International Journal of Arts and Social Science
ISSN: 2581-7922,
Volume 9 Issue 9, September 2026

Intervention Strategies for Addressing Postpartum Depression among First–Time Mothers at Mbagathi Hospital, Nairobi County, Kenya

CHIJIOKE, OZIOMA DARLINGTINA[1], DR. ANTONY CHEGE PhD[2], DR. MARIA NTARANGWE PhD[3]

[1,2,3]*Department of Counselling Psychology the Catholic University of Eastern Africa Nairobi, Kenya*

ABSTRACT: Major depression is a common mental disorder affecting women in the postpartum period and is associated with poor maternal and child outcomes. Studies around the world do indicate that one of the protective factors against PPD is psychosocial support. There is need to study about women's perceptions of sources or forms of psychosocial support following childbirth in Nairobi County. The study's purpose was to determine Perinatal Psychosocial Support and Post-Partum Depression among the first-time mothers in Mbagathi hospital Lang'ata sub-county, Nairobi, Kenya. The study focused on four objectives: To establish the prevalence of postpartum depression among first-time mothers; To assess the levels of perinatal psychosocial support for mothers; To assess the relationship between psychosocial support programs and postpartum depression and to establish the intervention strategies in addressing perinatal psychological support and postpartum depression among first-time mothers. The study was guided by two theories; cognitive behavioural therapy by Aaron Beck (1960) and Interpersonal theory by Harry Stack-Sullivan (1936). The study employed simple random sampling to select participants for quantitative data and purposive sampling for qualitative data. Among the 60 nurses, 18 nurses were chosen for qualitative data. The sampling formula developed by Yamane Taro (1967) was used to calculate the size of the sample taken from 384 first time mothers. The sample size of 226 was met during data collection. Convergent parallel research design was adopted for the study. Edinburgh postnatal screening tool, Postpartum Psychosocial Support Questionnaire were applied to get quantitative data from the individuals. Quantitative data was analysed using SPSS version 26. Findings showed that most mothers had high levels of PPD and reported to receive low levels of psychosocial support. The findings also showed that an increase in psychosocial support correlates with a decrease in PPD. The study recommends the following as a way forward for addressing post-partum depression: Capacity building for diagnosis, development of proper follow-up systems and community awareness were the intervention strategies suggested by the nurse.

I. BACKGROUND OF THE STUDY

Postpartum depression is a non-psychotic depressive episode that begins during pregnancy or within the first year after childbirth and is characterized by persistent sadness, anhedonia, fatigue, feelings of worthlessness, and, in some cases, difficulty bonding with the infant. Postpartum depression is one of the main problems and not only affects the health of mothers and babies, but also their partners, the whole family and the society (Vaezi et al., 2018). The postpartum period causes emotional stress to new mothers, even more troublesome when accompanied by intense physical changes. There are many factors that influence the success of the transition to parenting during the postpartum period, one of which is the support factor from family and friends. Many postpartum mothers experience feelings of let-down after giving birth due to the seriousness of their experience at birth and doubts about their ability to cope effectively in raising a child (Bahiyatun, 2010).

According to Wubetu et al., (2020) Postpartum depression (PDD) also known as postnatal depression is a non-psychotic depressive disorder of variable severity it can begin as early as 2 weeks after delivery and can persist indefinitely if left untreated. Depressive disorders are the leading cause of global disability, and PDD is a clinical depression with symptoms that can include a feeling of fatigue, social withdrawal, sadness, and changes in sleeping and eating patterns, guilt, crying, loneliness, and low self-esteem lasting longer than 2 weeks. Nearly one-fifth of the global disease burden has been ascribed to neuropsychiatric disorders, including those disorders that occur during the postpartum period. These estimates indicate the importance of addressing mental disorders in public health. According to a standardized diagnostic and statistical manual, postpartum depression is one type of depressive episode, which occurs within 1 year of childbirth. However, it can also manifest as the occurrence of a major depressive episode within 4 weeks after delivery. The fundamental neurobiological changes result from developmental connections between genetic susceptibility and environmental factors rather than a simple chemical imbalance.

Globally, around 322 million (4.4%) of the population suffer from depressive disorders, and at least 9% of those with depressive disorders live in Africa (World Health Organization, 2017). Postpartum depression affects a substantial minority of mothers, and the burden is disproportionately higher in low- and middle-income countries than in high-income settings. In a cohort of women attending maternal and child health clinics at two major public hospitals in Nairobi, including Mbagathi Hospital, Ongeri et al. (2018) found that 18.7 percent of women screened positive for significant postpartum depressive symptoms using the Kiswahili-translated Edinburgh Postnatal Depression Scale, and that conflict with a partner was associated with a more than seven-fold increase in the odds of depression. Other Kenyan facility-based studies report prevalence estimates ranging from roughly 11 to 18 percent, depending on the screening tool, cut-off score, and population studied, with obstetric factors such as high parity, unplanned pregnancy, and unresolved antenatal stressors consistently associated with elevated risk.

The WHO's mental health Gap Action Programme (mhGAP) suggests incorporating screening for perinatal depression and providing stepped psychological care within standard maternal and child health services. The Edinburgh Postnatal Depression Scale (EPDS) and the PHQ-9 are recommended tools for recognizing depression in pregnant or breastfeeding women (World Health Organization [WHO], 2015, 2019).

Cognitive behavioral therapy and interpersonal psychotherapy (IPT) are considered primary treatments for depression. A comprehensive 2024 systematic review from Campbell regarding IPT in low- and middle-income countries indicates that IPT yields results that are comparable to or better than those from pharmaceutical treatments (Ji & Wang, 2025). Guidelines for evidence-based treatment suggest that at least six sessions of IPT should be administered before assessing the treatment response and contemplating the introduction of medication (Ji & Wang, 2025).

II. Intervention strategies for addressing postpartum depression among first-time mothers in Mbagathi Hospital.

According to Cohen et al., (2010) postpartum depression is psychiatric disorder sharing some moderated and some exacerbated characteristics of general depression. Less anger, less self-rated emotion, less suicidal ideation, early insomnia as opposed to late insomnia, extra anxiety about the baby, more hypochondriacally complaints, and more animation are some of the reported differences between postpartum depressed and other depressed patients (Brockington et al., 1988). A diagnosis of Major Depression with Postpartum onset is the diagnostic label for this disorder when symptoms warrant (American Psychiatric Association, 2000). This study was done in Los Angeles and it addressed postpartum depression is psychiatric disorder sharing some moderated and some exacerbated characteristics of general depression while the current study was conducted in Kenya Nairobi County to address Perinatal Psychosocial Support and Post-partum Depression among first time mothers.

Treatment for these symptoms has ranged from increasing environmental support, including increased paternal care of the infant (Feggetter et al., 1981; Gordon & Gordon, 1967), to hospitalization when the new mother cannot be maintained at home (Halonen & Passman, 1985; Lee, 1982). Pharmacological interventions designed to elevate mood, decrease apprehension, correct sleep disturbances, and control agitation are useful and are employed when breast-feeding is not a current practice, or when it is determined that the potential risk from the medications is minimal or outweighed by the potential benefit (Carbary, 1984). Psychosocial interventions have focused on empathic listening and environmental management. Insight-oriented psychotherapy aimed at resolving underlying conflicts of motherhood also has been utilized (Deutsch, 1974).

Albright (1993) suggested that the most crucial factor for treating patients with PPD is a complete psychological assessment to identify the variables involved in each case; then interventions addressing specific variables should be formulated. Furthermore, there is little research addressing primary interventions aimed at PPD before delivery that focuses on single mothers. One study currently under investigation involves five sessions of individual and group psychotherapy and some psycho-education aimed at a select group of soon-to-be mothers ruling out of the study women with particular risk factors listed above as critical to the development of such disorders (Zlotnick, 2008).

Psycho-education and counselling aimed at modifying the client's negative expectations of the entire process from pregnancy through early infant care and negative self-statements regarding the client's capacity can assist in prevention of PPMDs. Assisting the client and the father of the baby to increase communication skills, negotiating tasks of childcare and household management, and revamping role assignments to fit the couple's specific situation, and increasing problem solving skills can all serve as means of reducing the stress associated with PPMD. Further, increasing the client's social support network to extended family and beyond may provide needed preventative measures (Pfost et al., 1990). This study was conducted to address process from pregnancy through early infant care and negative self-statements regarding the client's capacity and can assist in prevention of PPMDs, while the current study was conducted in Kenya Nairobi County to address Perinatal Psychosocial Support and Post-partum Depression among first time mothers.

Several diagnostic tools have been developed to diagnose post-partum depression. They include Edinburgh Postnatal Depression Scale (EPDS), (Cox et al*.,* 1987), the Nine-item Physician's Health Questionnaire (PHQ-9), (Maust & Thase, 2012), and the Postpartum Depression Screening Scale (PDSS), (Beck et al*.,* 2001). However, the most widely used epidemiological screening tool is the Edinburgh Postnatal Depression Scale (EPDS) due to its extensive validation, simplicity with good validity and reliability (O'Connor et al, 2016). Moreover, this tool is highly recommended due to the inclusion of anxiety symptoms which is a prominent feature of perinatal mood disorder hence increases its specificity for perinatal depression (American College of Obstetricians and Gynecologists 2015). The latest scale validation of the EDPS tool was done by O'Connor et al, 2016 who reported that the tool has a high sensitivity of 67 – 100%% and specificity of 87-99%. PPD is effectively managed if it is detected early through: psychological treatment or the use of pharmacological treatment. The two modes of treatment can be used individually or together, (Dennis &Dowswell, 2013). When postpartum depression is not diagnosed early, it may progress into a severe or chronic state which not only affects the mother but also the infant and the family thereby increasing maternal and perinatal morbidity and mortality, (Mwikali, 2013).

Postpartum depression is a main health issue among many women in various nations, which often remains undetected despite the existence of universal access to health care. This thereby leads to challenges in dealing with the problems and their complications, (Mburu, 2013). This confirms that postpartum depression is frequently under-recognized despite the availability of effective treatments and screening instruments, (Georgiopoulos,et al 2001).

Statistics indicates that at least 50% of PPD go unrecognized. Statistics by Country for postpartum depression, 2014, research also indicates that mental disorders are not prioritized in developing countries and this is due to other competing health care disorders, (Fisher *et al.,* 2012). Various experts have recommended PPD screening during the first postpartum clinic, which is usually done within 2 – 6 weeks post-delivery at any health care interaction point, (Yawn et al., 2015). Studies have also indicated that screening PPD on an outpatient setting is feasible and can improve detection rates and treatment. The child welfare clinic services provide a convenient longitudinal chance to monitor for PPD, due to its regular occurrence (Yawn et al., 2015).

In Kenya, screening of PPD is a challenge due to lack of a screening tool in most health facilities. Moreover, screening programs are recommended only in circumstances where there are follow up interventions, (Ongeri et al*.,* 2018). However, Kenyan research has used depression screening during scheduled antenatal and postpartum clinic visits to identify the affected mothers during the clinic visits in health care facilities.

III. METHOD

Research Design

Research design is a broad framework for connecting theoretical concerns to a focused and doable empirical research. It's an investigation that provides detailed instructions for study procedures (Creswell, 2014). According to Kerlinger (1986), research design is a blueprint, organization, and approach to investigation undertaken to provide answers to research questions with maximum control over variables. Also, Kothari (2004), states that research design provides the conditions necessary for the systematic collection and analysis of data, ensuring that the research objectives are achieved efficiently. It serves as the conceptual framework or blueprint that provides direction for data gathering, measurement, and analysis across the whole study process.

The study used a mixed methods approach adopting convergent parallel research design. According to Creswell and Pablo Clark (2011), the researcher conducted both quantitative and qualitative elements simultaneously within the same phase of the research. The methods were given equal importance, analyzed independently, and their results were interpreted together. This strategy was chosen to provide a more thorough grasp of the research issue by combining the advantages of both qualitative and quantitative research approaches.

The convergent parallel design is particularly advantageous because it enables the integration of diverse data sources, which can enhance the validity of the findings. Using both quantitative and qualitative data, the research benefits from the depth of qualitative insights and the generalization of quantitative data. This design is also time-efficient compared to other mixed-methods strategies, making it well-suited for studies that require timely and robust results.

Location of the Study

Lang'ata Sub-County is in Nairobi, the capital city of Kenya. It is one of the 17 sub-counties in Nairobi and covers an area of approximately 79.7 square kilometres. The sub-county is situated in the south-western part of Nairobi and is bordered by Kajiado County to the south and west, Nairobi National Park to the east, and Nairobi West and Karen to the north. The sub-county has both urban and rural areas, with some parts being highly developed and others being more rural in nature. Kibra, Kenya's largest slum, borders Lang'ata constituency, and was part of it before the creation of Kibra Constituency by the Independent Electoral and Boundaries Commission. The affluent suburb of Karen and the mainly middle class Lang'ata suburb are part of Lang'ata sub-county are part of Lang'ata Constituency along with the Nairobi National Park and Lang'ata Barracks, Named graph (n. d.).

The location was easily accessible to the researcher. Lang'ata Sub-County has been prone to PPD cases among the first-time mothers and since it is home to a diverse population, including people from different ethnic groups in Kenya and from different socioeconomic backgrounds, many cases of PPD have been reported in this area (Kombo & Tromp, 2013). Because of this, it gave the researcher an opportunity to study. It also presented a

beautiful opportunity for the researcher to assess mothers from a different class. Finally, the researcher chose this location because of the concerns that had been raised. Thus, these were helpful to evaluate the responses that were given by respondents.

Target Population

Mbagathi level 5 hospital had an average of 84 pregnant adolescents attended to in one month with approximately 300 deliveries in a month among the adult women. This made the target population to be 384 and were all postpartum mothers seeking postnatal and Maternal Child Health (MCH) Clinic Services in Mbagathi Hospital (NMS, 2023). The study population drew the accessible population from the mothers seeking MCH clinic services in the hospital. The 60 health care workers (nurses) working in the perinatal clinic were key informants for interview. These mothers were chosen since they possess critical insights on health issues as they care for their first babies and since they face this reality for the first time, they were open to share. The focus on first time mothers was particularly relevant as the study sought to understand how PPD affects first time mothers.

Sampling Procedure and Sampling Size

A sample is a portion or subset of the accessible population selected to represent the population. Mouton, (2006) defines a sample as elements selected with the intention of finding out something about the total population from which they are taken. The study population was derived from the target population postpartum mothers seeking postnatal and child welfare clinic services in selected hospital in Lang'ata Sub-County.

Simple random sampling was used to minimize selection bias and made certain that the sample accurately reflected the overall population. By using this method, the research findings became more legitimate and reliable and can be applied to the broader population of PPD mothers in Lang'ata Sub-County. The inclusion of diverse groups within the sample also ensured that the study captured a wide range of experiences and views, which was critical for understanding the impact of PPD on the first-time mothers.

The process of selecting a small number of people (a sample) from a larger population (the sampling population) in order to assess or predict the prevalence of an unidentified fact, event, or result in connection to the larger population is known as sampling, according to Kumar (2011). Kumar goes on to define a sample as the portion of the population that captures the interest of the researcher. To guarantee that every person of the population has an equal chance of being chosen for this study, the researcher employed random sampling. In this study, simple random sampling was used. The researcher utilised Yamane Taro's (1967) technique to determine a sample size of 384 of all postpartum mothers seeking postnatal and Maternal Child Health (MCH) Clinic Services in Mbagathi Hospital.

The participants were picked by the researcher using a simple random sample, which is a subset of a statistical population in which each member has an equal chance of being chosen. In this instance, 384 persons were selected as the target population, with numbers ranging from 1 to 384. Of the 60 nurses, 18 were selected using purposeful sampling.

n = N/1+N(e)2

n= Signifies the sample size
N= Study Population
e= Margin of error (0.05)
n=384/1+519(0.05)2
n=384/ (1+519(0.0025)
n=384/1+0.7
n=384/1.7
n=225.88
n=226

The sample size for quantitative data was 226 respondents. According to Nthambi (2014), an investigation on the effects of rewards on employee performance was done while citing Mugenda & Mugenda (2003). The researcher says that 30% of the target population makes for a strong presentation. Thus, the researcher

used 30% approach to get respondents for interview. 60 nurses attend the pregnant mothers using Mugenda 30% of 60 nurses brought 18 nurses for interviews. Therefore, the total sample size was 244 respondents.

Research Instruments

Data was collected using interview guide. The semi-structured interviews with the nurses were used by the researcher to collect qualitative data. As outlined by Magaldi and Berler (2020), semi-structured interviews are a flexible data collection method that allows for in-depth exploration of specific topics while maintaining a consistent focus guided by a pre-determined set of questions. Also, According to Easwaramoorthy and Zarinpoush (2006), in a semi-structured interview, the interviewer utilizes a list of prepared questions, while the respondents react in their own terms. This guarantees that all responders supplied data regarding the same topic. The researcher created a topic guide that served as a checklist. In addition to seeking clarity with follow-up questions, the researcher delved deeper into some subjects based on the respondent's responses. The study conducted interviews with 9 nurses who attended to mothers in Mbagathi Hospital. Consequently, semi-structured interviews assisted the study to pinpoint the intervention strategies from the nurses in addressing postpartum depression among first-time mothers.

IV. INTERVENTION STRATEGIES FOR PERINATAL PSYCHOLOGICAL SUPPORT AND POSTPARTUM DEPRESSION AMONG FIRST-TIME MOTHERS.

The final objective sought to investigate intervention strategies for perinatal psychosocial support and post-partum depression among first-time mothers in Mbagathi hospital. The findings were drawn from the interview with nurses using the first and third guiding questions. The first guiding question was, “Have you experienced any challenges when attending PPD mothers? If there are some of the challenges that have been hindering your services. Also give suggestions on how to overcome them” and the third guiding question was, “Concerning your profession in the field of serving PPD mothers' what advice can you suggest that can improve the health of PPD mothers”. To that, the themes that emerged include capacity building for diagnosis, development of proper follow-up systems and community awareness.

In capacity building for diagnosis, the nurses suggested that routine screening during antenatal clinics and specialized training on post-partum depression would be beneficial in identifying and helping first-time mothers dealing with post-partum depression.

> I think all hospitals should place mandatory PPD screening when they come for baby’s immunization and have that indicated in the book for at least the first six months. This could help in identifying PPD, monitoring recovery and eventually reducing the cases or severity of it. (HC9, January 2026)

“I think that most of us need more training on how to identify and handle cases of post-partum depression because we are used to just the routine antenatal clinics.” (HC2, January 2026)

Development of proper follow-up systems was another intervention strategy that emerged. The nurses experienced challenges following up on clients due to improper documentation and mothers only going for baby’s clinic. They suggested that there needs proper documentation for referral clients to the counsellor so as to know that therapy is going on, have the patients families’ more involved by ensuring the mother is getting care and increase the routine clinics for PPD mothers to ensure proper monitoring.

> When I have encountered a client and see that she exhibits symptoms of post-partum depression, it is hard to follow up on her because, I will refer her to the counselor but there is no way to know if she has gotten assisted or even went because there’ll be no record of it in her mother and child book and I can’t keep going to the counsellor’s office to confirm. The number of clients is really much, and everyone is in a hurry. We need a better referral method so that even the client can take it seriously. (HC12, January 2026)

“Patients with postpartum depression require to come in more often so as to see the counselor and be closely monitored. Mothers will only come when there is need for it so making it a rule will go a long way.” (HC7, January 2026)

Previous researchers like Ho et al, 2013 encouraged healthcare providers to suggest involving fathers more in the care of the baby, to improve family support.

It was found that there is need for aggressiveness in community awareness like running anti-stigma campaigns, advertisement on toll free emergency hotline where mothers can get psychological assistance and maternal advice, civic education programs on how to promote maternal well-being practices like nutrition, hydration, rest, sleep and physical activity will help mitigate and prevent PPD.

> A lot of people do not know that counseling is covered by SHA and that may cause them to shy away from it. They also don't know that there are toll-free hotline for them to receive maternal advice and confidential psychological aide. This information needs to reach people so making that happen will help a mother not feel isolated and overwhelmed with motherhood. HC1, January 2026.

"Caring for a new-born while also dealing with the pressure of 'kutojiachilia' increases stress for mothers, not to mention harsh critics who cause stigma. Anti-stigma campaigns should be done to check on this." (HC4, January 2026)

"Kutojiachilia" basically means not letting yourself go which is a term used for mothers who changed, especially in appearance, after having children. It's a term that causes stress on mothers as they struggle to bounce back from their pregnancy and nursing bodies.

A study in Somalia on lived experiences of mothers receiving post-partum support highlighted the urgent need for policy action to enhance postpartum care systems. This includes workforce capacity building and structured follow-up in fragile settings. Stating that strengthening postpartum social support through trained health workers, family engagement, and peer programs can improve maternal and neonatal outcomes. (Ibrahim et al., 2026).

V. Discussions

The WHO's mental health Gap Action Programme (mhGAP) suggests incorporating screening for perinatal depression and providing stepped psychological care within standard maternal and child health services. The Edinburgh Postnatal Depression Scale (EPDS) and the PHQ-9 are recommended tools for recognizing depression in pregnant or breastfeeding women (World Health Organization [WHO], 2015, 2019).

Cognitive behavioral therapy and interpersonal psychotherapy (IPT) are considered primary treatments for depression. A comprehensive 2024 systematic review from Campbell regarding IPT in low- and middle-income countries indicates that IPT yields results that are comparable to or better than those from pharmaceutical treatments (Ji & Wang, 2025). Guidelines for evidence-based treatment suggest that at least six sessions of IPT should be administered before assessing the treatment response and contemplating the introduction of medication (Ji & Wang, 2025).

The Kenya Mental Health Policy 2015–2030 (Ministry of Health, 2015) provides the overarching framework, but it identifies persistent gaps: an acute shortage of psychiatrists and mental health nurses (concentrated in urban centres), limited prevalence data, and poor integration of mental health into routine primary/maternal care.
National studies indicate perinatal depression affects roughly one in four to one in three pregnant and postpartum Kenyan women, with demographic, psychosocial, and clinical risk factors well documented (Ongeri et al., 2018, BMC Psychiatry).

VI. CONCLUSION

In conclusion, the evidence indicates that perinatal psychological support for first-time mothers is most effective when it prioritizes early risk screening and the provision of timely, structured interventions, rather than relying on isolated or purely informational approaches. While psychosocial and psychological strategies in general show mixed results for preventing postpartum depression, intensive, professionally delivered postpartum support and targeted assistance for high-risk women emerge as particularly promising. Combining elements such as psycho-education, enhanced social support, and consistent emotional follow-up within maternal care routine may improve accessibility and overcome barriers, especially in rural and financially constrained settings.

REFERENCES

[1.] Albright, A., (1993). Postpartum Depression: An Overview. *Journal of Counselling* Postpartum Depression: An Overview. *Journal of Counselling.*

[2.] American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev). Washington, DC:Author.

[3.] Bahiyatun (2010). Buku Ajar Asuhan Kebidanan Nifas Normal (Textbook of Normal Postpartum Midwifely Care). Jakarta: EGC.

[4.] Brockington, I. F., Margison, F. R., & Schofield, E. (1988). The clinical picture of the depressed form of puerperal psychosis. *Journal of Affective Disorders*, *15*, 29-37.

[5.] Carbary, L. J. (1984). Postpartum depression. *The Journal of Nursing Care*, *15*, 11-13.

[6.] Cohen, A. S., Minor, K. S., & Najolia, G. M. (2010).** _A framework for understanding experiential deficits in schizophrenia._ **Psychiatry Research, 178**(1), 10–16. https://doi.org/10.1016/j.psychres.2009.11.016

[7.] Creswell,W. J. (2014).R*esearch Design: Qualitative, Quantitative and Mixed Methods Approaches research (4thed).* Sage Publication, London, United Kingdom.

[8.] Dennis, C. E., Stewart, D. E. Treatment of postpartum depression Part 1: A critical review of biological interventions. The Journal of clinical psychiatry.2004; 45:1242-1251.

[9.] Deutsch, H. (1974). The psychology of women: A psychoanalytic interpretation (Vol. 2, Motherhood). Grune & Stratton.

[10.] Feggetter, G., Cooper, P., & Gath, D. (1981). Non-psychotic psychiatric disorders in women one year after childbirth. Journal of Psychosomatic Research, 25(5), 369–372. https://doi.org/10.1016/0022-3999(81)90051-9.

[11.] Georgiopoulos, A. M., Bryan, T. L., Yawn, B. P., Houston, M. S., Rott, M. A., & Bishop, H. (2001). Population-based screening for postpartum depression. Obstetrics & Gynecology, 93(5), 653–657.

[12.] Gordon, R. E., & Gordon, K. K. (1967). Factors in postpartum emotional adjustment. American Journal of Orthopsychiatry, 37, 359–360.

[13.] Fisher, J., Mello, M. C. d., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W (2012). Prevalence and determinants of common perinatal mental disorders in women in low-and lower-middle-income countries: A systematic review.*Bulletin of the World Health Organization,90(2), 139-149.*

[14.] Ho, C., Chang, L., & Wan, K. (2013). The relationships between postpartum adaptation and postpartum depression symptoms of first pregnancy mothers in Taiwan. *International Journal of Psychiatry in Medicine, 45*(1), 1-13. Doi: http://dx.doi.org/10.2190/PM.45.1.a.

[15.] Halonen, J. S., & Passman, R. H. (1985). Relaxation training and expectation in the treatment of postpartum distress. Journal of Consulting and Clinical Psychology, 53(6), 839–845. https://doi.org/10.1037/0022-006X.53.6.839

[16.] Ibrahim, A. A., et al. (2026). Lived experiences of first-time mothers receiving postpartum social support at Banadir Hospital, Mogadishu, Somalia: a phenomenological qualitative study. *BMC Pregnancy and Childbirth*, *26*(1), Article 367. https://doi.org/10.1186/s12884-026-08875-y.

[17.] Kerlinger, F. N. (1986). Foundations of behavioral research (3rd ed.). Holt, Rinehart and Winston.

[18.] Kothari, C. R. (2004). Research methodology: Methods and techniques (2nd rev. ed.). New Age International (P) Ltd., Publishers.

[19.] Kombo, D. K., & Tromp, D. L. A. (2013). Proposal and thesis writing: An introduction. Paulines Publications Africa.

[20.] Kumar, R. (2011). *Research Methodology a step-by-step guide for beginners (3rd ed.).*UK, London: SAGE Publications Ltd.

[21.] Lee, H. Y., Edwards, R. C., & Hans, S. L. (2020). Young first-time mothers' parenting of infants: The role of depression and social support. *Maternal and Child Health Journal*, *24*(5), 575–586. https://doi. org/10.1007/s1099 5-019- 02849-7.

[22.] Maust, D. T., & Thase, M. E. (2012). Treatment-resistant depression: A review of the literature and current treatment approaches. Psychiatric Clinics of North America, 35(1), 1–16.

[23.] McMillan, J. H., & Schumacher, S. (2010). Research in education: Evidence-based inquiry (7th ed.). Pearson.

[24.] Mouton, J. (2006). How to succeed in your master's and doctoral studies: A South African guide and resource book. Van Schaik Publishers.

[25.] Musau, V. M. (2013). Prevalence of postpartum depression among women delivering at Kenyatta National Hospital [Master's dissertation, University of Nairobi]. University of Nairobi

[26.] O'Connor, E., Rossom, R. C., Henninger, M., Groom, H. C., Burda, B. U., & Henderson, J. T. (2016). Primary care screening for and treatment of depression in pregnant and postpartum women: Evidence report and systematic review for the US Preventive Services Task Force. JAMA, 315(4), 388–406. https://doi.org/10.1001/jama.2015.18948

[27.] Ongeri, L., Wanga, V., Otieno, P., Mbui, J., Juma, E., Vander Stoep, A., & Mathai, M. (2018). Demographic, psychosocial and clinical factors associated with postpartum depression in Kenyan women. BMC Psychiatry, 18, Article 318. https://doi.org/10.1186/s12888-018-1904-7

[28.] Pfost, K. S., Stevens, M. J., & Matejcak, A. J. (1990). A counselor's primer on postpartum depression. *Journal of Counseling and Development*, *69*, 148-151.

[29.] Vaezi A, Soojoodi F, Tehrani A, Nojomi M (2018). The association between social support and postpartum depression in women: A cross-sectional study. Women birth. 32(2): e238-e242. https:// doi.org/10.1016/j.wombi.2018.07.014.

[30.] World Health Organization. (2019). *mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings* (Version 2.0). WHO.

[31.] Xia, J., Chen, C., Lu, X., Zhang, T., Wang, T., Wang, Q., & Zhou, Q. (2025). Artificial intelligence-oriented predictive model for the risk of postpartum depression: A systematic review. Frontiers in Public Health. https://doi.org/10.3389/fpubh.2025.1631705

[32.] Yamane, T. (1967). Statistics: An introductory analysis (2nd ed.). Harper & Row.

[33.] Yawn, B. P., Bertram, S., Kurland, M., & Wollan, P. C. (2015). Repeated depression screening during the first postpartum year. Annals of Family Medicine, 13(3), 228–234. https://doi.org/10.1370/afm.1777

[34.] Zlotnick, C. (2008). Interpersonal Therapy Program for Preventing Postpartum Depression. *National Institute of Mental Health* (NIMH), 158:638-640. http://clinicaltrials.gov/ct2/show/record/NCT00601757.

[35.] World Health Organization. (2015). *Thinking healthy: A manual for psychosocial management of perinatal depression*. WHO/MSD/MER/15.1.

[36.] World Health Organization. (2019). *mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings* (Version 2.0). WHO.

[37.] World Health Organization. (2015). *Thinking healthy: A manual for psychosocial management of perinatal depression*. WHO/MSD/MER/15.1.

[38.] Wubetu AD, Engidaw NA, Gizachew KD. Prevalence of postpartum depression and associated factors among postnatal care attendees in Debre Berhan, Ethiopia, 2018. *BMC Preg Childbirth.* (2020) 4:1–9. doi: 10.1186/s12884-020-02873-4.