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Individual-Oriented Relationship Education and Postpartum Depression: The Impact of the MotherWise Program

Maggie O. T. Allen[1], Galena K. Rhoades[1], and Sara E. Mazzoni[2]
[1] Department of Psychology, University of Denver
[2] Department of Obstetrics and Gynecology, University of Washington

Postpartum depression is the most common complication of childbearing and has serious negative impacts on both women and their children. Yet, due to stigma and barriers to accessing mental health care, many women do not engage in postpartum depression treatment. As a result, scholars have called for a shift in applied postpartum depression research from intervention to prevention in order to circumvent barriers to treatment and evade the negative consequences of this major public health issue. MotherWise is a community-based program for women who are pregnant or who have recently had a baby that combines an evidence-based relationship education curriculum developed for individuals (Within My Reach) with case management and information on infant care and parenting. Using data from medical charts, the present study evaluated the impact of MotherWise on postpartum depression, as well as history of depression, race, and ethnicity as moderators of these effects. The study sample included 425 women who enrolled in a larger randomized controlled trial of MotherWise during pregnancy. Results indicated that the program was associated with lower rates of positive postpartum depression screens among women without a history of depression, as well as among women who identify as Black or African American. The current project demonstrates the potential for individual-oriented relationship education programming to prevent postpartum depression among certain groups.

Public Significance Statement
It is necessary to consider multiple prevention and treatment options for postpartum depression in order to circumvent barriers to treatment and mitigate the deleterious effects of this disorder on women and their families. This study highlights relationship education as a unique path forward in combatting this major public health issue.

Keywords: relationship education, postpartum depression, prenatal

Postpartum depression is the most common complication of childbearing, affecting up to 20% of women in the United States. Although depression of any kind can have serious negative impacts on women, postpartum depression inherently includes caring for a young infant while experiencing depressive symptoms, contributing to increased stress and poor caretaking behaviors

Maggie O. T. Allen https://orcid.org/0000-0002-9560-5947

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Galena K. Rhoades co-developed the curriculum used the in the MotherWise program, Within My Reach. She receives royalties related to its sale and payment for facilitator trainings she conducts in the curriculum from the company that distributes it, PREP, Inc.

Correspondence concerning this article should be addressed to Maggie O. T. Allen, Department of Psychology, University of Denver, 2155 South Race Street, Denver, CO 80208, United States. Email: maggie.oreilly-treter@du.edu

(O'Hara & McCabe, 2013). Further, this disorder is also associated with a host of behavioral, cognitive, mental, and physical health-related consequences for the child (Closa-Monasterolo et al., 2017; O'Hara & McCabe, 2013).

Despite the important consequences of postpartum depression, only half of women experiencing this disorder actually engage in treatment (Ko et al., 2012). These low rates of treatment engagement are likely due to barriers such as stigma surrounding mental health care, opposition to treatment, and shame around experiencing depressive symptoms during a time that is meant to be joyful (Bina, 2020; Werner et al., 2015), as well as concern around taking psychotropic medications while breastfeeding (O'Hara & McCabe, 2013; Werner et al., 2015). There are also practical barriers to treatment, such as transportation or cost limitations (Ko et al., 2012). Given these difficulties in engaging women in postpartum depression treatment, scholars have called for a shift in applied postpartum depression research to focus not only on intervention, but also on prevention (Werner et al., 2015).

Poor romantic relationship quality is associated with greater depressive symptoms (Braithwaite & Holt-Lunstad, 2017; Faisal-Cury et al., 2021; Małus et al., 2016). Specifically, destructive patterns of communication contribute to lower relationship confidence in women, which in turn leads to increases in depressive symptoms (Whitton et al., 2007). Indeed, the limited studies of the associations between relationship quality during pregnancy and postpartum depression suggest that issues present in the relationship during pregnancy (e.g., low relationship satisfaction, destructive communication, lack of emotional support) contribute to the development of postpartum depression after the birth of a baby (Letourneau et al., 2012; Perfetti et al., 2004; Whisman et al., 2011). Therefore, engaging in relationship interventions during pregnancy could be one unique way to prevent postpartum depression via reductions in interpersonal distress.

Relationship education provides training in skills and strategies that help individuals and couples increase their chances of having healthy and stable relationships and interpersonal interactions (Markman & Rhoades, 2012). Studies have shown that participating in relationship education during pregnancy is associated with greater psychological well-being postpartum (Pinquart & Teubert, 2010). Further, a relationship education program for unmarried couples having a baby, Family Expectations, found that participants assigned to the program group demonstrated fewer depressive symptoms at the 15-month follow-up compared to the no-treatment control group (Devaney & Dion, 2010).

Although findings suggest that relationship education targeting perinatal populations has the potential to reduce risk for developing depression, studies of relationship education to date have primarily focused on programming delivered to couples, rather than individuals. Yet, many individuals are not married or in committed relationships when having a baby, suggesting the need for programming relevant to individuals of all relationship stages, including those who are unpartnered (Rhoades & Stanley, 2009). Individual-oriented relationship education has the potential to make even greater impacts on individual and relationship well-being than couple-oriented relationship education because it addresses topics relevant to not only current relationships (e.g., communication skills), but also future relationships (e.g., ways to identify and leave unsafe relationships, how to choose a partner) and parenting/co-parenting (e.g., how children influence and are impacted by relationship choices and experiences; Rhoades & Stanley, 2009, 2011). Indeed, studies of Within My Reach, the individual-oriented relationship education curriculum utilized in the present study, have demonstrated interpersonal benefits for both partnered and unpartnered individuals. For those in a relationship, participating in Within My Reach is associated with increased relationship confidence and quality, better communication skills, and reductions in conflict behaviors (Stanley et al., 2020; Visvanathan et al., 2015), as well as decreases in psychological distress (Carlson et al., 2017). For unpartnered individuals, participating in Within My Reach is associated with improvements in general relationship and communication skills (e.g., problem solving, anger management), as well as belief in their ability to obtain healthy relationships in the future (Visvanathan et al., 2015).

MotherWise is a community-based program for women who are pregnant or who have recently had a baby that combines Within My Reach, information on infant care and parenting, and case management. This study tested the impact of MotherWise specifically on postpartum

depression. In other reports from this randomized controlled trial, women assigned to the program reported better relationship skills and more healthy attitudes toward relationships one and two-and-a-half years after enrollment than those assigned to no-treatment (Patnaik et al., 2022; Patnaik & Wood, 2021). They also experienced fewer relationship transitions than those in the control group (Patnaik et al., 2022).

Further, MotherWise was associated with positive impacts on outcomes not directly targeted within the program, including lower risk for preterm birth and higher infant birthweight (Rhoades et al., 2022), as well as fewer unintended pregnancies in the year following enrollment (Patnaik & Wood, 2021).

Of particular interest to the present study, the longer term follow-up data show that there was not a significant impact on depression one or two-and-a-half years after enrollment (Patnaik et al., 2022; Patnaik & Wood, 2021). However, postpartum depression symptoms are most likely to emerge in the first few weeks after delivery (American College of Obstetrics and Gynecology, 2019; O'Hara & McCabe, 2013). Given that studies of relationship education have not evaluated postpartum depression symptoms during the early postpartum period (e.g., Devaney & Dion, 2010; Patnaik & Wood, 2021), the present study evaluated program effects on depression in the first 12 weeks following delivery.

Beyond understanding whether MotherWise is effective in preventing postpartum depression, it is also necessary to understand for whom this type of programming is most effective. Previous studies of relationship education suggest that populations most at-risk tend to benefit the most from relationship education (Stanley et al., 2020). One risk factor for postpartum depression is history of depression, as women who have experienced past depressive episodes are more likely to develop depression following the birth of a child (O'Hara & McCabe, 2013). Further, women of color, particularly women who identify as Black or Latina, experience postpartum depression at disproportionately higher rates compared to non-Hispanic White women (O'Hara & McCabe, 2013; Pao et al., 2019). These realities underscore the importance of understanding whether prevention programming such as MotherWise is a feasible option for combatting postpartum depression among groups most at-risk for developing it.

The Present Study

The present study evaluated the effects of MotherWise on screening positive for postpartum depression at mothers' postpartum or well-baby visit. It also tested history of depression, race, and ethnicity as moderators of these effects. We hypothesized that those randomly assigned to participate in MotherWise during pregnancy would be less likely to screen positive for postpartum depression compared to those in the no-treatment control group. Further, we hypothesized that those at greatest risk for postpartum depression, as measured by identifying as Black or African American or Hispanic/Latina, or having a history of depression, would show the strongest effects of the program.

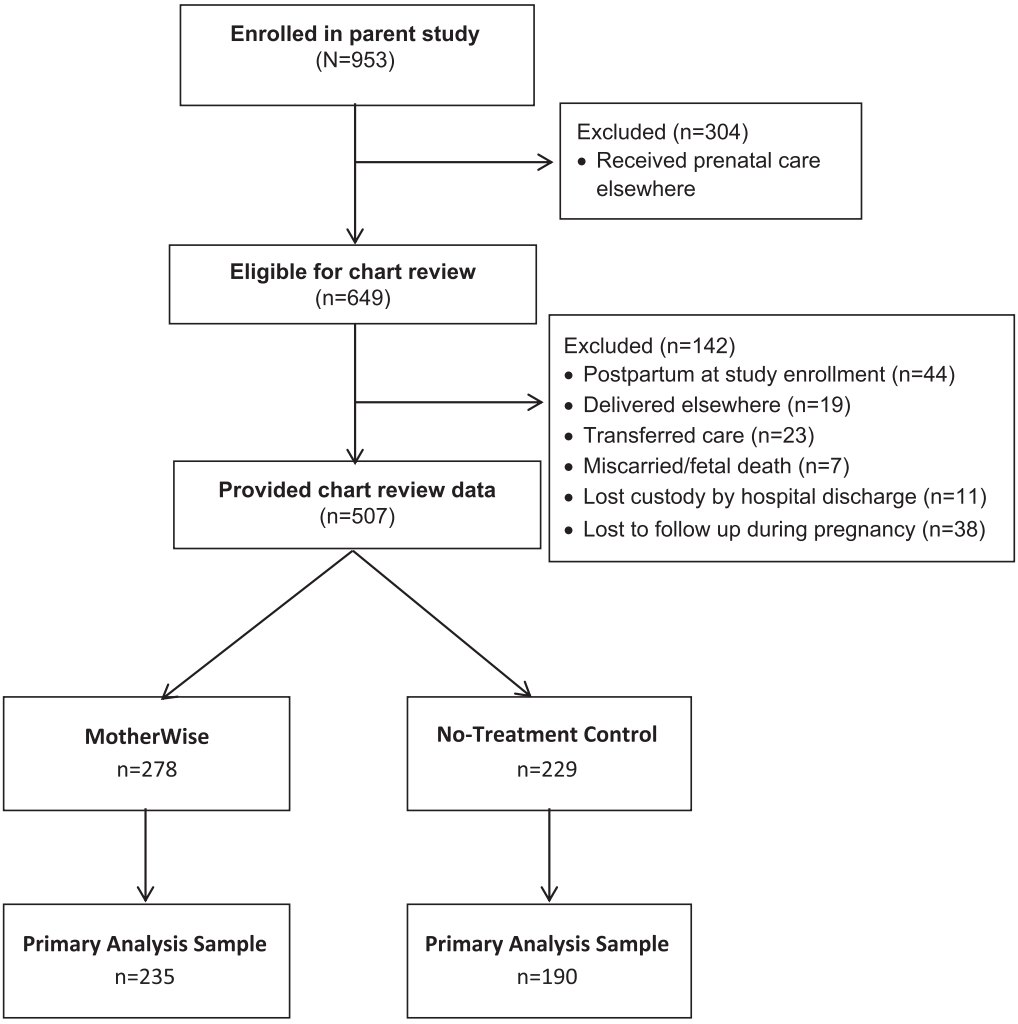
Materials and Method

Participants and Procedure

Participants included a subset of 425 women who enrolled in a larger randomized controlled trial (RCT) regarding the effectiveness of the MotherWise program on long-term family outcomes ($N = 953$; see Figure 1). Participants in the present study ranged from ages 18- to 43-years old and primarily identified as Hispanic or Latina (73.2%) followed by non-Hispanic White (14.5%), Black or African American (11.8%), and other (0.4%). Most women had earned the equivalent of a high school degree (e.g., general educational development test) or higher at the time of enrollment (73.4%), while 26.6% did not graduate from high school or earn their general educational development test; 9.9% had earned a college degree. Employment status varied, with the majority unemployed at enrollment (58.3%), and the remaining working temporarily/seasonally (18.2%), part-time (12.6%), or full-time (11.0%). Although not a requirement to participate in MotherWise, the majority of women (75.8%) reported having Medicaid as their primary form of insurance and 72.1% reported receiving some form of public assistance in the past month (e.g., Temporary Assistance for Needy Families, Supplemental Nutrition Assistance Program, Special Supplemental Nutrition Program for Women, Infants, and Children).

Most participants were in a relationship at enrollment, with 32.5% married, 46.6% engaged

Figure 1
Consolidated Standards of Reporting Trials Diagram of MotherWise Participants in Present Study



or "romantically involved with someone on steady basis," 8.2% "involved in an on-again off-again relationship," and 12.7% not partnered. One-third (33%) of women had a history of depression and 26% screened positive for prenatal depression at some point during pregnancy. Forty percent (40%) were pregnant with their first child at the time of enrollment. The average gestational age at enrollment was 23.68 weeks ($SD = 8.45$; range = 5.29–38.71 weeks). See Table 1 for demographic and prenatal characteristics by randomization status.

For the larger randomized controlled trial of MotherWise, participants were recruited from exam rooms in obstetrics and gynecology clinics and pediatrics clinics, flyers, referrals from the clinic or agency staff members, and radio, television, and social media advertising. For in-person recruitment (e.g., in exam rooms), project staff described the MotherWise program and associated study to the patient and, if she was interested in participating, staff scheduled her for an intake appointment. Women were eligible for enrollment into the larger RCT if they were pregnant or delivered a baby within the past 3 months, were age 18 or older, and were English or Spanish speaking. Inclusion in the present study was further restricted to only women who were pregnant

Table 1
Demographic and Pregnancy Characteristics by Randomization

Characteristic	No-treatment control ($N = 190$) $M(SD)$ or %	MotherWise ($N = 235$) $M(SD)$ or %	p value
Age at enrollment (years)	27.56(6.22)	28.18(5.79)	.293
Black/African American (%)[a]	15%	12%	.318
Hispanic/Latina (%)	63%	71%	.086
High school degree (%)	69%	77%	.067
Medicaid (%)	76%	76%	.992
Unemployed (%)	56%	59%	.455
In a relationship (%)	84%	90%	.093
History of depression (%)	35%	31%	.423
Gestational age at enrollment (weeks)	24.32(8.50)	23.32(8.37)	.179
Prenatal EPDS[b]	6.43(4.78)	6.54(4.76)	.814

Note. EPDS = Edinburgh Postnatal Depression Scale.
[a] Seven participants identified as both Black/African American and Hispanic/Latina. In these cases, participants were assigned to the Black/African American group. [b] Based on average of prenatal depression EPDS scores across first, second, and third trimesters.

at enrollment, delivered at the local safety-net hospital, and attended a postpartum or well-baby visit following delivery, when women were regularly assessed for postpartum depression. Women did not need to be in a romantic relationship to participate, though the vast majority were. All services were offered in both English and Spanish.

At intake, participants met with an intake specialist at the MotherWise offices in order to learn more about the study and MotherWise program. Verbal consent was then obtained over the phone by the organization conducting the larger RCT, Mathematica Policy Research, before study measures were collected. At the end of the appointment, participants were randomly assigned to the program or no-treatment control condition by Mathematica using computer-generated randomization software. Randomization was initially 3:2 in order to create adequate class sizes in the program group, then changed to 1:1 when recruitment was deemed sufficient (after 7 months). Participants were paid $30 for this intake appointment, regardless of randomization status.

Participants assigned to the MotherWise program attended six weekly group-based workshops lasting 4 hr each (with a meal, childcare, and transportation included) and up to four case management sessions. In the present study, of those randomized to MotherWise ($n = 235$), participants attended an average of four out of six classes and three out of four case management sessions. MotherWise participants received a $10 gift card for each workshop session and case management meeting attended, and $100 for attending five of six workshop sessions. Participants assigned to the no-treatment control group did not receive any additional services or referrals as part of this study but continued prenatal care as usual.

All participants in the present study also consented to medical chart review. Trained research assistants blinded to random assignment extracted data from participants' medical records via the hospital electronic medical record system. Reliability checks were conducted every 4–6 weeks in order to ensure that all research assistants were correctly following the data extraction protocol.

For the present study, we limited the sample to only those who enrolled in MotherWise during pregnancy and delivered a live infant at the local county hospital where medical chart data were available (45% of the larger sample; see Figure 1). This study was not preregistered and all study procedures were approved by two university institutional review boards.

Intervention

MotherWise is designed to support pregnant and postpartum women, particularly those who are underresourced, in making wise decisions for themselves and their children by learning about healthy relationship patterns, new skills,

and self-awareness through participation in group-based workshops. It is based on a cognitive behavioral model and assumes that it is important to change both behaviors (e.g., conflict management, stay/leave behavior) and cognitions (e.g., self-esteem, expectations for healthy relationships) to improve relationship experiences. The 6-week program (24 hr) utilized the evidence-based curriculum for individuals, Within My Reach (Pearson et al., 2005), and addresses research-supported ways to choose a partner, communicate effectively in close relationships, solve problems, manage conflict in their families, co-parent, address aggression and violence, and exit unhealthy relationships safely (Rhoades & Stanley, 2009, 2011). The program also includes brief (approximately 10 min), supplemental information about caring for and connecting with a newborn, engaging in self-care, and recognizing postpartum depression. All groups were co-facilitated by women with experience providing case management and/or relationship skills education and with relevant educational backgrounds, including some holding Bachelor's or Master's degrees in social work or psychology. All facilitators completed a 24-hr Within My Reach training prior to delivering the curriculum, as well as on-the-job training in the MotherWise program.

In addition to these workshops, each MotherWise participant was assigned a dedicated case manager with whom she worked individually to apply skills learned in the workshops to her own life and to connect her with other community resources (e.g., food assistance, housing, and employment services). There were six case managers involved in the program at the time of the present study, each with an active caseload of 10–20 participants. Some of the time, participants had a group workshop facilitator who also served as their case manager, and other times, participants had facilitators different from their case manager. The case managers and group facilitators often held identities and had lived experiences similar to the participants served. Treatment adherence was assessed using surveys after each workshop session. In the surveys, facilitators reported how much of the curriculum materials they used and the degree to which they followed the instructor's manual. Fidelity was assessed via biweekly meetings with one of the curriculum developers. The facilitators recorded all workshop sessions for fidelity review. The developer reviewed approximately 5 hr of audiotape of Within My Reach workshop sessions every 2 weeks to identify topics to discuss during biweekly check-in meetings with the program director and facilitators. Patnaik and Wood (2021) reported that facilitators demonstrated high treatment adherence and fidelity to the program.

Measures

Postpartum Depression

The hospital from which participants were recruited and received prenatal care utilizes the 10-item Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987) to screen for depression during the perinatal period. Participants' EPDS scores were collected via medical chart review of postpartum and well-baby visits. The majority of women (70.8%) provided postpartum depression data between 5 and 9 weeks postpartum ($M = 6.80$ weeks, $SD = 1.92$, range = 2–12 weeks postpartum), which is typically when their postpartum visit is scheduled. For the present study, a positive screen for postpartum depression was defined as a score ≥ 10 (Closa-Monasterolo et al., 2017; Earls, 2010). The present study also demonstrates good internal consistency among items ($\alpha = .91$).

Moderators and Covariates

History of depression was gathered via medical chart review. History of depression was defined as any diagnosed depression prior to pregnancy that was documented in participants' medical chart notes or problem lists by a medical provider.

The EPDS (Cox et al., 1987) was also used clinically to assess prenatal depression during each trimester of pregnancy. In the present study, prenatal depression was measured using the mean of EPDS scores across all trimesters of pregnancy to account for inconsistency in timing and frequency of prenatal EPDS administration (only 4.9% of participants were administered the EPDS during each trimester).

Participant race and ethnicity were gathered as part of Mathematica's baseline phone survey and were self-reported. We were particularly interested in examining women who identified as Black/African American or Hispanic/Latina; therefore, these variables were dichotomized into Black/African American (1) versus not Black/African American (0) and Hispanic/Latina (1) versus not Hispanic/Latina (0).

Statistical Analysis

Approximately, 7.5% of the overall sample was excluded from analyses due to missing values (6% of the no-treatment control group, 9% of the program group). As a result, 393 participants ($n = 179$ in the control group, $n = 214$ in the program) were included in analyses. All analyses were intent-to-treat and used two-tailed tests and a standard of $p < .05$. To assess for baseline inequivalence among demographic characteristics, we performed a series of *t* tests for continuous variables and chi-square tests for categorical variables. These tests demonstrated a significant difference in the percentage of participants randomized to the program and control groups who identified as Hispanic/Latina ($p = .046$). Ethnicity was tested as a moderator of program effects. Participants assigned to the program and control groups did not demonstrate significant differences in any other demographic characteristics at enrollment ($ps > .086$).

We report effect sizes using the Cox index, which is an unbiased estimator of the effect for a dichotomous outcome comparable to estimates of effect sizes for continuous outcomes (e.g., Hedges' *g* or Cohen's *d*; Sánchez-Meca et al., 2003; see also, What Works Clearinghouse, 2020). The impact of MotherWise on the dichotomous outcome of screening positive for postpartum depression was evaluated using binary logistic regression, with intervention status (MotherWise vs. control) as the independent variable and postpartum depression as the outcome variable. For analyses of moderation, the interaction between intervention status and each moderator variable (Black/African American, Hispanic/Latina, and history of depression) was added to separate binary logistic regression models. In order to account for variability in gestational age at enrollment, gestational age was included as a covariate in all analyses. In addition, in order to parse out the possibility of depression during pregnancy contributing to program effects on postpartum depression, we included prenatal depression as a covariate in all analyses.

Results

Although those assigned to MotherWise were less likely to screen positive for postpartum depression (16%) compared to the control group (21%) overall, this difference was not statistically significant ($b = -.35$, $OR = .71$, $p = .221$, effect size [ES] = .21; see Table 2).

There was a main effect of race on postpartum depression such that those who identified as Black or African American were significantly more likely to screen positive for postpartum depression compared to those who did not identify as Black or African American ($b = 1.29$, $p = .008$, ES = .78). Race also moderated the impact of MotherWise on postpartum depression ($b = -1.76$, $p = .035$; see Table 2) such that program effects were significant only for participants who identified as Black or African American. Over one-third (39%) of Black control group participants screened positive for postpartum depression compared to only 15% of Black participants assigned to MotherWise ($b = -2.52$, $p = .019$, ES = 1.53). Those who did not identify as Black did not significantly differ in their postpartum depression based on random assignment ($p = .899$).

The main effect of ethnicity on postpartum depression was not significant ($p = .971$). In addition, the test for moderation of program effects based on whether participants identified as Hispanic or Latina was not significant ($p = .961$; see Table 2).

The main effect of history of depression on postpartum depression was not significant ($p = .321$). However, history of depression moderated program effects ($b = 1.25$, $p = .030$; see Table 2) such that program effects were significant only for participants without a history of depression, contrary to our hypothesis. Nineteen percent (19%) of control group participants without a history of depression screened positive for postpartum depression compared to only 10% of those assigned to MotherWise without a history of depression ($b = -.85$, $p = .031$, ES = .51). Those with a history of depression did not significantly differ in their postpartum depression based on random assignment ($p = .361$).

Discussion

The findings from our study indicate that the MotherWise program did not significantly impact the incidence of having a positive postpartum depression screen overall; however, the program was associated with lower rates of positive postpartum depression screens among women without a history of depression, as well as among women who identify as Black or African American. Thus, our results demonstrate the potential for

Table 2
Binary Logistic Regression Models of Main Effects and Moderation of MotherWise on Postpartum Depression

Variable	*b*	*SE*	Odds ratio	(95% CI) *LL*	(95% CI) *UL*
Main effects					
MotherWise	−0.35	0.28	0.721	0.41	1.23
Constant	−2.58***	0.51	0.08		
Black or African American					
MotherWise	−0.05	0.31	0.88	0.52	1.76
Moderator	1.29**	0.49	3.63	1.39	9.48
MotherWise × Moderator	−1.76*	0.83	0.17	0.03	0.89
Constant	−2.90***	0.54	0.06		
Hispanic or Latina					
MotherWise	−0.40	0.49	0.67	0.26	1.73
Moderator	−0.05	0.41	0.95	0.42	2.13
MotherWise × Moderator	−0.08	0.60	1.09	0.34	3.50
Constant	−2.55***	0.56	0.08		
History of depression					
MotherWise	−0.90*	0.39	0.41	0.19	0.87
Moderator	−0.43	0.43	0.65	0.28	1.51
MotherWise × Moderator	1.25*	0.58	3.49	1.13	10.84
Constant	−2.30***	0.53	0.10		

Note. *SE* = standard error; CI = confidence interval; EPDS = Edinburgh Postnatal Depression Scale; *UL* = upper limit; *LL* = lower limit. Positive screen for postpartum depression (EPDS ≥ 10) = 1, does not meet criteria = 0. Black/African American = 1, not Black/African American = 0. Hispanic/Latina = 1, not Hispanic/Latina = 0. history of depression = 1, no history = 0.
* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

relationship education delivered to pregnant women to prevent postpartum depression among certain groups. It makes sense that MotherWise may not have a universal impact on postpartum depression, as the program does not target depression specifically. Rather, through the many facets of the program, MotherWise addresses barriers to treatment and risk factors for depression that could ultimately lead to lower risk for postpartum depression, at least for some.

Studies have shown that experiencing stress during pregnancy is a risk factor for developing postpartum depression (O'Hara & McCabe, 2013; Werner et al., 2015). Compared to White women, Black women are disproportionately more likely to experience chronic stress (Jackson et al., 2010), including higher levels of stress and fewer buffers of stress during pregnancy (Borders et al., 2015). Perhaps program impacts among Black women stem from MotherWise providing services that combat stress in myriad ways. First, MotherWise teaches women healthy relationship skills that improve romantic relationships (Antle et al., 2011, 2013; Visvanathan et al., 2015). By providing information and skills to reduce interpersonal distress, women likely also experience improvements in their individual well-being, as relationship and individual functioning are highly correlated (Whisman & Baucom, 2012). Indeed, as previously noted, participants enrolled in the larger MotherWise RCT demonstrated significantly improved relationship skills and more healthy attitudes toward relationships 1 year after enrollment (Patnaik & Wood, 2021), suggesting a possible mechanism by which MotherWise prevents postpartum depression. Second, social support is an important protective factor against postpartum depression, though this has been shown regardless of race (Pao et al., 2019). Perhaps relationship education presents a unique form of support that has not been comprehensively examined among perinatal women. Indeed, other forms of group support, such as group prenatal care, demonstrate that women engaging in group prenatal care with higher levels of stress or lower levels of social support experience greater improvements in individual mental health compared to those who engage in individual care (Heberlein et al., 2016). Similarly to our findings, a meta-analysis conducted by Carter et al. (2016) found that only African American women experienced lower rates of preterm birth after engaging in group prenatal

care, suggesting that women who identify as Black or African American tend to benefit the most from group-based support. Finally, MotherWise offers case management that provides important resources that could address sources of distress, such as lack of housing and essential baby items. Taken together, this combination of resources, education, and social support offered through MotherWise could be especially relevant and helpful for targeting the chronic stress that Black women face.

Further, one barrier to postpartum depression treatment is stigma around mental illness and mental health care (Abrams et al., 2009). In particular, women of color are among those least likely to seek mental health services for postpartum depression, and when they do engage, they often receive a lower standard of care (Kozhimannil et al., 2011; Ward et al., 2009). Indeed, women of color are less likely to receive follow-up treatment or continued care (Kozhimannil et al., 2011) and may have limited access to culturally competent providers and clinicians of color (Ward et al., 2009). Black women can experience several barriers to accessing treatment, including stigma around mental illness, distrust of the health care system, lack of insurance, and lack of culturally competent providers (American Psychiatric Association [APA], 2017a). As a result, they may be more likely to rely on nonclinical forms of depression coping, such as religion (Ward et al., 2013). Perhaps relationship education is a less stigmatizing entry point to services that help to prevent postpartum depression, which extends the reach to populations who may not engage in or receive adequate mental health care otherwise. In comparison, individuals who identify as White tend to be more open to receiving mental health services (Kozhimannil et al., 2011). It is possible that women who are more likely to engage in mental health treatment do not experience additional benefits of MotherWise in fewer incidences of positive postpartum depression screens, as they are more likely to have other clinical supports or resources already in place.

Results also demonstrated that MotherWise may prevent new instances of positive postpartum depression screens but not among those with a history of depression. This makes sense given that the program is focused on implementing healthy relationship skills and recognizing signs of individual distress, rather than treating depression itself. One of the most prominent and effective postpartum depression prevention programs, Reach Out, Stand strong, Essentials for new mothers (ROSE), addresses similar risk factors for postpartum depression as MotherWise, such as social support, role transitions, and life stressors (Zlotnick et al., 2011, 2016). However, ROSE addresses these risk factors directly using an interpersonal psychotherapy framework and found overall program effects regardless of history of depression (Zlotnick et al., 2011, 2016). Conversely, MotherWise indirectly addresses risk factors for postpartum depression through group participation in relationship education and individual case management. As such, perhaps indirect prevention such as MotherWise is particularly helpful for mothers without a history of depression, who are often overlooked in postpartum depression prevention (Shorey et al., 2018).

It is important to acknowledge that the effects of MotherWise on screening positive for postpartum depression were not moderated by whether women identified as Hispanic or Latina, despite the fact that Hispanic/Latina women face barriers to mental health treatment and risk factors for postpartum depression similar to Black women (APA, 2017b; Borders et al., 2015; Kozhimannil et al., 2011). Perhaps these groups of women differed in their social support, stress, or depression upon entering the program, which led to differences in program impact. Indeed, Hispanic and Latina participants were less likely to have a history of depression (27% vs. 33%) and demonstrated lower prenatal depression scores at enrollment (6.08 vs. 7.20) compared to Black participants, though these differences were not statistically significant ($ps > .144$). Further, a sizeable portion of Hispanic/Latina participants were born outside of the United States (46%). Though we did not have the sample size to analyze these groups separately, it is possible that program effects occurred in the context of the immigrant paradox (Schwartz et al., 2010) in which immigrants demonstrate better psychological health compared to nonimmigrants. Additionally, some participants were also undocumented (though we did not collect data on exact numbers), which likely affected their willingness to disclose mental health concerns and receive similar community resources compared to women who hold documentation status. As a result, they may not have been able to fully benefit from MotherWise in the same way as Black women.

Implications and Applications

The present study lays the groundwork for exploring unique avenues of preventing postpartum depression. MotherWise, an individual relationship education and case management program, is associated with fewer positive postpartum depression screens among women who identify as Black or African American and women without a history of depression. Consistent with a previous study examining depression 1 year after enrollment, the program did not have an impact on depression in the early postpartum period among the overall sample (Patnaik & Wood, 2021), and it is less clear why program effects emerged only among particular groups. We hypothesize that increased access to social support and healthy relationship skills that help to reduce stress could be particularly effective for those who are less likely to interface with mental health providers and/or receive suboptimal health care (Kozhimannil et al., 2011; Ward et al., 2009). Thus, participating in group relationship education classes may be a more approachable way to promote self-awareness, overall well-being, and openness to seeking help. In addition, perhaps certain content within the program was more salient for Black women, or the overall structure of gathering as a group of women was particularly impactful, as suggested by Carter et al. (2016). Thus, further exploration of the mechanisms by which MotherWise is associated with fewer positive postpartum depression screens (e.g., improvements in relationships, increases in social support, reductions in stress) is important.

Given the low rates of postpartum depression treatment engagement and increased need for more prevention options (O'Hara & McCabe, 2013; Werner et al., 2015), MotherWise and other relationship education programs could be a viable way to expand current postpartum depression prevention efforts. Further, MotherWise may also strengthen women's awareness of postpartum depression and ways to access services, creating an approachable entry point for pursuing important mental health services. It is pertinent to evaluate how the effects of MotherWise compare to other forms of relationship education, such as those serving pregnant and postpartum couples (e.g., Family Expectations; Ritchie et al., 2022) or online services (OurRelationship; Roddy et al., 2020). Such knowledge would help to further clarify whether our findings are limited to MotherWise or generalizable to other relationship education programming that could further expand the reach of postpartum depression prevention.

Despite promising findings demonstrating the potential for individual-oriented relationship education to prevent postpartum depression among certain groups of women, certain limitations should be noted. First, our data collection were limited to medical chart review data extraction, as well as a standard set of items provided by Mathematica Policy Research and required by the funding agency. Additionally, the primary outcome was a positive screen for depressive symptoms assessed at one postpartum time point rather than a diagnosis gleaned from a comprehensive evaluation. Many women also underreport their postpartum depression symptoms due to stigma regarding mental illness, shame, or fear of being deemed an unfit parent (Perfetti et al., 2004). Thus, we were limited in our ability to thoroughly evaluate depression and test the mechanisms by which MotherWise was associated with lower rates of postpartum depression screens. Further, although certainly a strength of the program, MotherWise includes multiple services to support pregnant and postpartum women, which limits our ability to pinpoint which aspects of MotherWise are particularly impactful on postpartum depression. However, this combination of services is similar to other relationship education programs (e.g., Family Expectations in Oklahoma City; Ritchie et al., 2022), allowing for easier comparison and generalization. Future studies would benefit from exploring which aspects of MotherWise (e.g., curriculum, case management, financial assistance, group dynamics) separately or jointly contribute to postpartum depression prevention.

Conclusion

In sum, our study demonstrates the viability of MotherWise, an individual-oriented relationship education program, as a form of postpartum depression prevention. This type of programming offers many benefits, such as reducing barriers to treatment (e.g., providing transportation, childcare, services in English and Spanish) and providing relationship education that is generalizable to a variety of relationship stages. In order to expand the reach of services and mitigate the deleterious effects of postpartum depression on

women and their families it is necessary to consider multiple prevention and treatment options. Black and African American women and women without a history of depression enrolled in MotherWise are less likely to screen positive for postpartum depression, thus demonstrating an innovative path forward in combatting this major public health issue.

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