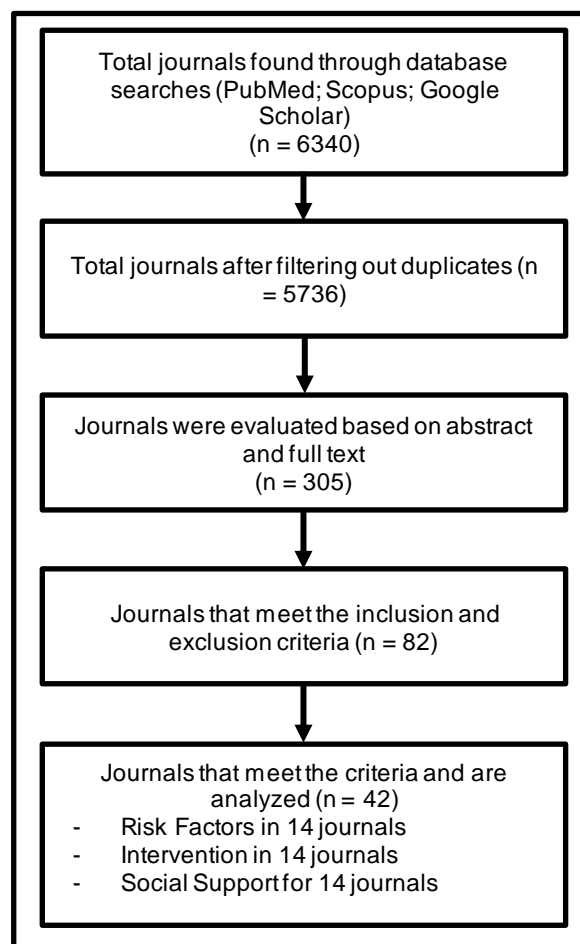
risk of postpartum depression. Therefore, it is important to increase awareness of the importance of social support for new mothers as part of prevention and intervention strategies [7].

Given the complexity of risk factors and the importance of appropriate interventions, this study aimed to conduct a systematic review of postpartum mental health dynamics. The main focus is identifying risk factors, evaluating the effectiveness of various interventions, and understanding the role of social support in supporting maternal mental health after childbirth. It is hoped that the results of this research will provide comprehensive insight for the development of more effective prevention and treatment strategies [8].

2. METHODOLOGY

The PICO (Population, Intervention, Comparison, Outcome) methodological approach in this systematic review study optimizes a systematic and structured evaluation of postpartum mental health dynamics, highlighting risk factors, interventions, and the role of social support. A literature search was carried out through the PubMed and Google Scholar databases using relevant keywords (Postpartum Mental Health OR Postpartum Depression AND Risk Factors OR Intervention AND Social Support). The search process was carried out systematically and in stages, starting from identifying relevant studies, selecting studies based on predetermined criteria, to data extraction and analysis of results..

The research results are then presented in the form of a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) diagram to provide a clear, systematic and transparent picture of the study selection process and presentation of research results.



Systematically, a search was carried out through the PubMed, Scopus and Google Scholar databases with keywords related to postpartum mental health, namely "Dynamics of Postpartum Mental Health", resulting in 6340 initial journals. After removing duplicates, 5736 journals

remained which were further filtered based on abstracts and full text to 305 journals. Furthermore, it is adjusted based on inclusion criteria including peer-reviewed journals in the last 10 years (2014-2024) that discuss risk factors, interventions, or social support in postpartum mental health, with clear quantitative or qualitative methods. Meanwhile, exclusion criteria include irrelevant articles, opinions without research data, and inappropriate populations. After final selection, 216 journals met the inclusion criteria, consisting of 14 journals about risk factors, 14 journals about interventions, and 14 journals about the role of social support, which were then analyzed to understand the dynamics of postpartum mental health as well as effective prevention and intervention strategies.

3. RESULT

The results of this systematic review show that of the 42 pieces of literature that meet the inclusion criteria, each risk factor, intervention, and social support play an important role in the dynamics of postpartum mental health. Factors such as hormonal changes, psychosocial stress, and lack of social support increase the risk of mental disorders, while interventions such as psychological counseling, cognitive therapy, and emotional support from partners and family have proven effective in helping mothers adapt after giving birth. postpartum and reduces symptoms of mental disorders. However, this study has limitations, such as variations in methods and duration of intervention as well as differences in population characteristics. Therefore, further research is needed to confirm the results and evaluate the long-term effectiveness of the intervention.

3.1 Postpartum Mental Health Risk Factors

From the 14 pieces of literature analyzed, several main factors were found that contributed to postpartum mental health disorders. First, fluctuations in the hormones estrogen and progesterone after giving birth can affect the brain's neurochemical balance, increasing the risk of depression and anxiety. Second, mothers with a previous history of mental disorders, such as depression or anxiety, are more susceptible to postpartum depression. Third, psychosocial pressure caused by changes in the role of mother, workload, and lack of emotional and financial readiness can trigger mental disorders. Fourth, lack of social support from a partner, family, or social environment can increase the risk of social isolation and emotional stress. Lastly, birth complications such as premature birth or a baby with certain health problems, as well as a traumatic birth experience, can trigger postpartum anxiety and depression.

3.2 Postpartum mental Health Interventions

The 14 pieces of literature analyzed show that various forms of intervention have been carried out to help postpartum mothers overcome mental health disorders, including: Cognitive and Behavioral Therapy (CBT): This method has been proven to be effective in managing symptoms of postpartum depression and anxiety by helping mothers change their thinking patterns. negative and improve coping mechanisms. Psychosocial Support: Maternal support groups, community-based therapy, and emotional counseling can improve mothers' psychological well-being by providing a space for sharing experiences and practical solutions. Pharmacological Interventions: The use of antidepressants and anxiolytics, although effective, is still a matter of debate, especially in terms of safety for breastfeeding mothers. Holistic Approach: Several studies show that yoga, meditation, and music therapy can help reduce stress and improve a mother's mental well-being postpartum. Parenting Education and Training: Programs that help mothers understand parenting and stress management are proven to increase self-confidence and reduce anxiety.

3.3 The Role of Social Support in Postpartum Mental Health

The 14 pieces of literature analyzed consistently show that social support has a crucial role in maintaining maternal mental health after giving birth. Some forms of support that have been shown to be beneficial include: Spousal Support: The husband's active involvement in caring for the baby and sharing household tasks has been shown to reduce stress levels and increase the mother's emotional satisfaction. Family Support: The presence of family, especially the biological

mother or in-laws, in helping care for the baby can reduce feelings of overwhelm and provide emotional calm for the mother. Professional Support: Health workers such as midwives, doctors and psychologists who provide education and mental health monitoring can help with early detection and prevention of psychological disorders. Social Support from the Community: New mothers' groups, either in person or through social media, provide a sense of community and reduce the risk of social isolation.

4. CONCLUSION

A systematic review of 42 journals shows that postpartum mental health is influenced by various risk factors, but can be managed with appropriate interventions and adequate social support. Therefore, a multidisciplinary approach involving health workers, families and communities is very necessary to prevent and treat mental health disorders in postpartum mothers. For further research, studies with more controlled designs are needed to evaluate the long-term effectiveness of various interventions and develop more appropriate strategies to support maternal mental health after giving birth.

REFERENCES

- [1] WHO. 2016. Mental health Gap Action Programme.
- [2] Modak A, Ronghe V, Gomase KP, Mahakalkar MG, Taksande V. A Comprehensive Review of Motherhood and Mental Health: Postpartum Mood Disorders in Focus. *Cureus*. 2023 Sep 29;15(9):e46209. doi: 10.7759/cureus.46209. PMID: 37905286; PMCID: PMC10613459.
- [3] Maryati. 2023. *Asuhan Kebidanan Pada Perempuan Dan Anak Kelompok Rentan*. Surabaya: Scopindo Media Pustaka
- [4] Amna, Zaujatul & Khairani, Maya. (2024). FAKTOR-FAKTOR RISIKO DEPRESI PADA IBU PASCABERSALIN. *Jurnal Ilmu Keluarga dan Konsumen*. 17. 28-40. 10.24156/jikk.2024.17.1.28.
- [5] Zulaekah, Siti & Kusumawati, Yuli. (2021). Kecemasan sebagai Penyebab Gangguan Kesehatan Mental pada Kehamilan di Layanan Kesehatan Primer Kota Surakarta. *Jurnal Kebidanan dan Keperawatan Aisyiyah*. 17. 10.31101/jkk.2064.
- [6] Ruan JM, Wu LJ. Postpartum depression and partner support during the period of lactation: Correlation research and its influencing factors. *World J Psychiatry*. 2024 Jan 19;14(1):119-127. doi: 10.5498/wjp.v14.i1.119. PMID: 38327897; PMCID: PMC10845228. <http://dx.doi.org/10.22146/jkr.58017>
- [7] Apriyanti. P, Triratnawati. A, Astuti. D A. 2021. Peran Keluarga pada Ibu Pasca Bersalin . *Jurnal Kesehatan Reproduksi*. Vol 8 No 1 – April 2021 ISSN 2302-836X (print), ISSN 2621-461X (online) DOI: 10.22146/jkr.5801
- [8] Abulaiti A, Abudurexiti M, Nuermaimaiti A, Kelimu A. Analysis of the incidence and influencing factors of postpartum depression and anxiety: A cross-sectional study in Xinjiang from 2018 to 2021. *J Affect Disord*. 2022 Apr 1;302:15-24. doi: 10.1016/j.jad.2022.01.069. Epub 2022 Jan 19. PMID: 35063585.
- [9] Chen J, Cross WM, Plummer V, Lam L, Tang S. A systematic review of prevalence and risk factors of postpartum depression in Chinese immigrant women. *Women Birth*. 2019 Dec;32(6):487-492. doi: 10.1016/j.wombi.2018.11.019. Epub 2018 Dec 14. PMID: 30559006.
- [10] Poreddi V, Sundaram V, Reddy SN, Bidadi K, Thimmaiah R. Postpartum depression: Mental health literacy of Indian mothers. *Arch Psychiatr Nurs*. 2021 Dec;35(6):631-637. doi: 10.1016/j.apnu.2021.09.003. Epub 2021 Sep 30. PMID: 34861956.

- [11] Kwon H, Kim J. Effect of Postpartum Depression on Infant Safety Practices in Korea. *J Obstet Gynecol Neonatal Nurs*. 2023 Nov;52(6):491-500. doi: 10.1016/j.jogn.2023.08.003. Epub 2023 Aug 30. PMID: 37659433.
- [12] Tahirkheli NN, Cherry AS, Tackett AP, McCaffree MA, Gillasp SR. Postpartum depression on the neonatal intensive care unit: current perspectives. *Int J Womens Health*. 2014 Nov 24;6:975-87. doi: 10.2147/IJWH.S54666. PMID: 25473317; PMCID: PMC4247145.
- [13] Liu Y, Guo N, Li T, Zhuang W, Jiang H. Prevalence and Associated Factors of Postpartum Anxiety and Depression Symptoms Among Women in Shanghai, China. *J Affect Disord*. 2020 Sep 1;274:848-856. doi: 10.1016/j.jad.2020.05.028. Epub 2020 May 23. PMID: 32664024.
- [14] Kikuchi S, Murakami K, Obara T, Ishikuro M, Ueno F, Noda A, Onuma T, Kobayashi N, Sugawara J, Yamamoto M, Yaegashi N, Kuriyama S, Tomita H. One-year trajectories of postpartum depressive symptoms and associated psychosocial factors: findings from the Tohoku Medical Megabank Project Birth and Three-Generation Cohort Study. *J Affect Disord*. 2021 Dec 1;295:632-638. doi: 10.1016/j.jad.2021.08.118. Epub 2021 Sep 4. PMID: 34509778.
- [15] Julian M, Le HN, Coussons-Read M, Hobel CJ, Dunkel Schetter C. The moderating role of resilience resources in the association between stressful life events and symptoms of postpartum depression. *J Affect Disord*. 2021 Oct 1;293:261-267. doi: 10.1016/j.jad.2021.05.082. Epub 2021 Jun 5. PMID: 34217964; PMCID: PMC8547228.
- [16] Kountanis JA, Muzik M, Chang T, Langen E, Cassidy R, Mashour GA, Bauer ME. Relationship between postpartum mood disorder and birth experience: a prospective observational study. *Int J Obstet Anesth*. 2020 Nov;44:90-99. doi: 10.1016/j.ijoa.2020.07.008. Epub 2020 Jul 22. PMID: 32861082.
- [17] Barber GA, Shenassa ED. Smoking status: A tacit screen for postpartum depression in primary care settings. *J Affect Disord*. 2021 Dec 1;295:1243-1250. doi: 10.1016/j.jad.2021.09.033. Epub 2021 Sep 17. PMID: 34706438.
- [18] Yaqoob H, Ju XD, Bibi M, Anwar S, Naz S. "A systematic review of risk factors of postpartum depression. Evidence from Asian culture ". *Acta Psychol (Amst)*. 2024 Sep;249:104436. doi: 10.1016/j.actpsy.2024.104436. Epub 2024 Aug 13. PMID: 39142256.
- [19] Avalos LA, Chandran A, Churchill ML, Gao X, Ames JL, Nozadi SS, Roubinov D, Brennan PA, Bush NR, Camargo CA, Carroll KN, Cioffi CC, Ferrara A, Goldson B, Hedderson MM, Hipwell AE, Kerver JM, O'Connor TG, Porucznik CA, Shuffrey LC, Talavera-Barber MM, Wright RJ, Zhu Y, Croen LA; Program Collaborators for Environmental influences on Child Health Outcomes. Prenatal depression and risk of child autism-related traits among participants in the Environmental influences on Child Health Outcomes program. *Autism Res*. 2023 Sep;16(9):1825-1835. doi: 10.1002/aur.2988. Epub 2023 Aug 1. PMID: 37526980; PMCID: PMC10857745.
- [20] Lawrence CG, Breau G, Yang L, Hellerstein OS, Hippman C, Kennedy AL, Ryan D, Shulman B, Brotto LA. Effectiveness of a web-enabled psychoeducational resource for postpartum depression and anxiety among women in British Columbia. *Arch Womens Ment Health*. 2024 Dec;27(6):995-1010. doi: 10.1007/s00737-024-01468-8. Epub 2024 May 6. PMID: 38709329; PMCID: PMC11579107.
- [21] Lawrence CG, Breau G, Yang L, Hellerstein OS, Hippman C, Kennedy AL, Ryan D, Shulman B, Brotto LA. Effectiveness of a web-enabled psychoeducational resource for postpartum depression and anxiety among women in British Columbia. *Arch Womens Ment Health*. 2024 Dec;27(6):995-1010. doi: 10.1007/s00737-024-01468-8. Epub 2024 May 6. PMID: 38709329; PMCID: PMC11579107.

- [22] Sambrook Smith M, Lawrence V, Sadler E, Easter A. Barriers to accessing mental health services for women with perinatal mental illness: systematic review and meta-synthesis of qualitative studies in the UK. *BMJ Open*. 2019 Jan 24;9(1):e024803. doi: 10.1136/bmjopen-2018-024803. PMID: 30679296; PMCID: PMC6347898.
- [23] Abu Maloh HIA, Soh KL, AbuRuz ME, Chong SC, Ismail SIF, Soh KG, Abu Maloh DI. Efficacy of Benson's Relaxation Technique on Anxiety and Depression among Patients Undergoing Hemodialysis: A Systematic Review. *Clin Nurs Res*. 2022 Jan;31(1):122-135. doi: 10.1177/10547738211024797. Epub 2021 Jun 23. PMID: 34159828.
- [24] Bhatti P, Delaney T, Poulin M, Hahn-Holbrook J. Oxytocin receptor gene (OXTR) and father support interact to predict depressive symptoms postpartum. *Biol Psychol*. 2019 Oct;147:107686. doi: 10.1016/j.biopsycho.2019.03.015. Epub 2019 Mar 27. PMID: 30928624.
- [25] Min W, Jiang C, Li Z, Wang Z. The effect of mindfulness-based interventions during pregnancy on postpartum mental health: A meta-analysis. *J Affect Disord*. 2023 Jun 15;331:452-460. doi: 10.1016/j.jad.2023.03.053. Epub 2023 Mar 23. PMID: 36963518.
- [26] Lewkowitz AK, Whelan AR, Ayala NK, Hardi A, Stoll C, Battle CL, Tuuli MG, Ranney ML, Miller ES. The effect of digital health interventions on postpartum depression or anxiety: a systematic review and meta-analysis of randomized controlled trials. *Am J Obstet Gynecol*. 2024 Jan;230(1):12-43. doi: 10.1016/j.ajog.2023.06.028. Epub 2023 Jun 15. PMID: 37330123; PMCID: PMC10721728.
- [27] Gonzalez C, Ramirez M, Diaz A, Duran M, Areán P. Expanding Virtual Postpartum Mental Health Care for Latina Women: A Participatory Research and Policy Agenda. *Womens Health Issues*. 2021 Mar-Apr;31(2):96-99. doi: 10.1016/j.whi.2020.10.005. Epub 2020 Nov 26. PMID: 33250342.
- [28] Franco P, Olhaberry M, Kelders S, Muzard A, Cuijpers P. Guided web app intervention for reducing symptoms of depression in postpartum women: Results of a feasibility randomized controlled trial. *Internet Interv*. 2024 Apr 25;36:100744. doi: 10.1016/j.invent.2024.100744. PMID: 38707545; PMCID: PMC11067323.
- [29] Stanhope KK, Stallworth T, Forrest AD, Vuncannon D, Juarez G, Boulet SL, Geary F, Dunlop AL, Blake SC, Green VL, Jamieson DJ. Planning for the forgotten fourth trimester of pregnancy: A parallel group randomized control trial to test a postpartum planning intervention vs. standard prenatal care. *Contemp Clin Trials*. 2024 Aug;143:107586. doi: 10.1016/j.cct.2024.107586. Epub 2024 Jun 3. PMID: 38838985; PMCID: PMC11283948.
- [30] Betts KS, Kisely S, Alati R. Predicting postpartum psychiatric admission using a machine learning approach. *J Psychiatr Res*. 2020 Nov;130:35-40. doi: 10.1016/j.jpsychires.2020.07.002. Epub 2020 Jul 28. PMID: 32771679.
- [31] Strahm AM, Mitchell AM, Pan X, Christian LM. Repetitive negative thinking during pregnancy and postpartum: Associations with mental health, inflammation, and breastfeeding. *J Affect Disord*. 2022 Dec 15;319:497-506. doi: 10.1016/j.jad.2022.09.067. Epub 2022 Sep 24. PMID: 36162689.
- [32] Hannon S, Gartland D, Higgins A, Brown SJ, Carroll M, Begley C, Daly D. Physical health and comorbid anxiety and depression across the first year postpartum in Ireland (MAMMI study): A longitudinal population-based study. *J Affect Disord*. 2023 May 1;328:228-237. doi: 10.1016/j.jad.2023.02.056. Epub 2023 Feb 19. PMID: 36801420.
- [33] Little EE, Bain L, Hahn-Holbrook J. Randomized controlled trial to prevent postpartum depressive symptomatology: An infant carrier intervention. *J Affect Disord*. 2023 Nov 1;340:871-876. doi: 10.1016/j.jad.2023.08.044. Epub 2023 Aug 15. PMID: 37586649.

- [34] Kim S, Kim DJ, Lee MS, Lee H. Association of Social Support and Postpartum Depression According to the Time After Childbirth in South Korea. *Psychiatry Investig.* 2023 Aug;20(8):750-757. doi: 10.30773/pi.2023.0042. Epub 2023 Aug 11. PMID: 37559482; PMCID: PMC10460980.
- [35] Reid KM, Taylor MG. Social support, stress, and maternal postpartum depression: A comparison of supportive relationships. *Soc Sci Res.* 2015 Nov;54:246-62. doi: 10.1016/j.ssresearch.2015.08.009. Epub 2015 Aug 31. PMID: 26463547.
- [36] Prevatt BS, Lowder EM, Desmarais SL. Peer-support intervention for postpartum depression: Participant satisfaction and program effectiveness. *Midwifery.* 2018 Sep;64:38-47. doi: 10.1016/j.midw.2018.05.009. Epub 2018 May 31. PMID: 29908406.
- [37] Riem MME, Perrykkad K, Watson SJ, Wynter K, van IJzendoorn MH, Galbally M. The role of lack of grandparental support in perinatal depression. *J Affect Disord.* 2024 Sep 1;360:198-205. doi: 10.1016/j.jad.2024.05.104. Epub 2024 May 22. PMID: 38788855.
- [38] Seymour-Smith M, Cruwys T, Haslam SA. More to lose? Longitudinal evidence that women whose social support declines following childbirth are at increased risk of depression. *Aust N Z J Public Health.* 2021 Aug;45(4):338-343. doi: 10.1111/1753-6405.13099. Epub 2021 Apr 5. PMID: 33818864.
- [39] Aviv EC, Lindquist EG, Waizman YH, Dews AA, Flores G, Saxbe DE. Fathers' subjective childbirth stress predicts depressive symptoms at six months postpartum. *J Affect Disord.* 2023 Oct 15;339:593-600. doi: 10.1016/j.jad.2023.07.064. Epub 2023 Jul 17. PMID: 37459973; PMCID: PMC10923195.
- [40] Phua DY, Kee MZL, Meaney MJ. Positive Maternal Mental Health, Parenting, and Child Development. *Biol Psychiatry.* 2020 Feb 15;87(4):328-337. doi: 10.1016/j.biopsych.2019.09.028. Epub 2019 Oct 16. PMID: 31839213.
- [41] Xu L, Boama-Nyarko E, Masters GA, Moore Simas TA, Ulbricht CM, Byatt N. Perspectives on barriers and facilitators to mental health support after a traumatic birth among a sample of primarily White and privately insured patients. *Gen Hosp Psychiatry.* 2021 Nov-Dec;73:46-53. doi: 10.1016/j.genhosppsych.2021.08.010. Epub 2021 Aug 28. PMID: 34583284; PMCID: PMC8629868.
- [42] Pope J, Redsell S, Houghton C, Matvienko-Sikar K. Healthcare professionals' experiences and perceptions of providing support for mental health during the period from pregnancy to two years postpartum. *Midwifery.* 2023 Mar;118:103581. doi: 10.1016/j.midw.2022.103581. Epub 2022 Dec 24. PMID: 36608486.
- [43] Smith I, O'Dea G, Demmer DH, Youssef G, Craigie G, Francis LM, Coles L, D'Souza L, Cain K, Knight T, Olsson CA, Macdonald JA. Associations between unintended fatherhood and paternal mental health problems: A systematic review and meta-analysis. *J Affect Disord.* 2023 Oct 15;339:22-32. doi: 10.1016/j.jad.2023.06.065. Epub 2023 Jun 30. PMID: 37393953.
- [44] Cai D, Villanueva P, Lu H, Zimmermann B, Horsch A. A qualitative study of postpartum practices and social support of Chinese mothers following childbirth in Switzerland. *Midwifery.* 2024 Nov;138:104137. doi: 10.1016/j.midw.2024.104137. Epub 2024 Aug 8. PMID: 39153470.
- [45] Alao MA, Ibrahim OR, Yekinni SA, Sotimehin SA, Diala UM, Briggs DC, Musa AZ, Imam ZO, Famutimi EO, Idris AA, Ayuk AC, Iloh KK, Odimegwu CL, Adeyemi AT, Medupin PF, Adeniyi YC, Nnamani KO, Tongo OO. Breastfeeding support as predictors of sustainable breastfeeding practices of nursing mothers with common mental disorders in tertiary hospital nurseries in Nigeria: a cross sectional study. *BMC Pregnancy Childbirth.* 2024 Dec 20;24(1):834. doi: 10.1186/s12884-024-07031-8. Erratum in: *BMC Pregnancy Childbirth.*

2025 Jan 9;25(1):23. doi: 10.1186/s12884-024-07126-2. PMID: 39707225; PMCID: PMC11660493.

- [46] Hoffmann L, Hilger N, Riolino E, Lenz A, Banse R. Partner support and relationship quality as potential resources for childbirth and the transition to parenthood. *BMC Pregnancy Childbirth*. 2023 Jun 13;23(1):435. doi: 10.1186/s12884-023-05748-6. PMID: 37312055; PMCID: PMC10261844.
- [47] Ozcalik HB, Aksoy YE. The relationship between maternal functioning and birth memory and trauma. *Midwifery*. 2024 May;132:103974. doi: 10.1016/j.midw.2024.103974. Epub 2024 Mar 16. PMID: 38503117.