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# Empowering Maternal Resilience: A Prenatal Education Program for Mothers and Their Chosen Support Persons for Postpartum Depression

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# Empowering Maternal Resilience: A Prenatal Education Program for Mothers and Their Chosen Support Persons for Postpartum Depression

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## Abstract

Previous research studies have demonstrated the positive impact education and social support has on reducing the risk of postpartum depression (PPD) when used separately. However, there exists a clear gap in understanding the combined effects of integrating both education and social support during the prenatal period on PPD. This longitudinal quasi-experimental study aims to evaluate the impact of an in-person prenatal PPD prevention program for the birthing person, requiring the presence of a support person on the reduction of PPD. Participants and their chosen support persons will receive information on PPD, including risk factors, signs and symptoms, preventative measures, and coping strategies. The study will involve 128 participants from a local obstetrics community clinic selected through convenience sampling, with 64 participants in the experimental group and 64 in the control group. Basic demographic data, as well as information on the relationship with the support person, will be collected prior to intervention. The Edinburgh Postnatal Depression Scale will be administered as a pre-test during the third trimester and as a post-test at 1 month, 3 months, and 6 months postpartum. The experimental group will attend the in-person prenatal PPD program while the control group will instead receive the usual prenatal care. Two-tailed t-tests will be used to assess statistical significance in comparing PPD incidents between experimental and control groups at various postpartum time points. Pearson Correlation coefficient (Pearson r) will measure the linear association between pairs of continuous variables. If successful, the study could provide nurses with an evidence-based approach to PPD education and prevention. Importantly, it has the potential to enhance the well-being of the mother and baby. The more nurses can expose birthing persons and their support persons to patient and partner-centered PPD education, the lower the risk of PPD.

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# Empowering Maternal Resilience: A Prenatal Education Program for Mothers and Their Chosen Support Persons for Postpartum Depression

## Problem Statement

One out of seven postpartum mothers in the United States currently experience postpartum depression (PPD) (Mughal et al., 2022). Postpartum depression is a major depressive episode defined as two consecutive weeks or more of depressive symptoms that start within 4 weeks of giving birth (Mughal et al., 2022). Depressive symptoms include depressed mood or loss of interest in activities of daily living plus any four of these associated symptoms: appetite disturbance, sleep disturbance, psychomotor agitation or slowing, fatigue, feelings of worthlessness or inappropriate guilt, poor concentration, or suicidal ideation (Mughal et al., 2022).

Many women experience depressive symptoms but may lack the necessary education and social support to mitigate the risk of developing PPD. A cross-sectional study revealed that mothers with low or moderate social support were most likely to develop PPD (Cho et al., 2022). According to the American Psychological Association, social support is the "provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors" (American Psychological Association, 2018). McLeish & Redshaw (2019) conducted a study to meet the social support and educational needs of disadvantaged women (McLeish & Redshaw, 2019). Their study provided mothers with community doulas during the antenatal and postnatal phases, and this improved the mother's parenting confidence and skills (McLeish & Redshaw, 2019). These studies indicate that social support may be protective against PPD.

**Purpose Statement**

PPD is associated with self-harm and chronic disease, which is why efforts to prevent PPD are necessary to prevent consequences. A Canadian study found, one out of 10 women reported thoughts of self-harm after giving birth and 54% of these women had moderate levels of symptoms of PPD (Palladino et al., 2020). PPD also has an impact on physical health. In a study done in Iran on the effects of PPD on women 4 years after childbirth, it was found that women who had experienced PPD were more likely to experience chronic diseases 4 years after childbirth (Abdollahi & Zarghami, 2018). PPD also adversely affects the child's development because mothers who experience PPD are more likely to experience breastfeeding problems and stop nurturing their child in this way (Onat & Karakoç, 2021). The World Health Organization (2021) recommends exclusive breastfeeding for about the first 6 months and states that breast milk provides the newborn child with immunity to fight against infections and reduces newborn mortality. If a child is not being breastfed then they won't receive the benefits of breast milk. Studies have shown that a young child who grows up with a depressed mother has more difficulty controlling their thoughts and memories compared to children who do not have a depressive mother (Choe et al., 2023). The mother's well-being affects the children's ability to reach the different areas of child development.

There is a need for impactful prevention programs that will prepare and guide these mothers for postpartum. Doaltabadi & Amiri-Farahani (2021) used in-person and virtual prenatal care education of the spouses of primiparous women on the father and mother's attachment to infants. There was a large and medium effect size between the in-person and virtual education to the father-infant attachment scores. (Doaltabadi & Amiri-Farahani, 2021). In Dehshiri et al. 's (2023) study, husband involvement in prenatal care was associated with a lower incidence of

postpartum blues, with 15.20% of women in the intervention group experiencing it compared to 72.20% in the control group receiving prenatal care without their husbands (Dehshiri et al., 2023). While these studies demonstrate that when partners participate in prenatal care classes, the partner's attachment to their baby increases, and the likelihood of the woman experiencing postpartum blues decreases, the effect on PPD prevention is not well understood. Further research is warranted to evaluate the impact of exposing both the birthing person and their designated support person to an in-person PPD prevention program during the prenatal period on the likelihood of having PPD. The literature indicates that PPD prevention educational interventions are effective for postpartum mothers. However, little is known about the effect of an in-person prenatal PPD prevention program that provides educational and social support in the form of group classes with information on the incidence and severity of PPD.

**Research Question**

Does having birthing persons in the United States and their support persons participate in an in-person prenatal PPD prevention program decrease their risk of developing postpartum depression?

**Hypothesis**

Having birthing persons in the United States and a support person of their choice participate in an in-person prenatal PPD prevention program that provides educational and social support in the form of group classes with information on the incidence and severity of PPD, will reduce the incidence of PPD in those participants compared to the birthing persons who do not participate in the prevention program.

## Literature Critique

This literature review examines the impact of prenatal education and social support on postpartum depression. Six articles were found by searching the CINAHL and Pubmed databases. To find these articles the following search terms were used: “postpartum depression”, “prenatal education”, “in-person or face-to-face vs online”, “depressive symptoms”, “maternal support”, “support person or people or partner or husband or doula”, “prenatal care”.

The six articles selected for this critique are primary research published in peer-reviewed journals between 2018 and 2023.

The articles are categorized into three groups:

- Assessing the effectiveness of prenatal education programs in reducing postpartum depression
- Exploring the impact of prenatal education programs in reducing postpartum depression
- The specific influence of partner support on postpartum depression

### Effectiveness of Prenatal Education Programs

The articles within this category delve into the effectiveness of participation in prenatal education programs as a means to reduce PPD, while also exploring the influence of program delivery methods, comparing in-person and virtual approaches.

Shimpuku et al. (2022) conducted a longitudinal, quasi-experimental study on pregnant women in urban Japan to determine whether mothers who participated in a prenatal HUG Your Baby educational program would have better PPD outcomes than those who received regular, prenatal teaching. The sample included 221 pregnant women with at least 30 weeks gestation. Recruitment posters were posted on the walls of prenatal clinics and the women who were interested in the study were included in the study, 121 participants were placed in the

intervention group where they participated in the HUG Your Baby classes while 100 participants received routine prenatal education. The goal of the HUG Your Baby program was to teach the participants how to recognize and respond to the baby's behavior. At 1 and 3 months postpartum, all participants completed the Edinburgh Postnatal Depression Scale (EPDS), Karitane Parenting Confidence Scale (KPCS), Tabuchi and Shimada's Maternal Difficulty with Infant Crying Scale, the Japanese version of the Maternal Confidence Questionnaire, and the Maternal Attachment Inventory Japanese Version (Shimpuku et al., 2022).

The study found statistically significant differences in lowering the risk for PPD between the intervention and control groups. At 1 month, the intervention group had an EPDS mean score of 6.93 while the control group's score was 5.66. At 3 months, the intervention's EPDS score dropped to 4.00 while the control's score was 6.10. There was also an increase in parenting confidence at one month for the intervention group. The intervention group had a KPCS mean score of 34.42 at 1 month while the control group had a score of 28.11. A high KPCS score indicates there is a high level of parental confidence. A strength of this study is that it's a longitudinal study that shows the sustained effect of the intervention and how the EPDS score decreased from 1 month postpartum to 3 months. As for limitations, there was selection bias because mothers with multiple children might have found it difficult to participate in the classes. Participants in the study were more urban and educated, and earned higher incomes than the general Japanese population, so the results may not be generalizable. The two of the scales employed in this study were specifically designed for the Japanese population. Consequently, the application of these Japanese version scales may not be appropriate for the United States demographic. Another significant limitation lies in the omission of an assessment of the impact of social support from both family and the surrounding community. Other research findings in

this review show that elevated levels of social support play a protective role against PPD (Shimpuku et al., 2022).

Doaltabadi & Amiri-Farahani (2021) created a quasi-experimental study across three health centers to assess how in-person and virtual prenatal education for first-time mothers and their spouses affected their attachment to the infant. The population included primiparous pregnant women and their spouses in Tehran, Iran. Participants had to be at least the age of 18 years, experiencing parenthood for the first time, and can read and write. The female participants met the criteria for gestational age (20 weeks) and low-risk singleton pregnancy. The sample size included 114 participants and the sampling was done by continuous method. The pregnant women were divided into three groups: face-to-face education; virtual education; and control. The content of both the in-person and virtual sessions were similar. The in-person and virtual groups provided training for spouses as well as the pregnant women while the control group did not provide education for spouses. The mothers completed the Maternal Postnatal Attachment Scale and the fathers completed the Postnatal Paternal-Infant Attachment Questionnaire 12 weeks after childbirth (Doaltabadi & Amiri-Farahani, 2021).

The study found a large effect size between the in-person education and the control group and a medium effect size between the virtual education and control group concerning the father-infant attachment. No statistically significant difference was found between the in-person and virtual education programs on father-infant attachment scores. Also, there was no statistically significant difference between the three educational groups and the mother-infant attachment scores (Doaltabadi & Amiri-Farahani, 2021). This study confirms that in-person and virtual trainings provide the same effect on father-infant attachment which means that both virtual and in-person prenatal education classes can be used by men which is a major finding. It

shows that prenatal education in fathers has a positive effect in some way. However, a limitation would be that the in-person childbirth preparation classes were held by different trainers which introduces communication style bias because each trainer could have a different way of presenting the information. Additionally, some participants might have gathered pregnancy and childbirth information from external sources, which could have introduced confounding variables that inflated the results for those participants. Prenatal education for fathers has been shown in previous research to be effective in father-infant attachment and therefore this study contributes to the need to involve partners in all forms of prenatal education.

**Impact of Social Support**

The subsequent articles investigate the impact of overall social support on a mother's depressive symptoms and her confidence.

MacMillan et al. (2021) designed a prospective cohort study to assess the effect of support from a partner, friends, or family on mother-infant interactions and depressive symptoms. The researchers measured these outcomes at 6 months postpartum using the Emotional Availability (EA) and the Structured Clinical Interview and the Edinburgh Postnatal Depression Scale respectively. The study included 210 pregnant women from an Australian pregnancy cohort called the Mercy Pregnancy and Emotional Wellbeing Study (MPEWS). The study period started when each participant was less than 20 weeks pregnant to when they were 6 months postpartum. The Multidimensional Scale of Perceived Social Support was used in early and late pregnancy and at 6 months by mothers to rate their perceived maternal social support from a partner, family, and friends. (MacMillan et al., 2021).

MacMillan et al. (2021) observed a significant interaction of ($\beta = 0.17$, $p = 0.018$) between depressive symptoms in the early stages of pregnancy and support from a partner. A

significant interaction of ($\beta$ = 0.18, p = 0.015) was found between depressive symptoms in the early stages of pregnancy and support from family members. However, no interaction ($\beta$ = 0.12, p = 0.076) was found from the support of friends. This research shows that the more support the participants perceive from partner and family can be helpful for maternal emotional availability. (MacMillan et al., 2021). Having data collection at three time periods from pregnancy to the postpartum phase is a strength of this study because it shows whether the intervention continues to affect the mother after childbirth has occurred. Using observational evidence to assess the interactions between mother and infant is another strength. The study also uses multiple scales that are well-validated which improves reliability when it comes to assessing the underlying theme that there is a relationship between perceived support and maternity-related depressive symptoms. As for limitations, MacMillan et al. (2021) recommended measuring the mother-infant relationship using scales beyond the EA Scales as well as the measurement of maternal childhood trauma. Another limitation would be that the mothers self-reported their quality of perceived support so there could be self-report bias to try to make their answers look better. Self-reporting also introduces social desirability bias as the participants may have answered the questions in a way they believe will fit with social norms or expectations.

McLeish & Redshaw (2019) conducted a descriptive qualitative study involving 13 disadvantaged mothers and 19 community doulas in England to gain insight into how the doulas could meet the social support and educational needs of the women during pregnancy and after giving birth. The researchers conducted semi-structured qualitative audio-recorded interviews and their content was analyzed using inductive thematic analysis (McLeish & Redshaw, 2019).

This qualitative study found that doulas were appreciated by mothers and helped improve the mothers' parenting confidence and skills (McLeish & Redshaw, 2019). The main theme that

emerged from this study was, “Supporting the mother to success and flourish”. Other subthemes that emerged were: “Overcoming stress, anxiety and unhappiness”, “Becoming knowledgeable and skillful”, “Developing self-esteem and self-efficacy”, “Using services effectively”, and “Becoming locally connected”. Doulas did not have a structured program so they were able to provide social support tailored to the mother’s needs which is a strength of the qualitative study. As for limitations, the sample size includes only disadvantaged women so the findings may not be generalizable to other populations. Also, this study didn’t include participation by the mothers’ partners. The participants were referred to the program by their healthcare or social care provider which introduces selection bias when choosing who they wanted to be in the interview. Another limitation is that mothers with children’s social services did not want to be interviewed. The above studies show that providing social support for mothers in the prenatal and postnatal is effective in increasing the mother’s parenting confidence and depressive symptoms related to pregnancy.

**The Specific Influence of Partner Support**

The following articles investigate the impact of exclusive partner support on mothers during the postpartum period.

Bánovčinová & Škodová (2022) designed a cross-sectional observational study whose objective was to assess how partner support and perceived stress influence the level of depressive symptoms in the postpartum period. The population included postpartum women in Slovakia over the age of 18 years, who had a live birth, and completed a questionnaire 6 weeks after giving birth. Data was collected in two university hospital birthing centers in Slovakia. The sample size included 206 women and their ages ranged from 20 to 44 years. The mean age was 30.9 years. The scales used to measure the variables included the Edinburgh Postnatal

Depression Scale, Postpartum Partner Support Scale, and Perceived Stress Scale. Socio-demographic, health-related, and obstetric data were included in the questionnaire (Bánovčinová & Škodová, 2022).

The researchers found that the significant predictors of postpartum depression were the lack of support person during labor [$\beta$ = -0.105; 95% CI = (-0.754; -0.030)]; lower education [$\beta$ = –0.139; 95% CI = (-2.256; -0.407)]; lower partner support [$\beta$ = –0.154; 95% CI = (-0.115; -0.025)]; and higher perceived stress [$\beta$ = 0.755; 95% CI = (0.470; 0.615)]. Perceived stress emerged as the most notable predictor of increased depressive symptoms (Bánovčinová & Škodová, 2022). A large sample size with a wide range of ages is a strength of the study. The use of multiple, valuable scales allowed the researchers to examine the effect of multiple factors at once. For limitations, there could be self-reported bias because the self-assessment questionnaires are subjective data on the perceptions of the respondents. The participants could include answers that they believe the researchers would want to read. Also, the use of a convenience sampling method to select participants is a limitation because it may not represent the entire target population. The majority of the participants obtained a college degree and were primiparous mothers.

Dehshiri et al. (2023) conducted a quasi-experimental study to assess the effects of husbands' participation in prenatal care on the couples' intimacy and postpartum blues in primiparous women in Iran. The sample size included 71 pregnant women with a gestational age of 20-36 weeks. The participants were assigned using convenience sampling, 36 participants were in the intervention group and 36 were in the control group. Participants in the intervention group received standard prenatal care along with virtual training, all while being accompanied by their husbands. The control group received standard prenatal care, but their husbands did not join

them. The Unidimensional Relationship Closeness Scale was completed before the intervention started and 2 weeks after the intervention was delivered. The postpartum blues Stein questionnaire was also completed 1 week after the intervention was given. Data was analyzed using an independent two-sample t-test, paired t-test, chi-square, Fisher's exact tests, and Pearson Correlation coefficient (Dehshiri et al., 2023).

The study found that five women in the intervention group (15.20%) and 26 women in the control group (72.20%) experienced postpartum blues after the intervention was delivered. No statistically significant difference was found in the mean scores of couples' intimacy (Dehshiri et al., 2023). A strength of this study is that is one of the first research studies in Iran to involve others in prenatal care and assess its effect on intimacy and postpartum blues. Having the same number of participants in the intervention and control group is also a strength. As for limitations, the study showed the effect of partner support on postpartum blues and not PPD. Also, the training was done virtually, so there is no information from this study on whether face-to-face training sessions could significantly impact the results. The study has plans to provide face-to-face education training for the husbands but it was canceled due to the COVID-19 pandemic. An opportunity for future research is to retest this study using in-person training instead of virtual. The researchers suggested that future studies use face-to-face training for parent education. In this study, the virtual information was presented in the form of text and images. For future research, the information could be delivered in person and include the use of video to deliver the information. Having fathers included in prenatal care may be why there were lower levels of postpartum blues in the intervention group. This information guides my research to evaluate the effect of including partners in an in-person prenatal education program for PPD.

## Discussion

The aforementioned studies collectively underscore the effectiveness of prenatal education for both mothers and their partners. Those studies that specifically assess the rates and severity of PPD or postpartum blues demonstrated the favorable influence of social support during pregnancy in mitigating the risk of PPD. The studies also illuminated the applicability of different survey and assessment tools to measure a variety of outcomes. The research consistently underscored the effectiveness of prenatal educational programs, particularly when they engage the active participation of spouses. Nevertheless, none of the existing studies have endeavored to develop an in-person program that requires the presence of a support person and is expressly tailored to target postpartum depression, therefore this is the specific focus of my forthcoming research.

# Proposal for Further Study

## Proposed Study

Research indicates that prenatal educational programs are effective, especially when a support person is involved. However, the literature does not show the effect of an in-person prenatal PPD prevention program when a support person is present and its effect on the likelihood of PPD. Therefore, my proposed study aims to evaluate the influence of having birthing persons and their support persons participate in an in-person prenatal PPD prevention program on their risk of developing PPD. The educational program will include presentations and videos on PPD risk factors, signs and symptoms, coping strategies, and support systems.

## Theoretical Framework

The emotional and informational components of Social Support Theory offer a framework for understanding my hypothesis. Social Support Theory has been applied to the field

of nursing to describe patient-environment interactions in various contexts, including transitions like parenthood and motherhood (Fitzpatrick & McCarthy, 2014). This middle-range theory focuses on the interaction of support between at least two individuals. There is a lack of agreement on defining and measuring social support among researchers and theorists. This disagreement has led to difficulty in trying to assess the various social support interventions and evaluation, comparing research findings as well as the creation of the Social Support Theory. Since the early 1970s, nurse scientists have played a significant role in the development of social support, both conceptually and theoretically. The theoretical underpinnings encompass four types of social support: emotional, informational, instrumental, and appraisal (Fitzpatrick & McCarthy, 2014).

Providing birthing persons with emotional and informational support in an in-person, prenatal PPD prevention program can reduce the incidence of PPD. Emotional support is providing an individual with caring attributes such as empathy, caring, concern, love, and trust (Fitzpatrick & McCarthy, 2014). Informational support is providing an individual with relevant information and advice that can be used by that individual to cope with personal and environmental problems (Fitzpatrick & McCarthy, 2014).

In my study, emotional support can be provided to the birthing persons by having their support person present during the PPD program and sharing emotional experiences. My proposed PPD prevention program will provide support person-centered and patient-centered education on PPD, which connects to the informational and emotional support component of the Social Support Theory. Having the support person and birthing person become more knowledgeable about the signs and symptoms of PPD and techniques to decrease the risk of PPD will help the birthing person cope with the postpartum phase. The emotional and informational

support provided by the proposed prenatal PPD prevention program aligns with the framework of the Social Support Theory.

**Primary Research Aim**

- Evaluate the effect of exposing both the birthing person and their designated support person to a prenatal PPD prevention program designed to bring awareness to and reduce the risk of developing PPD

***Ethical considerations***

Before conducting the study, informed consent will be obtained from all participants. The confidentiality and privacy of all participants will be protected. This research proposal will be approved by the Dominican University of California's Institutional Review Board (IBS).

***Research Method***

The design of my proposal is a longitudinal quasi-experimental study. The participants will be recruited from a local obstetrics (OB) community clinic by using convenience sampling. Posters will be posted on the walls of the OB clinic and the healthcare providers will inform patients on the program. A power analysis was performed by using G*Power. The parameters entered were two-tailed, $\alpha = 5\%$, an effect size of 0.5, a 1:1 allocation ratio, and a power of 80%. G*Power revealed that a sample size of n=64 per group is needed. Therefore, the total number of participants for this study is 128 participants. There will be 128 birthing persons plus support persons. If any member of the dyad drops out, that dyad will be part of the attrition. There will be 64 participants in the experimental group and 64 participants in the control group. The experimental group will attend the in-person, prenatal PPD prevention program with a support person. The control group will not attend the in-person prenatal prevention program; instead, they will receive regular prenatal care from their provider.

The PPD prevention program will take place at the OB community clinic where the participants receive their OB care. The intervention group (the dyads) will participate in a total of three sessions that are 60 minutes each. Since there are 64 gyads, the intervention group will be split into two classes with 30 gyads in each. A trained registered nurse will host each session. Each session will start with a 30-minute educational video the remaining time will be interactive. The video will be put together using evidence-based content. The participants will get to share what they learned from the video, ask the nurse question, and converse with the rest of the participants. Each session will cover a specific component of PPD. The first session will cover what PPD is; its risk factors; and the signs of symptoms of PPD. The second session will include ways to prevent PPD. The third session will show how to spot PPD; where to reach out for help and how coping strategies to deal with PPD.

The inclusion criteria include primiparous pregnant women at least 30 weeks gestation. Primiparous pregnant women are new to the idea of PPD and have never experienced PPD. During the literature review, it was found that having mothers with at least 30 weeks gestational in a prenatal educational program was a success (Shimpuku et al., 2022). The support person that joins the participant must be a family member or partner, as MacMillan et al. (2021) found statistically significant results exclusively in having support from a partner and family member but not from friends. Therefore, an exclusion would be a birthing person interested in the program but only has a friend as a support person. Multiparous pregnant women will be excluded from the study, as the presence of multiple childbirth experiences may potentially influence the study results. These mothers are most likely to be knowledgeable on PPD and their previous PPD education could impact the study's outcomes.

Before starting the intervention, a questionnaire that includes basic demographic data will be collected from birthing persons of both groups. Contact information as well as how the participants would like to be contacted at 1 month, 3 months, and 6 months postpartum will also be collected. Data collected includes maternal age; race; gestational age; employment; occupation; housing; education and clinical data regarding their pregnancy. Data regarding the nature of the relationship with the support person and if they plan on living together after the baby is born will also be collected. Pearson r correlation coefficient will be used if there are major changes like unemployment or separation from partner to assess the effect it has on results. To collect data on PPD, the Edinburgh Postnatal Depression Scale (EPDS) will be administered as a pre-test and post-test. This is a 10-item questionnaire used as a screening tool to identify depressive symptoms in the prenatal and postnatal period. The EPDS will first be given as a pre-test during the third trimester, before implementing the intervention. The EPDS will be administered as a post-test at 1 month, 3 months, and 6 months postpartum. The EPDS is a validated screening tool for postnatal depression and was used by Shimpuku et al. (2022) and MacMillan et al. (2021) to measure the level of PPD from their prenatal educational interventions.

***Results***

To determine a medium effect size between the experimental and control groups, a two-tailed t-test will be conducted. A quantitative analysis using a two-tailed t-tests will assess statistical significance in comparing PPD incidence between experimental and control groups at various postpartum time points. Pearson Correlation Coefficient (Pearson r) will gauge the linear association between pairs of continuous variables. The study, with 80% power, aims to detect a medium effect size ($\geq 0.5$), and the null hypothesis will be rejected for p-value $< 0.05$.

### *Limitations*

A limitation of this study pertains to the challenges in assessing the knowledge acquisition by the support person or their level of engagement. The exclusion criteria include friends, therefore, the findings from the study may not be directly applicable to mothers whose primary support person is a friend.

## Conclusion

This research proposal aims to evaluate the effect of integrating education and support into a in person prenatal PPD prevention program on the risk of developing PPD. Mothers are greatly impacted by PPD and not only have to experience the depressive symptoms but have to care for a newborn on top of that which can be overwhelming if they do not have support and resources. That is why the mother must be mentally stable, educated, and supported to not only help herself triumph but her children as well. Providing postpartum mothers with social support and education can decrease their risk of developing symptoms of PPD.

Reducing the risk of PPD is crucial for the well-being of the mother and baby. This research proposal aims to evaluate the impact of integrating a PPD prevention program into childbirth preparation curricula and mandating attendance for both the birthing parent and their support person. The study has the potential to advance the nursing profession by providing nurses with an evidence-based approach to PPD education and prevention. The approach involves having nurses: (a) become competent PPD educators; (b) allocate time and resources for patient education, and (c) establish social contracts with their pregnant patients and support persons to ensure PPD education session attendance. The hope is that the more nurses can expose of this dyad to patient and partner-centered PPD education, the lower the risk of PPD.

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## Appendix A

## Literature Review Table

Authors: (Shimpuku et al., 2022)
Citation: (DOI): https://doi.org/10.1016/j.wombi.2021.11.004

Title of Article:

Prenatal education program decreases postpartum depression and increases maternal confidence: A longitudinal quasi-experimental study in urban Japan

Purpose/ Objective of the study:

The purpose was to find out whether mothers who participated in a prenatal HUG Your Baby education would have better outcomes related to postpartum depression compared to the control group who received regular, prenatal teaching.

Sample- population of interest and sample size:

Participants were 221 pregnant women with at least 30 weeks gestation in urban Japan.

Study Design:

Longitudinal quasi-experimental study

Study Methods (any other information about how they conducted the study):

The intervention group started participating in the HUG Your Baby classes after thirty weeks' gestation while the control group received a different regular, prenatal treatment. The HUG Your Baby classes provide teaching on how to recognize and respond to the baby's behavior. Participants completed the Edinburgh Postnatal Depression Scale, Karitane Parenting Confidence Scale, Tabuchi and Shimada's Maternal Difficulty with Infant Crying Scale, the Japanese version of the Maternal Confidence Questionnaire, and the Maternal Attachment Inventory Japanese Version at one and three months, postpartum.

Major (stats) Findings:(is it stat significant)

A program that included knowledge of a baby's behavior helped with the prevention of PPD compared to the regular, prenatal education offered. Statistically significant differences were found in lowering the risk for postpartum depression in the intervention group at one and three months. Significant differences were found regarding parenting confidence at one month for the intervention group.

Strengths:

The same socio-economic and clinical data as well as contact details were collected for both intervention and control groups. It is a longitudinal study which is helpful because changes can be identified over time.

Limitation:

There was selection bias because mothers with multiple children might have found it difficult to participate in the classes. Participants in the study were more urban, educated, and earned higher incomes than the general Japanese population, so the results may not be generalizable. Another limitation would be that the effect of social support from family and the surrounding community was not assessed and that other studies evidence that higher levels of social support are protective against PPD. Also, two of the scales used were Japanese versions meaning they were intentionally created for the Japanese population. The Japanese version scales won't apply to the United States' population.

Authors: (Doaltabadi & Amiri-Farahani, 2021)
Citation (DOI): https://www-doi-org.dominican.idm.oclc.org/10.1186/s13063-021-05559-0

Title of Article:

The effect of in-person and virtual prenatal care education of the spouses of primiparous women on the father and mother's attachment to infant: a quasi-experimental and controlled study

Purpose/ Objective of the study:

The purpose of the study was to compare the effect of in-person and virtual prenatal care education of the spouses of primiparous women on the father and mother's attachment to the infant.

Sample- population of interest and sample size:

The population of interest was primiparous women in Tehran, Iran. The sample size was 114 individuals.

Study Design:

Quasi-experimental study

Study Methods:

The pregnant women were divided into three different groups. The groups were face-to-face education, virtual education, and control. The content for both in-person and virtual sessions was similar. Maternal postnatal attachment scale and postnatal paternal-infant attachment questionnaires were completed.

Major Findings:

There was a large and medium effect size between the in-person education and control, and virtual education and control in relation to the father-infant attachment score. However, there were no significant differences in the mother-infant attachment scores.

Strengths:

Confirms that in-person and virtual training provide the same effect in the father-infant attachment which means that virtual childbirth classes can be used by men.

Limitation:

The study didn't show the effect it has on postpartum depression, only the effect on father-infant attachment. This demonstrates that there is a gap in how prenatal care education for fathers affects the mothers' postpartum depression. Another limitation would be that the in-person childbirth preparation classes were held by different trainers. If participants obtained pregnancy and childbirth information from other sources that could have affected the results too.

Authors: (MacMillan et al., 2021)
Citation (DOI):
https://dominican.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=151328178&site=ehost-live

Title of Article:
Maternal social support, depression and emotional availability in early mother-infant interaction: Findings from a pregnancy cohort.

Purpose/ Objective of the study:

The objective was to assess whether support from a partner, friends or family impacts the quality of mother-infant interactions in the context of maternal depression.

Sample- population of interest and sample size:

The sample size included 210 pregnant women from an Australian pregnancy cohort, the Mercy Pregnancy and Emotional Wellbeing Study (MPEWS).

Study Design:

Prospective pregnancy cohort study

Study Methods:

The study started from early pregnancy to six months postpartum. The Emotional Availability (EA) Scales were used to assess the mother-infant interactions. The Multidimensional Scale of Perceived Social Support was used by mothers to rate their perceived maternal social support from a partner, family and friends. Depression was measured by using the Structured Clinical Interview and depressive symptoms were measured using the Edinburgh Postnatal Depression Scale.

Major Findings:

Significant interactions were found between early pregnancy depressive symptoms and perceived maternal support from a partner and family, in predicting maternal emotional availability. There was no direct association between maternal depressive disorder in early pregnancy and perceived support. No interaction was found from support from friends. Maternal depression was not a significant predictor of emotional availability. In conclusion, the mother's perception of partner and family support in the postpartum period is a predictor of the correlation between early pregnancy depressive symptoms and maternal emotional availability.

Strengths:

The study had a large sample size and multiple scales were used.

Limitation:

For future studies, the measurement of the mother-infant relationship should extend beyond the EA Scales. Maternal childhood trauma should also be measured.

Authors: (McLeish & Redshaw, 2019)
Citation (DOI):
https://www-doi-org.dominican.idm.oclc.org/10.1186/s12884-018-2170-x

Title of Article:

"Being the best person that they can be and the best mum": a qualitative study of community volunteer doula support for disadvantaged mothers before and after birth in England

Purpose/ Objective of the study:

The effect of providing disadvantaged women in England with a community doula in the antenatal and postnatal period. Their aim is to meet the social support and information needs of disadvantaged women.

Sample- population of interest and sample size:

The study included 13 disadvantaged mothers and 19 doulas at three community volunteer doula projects in England.

Study Design:

Descriptive qualitative study

Study Methods:

This study focused on mothers' and doulas' experiences of having community doula support in the antenatal and postnatal phases. It included semi-structured qualitative interviews. Methods included audio-recorded interviews that were analyzed using inductive thematic analysis.

Major Findings:

Doulas were appreciated by mothers and helped improve the mothers' parenting confidence and skills.

Strengths:

Qualitative study. Doulas did not have a structured program so they were able to provide social support tailored to the mothers' individual needs. Another strength was that the study was based on in-depth interviews with the doulas and mothers.

Limitation:

The study was conducted only on disadvantaged women so the findings may not be generalizable to other populations. The participants were contacted to be part of the search so there could've been some bias when choosing who they wanted to be in the study. Another limitation would be that mothers with childrens' social services did not want to be interviewed.

Authors: (Bánovčinová & Škodová, 2022).
Citation (DOI):
https://www-doi-org.dominican.idm.oclc.org/10.15452/CEJNM.2022.13.0010

Title of Article:

The Effect of Perceived Stress and Postpartum Partner Support on Postpartum Depression

Purpose/ Objective of the study:

The purpose was to study the impact of partner support and perceived stress on the level of depressive symptoms in the postpartum period.

Sample- population of interest and sample size:

The sample size included 206 women and their ages ranged from 20-44 years. The mean age was 30.9 years

Study Design:

Cross-sectional observational study

Study Methods:

Scales used to measure the variables included the Edinburgh Postnatal Depression Scale, Postpartum Partner Support Scale, and Perceived Stress Scale. Socio-demographic, health-related, and obstetric data were included in the questionnaire.

Major Findings:

Results showed that the significant predictors of postpartum depression were the lack of a support person during labor, lower education, lower partner support, and higher perceived stress. Perceived stress was the most significant predictor of increased depressive symptoms.

Strengths:

Has a large sample size. The use of multiple scales allowed the researchers to examine the effect of multiple factors at once.

Limitation:

There could be significant bias because the self-assessment questionnaires are subjective data on the perceptions of the respondents. The use of a convenience sampling method used to select the respondents may not represent the entire target population.

Authors: (Dehshiri et al., 2023).
Citation (DOI):
https://www-doi-org.dominican.idm.oclc.org/10.30476/IJCBNM.2023.97739.2204

Title of Article:

Effects of Husband Involvement in Prenatal Care on Couples' Intimacy and Postpartum Blues in Primiparous Women: A Quasi-Experimental Study

Purpose/ Objective of the study:

Assess the effects of husband involvement in prenatal care on couples' intimacy and postpartum blues in primiparous pregnant women in Iran.

Sample- population of interest and sample size:

The population included 71 primiparous pregnant women with gestational age of 20-36 weeks. 36 participants were in the control group and 36 were in the intervention group.

Study Design:

Quasi-experimental study

Study Methods:

Participants in the intervention group would receive routine prenatal care and virtual training and would be accompanied by their husbands. The control group would also receive routine prenatal care but their husbands would not join them.

The Unidimensional Relationship Closeness Scale was completed before the intervention started and two weeks after the intervention. The postpartum blues Stein questionnaire was also completed one week after the intervention was given. Data was analyzed using an independent two-sample t-test, paired t-test, chi-square, Fisher's exact tests, and Pearson correlation coefficient.

Major Findings:

5 women in the intervention group and 26 in the control group experienced postpartum blues after the intervention. No statistically significant difference was found in the mean scores of couples' intimacy.

Strengths:

The study occurred over a long period of time from January to September. The intervention and control groups included the same number of participants.

Limitation:

The study included primiparous pregnant women and not just pregnant women in general. Another limitation would be the small sample size. This study showed the effect on postpartum blues and not postpartum depression which are different. The training was done virtually so there is no information on whether face-to-face training sessions could significantly impact the results. They had plans to provide face-to-face education trialing for husbands but it was canceled because of the COVID-19 pandemic. The virtual information was given in the form of text and images instead of video.

## Appendix B

## Assessment Tool: Edinburgh Postnatal Depression Scale (EPDS)

# Edinburgh Postnatal Depression Scale (EPDS)

Best Practice COPE Guideline

Cox JL, Holden JM Sagovsky R (1987) Detection of postnatal depression: development of the 10-item Edinburgh postnatal depression scale. Brit J Psychiatry 150 782-86. Reproduced with permission.

Name: _____ Date: _____

We would like to know how you have been feeling in the past week. Please indicate which of the following comes closest to how you have been feeling over the past seven days, not just how you feel today. Please tick one circle for each question that comes closest to how you have felt in the **last seven days.**

Here is an example already completed.

**I have felt happy:**

- ☐ Yes, all of the time
- ■ Yes, most of the time
- ☐ No, not very often
- ☐ No, not at all

This would mean: 'I have felt happy most of the time during the past week'.

**Please complete the other questions in the same way.**

**1.** I have been able to laugh and see the funny side of things

- ☐ As much as I always could
- ☐ Not quite so much now
- ☐ Definitely not so much now
- ☐ Not at all

**2.** I have looked forward with enjoyment to things

- ☐ As much as I ever did
- ☐ Rather less than I used to
- ☐ Definitely less than I used to
- ☐ Hardly at all

**3.** I have blamed myself unnecessarily when things went wrong

- ☐ Yes, most of the time
- ☐ Yes, some of the time
- ☐ Not very often
- ☐ No, never

**4.** I have been anxious or worried for no good reason

- ☐ No, not at all
- ☐ Hardly ever
- ☐ Yes, sometimes
- ☐ Yes, very often

**5.** I have felt scared or panicky for no very good reason

- ☐ Yes, quite a lot
- ☐ Yes, sometimes
- ☐ No, not much
- ☐ No, not at all

**6.** Things have been getting on top of me

- ☐ Yes, most of the time I haven't been able to cope at all
- ☐ Yes, sometimes I haven't been coping as well as usual
- ☐ No, most of the time I have coped quite well
- ☐ No, I have been coping as well as ever

**7.** I have been so unhappy that I have had difficulty sleeping

- ☐ Yes, most of the time
- ☐ Yes, sometimes
- ☐ Not very often
- ☐ No, not at all

**8.** I have felt sad or miserable

- ☐ Yes, most of the time
- ☐ Yes, quite often
- ☐ Not very often
- ☐ No, not at all

**9.** I have been so unhappy that I have been crying

- ☐ Yes, most of the time
- ☐ Yes, quite often
- ☐ Only occasionally
- ☐ No, never

**10.** The thought of harming myself has occurred to me

- ☐ Yes, quite often
- ☐ Sometimes
- ☐ Hardly ever
- ☐ Never

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Edinburgh Postnatal Depression Scale (*EPDS-Questionnaire* 2019)