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Low Social Support is Associated With Postpartum Depression Symptoms Among Illinois Postpartum Women

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Abstract

Background: Postpartum depression (PPD) occurs after delivery, with severity and onset varying by individual. Women with low social support may be at higher risk for PPD. This study examined the association between social support and self-reported postpartum depression symptoms (PDS) among Illinois postpartum women.

Methods: Using 2016–2020 data from the Illinois Pregnancy Risk Assessment Monitoring System (PRAMS) ($n = 5886$), instrumental support (physical, hands-on support) and partner emotional support were each categorized as high/low and were combined in a composite measure (high = high on both types, moderate = high on one type, and low = low on both types). PDS were self-reported. Crude and adjusted odds ratios (aOR) and 95% confidence intervals (CI) were calculated using logistic regression.

Results: Overall, 9.6% (95% CI = 8.8–10.4) of Illinois postpartum women experienced PDS. Of Illinois postpartum women, 63.5% (95% CI = 62.1–64.9) had high composite support, 29.3% (95% CI = 28.0–30.6) had moderate composite support, and 7.1% (95% CI = 6.4–7.9) had low composite support. After adjustment for maternal characteristics, instrumental support, partner emotional support, and a composite measure of support were each significantly associated with PDS. Compared to women with high composite support, women with low composite support had six times the odds of PDS (aOR = 6.1, 95% CI = 4.5–8.2), and women with moderate composite support had nearly three times the odds of PDS (aOR = 2.7, 95% CI = 2.2–3.4).

Conclusion: PDS was associated with instrumental support, partner emotional support, and a composite measure of support in Illinois postpartum women. This suggests the importance of addressing social support for postpartum individuals.

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Conflicts of Interest

The authors declare no conflicts of interest.

1 | Introduction

Postpartum depression (PPD) is depression that occurs after delivery [1]. Postpartum depression symptoms (PDS), which vary by individual, affect up to one in eight women [2]. When left untreated, PPD can negatively affect one's ability to care for themselves and their infant and can negatively impact long-term bonding and child development [3].

Social support helps alleviate the stress of a new baby and allows for better adjustment to life changes [4]; perceived social support from partners is associated with decreased maternal and infant distress [5]. Social support is described as functions of sharing information (informational), providing hands-on services (instrumental), emotive sharing of experiences (emotional), and offering approval to each other (appraisal) [6]. Multiple types of social support are important for the transition to parenthood and healthy infant development. In qualitative studies, postpartum women commonly express a need for social support [7] and how it is important to physical and emotional recovery [8]. A systematic review examining 10 qualitative studies focused on postpartum social support found that women benefit from all forms of social support, including support from other mothers [9]. Studies have found a relationship between low social support and PPD [10] and between low social support and PDS [11–14] in a variety of populations, including various race and age groups in the United States (U.S.).

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an ongoing collaboration between participating jurisdictions and the Centers for Disease Control and Prevention (CDC) to collect data on maternal attitudes and experiences before, during, and after birth [15], and is used to monitor PDS². PRAMS data are not routinely used to study postpartum social support, because social support questions are not included on the core questionnaire. Jurisdictions may include questions from the PRAMS standard (optional) question set or develop their own state-specific questions. Beginning in 2016, Illinois added one standard question to assess instrumental support and one state-specific question to assess partner emotional support.

Few studies have assessed the relationship of social support and PDS/PPD using PRAMS. One study using PRAMS data from New York City found that partner social support was not a significant predictor of PPD for any racial/ethnic group [16]. Another study using Ohio Pregnancy Assessment Survey data, a PRAMS-like survey, found that low social support (both instrumental support and emotional support) was associated with increased PDS in crude analyses, but this association did not maintain statistical significance in adjusted models [17]. The objective of this study was to assess the association of social support and PDS among postpartum Illinois women with a recent live birth.

2 | Materials and Methods

2.1 | Data Source

We analyzed 2016–2020 data from Illinois PRAMS ($n = 6352$), which is administered by the Illinois Department of Public Health (IDPH) with support from CDC. Illinois PRAMS uses birth certificates to select a stratified, random sample of women with a recent live

birth [15] and mails self-administered questionnaires approximately 2 months postpartum. After three mailings, sampled individuals are contacted by telephone until approximately 7 months postpartum, when they are considered nonrespondents. This study was approved under expedited review by the IDPH Institutional Review Board.

2.2 | Exposure: Social Support

To measure instrumental support, Illinois PRAMS asked:

Since you delivered your new baby, would you have the kinds of help listed below if you needed them?

- a. Someone to loan me \$50
- b. Someone to help me if I were sick and needed to be in bed
- c. Someone to talk with about my problems
- d. Someone to take care of my baby
- e. Someone to help me if I were tired and feeling frustrated with my new baby

Respondents were instructed to check “No” if you would not have it or “Yes” if you would. Respondents were considered to have high instrumental support if they were able to obtain all five types of support listed and low instrumental support if they were able to obtain four or fewer types. A sensitivity analysis was conducted using an alternate definition of obtaining four or more types of support listed.

To measure partner emotional support, Illinois PRAMS asked:

Since your new baby was born, how often does your husband or partner provide you with encouragement and emotional support?

Response options were “always,” “often,” “sometimes,” “rarely,” and “never.” Respondents were considered to have high partner emotional support if they answered “always” or “often” and to have low partner emotional support if they answered “sometimes,” “rarely,” or “never.” A sensitivity analysis was completed using two alternate definitions; one version defined high support as “always” and low support as all other responses; the second version defined high support as “always,” “often,” or “sometimes” responses and low support as all other responses. There were no inherent skip patterns for women without a husband or partner, and all responses were used.

To develop a composite support measure, instrumental support and partner emotional support were combined into three mutually exclusive categories: high (high levels of both support types), moderate (high level of one support type), and low (low levels of both support types). A sensitivity analysis was conducted using a four-category version of the composite support measure, which separated two “moderate” groups based on which support type was noted as high.

2.3 | Outcome—Postpartum Depression Symptoms (PDS)

To measure PDS, PRAMS asked two core questions:

1. Since your new baby was born, how often have you felt down, depressed, or hopeless?
2. Since your new baby was born, how often have you had little interest or little pleasure in doing things you usually enjoyed?

Response options were “always,” “often,” “sometimes,” “rarely,” and “never.” In alignment with the Health Resources and Services Administration (HRSA)’s Title V Maternal and Child Health Services Block Grant national outcome measure definition [18], respondents were coded as experiencing PDS if they answered “always” or “often” to either question, and not experiencing PDS if they answered “sometimes,” “rarely,” or “never” to both questions.

2.4 | Maternal Characteristics

PRAMS data include maternal characteristics from the linked birth certificate. Age (≤ 24 years, 25–29 years, 30–34 years, and ≥ 35 years) and education (less than high school, high school degree or GED, some college, and college degree or higher) were categorized based on frequency distributions. Marital status at delivery was dichotomized as “yes” or “no.” Race/ethnicity was categorized as Hispanic, non-Hispanic (NH) Asian, NH Black, NH White, and NH all other races (includes American Indian/Alaska Native, other race, and multiple races selected). Due to small sample size, American Indian/Alaska Native ($n < 20$) and Native Hawaiian or Pacific Islander ($n = 0$) are not reported separately.

Pregnancy intention and Medicaid status were obtained from PRAMS responses and dichotomized as “yes” or “no.” Respondents who indicated, “I wanted to be pregnant later” (mistimed), “I didn’t want to be pregnant then or at any time in the future” (unwanted), or “I wasn’t sure what I wanted” (uncertain) were categorized as unintended pregnancies. Respondents who indicated Medicaid as their insurance 1 month prior to pregnancy, during pregnancy, or when surveyed were categorized as Medicaid insurance. Persons with any other types of insurance or no insurance across all three time points were categorized as not having Medicaid insurance because of small counts ($\sim 1\%$ of study population).

2.5 | Analytic Sample and Methods

Following PRAMS’ skip patterns, respondents were excluded if their infant was not alive or not living with them when surveyed ($n = 110$; 1.7% of original sample), leaving an eligible study population of $n = 6242$. Of these, 198 (3.2%) had missing values on at least one social support question, 74 (1.2%) had missing values on PDS, and 179 (2.9%) had missing values on at least one maternal characteristic, leading to their exclusion from the final analytic sample ($n = 5886$; 94.3% of the eligible study population).

We used survey procedures in SAS 9.4 to account for the PRAMS survey design and to obtain weighted estimates representative of Illinois postpartum women who delivered a live birth. We calculated prevalence estimates of social support and PDS and used chi-square statistics to determine whether prevalence varied by maternal characteristics. We used logistic regression to estimate crude and adjusted odds ratios (OR) and 95% confidence intervals (CI) separately for the association of each social support variable (instrumental,

partner emotional, and a composite support measure) and PDS. Multivariable models adjusted for all selected maternal characteristics. For all analyses, $p < 0.05$ was used to establish statistical significance.

As an alternative to the composite support measure, and to assess potential multiplicative interaction between instrumental support and partner emotional support, we built a multivariable logistic model that included independent effects for the two types of social support, a pairwise interaction term for the two types of support, and all maternal characteristics. Finally, to ensure that findings were not substantially affected by the SARS-CoV-2 pandemic, we conducted a sensitivity analysis that excluded 2020 births.

3 | Results

Maternal characteristics of the study population are shown in Table 1. Approximately 41.0% had a college degree or higher and 31.3% were 30–34 years old. More than half of Illinois postpartum women were NH White (55.9%), did not have Medicaid insurance (58.2%), were married (61.3%), and had births resulting from intended pregnancies (59.1%).

Among Illinois postpartum women, 77.0% had high instrumental support and 79.3% had high partner emotional support (Table 2). There were statistically significant differences in the distributions of both types of support for each maternal characteristic ($p < 0.0001$). High levels of both support types were most common among women who: had a college degree or higher, were 30–34 years old, did not have Medicaid insurance, were married, and had an intended pregnancy. High instrumental support was highest among NH White women (84.7%) and lowest among NH Asian women (58.7%). In contrast, high partner emotional support was highest among NH Asian women (88.4%) and lowest among NH Black women (66.1%).

Among Illinois postpartum women, 63.5% had high composite support, 29.3% had moderate composite support, and 7.1% had low composite support (Table 3). There were statistically significant differences in the distribution of the composite support measure for each maternal characteristic ($p < 0.0001$). Groups with high levels of both support types also had high composite support. Low composite support was most common among women who: had less than a high school education, were 24 years old or younger, were NH Black, had Medicaid insurance, were not married, and had an unintended pregnancy.

Approximately 9.6% of Illinois postpartum women experienced PDS, and there were statistically significant ($p < 0.0001$) differences in PDS by all maternal characteristics (Table 4). The highest prevalence of PDS was reported by women who had less than a high school degree, were 24 years and younger, had Medicaid insurance, were not married, and had an unintended pregnancy. When comparing PDS by race/ethnicity, NH White women had the lowest PDS prevalence (8.5%) and NH Black women had the highest PDS prevalence (12.9%).

The prevalence and crude and adjusted OR for PDS for each type of social support are shown in Table 5. PDS was reported by 6.7% of women with high instrumental support compared to 19.2% of women with low instrumental support (crude OR = 3.3, 95% CI =

2.7–4.0). After adjusting for maternal characteristics, those with low instrumental support had approximately three times the odds of PDS compared to those with high instrumental support (adjusted OR = 3.1, 95% CI = 2.5–3.8). Similarly, PDS was reported by 7.3% of women with high partner emotional support compared to 18.4% of women with low partner emotional support (crude OR = 2.9, 95% CI = 2.3–3.5). After adjusting for maternal characteristics, those with low partner emotional support had approximately two- and a-half times the odds of PDS compared to those with high partner emotional support (adjusted OR = 2.5, 95% CI = 2.1–3.2).

The three levels of the composite support measure showed a dose–response relationship with PDS (Table 5). PDS was reported by 5.4% of women with high composite support, compared to 14.1% of women with moderate composite support (crude OR = 2.9, 95% CI = 2.3–3.6), and 28.4% of women with low composite support (crude OR = 7.0, 95% CI = 5.2–9.3). After adjusting for maternal characteristics, compared to those with high composite support, women with moderate composite support had approximately three times the odds of PDS (adjusted OR=2.7, 95% CI=2.2–3.4) and women with low composite support had approximately six times the odds of PDS (adjusted OR = 6.1, 95% CI = 4.5–8.2).

In the model that included an interaction term for instrumental support and social support, the beta coefficient for the interaction term was not statistically significant ($p = 0.40$), demonstrating no statistically significant multiplicative interaction for the effects of instrumental support and partner emotional support on PDS (results not shown).

The sensitivity analyses that used alternate definitions for each social support type (instrumental, partner emotional and a composite support measure) did not substantially change the direction or magnitude of the results, demonstrating that the findings were robust to the coding decisions; finally, excluding 2020 deliveries from our adjusted models did not substantively change the findings (results not shown).

4 | Discussion

This study showed PDS were associated with instrumental support, partner emotional support, and a composite support measure among Illinois postpartum women who delivered a live birth in 2016–2020. These associations persisted after adjusting for maternal characteristics. The composite support measure showed a dose–response relationship with PDS, with increasing PDS prevalence as social support decreased across three levels. This is consistent with another cross-sectional study which found that pregnant women who had more social support exhibited lower psychological stress and displayed fewer depressive symptoms, compared to pregnant women with less social support [19]. Our study also demonstrated that instrumental support, partner emotional support, and a composite support measure significantly differed by maternal education, age at delivery, race/ethnicity, Medicaid insurance status, marital status, and pregnancy intention.

The prevalence of instrumental support and partner emotional support had similar patterns across all maternal characteristics, except for race/ethnicity. Specifically, NH Asian women had the lowest prevalence of high instrumental support and the highest prevalence of high

partner emotional support. This demonstrates the importance of assessing multiple types of social support, as evaluating one may not fully represent social support experiences and could result in under- or over-estimation of the relationship with PDS. Our study did not specifically examine the role of race/ethnicity in the relationship between social support and PDS. One qualitative study showed there are racial/ethnic differences in the way women ask for help from their social networks, underscoring the dynamic nature of how cultural perceptions of social support can influence PPD [8]. Another study looking at a racially and ethnically diverse group of women found that higher levels of social support had a strong protective association against PPD for all races/ethnicities; however, social support was more protective against PPD for White women than for Black or Latina women [10].

This research is important for healthcare professionals who can leverage clinical interactions to assess social support needs and connect new mothers and families to resources as a potential strategy to mitigate PDS. Healthcare professionals are uniquely qualified to be key players in supporting first-time mothers in the early postpartum period and “fostering emotional functional social support from significant others within mothers’ social network.” [6] The American College of Obstetrics and Gynecologists (ACOG) acknowledges that many women lack formal or informal support in the first 6 weeks postpartum and suggests that providers work with their patients during prenatal care to identify sources of postpartum social and material support [20]. In a recent survey of U.S. postpartum care providers, most respondents identified transitioning to parenthood, which included evaluating sources of social support, as an important priority for their patients [21]. Healthcare providers realize the importance of social support, but likely need more resources to engage and support patients with their social support needs.

This study is unique because it utilizes two PRAMS questions to assess multiple aspects of social support, instrumental support and partner emotional support, separately and in combination. The two previous studies using PRAMS or PRAMS-like data did not assess partner emotional support in combination with other types of support, so our approach is innovative and unique [16, 17]. Our study proposes a composite support measure that could be replicated in other PRAMS jurisdictions that use these questions.

This study has several limitations inherent to the PRAMS design. First, PRAMS data are cross-sectional, so a causal relationship between PDS and social support cannot be determined. However, longitudinal studies demonstrated the overall protective influence of social support on PDS at 1 year postpartum among adolescent women [12], and that low perceived social support at 1 month postpartum predicted depressive symptoms at 6 months among first-time mothers [22]. In our study, the PDS and social support questions of interest all began with the phrase “since your new baby was born,” so were not specific to a certain point in the postpartum period. The association of PDS and social support could vary based on the timing of survey response, but we did not explore response timing in this study. Due to question phrasing, we could also not assess social support during pregnancy, which has also been shown to be associated with PDS [23]. Finally, PRAMS data may be subject to reporting and recall biases. This study relied on self-reported symptoms that are common with PPD, but a report of PDS is not indicative of a clinical diagnosis of PPD. Self-reported PDS may be underreported due to social desirability bias, but this misclassification would

likely lead our study to underestimate the true relationship between PDS and social support. Additionally, these symptoms may be related to other mental health conditions and are not specific to PPD.

There are also limitations to the measurement of social support in this study. First, we could not assess emotional support from non-partners, informational support, or appraisal support, due to lack of Illinois PRAMS questions; thus, our study was limited to instrumental support and partner emotional support. When social support is assessed in clinical practice, it is standard to use an instrument that asks about multiple types of social support and weighs each type of support equally, such as the Multidimensional Scale of Perceived Social Support [24]. We measured instrumental support by the respondent's perceived ability to receive five specific supports from her social network and did not reflect actual support received, nor the source. The question measuring partner emotional support asks only about support from a "husband or partner," with no mention of other relationships. As a result, this question may not be applicable to all intimate relationships and does not specifically assess other sources of emotional support (e.g., family and friends). This study was also not able to assess the complexities of nonmarital relationships nor how the woman's current living/housing situation may affect partner emotional support. One study found that both intimate partner support and friend/family support were independently associated with a significantly lower risk of PPD for all women, but intimate partner support had a greater impact on PPD than friend/family support for married and cohabiting women, and was equal in magnitude to friend/family support for single women [25]. This reiterates the nuanced complexity of how partner emotional support could impact PPD.

While this study examined and controlled for factors that were determined to confound the relationship between PDS and social support, possible residual confounding exists. Namely, we could not control for history of other mental health conditions, though prepregnancy depression and anxiety has been associated with increased risk of PPD [26]. Medicaid enrollment was used as a proxy for socioeconomic status, but this may not sufficiently address confounding. Unmeasured confounders could affect the magnitude of the association of PDS and social support in either direction.

It is worth noting that this study time frame included mostly births prior to the SARS-CoV-2 pandemic but did include 2020 births. Normal social support patterns during 2020 and beyond may have been disrupted due to the restriction of social gatherings and quarantine measures. Additionally, rates of depression symptoms among U.S. adults increased during the pandemic, particularly for those with low household income and who were unmarried [27]. However, a sensitivity analysis excluding 2020 births from our adjusted models did not substantively change our findings. Future analyses could compare the patterns of social support and PDS pre- and postpandemic for postpartum women to assess how support patterns may have shifted.

5 | Conclusion

This study contributes to an ongoing body of U.S. research that demonstrates a protective association between maternal social support and PDS. Our findings reiterate the importance

of addressing social support for postpartum individuals within clinical and community health settings. These findings support efforts such as ACOG's Guidelines for Perinatal Care which calls for creating a care team inclusive of postpartum family and friend support [28]. The routine assessment of social support during perinatal care might also offer important context for the screening, prevention, and clinical management of PPD and could prompt connections to supportive services. Public health and clinical care entities could consider new programs to increase social support for new parents or ways to enhance social support elements within existing programs. Research has demonstrated that those at high risk for PPD may benefit from maternal supports such as home visitation and peer support [29]. Studies from various countries suggest that interventions such as couples counseling, interpersonal psychotherapy, and follow-up calls from an advanced practice nurse may be effective in improving social support among postpartum individuals [30]. Ultimately, acknowledging social support as a powerful asset during the postpartum period, and working to bolster that support, could improve postpartum mental health for mothers.

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Data Availability Statement

The data that support the findings of this study are available from the Illinois Department of Public Health. Restrictions apply to the availability of these data, which were used under license for this study. Requests for Illinois PRAMS datasets are reviewed on an individual basis. Publicly available data can be accessed at: <https://dph.illinois.gov/data-statistics/pregnancy-risk-assessment-monitoring-system.html>.

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TABLE 1 |
Maternal characteristics of Illinois women with a recent live birth, Illinois PRAMS 2016–2020 ($n = 5886$).

Maternal characteristic	Unweighted n	Weighted %	(95% CI)
Education			
Less than high school	580	10.5	9.6–11.5
High school degree	1219	22.3	21.0–23.5
Some college	1568	26.2	25.0–27.4
College or more	2519	41.0	39.6–42.4
Age at delivery (years)			
Less than 25	1129	20.9	19.7–22.1
25–29	1571	27.4	26.1–28.7
30–34	1920	31.3	30.0–32.6
Greater than 35	1266	20.4	19.3–21.5
Race/Ethnicity			
Hispanic	1116	20.8	19.6–22.0
Non-hispanic Asian	385	5.7	5.1–6.3
Non-hispanic black	994	15.6	14.5–16.6
Non-hispanic white	3279	55.9	54.5–57.3
Non-hispanic all other races ^a	112	2.0	1.6–2.4
Medicaid insurance			
No	3473	58.2	56.8–59.6
Yes	2413	41.8	40.4–43.2
Marital status			
Not married	2167	38.7	37.3–40.1
Married	3719	61.3	59.9–62.7
Pregnancy intention			
Intended	3520	59.1	57.7–60.5
Unintended	2366	40.9	39.5–42.3

^aIncludes American Indian/Alaska Native (AI/AN), other race, and multi-race. AI/AN are not reported separately due to small sample size (< 20) in Illinois PRAMS. There were no Native Hawaiian or Pacific Islander respondents in Illinois PRAMS for the study years.

TABLE 2 |

Prevalence of high partner emotional support and high instrumental support among Illinois women with a recent live birth, by maternal characteristics, Illinois PRAMS 2016–2020 ($n = 5886$).

Maternal characteristic	High instrumental support weighted % (95% CI)	High partner emotional support weighted % (95% CI)
Overall	77.0 (75.8–78.2)	79.3 (78.2–80.5)
Education		
Less than high school	63.2 (58.7–67.7)	75.0 (70.9–79.1)
High school degree	68.3 (65.4–71.3)	76.2 (73.5–78.9)
Some college	76.2 (73.9–78.6)	73.9 (71.4–76.3)
College or more	85.8 (84.4–87.3)	85.7 (84.2–87.2)
Age at delivery (years)		
24 and younger	70.4 (67.4–73.4)	68.9 (65.8–71.9)
25–29	75.2 (72.8–77.5)	80.8 (78.6–83.0)
30–34	81.6 (79.6–83.5)	83.7 (81.9–85.6)
35 and older	79.3 (76.8–81.7)	81.4 (79.0–83.8)
Race/Ethnicity		
Hispanic	66.4 (63.3–69.5)	78.9 (76.2–81.5)
Non-hispanic Asian	58.7 (53.2–64.2)	88.4 (84.9–92.0)
Non-hispanic black	70.9 (67.6–74.2)	66.1 (62.7–69.5)
Non-hispanic white	84.7 (83.3–86.0)	82.3 (80.9–83.8)
Non-hispanic all other races ^a	73.3 (64.2–82.3)	78.5 (69.8–87.2)
Medicaid insurance		
No	83.7 (82.3–85.0)	84.1 (82.8–85.5)
Yes	67.7 (65.6–69.8)	72.7 (70.6–74.7)
Marital status		
Married	80.9 (79.5–82.3)	86.6 (85.5–87.8)
Not married	70.9 (68.7–73.1)	67.8 (65.6–70.1)
Pregnancy intention		
Intended	80.8 (79.3–82.2)	85.5 (84.2–86.8)
Unintended	71.6 (69.6–73.7)	70.5 (68.5–72.6)

^aIncludes American Indian/Alaska Native (AI/AN), other race, and multi-race. AI/AN are not reported separately due to small sample size (< 20) in Illinois PRAMS. There were no Native Hawaiian or Pacific Islander respondents in Illinois PRAMS for the study years.

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TABLE 3 |

Prevalence of a composite measure of social support^a among Illinois women with a recent live birth, by maternal characteristics, Illinois PRAMS 2016–2020 (*n* = 5886).

Maternal characteristic	High composite support weighted % (95% CI)	Moderate composite support weighted % (95% CI)	Low composite support weighted % (95% CI)
Overall	63.5 (62.1–64.9)	29.3 (28.0–30.6)	7.1 (6.4–7.9)
Education			
Less than high school	49.5 (44.9–54.2)	39.1 (34.6–43.7)	11.3 (8.3–14.4)
High school degree	54.2 (51.1–57.3)	36.1 (33.1–39.1)	9.7 (7.8–11.5)
Some college	59.9 (57.2–62.6)	30.3 (27.8–32.8)	9.8 (8.1–11.5)
College or more	74.5 (72.7–76.3)	22.5 (20.8–24.3)	3.0 (2.3–3.7)
Age at delivery (years)			
24 and younger	52.0 (48.7–55.3)	35.2 (32.0–38.4)	12.8 (10.5–15.0)
25–29	62.6 (60.0–65.2)	30.8 (28.3–33.3)	6.6 (5.3–8.0)
30–34	70.5 (68.2–72.7)	24.4 (22.3–26.5)	5.1 (4.0–6.2)
35 and older	65.9 (63.0–68.7)	29.0 (26.2–31.7)	5.2 (3.8–6.5)
Race/Ethnicity			
Hispanic	54.5 (51.3–57.8)	36.2 (33.1–39.4)	9.2 (7.3–11.2)
Non-hispanic Asian	53.1 (47.5–58.7)	40.9 (35.5–46.4)	6.0 (3.3–8.6)
Non-hispanic black	50.4 (46.8–54.1)	36.1 (32.7–39.6)	13.4 (11.0–15.9)
Non-hispanic white	71.7 (70.0–73.4)	23.6 (22.0–25.2)	4.7 (3.9–5.5)
Non-hispanic all other races ^b	59.7 (49.7–69.7)	32.3 (22.7–41.9)	8.0 (2.2–13.8)
Medicaid insurance			
No	72.0 (70.3–73.6)	23.9 (22.3–25.4)	4.1 (3.4–4.9)
Yes	51.7 (49.5–54.0)	36.9 (34.7–39.1)	11.3 (9.9–12.8)
Marital status			
Married	71.3 (69.8–72.9)	24.8 (23.3–26.4)	3.8 (3.1–4.5)
Not married	51.1 (48.7–53.5)	36.5 (34.2–38.8)	12.4 (10.8–14.0)
Pregnancy intention			
Intended	70.3 (68.6–72.0)	25.6 (24.0–27.2)	4.1 (3.3–4.8)
Unintended	53.7 (51.5–56.0)	34.7 (32.5–36.8)	11.6 (10.1–13.1)

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The levels of the measure of composite support are defined as: “high” = high level of both instrumental support and partner emotional support, “moderate” = high level of one type of support (either instrumental or partner emotional), and “low” = low level of both instrumental support and partner emotional support.

^g Includes American Indian/Alaska Native (AI/AN), other race, and multi-race. AI/AN are not reported separately due to small sample size (< 20) in Illinois PRAMS. There were no Native Hawaiian or Pacific Islander respondents in Illinois PRAMS for the study years.

TABLE 4 |

Prevalence of postpartum depression symptoms among women with a recent live birth, by maternal characteristics, Illinois PRAMS 2016–2020 ($n = 5886$).

Maternal characteristic	Postpartum depression symptoms	
	Weighted %	(95% CI)
Overall	9.6	8.8–10.4
Education		
Less than high school	12.3	9.3–15.4
High school degree	10.9	9.0–12.9
Some college	11.6	9.9–13.4
College or more	6.8	5.8–7.9
Age at delivery (years)		
24 or younger	14.3	12.0–16.6
25–29	10.6	8.9–12.3
30–34	7.6	6.3–8.9
35 or older	6.4	4.9–7.9
Race/Ethnicity		
Hispanic	9.7	7.8–11.7
Non-hispanic Asian	10.8	7.3–14.2
Non-hispanic black	12.9	10.5–15.3
Non-hispanic white	8.5	7.4–9.5
Non-hispanic all other races ^a	10.6	4.3–16.8
Medicaid insurance		
No	7.4	6.5–8.4
Yes	12.6	11.1–14.1
Marital status		
Married	7.8	6.9–8.7
Not married	12.4	10.9–14.0
Pregnancy intention		
Intended	7.7	6.8–8.7
Unintended	12.2	10.8–13.7

^aIncludes American Indian/Alaska Native (AI/AN), other race, and multi-race. AI/AN are not reported separately due to small sample size (< 20) in Illinois PRAMS. There were no Native Hawaiian or Pacific Islander respondents in Illinois PRAMS for the study years.

Prevalence, crude odds ratios (OR), and adjusted odds ratios of postpartum depression symptoms among Illinois women with a recent live birth, by level of social support, Illinois PRAMS 2016–2020 ($n = 5886$).

^cAdjusted for education, age at delivery, race/ethnicity, medicaid insurance, marital status, and pregnancy intention. Separate logistic regression models were used to estimate the association of each social support variable (instrumental, partner emotional, and composite supports) and postpartum depression symptoms.