Exploring the Effect of Social Media on Post-Partum Depression

Zixian Ye[1,a,*]

[1]*James Cook University, 149 Sims Dr, Singapore, 387380, Singapore*
a. zixian.ye@my.jcu.edu.au
*corresponding author

Abstract: Postpartum Depression (PPD) has a globally effect on an extensive number of women, it is hard to prevent or diagnosis the PPD due to its multifactor. From a web-based approach, this study investigates social media's impacting elements and mechanisms for PPD. Self-comparisons with the social dynamics of other people's social media postings are one of the causes that are more likely to cause women to have low self-esteem, which can exacerbate or trigger depressive symptoms. This paper also discusses the low reliability of the existing digital mobile mental health care application and its potential effect on PPD. Overall, even if social media can offer psychosocial support for women, it is important to be aware of the influence of self-comparisons to prevent harming women's sense of self-worth and acceptance. Future research should continue investigate more aspects of the factors affecting PPD, thus, increase the possibility of preventing and diagnosing PPD.

Keywords: Post Partum Depression, social media, digital mobile application, body image, self comparison

1. Introduction

According to the World Health Organization (WHO), depression is the top cause of disability in the world in 2023 [1]. The Prevenance of depression among women is twice as man, this difference is seemed as due to the female's hormonal fluctuation, like during pregnant, after pregnant and during period [2]. More than one in nine postpartum mothers experience Postpartum Depression (PPD), making it one of the most prevalent kinds of depression. Although PPD is widespread, research on its diagnosis and prevention is still lacking. Only 13% to 18% of women who fulfill the criteria for PPD seek help; those who do not may have done so due to stigma, a lack of awareness of PPD, or a lack of nurturing time [3]. The post-partum period is considering the key factor for women where they will pay a significant attention on its body image, shape, and weight. Because of the big change in body shape, for most women, this may cause they have a negative self-cognition and emotion.

Beyond face-to-face interactions, the vast digital environment of today has an impact on the social experience of pregnancy. Online encyclopedias and mobile applications make a lot of information available, while social media platforms encourage user interaction and mutual support [4]. Over 90% of Australians use social media, with an average daily usage of over 2.6 hours, according to Smith et al., research on Western countries [4]. The increasing number of the newborn mothers seeking support and information through the social media has emphasis the need to understand its effect on PPD. The emotional support and the ability to interact with people in similar situations to share or learn from

experiences are two reasons why women value digital platforms, this allows the women attend and benefit from the conversation anonymously. Women may find a wealth of resources, both public and private, in the internet sphere to support them throughout and after pregnancy. However, those who already have a tendency to berate themselves could discover that their anxiety levels rise as a result of their persistent need for online validation and comparison [5]. Investigating how social media use affects PPD is therefore crucial. The goal of this paper is to examine the research on PPD and social media in order to make recommendations for improving future therapies or diagnostic tools for PPD patients.

2.   Untreated Postpartum Depression: Prevalence, Role, and Effects

The early prediction and intervention are crucial for women are crucial. Research conducted by Shorey et al. on 37,294 women among 58 journal articles has shown that the average prevalence of PPD worldwide is 17% [6]. Multiple causes contribute to the high incidence; these include biological causes including estrogen withdrawal and changes in prolactin levels, as well as psychological and societal causes [7]. This emphasis on the need to determine the reason of the PPD symptoms, particularly at the beginning of the few years for the newborn babies and mothers, not only calls for a high level of attention concentration, but also the preparation of the transition to taking on the responsibility of becoming parents. Many of these young women must also manage the enormous demands of delivery and raising a family, thus during this time they are more likely to feel emotional resentment and anxiety about the present circumstance. According to Slomian et al., the research showed that compare to those women who already taking treatment for PPD, those who have not taking treatment has a generally higher rate of casing their children facing mental issue, for example, cognitive dysfunction, inhibited behavior, dysregulated mood, along with psychiatric and medical disorders during puberty [8]. This raised the awareness and showed the benefits of identifying and treating PPD at the early stage. The early intervention of PPD can significantly improve the outcome, and the possibility of the symptoms relapse, relive emotion. Nevertheless, a number of obstacles, including temporal, monetary, logistical, parental, and societal ones, have prevented women from utilizing these services. In order to overcome obstacles and improve the form of treatment, people have recently paid increasing attention to technology-based treatments, such as interventions based on the telephone or internet [2].

However, a large proportion of women may not seek therapy for postpartum depression because they incorrectly believe their chances of developing symptoms are low. This can be attributed to various factors, including insufficient awareness of postpartum psychiatric illnesses, the presence of societal stigma around mental health, and the prioritization of parental responsibilities [3].

3.   Current Challenges in Diagnosing and Treating Postpartum Depression

Women often avoid diagnosing and treatment due to the scariness of been judge and the stigma. According to Valverde et al., the untreated PPD will last for three to six months, his research showed 30% out of 521 young mothers after one year of given birth who diagnosed with PPD still has the symptoms [3]. For people with depression, if they do not recognize and cope with the discrimination and stigma that surrounds mental illness in our society, it is hard to recovery [3]. Many people choose not to receive therapy in order to avoid being classified as "mentally ill" and the associated discrimination. This behavior has demonstrated how stigma affects people's willingness to seek treatment and that stigma is correlated with gender and personal background. In order to avoid being judged for not fulfilling their ideal role as mothers, young women choose to conceal their symptoms rather than seeking professional assistance.

Therefore, a key component of effectively managing these disorders is early diagnosis of PPD. The treatment for PPD, as a study conducted in UK by Hadfield et al., estimates place the financial burden of prenatal depression in the UK at £22,360 for mothers and £51,462 for their offspring [9]. UK recommends guided self-help treatment, the primary care system in England has expanded access to psychological therapies through the Improving Access to Psychological Therapies (IAPT) program. The therapizes used Cognitive behavioral theory (CBT), to treat mild to moderate symptoms of depression. To achieve the most beneficial results from IAPT treatment, it is advised that patients attend a minimum of 6 sessions. It has been established that both individual and group psychological therapy are useful in alleviating depressive symptoms [9]. However, the mechanisms of preventing and predicting PPD are still unclear. Therefore, it is crucial that both therapeutic efforts and research activities fully explore all these dimensions.

4. The Effects of Social Media

4.1. Negative Effects of Social Media

A possible risk of using social media has been found as having higher levels of self-criticism and negative affect [4]. Females in perinatal are frequently unprepared and look for strategies dealing with the impending newborns, but the stigma surrounding maternal mental health makes it less likely that they will ask for help. According to Henton and Swanson, research on 2300 newborn mothers showed that half of them have encountered anxiety, but only 7% asked for specialist care [10]. Under this circumstance, social media provides an opportunity where females can gain social support anonymously and avoid stigma barriers, other parents' blogs provide expectant mothers and caregiver mothers with a wealth of knowledge, as well as a public venue for the authors to air their views [10]. However, the probability of self-comparison is strengthened by social media; people compare images of self and others [4]. A study conducted by Scherr and Brunet, on 510 young female Facebook users showed the time they spend on Facebook is linked to depression [11]. According to Festinger's social comparison theory, people form their own identities and emotional reactions based on their comparisons to those of others' [12]. Although the anonymity has ensured, people with depression may be more prone to jealousy because they lack confidence and are more likely to make unfavorable comparisons to others [13].

In addition, accessing Facebook, where individuals' romanticized opinions of other users are displayed, has been linked to low self-esteem and depression [13]. Social media may be used by pregnant women with high expectations for themselves to validate their conduct and find reassurance, but vulnerable people who make these comparisons are more prone to internalize negative emotions like guilt, regret, and a sense of their own unworth [4]. Mothers sometimes like to compare themselves with non-mothers; the importance of motherhood for women's health and the need for stable marriages; families might contribute to a sense of superiority that mothers may have [5]. But on the other hand, pregnancy and its aftermath can have a negative impact on a woman's self-image, making her feel less capable of achieving success in life, for example, weight gain, body dysmorphia, post-natal depression, and maternity leave [5]. Indicators of outcomes suggest that excessive use of social media may be harmful to the mental health of pregnant women, notwithstanding their use of these platforms for information and social support.

4.2. Preventing PPD Through Social Media Status

Checking female's social media status during their perinatal period or after may help to prevent PPD. According to Zhang et al., the research conducted on both Western countries and Eastern countries major social software (Facebook, Twitter, WeChat) has shown its effectiveness on anticipating major life changes and maternal postpartum depression [14]. Additionally, the hospital will provide regular

assessment of depressive symptoms during perinatal health visits, 20% of the women in a study of 1596 expecting mothers who were evaluated for PPD gave inaccurate answers [15]. Nowadays, with over 2.6 billion and 330 million monthly active Facebook and Twitter users worldwide, respectively [16], there seems to be no stopping the meteoric rise of social media. Much research has found out that, Images shared on social media typically carry a lot of information that might be useful for spreading the word. For example, bluer, greyer, and darker tones are more common in Instagram posts from people who are melancholy [16]. In addition, selfies have been linked to increased rates of depression. Postpartum is a common time for mothers to share photos of their new-borns online, and mothers who share photos of their children are more likely to be classified as having positive emotions. Selfie-taking new mothers, however, are more likely to experience PPD [14]. This finding was supported by Zhang et al., analysed 15,647 WeChat Circle of Friends images and 6,609 posts in China, in which 123 mothers suffered from PPD [14]. Especially for individuals who are close to the moms, this abundance of data may considerably enhance PPD detection and quick treatment. The utilization of the visual analysis in conjunction with the more typical textual reviews seen in Western research is possible. It is possible to decrease the harm caused by too favourable images of motherhood and provide women with the skills they need to confront the challenges of the postpartum period with fortitude and unity by educating moms about the long-lasting effects of their online presence. Even though a pregnant woman's social media postings can provide some insight into her risk of PPD, the range is too narrow, thus, given the ubiquitous nature of the Internet and the never-ending proliferation of mobile devices, greater investigation of its veracity is required.

5. The Reliability of Digital Application

Although there are numerous digital mobile applications for phones that can continuously track a woman's health and her risk of depression during preventive or postpartum pregnancies, the majority of these have not been professionally tested, which could lead to inaccurate information or privacy risks and expose private mental health information. Numerous mobile apps exist that can track activity, sleep, and energy levels in order to monitor physical and mental health. This makes it easier for mothers to comprehend their situation [17].

However, despite having applications, in terms of app stores, a growing body of research suggests that consumer-available apps are often not supported by academic research [18]. Larsen et al., found that just two of the 73 available mental health apps on the market included papers with evidence-based results from pilot studies and user reports of post-app mood changes [18]. This has raised the risk of provide wrong information's and skills to treat depressive symptoms, as apps that claim to provide features such as Cognitive Behavioral Therapy (CBT) for depression may be barely compatible with the actual principles of CBT [18]. There are even apps that informed they will collect data from users but do not specify what they will use it for [17]. In addition, according to Feldman et al., research on 12 APPs, despite entering "PPD" as a keyword when searching the app store, six of the 12 applications were fitness trackers that promised quick weight loss, which may increase postpartum mothers' concerns about their appearance [17]. This also demonstrates that while it is possible to help women ensure anonymity as well as avoid stigma through means such as digital technology, and to provide prevention of depression as well as offer ways to cope with the baby and alleviate depressive symptoms, more research as well as evidence-based investigations are needed to ensure the effectiveness of these wellness programs in terms of guaranteeing privacy.

6. Conclusion

This paper reviews the studies done on the effect of social media on PPD. There is a generally high prevalence in PPD, but few of them ask for support or help due to the lack of awareness or resources

and the in willingness of asking for help. This emphasis the urge to figure the factors affecting PPD. Multiple variables contribute to the difficulty of diagnosing and treating postpartum depression in mothers. This paper found out that the allowance of anonymous and convivence has made many newborn mothers has spent a lot of time on social media to seek support, guidance. However, this also increases the likelihood of self-comparisons, and mothers with depressive tendencies are more likely to make negative comparisons with people online, such as weight, body image, and often those are ideal dynamics that people have been carefully selected to post, which ultimately leads to damaging mental health. Much current research has shown that the potential possibility of predicating depressive symptoms through the observation to the mother's social media posting, but still need more studies to investigate their reliability and to ensure ethical compliance. The paper also found out that there are many mothers who use the digital mobile mantel health application to record the body data, predict current mental health status and follow the lecture given in the APP to treat their current depressive symptoms.

However, despite the fact that there are thousands of apps available in the app store, research has shown that the majority of them lack scientific backing, which increases the risk of both privacy invasion and depression that is worsened by taking the incorrect psychological treatments. To make sure that various digital applications adhere to treatment requirements, more surveys and data support will be required in the future. With the use of this article, social workers or family members can be guided in developing preventive and intervention strategies for expectant mothers during the perinatal or postpartum period. The paper demonstrates that social media dynamics can predict the mental health status of pregnant women, so stakeholders can prevent postpartum depression while ensuring ethics and obtaining user consent. In addition, stakeholders can conduct more specialized research on the shortcomings of digital mental health apps to provide evidence-based support and guided apps. However, this area is still in the emerging field and some of the studies in this paper are cross-sectional, therefore whether there is a causal relationship still needs to be confirmed by more studies and research. More study is needed to determine the best ways to combat postpartum depression, including social media's role.

References

[1] World Health Organization: WHO & World Health Organization: WHO. (2023). Depressive disorder (depression). www.who.int.

[2] Hanach, N., De Vries, N., Radwan, H., & Bissani, N. (2021). The effectiveness of telemedicine interventions, delivered exclusively during the postnatal period, on postpartum depression in mothers without history or existing mental disorders: A systematic review and meta-analysis. Midwifery, 94, 102906.

[3] Valverde, N., Mollejo, E., Legarra, L., & Gómez-Gutiérrez, M. (2023). Psychodynamic Psychotherapy for Postpartum Depression: A Systematic Review. Maternal and Child Health Journal, 27(7), 1156–1164.

[4] Smith, M., Mitchell, A. S., Townsend, M. L., & Herbert, J. (2020). The relationship between digital media use during pregnancy, maternal psychological wellbeing, and maternal-fetal attachment. PLOS ONE, 15(12), e0243898.

[5] Tosun, L. P., Öztürk, A., & Özdemir, G. Y. (2020). Mother to mother: Mothers' social comparison-based emotions on social networking sites. Europe's Journal of Psychology, 16(4), 602–618.

[6] Shorey, S., Chee, C., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. Journal of Psychiatric Research, 104, 235–248.

[7] Cheng, B., Hu, X., Roberts, N. P., Zhao, Y., Xu, X., Zhou, Y., Tan, X., Chen, S., Meng, Y., Wang, S., Xing, H., & Deng, W. (2022). Prolactin mediates the relationship between regional gray matter volume and postpartum depression symptoms. Journal of Affective Disorders, 301, 253–259.

[8] Slomian, J., Honvo, G., Emonts, P., Reginster, J., & Bruyère, O. (2019). Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. Women's Health, 15, 174550651984404.

[9] Hadfield, H., Glendenning, S., Bee, P., & Wittkowski, A. (2019). Psychological Therapy for Postnatal Depression in UK Primary Care Mental Health Services: A Qualitative Investigation using Framework analysis. Journal of Child and Family Studies, 28(12), 3519–3532.

[10] Lupton, D. (2016). The use and value of digital media for information about pregnancy and early motherhood: a focus group study. BMC Pregnancy and Childbirth, 16(1).

[11] Scherr, S., & Brunet, A. (2017). Differential influences of depression and personality traits on the use of Facebook. Social Media and Society, 3(1), 205630511769849.

[12] Festinger, L. (1954). A theory of social comparison processes. Human Relations, 7(2), 117–140.

[13] Carraturo, F., Di Perna, T., Giannicola, V., Nacchia, M. A., Pepe, M., Muzii, B., Bottone, M., Sperandeo, R., Bochicchio, V., Maldonato, M., & Scandurra, C. (2023). Envy, Social Comparison, and Depression on Social Networking Sites: A Systematic review. European Journal of Investigation in Health, Psychology and Education, 13(2), 364–376.

[14] Zhang, W., Liu, L., Cheng, Q., Chen, Y., Xu, D. R., & Gong, W. (2020). The relationship between images posted by new mothers on WeChat moments and postpartum depression: cohort study. Journal of Medical Internet Research, 22(11), e23575.

[15] Forder, P., Rich, J., Harris, S., Chojenta, C., Reilly, N., Austin, M., & Loxton, D. (2020). Honesty and comfort levels in mothers when screened for perinatal depression and anxiety. Women and Birth, 33(2), e142–e150.

[16] Reece, A., & Danforth, C. M. (2017). Instagram photos reveal predictive markers of depression. EPJ Data Science, 6(1).

[17] Feldman, N., Back, D., Boland, R., & Torous, J. (2021). A systematic review of mHealth application interventions for peripartum mood disorders: trends and evidence in academia and industry. Archives of Women's Mental Health, 24(6), 881–892.

[18] Larsen, M., Huckvale, K., Nicholas, J., Torous, J., Birrell, L., Li, E., & Reda, B. (2019). Using science to sell apps: Evaluation of mental health app store quality claims. Npj Digital Medicine, 2(1).