THE EFFECT OF SOCIOECONOMIC STATUS ON THE PREVALENCE OF POSTPARTUM DEPRESSION (PPD)

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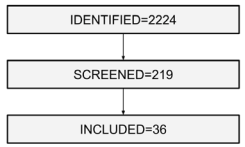
ABSTRACT

The joy of new motherhood is often accompanied by a silent struggle. One in ten women experience postpartum depression, a severe form of baby blues that can manifest up to a year after childbirth (Fan et al, 2019). Characterized by feelings of sadness and/or frequent worrying (Fan et al, 2019), postpartum depression can have a devastating impact on a mother's daily life, relationships, and overall well-being. Socioeconomic factors, such as income, education, and support system, play a significant role in contributing to the risk of postpartum depression (Fan et al, 2019).
This study aims to investigate the prevalence of postpartum depression (PPD) amongst different socioeconomic groups and observe the significance it has on the frequency of postpartum depression (PPD) with the goal of identifying potential prevention and intervention strategies.
In this systematic review study, the correlation between socioeconomic status (SES) and PPD was examined. The prevalence of PPD correlated with a lower socioeconomic status and higher occurrence of postpartum depression, driven by factors such as income, education, antenatal education, and employment status. In addition, the relationship between higher SES and PPD such as income, level of education completed, antenatal education given to expecting mothers and employment status heavily is influenced the prevalence of PPD.
The findings for this review highlight the significant correlation between lower socioeconomic status risk remains unclear, warranting further research to be done.

METHODS

We conducted systematic research across multiple databases and sources to identify relevant studies on this topic. Specifically, search words used included "Socioeconomic status + PPD" and "Antenatal education + PPD" on Google Scholar and PubMed.
Amongst those, we included the ones that met our criteria as follows:
Inclusion criteria: studies on women within the 1st year postpartum with diverse economic backgrounds, articles published within the last 15 years, studies examining income, education, antenatal education, and employment factors, and studies published in English to ensure understanding and accessibility.
Exclusion criteria: Non-postpartum population, non-specific socioeconomic factors, studies not explicitly measuring postpartum depression or using validated measures, studies which do not include raw number of subjects and those diagnosed with PPD.
We divided SES into income, education level, antenatal education, and employment status respectively. After pooling the raw data, we found the total sum of women who were diagnosed and not diagnosed with PPD in each of our SES categories. Finally, we calculated prevalence, standard error of proportion, and P-value (using double-tailed z score) for each of our categories to obtain our results.



RESULTS

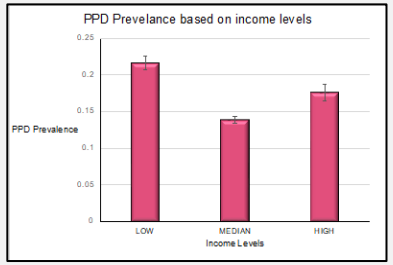


Figure 1: The prevalence of PPD based on different levels of income is shown in the graph. The prevalence for low income is 22%, median income 14%, and high income 18%. The difference in prevalence between low- and median-income levels is 8% and statistically significant (P-Value <0.0001). The difference in prevalence between median and high-income levels is 4% and statistically significant as well (P-Value =0.0015). N= 8273.

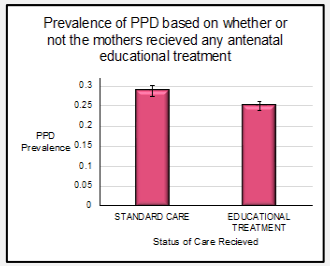


Figure 3: The prevalence of PPD based on whether the mother had received antenatal education is shown in the graph. PPD prevalence is 4% higher in the control group (29%) in comparison to the intervention group (25%). The P-value is 0.0251, indicating a statistically significant difference between these two groups. N= 2905.

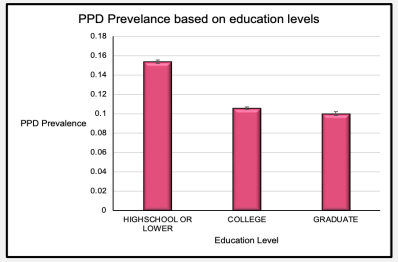


Figure 2: The prevalence of PPD based on different levels of maternal education is shown in the graph. The prevalence of PPD for high school or lower education group is 15%, college graduates 11%, and graduates 10%. The difference in PPD prevalence between high school and college-educated groups is 4% and statistically significant (P <0.0001). The difference in prevalence between college to graduate groups is 1% and statistically significant (P=0.043). N= 106,579.

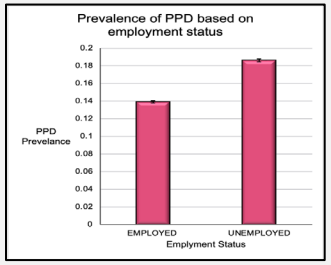


Figure 4: The prevalence of PPD based on maternal employment status is shown in the graph. PPD prevalence is 5% higher in the unemployed group (19%) compared to the employed group (14%). The P-value is <0.0001, indicating a statistically significant difference between these two groups. N= 110,034.

DISCUSSION

In all four factors that we looked at, it is indicated that lower than median socioeconomic status was associated with a higher prevalence of PPD.
First, our data suggests that women in lower than median income groups had the highest prevalence of PPD amongst all income groups (22) compared to those with median income and high income. (Figure-1). This finding can be attributed to several factors such as higher levels of financial stress to provide for the new baby, less access to healthcare services to receive diagnosis and treatment for PPD, and more limitations in lifestyle choices such as diet and living conditions.
Interestingly, the prevalence of PPD increased by 4% as we moved from median to high-income levels (Figure-1). This finding could be caused by certain stress factors that women with higher income face, such as being responsible for making stressful financial decisions, facing social comparison, holding demanding jobs, and being at risk of higher psychosocial stressors such as being a perfectionist or a high achiever.
Secondly, women with a high school diploma or equivalent had a significantly higher prevalence of PPD compared to those who completed college or graduate-level education. While statistically significant, the difference in prevalence was much smaller amongst those who completed college versus graduate level of education (Figure 2). The decrease in PPD prevalence with an increase in education can be attributed to several factors. Mothers with higher education levels are equipped to make more informed decisions regarding their healthcare and how to seek the help they need, better coping mechanism skill set, more financial resources and opportunities, and a greater network of people they can reach out to.
Furthermore, to disentangle the relationship between education level and PPD, we examined whether antenatal education itself has an independent impact on PPD prevalence, above and beyond the potential confounding influence of income. PPD prevalence was 4% higher in the control group (Figure 3). The improvement associated with educational treatment can be caused by having better-coping mechanisms and being equipped with mental health management skills as previously discussed.
Finally, unemployed mothers showed a 5% higher PPD prevalence compared to employed mothers (Figure 4). This increase may be attributed to a lack of financial stability, social isolation, and lack of structured routine of work amongst unemployed mothers, which predisposed them to a higher risk of PPD.

CONCLUSION

Our research found that a lower socioeconomic status is associated with a higher prevalence of postpartum depression. This association is often linked to financial strain, lower education level, inadequate antenatal education and unemployment. While it is well established that being in a socioeconomic status below the median heightens the risk of postpartum depression, the relationship between higher SES and PPD risk is not clear and may vary depending on individual circumstances and broader societal influences.

REFERENCES

https://docs.google.com/document/d/1DwebmDd2BdXpEiH26hd21ATtlxWITVilP9YFnWxJBIU/edit