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Improving Postpartum Depression Screening Practices in the Postpartum Setting

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Abstract

Problem: Postpartum Depression (PPD) is frequently undetected in women due to barriers that limit effective recognition and diagnosis. Depression screenings and treatment referrals improve outcomes in the immediate postpartum period. Follow-up methods for positive depression screens are often missed by postpartum care teams.

Methods: A descriptive, observational design was used for this quality improvement project. A formalized depression screening protocol was created to help guide nursing staff on a Postpartum Unit when detecting a positive depression screen. Convenience sampling was utilized and the sample included patients aged 18-45. Data collected throughout this quality improvement project included Edinburgh Postnatal Depression Scale (EPDS) scores greater than 10 and the number of completed and/or missed social work consults and OBGYN notifications.

Results: A total of 66 positive depression screens were identified during data collection. Prior to the implementation of the QI project, social work consults were completed at a rate of 96.9% (n = 31), and 3.1% (n = 1) were missed. The rate of completed OBGYN notifications was 62.5% (n = 5), and 37.5% (n = 3) were missed. After implementing the QI project, the rate of completed social work consults increased to 100% (n = 34), and 0% (n = 0) were missed. The rate of completed OBGYN notifications increased to 81.8% (n = 9), and 18.2% (n = 2) were missed. Completed follow-up methods for positive depression screens were improved by utilizing a depression screening protocol.

Implications for Practice: Implementing a formalized depression screening protocol is an effective intervention to help improve routine screening and completion of follow-up methods for positive depression screens leading to favorable outcomes for mothers.

Improving Postpartum Depression Screening Practices in the Postpartum Setting

Postpartum depression (PPD) is a diagnosis of depression made in the first 12 months after the delivery of an infant. One in seven women will be affected by PPD (Van Niel & Payne, 2020). However, due to barriers that limit effective recognition and diagnosis of PPD, it often goes underdiagnosed. Less than 20% of women diagnosed with PPD had reported their symptoms to a healthcare provider (The American College of Obstetricians and Gynecologists [ACOG], 2018). Normal postpartum symptoms include changes in sleep patterns, fatigue, or changes in appetite which are often symptoms attributed to PPD leading to a more difficult distinction from expected postpartum behaviors (Van Niel & Payne, 2020). There remains a stigma surrounding PPD, and new mothers may be hesitant to pursue help due to an overwhelming sense of shame and embarrassment.

The literature demonstrates inconsistencies in screening, treatment, and referrals for PPD due to limited education on perinatal mental health for healthcare providers. Depression screenings and further evaluations help improve outcomes in the immediate postpartum period. On average only 55% of healthcare providers screen for PPD ever, sometimes, often, or always (Long et al., 2017). Healthcare providers' lack of comfort with screening postpartum patients for depression, and their comfort level with discussing perinatal mental health can lead to inconsistencies with routine screening and missed treatment referrals resulting in undetected and undiagnosed PPD in women.

Postpartum depression has a substantial effect on maternal well-being and the mother-infant relationship. For the mother, it can lead to intense sadness, marked anxiety, and a lack of interest in life and the child, often resulting in poor or absent maternal

bonding with the infant (Van Niel & Payne, 2020). Postpartum depression inhibits maternal and infant bonding, leading to developmental problems for the infant including impaired cognitive, behavioral, and emotional development, and delayed social and communication skills (Van Niel & Payne, 2020). Repercussions of untreated PPD can be detrimental to both the mother and the infant. The second-leading cause of death for women during the postpartum period is suicide (Van Niel & Payne, 2020). Detecting and treating PPD is not only imperative for mothers in reducing adverse effects, but it is also imperative for the infant.

Postpartum depression affects 10% to 20% of women in the United States during pregnancy, the postpartum period, or both (Van Niel & Payne, 2020). More than half a million women will develop PPD each year, and half of these women will face obstacles and barriers that lead to the prevention of seeking and/or receiving treatment (Van Niel & Payne, 2020). During postpartum visits, one in eight women reported their healthcare provider did not ask them about PPD (Bauman et al., 2020).

Screening for PPD is a standard of care that is significantly lacking within the healthcare system. Several organizations have recommendations that address perinatal mental health. The U.S. Preventative Service Task Force (USPSTF) recommends screening all adults for depression, including pregnant and postpartum women. The American College of Obstetricians and Gynecologists recommends screening once during the perinatal period and again at the postpartum visit. The American Academy of Pediatrics (AAP) recommends screening during well-child visits.

The purpose of this quality improvement project is to implement a formalized depression screening protocol on a postpartum unit to help identify patients at risk of

developing PPD, who would benefit from further evaluation and referrals. The Institute for Healthcare Improvements (IHI) Model for Change was selected as the framework for this quality improvement project utilizing the Plan-Do-Study-Act (PDSA) cycle. This project aims to increase the rate of completed social work consults and OBGYN notifications for positive depression screens by 10% over two months by implementing a formalized depression screening protocol. The primary outcome measure is the number of completed social work consults for those positive depression screens (Edinburgh Postnatal Depression Scale [EPDS] score greater than or equal to 10). The secondary outcome measure is the number of completed OBGYN notifications (OBGYN is notified by the RN when a patient has an EPDS score of 13 or higher, allowing them to follow up with the patient) for depression screenings greater than or equal to 13. The study question for this project is: In postpartum women ages 18-45 in the hospital setting, what is the effect of implementing a formalized depression screening protocol on the rate of completed social work consults and OBGYN notifications for positive depression screens over two months?

Review of Literature

To conduct a literature search, the following search engines were utilized: Academic Search Complete, CINAHL, Cochrane Library, Medline, and PubMed. Key search terms and phrases used throughout the literature search included *barriers, education, Edinburgh Postnatal Depression Scale, infant outcomes, perinatal mood disorder, postpartum depression, social work, screening practices, and routine,* with AND and OR Boolean operators utilized. Inclusion criteria included publications from 2017 to 2022, those with full text, published in English, and publications focused on

depression in postpartum women, screening tools for detection of postpartum depression, postpartum women group, female, as well as an age range from 18-45. Exclusion criteria included publications not published within the last five years, not published in English, publications that did not include women in the postpartum period or did not focus on depression in postpartum women, or an age range from 18-45.

One of the most common screening tools used to assess depression in women during the perinatal period is the EPDS (Moraes et al., 2017). The EPDS includes 10 self-reported questions to assess the risk of pregnant and postpartum women's likelihood of developing depression during the perinatal period. Cut-off values are executed to aid in identifying women who are at risk of developing PPD. Levis et al. (2020) reported a cut-off value of 10 or higher and 13 or higher to identify women at risk for developing depression. In comparison, Moraes et al. (2017) reported three different cut-off values to identify the risk of developing PPD: 9-10 (possible depression), 12-13 (probable depression), and 14-15 (probable depression for pregnant women). The EPDS is known to have a high accuracy in determining the risk of women developing PPD. Levis et al. (2017) looked at combined sensitivity and specificity for cut-off values of 10 (sensitivity 92% and specificity 77%), 12 (sensitivity 86% and specificity 87%), and 13 or higher (sensitivity 79% and specificity 89%). Moraes et al. (2017) did not look at specific cut-off values but determined significant levels of sensitivity (86%) and specificity (87%) for the EPDS screening tool. Using the EPDS as a validated screening tool will help improve the detection and evaluation of depression in postpartum women.

In addition to using a validated screening tool such as the EPDS, achieving improved screening and referral rates can be accomplished by implementing a

standardized depression screening protocol through healthcare organizations. Puryear et al. (2019) and Miller et al. (2019) found that depression screening policies improved the following areas: PPD screening, treatment for women who screen positive, and linkage to mental health care. Puryear et al. (2019) introduced a universal screening for perinatal mood disorders to increase access to perinatal mental health services. There were a total of 102,906 completed EPDS screens, with 3,893 (3.8%) referrals received and 2,171 (55.8%) completed within 60 days (Puryear et al., 2019). In comparison, Miller et al. (2019) evaluated how the initiation of a depression screening protocol was associated with increased screening frequency and depression treatment following a positive screen. Screening improvement increased from 69.5% to 90% after introducing a universal protocol (Miller et al., 2019). Mental health referrals increased as well after a depression screening protocol was enacted (Miller et al., 2019).

Lind et al. (2017) aimed to introduce a PPD screening program to identify and treat women at an increased risk of depression in the postpartum period. An 87.1% screening rate was completed during postpartum visits (Lind et al., 2017). Although no pre-implementation process screening rate was stated, the post-screening rate is comparable to the findings from Miller et al. (2019). Possible depression was detected in 7.8% of women with a positive EPDS screen. Integrating a universal PPD screening program resulted in higher screening rate completion, and higher referral rates for women with PPD (Lind et al., 2017). Improving screening and referral rates will lead to improved outcomes for the mother and the infant.

Postpartum depression is often associated with a stigma, which discourages women from seeking treatment. Not wanting to be seen as “crazy” or having a “mental

illness" enabled mothers to hide depression symptoms (Hansotte et al., 2017). Many reported withdrawing during PPD because of fear of the stigma (Hansotte et al., 2017). Iturralde et al. (2021) found similar findings behind the stigma of PPD but enhanced this understanding by studying how the stigma impacted women from distinct racial/ethnic backgrounds.

The surrounding stigma attached to PPD is only one type of barrier women face when trying to access treatment. Common physical barriers to treatment and management of depression in postpartum women include a lack of childcare, transportation, and financial resources (Hansotte et al., 2017). Iturralde et al. (2021) identified time constraints as a major barrier to treatment engagement. Lack of awareness by the mother about PPD itself or the treatment options available was identified as a barrier (Hansotte et al., 2017). Iturralde et al. (2021) similarly found that women diagnosed with PPD lack an understanding of treatment options and where to find help. Barriers that hinder the treatment and management of depression in postpartum women must be addressed to improve the rate of treatment engagement.

Untreated PPD in mothers leads to detrimental consequences for the infant. Failure to thrive, lower body weight, and short stature are found in infants with mothers diagnosed with PPD (Akcan & Guler, 2021). In comparison, Slomian et al. (2019) also found infants to have a lower body weight when mothers were depressed compared to infants of nondepressed mothers. Mothers with depression are less likely to ensure age-appropriate vaccinations are completed, as well as completion of well-child visits between six and 24 months (Slomian et al., 2019). On top of missing vaccinations and well-child visits, Akcan and Guler (2021) further found that mothers with PPD are less

likely to comply with recommendations from healthcare providers.

Depression symptoms are known to have a negative effect on breastfeeding rates. Slomian et al. (2019) found significant negative effects of maternal depression symptoms on breastfeeding. Mothers with depression symptoms were significantly more likely to discontinue breastfeeding in the first months (Slomian et al., 2019). A significant inverse relationship between depression symptoms and breastfeeding at 6 weeks postpartum, but not at 12 weeks was found (Slomian et al., 2019). In comparison, Akcan and Guler (2021) observed that shorter periods of breastfeeding and early discontinuation are often associated with depressed mothers. Healthy feeding practices for the infant are less likely to be engaged for an infant of depressed mothers (Slomian et al., 2019). The negative impact PPD has on mothers leads to devastating consequences on the health of the infant.

Lack of continuing education and professional development for providers can significantly impact the screening rate and treatment referrals for postpartum women with depression. Accortt et al. (2022) and Legere et al. (2017) identified a lack of confidence among providers when caring for women experiencing mental health symptoms due to a lack of experience. Enhancing provider knowledge and confidence is accomplished through continuing education and professional development (Legere et al., 2017). Accortt et al. (2022) found that baseline screening rates were 10% and the screen positive rate was 0.04% before the implementation of educational interventions. Screening rates then increased to 67% and the screen positive rate increased to 4% (Accortt et al., 2022). Similarly, Legere et al. (2017) found that increased levels of knowledge led to improved screening efficiency and overall favorable outcomes for postpartum women with depression. This review recognized an emphasis for ongoing professional development

and continued education for providers regarding perinatal mental health. Providers are presented with the challenging task of identifying women in the postpartum period at risk of developing depression; however, with proper training and education, postpartum women can be more easily identified and referred to treatment.

The IHI Model for Change is a well-known evidence-based practice framework used for tests of change. This framework will be utilized throughout the quality improvement project to provide guidance. PDSA cycles provide continuous improvement and carry out small-scale changes over a short period. PDSA cycles will have the most beneficial impact on implementing a formalized depression screening protocol to improve patient outcomes.

Postpartum depression is a serious complication diagnosed in the postpartum period. Universal screening for PPD leads to early detection, adequate treatment referrals, and improved outcomes for women. Screening recommendations addressing perinatal mental health have already been enforced by several organizations. Despite these recommendations, those with PPD often go undiagnosed due to inconsistencies in the screening and referral process. The continued stigma of PPD can leave women ashamed and unable to seek care, while the effects of untreated PPD can result in devastating outcomes for both mothers and infants. Those who do seek treatment are often faced with a multitude of barriers to engaging in treatment. Limited research is available regarding the importance of completed social work consults, along with referral recommendations for postpartum women with positive depression screens.

Methods

Design

A descriptive, observational design was used for this quality improvement project. Data were collected both retrospectively and prospectively. Data collection included EPDS scores greater than 10 and the number of completed and/or missed social work consults and OBGYN notifications. A retrospective chart review was conducted from January 2023 through February 2023. Prospective data was generated by implementing a formalized depression screening protocol on a Postpartum Unit from March 2023 through April 2023, and post-implementation data was summarized in mid-May 2023.

Setting

This project took place in a Midwest community hospital on a postpartum unit with 31 beds. This hospital is part of a nonprofit healthcare organization delivering services to residents in the region.

Sample

Convenience sampling was used for this project. Postpartum patients in the age range of 18 to 45 were included. Patients identified outside of the stated age were omitted. Patients were screened with the EPDS tool one time during their hospital stay. The desired sample size was approximately 75 positive depression screens within an 8-week time frame.

Approvals

Formal, written approval was obtained from the institution's nursing shared governance council on September 15, 2022. Formal, written approval was obtained from the hospital's Institutional Review Board (IRB) on October 26, 2022. Formal, written approval was obtained by the university IRB on February 12, 2023. No risks have been identified from this project. Benefits include increased awareness of PPD for postpartum

patients and the nursing staff. Postpartum patients gained increased awareness of the risk of developing PPD during the postpartum period, and resources to seek treatment if needed. An ethical consideration noted throughout the project's implementation was the sensitivity of questions being asked throughout the EPDS. Sensitivity from the EPDS may lead to uncomfortable feelings for some postpartum patients, thus leading to falsifying answers.

Interventions

A formalized depression screening protocol was created by the Doctor of Nursing Practice (DNP) candidate for nursing staff to use as a guide when detecting positive depression screenings among postpartum patients. Education was provided to all postpartum staff nurses utilizing a teach-back method. Scores of 10 or higher on the EPDS indicate a positive depression screen, resulting in a social work consult prior to discharge. Scores of 13 or higher on the EPDS indicate a social work consult and OBGYN notification is needed prior to discharge. This protocol provided nursing staff with step-by-step instructions on actions to take when a positive depression screen is identified.

Data Collection and Analysis

A retrospective chart review containing quantitative, descriptive data regarding the number of positive depression screens from January 2023 through February 2023 was collected. Data were de-identified.

By the start of March 2023, the formalized depression screening protocol was implemented, and the nursing staff utilized this when a positive depression screen was detected. All positive depression screenings were documented in the EMR and became a

part of the patient's medical record. Positive depression screens, completed and/or missed social work consults, and OBGYN notifications were monitored weekly by the DNP candidate. Data were de-identified and collected in a Microsoft Word sheet, kept on the primary investigator's password protected computer. Demographic data collected included age, delivery method, gravidity and parity (GP), race, and insurance type.

To better understand the outcomes of implementing a formalized depression screening protocol, descriptive statistics were employed by using IBM SPSS Statistics (Version 27), and frequency analysis were calculated.

Results

The total number of positive depression screens was 66 (n = 66). Of the 32 patients in the pre-data period, patients' age ranged from 22 to 41, with a mean of 32 years of age. The most prevalent race/ethnicity was Caucasian (n = 23, 71.9%), followed by African American (n = 8, 25.0%). Of the sample, 34.4% (n = 11) were primiparous (first pregnancy), and 65.6% (n = 21) were multiparous (have been pregnant previously). The most prevalent delivery method was cesarean section (n = 18, 56.3%), followed by vaginal delivery (n = 14, 43.7%). United Healthcare, Blue Cross Blue Shield (BCBS), and Cigna (n = 7, 21.9%) were all identified as the most prevalent types of insurance.

Of the 34 patients in the post-data period, patients' age ranged from 22 to 40, with a mean of 31 years of age. The most prevalent race/ethnicity was Caucasian (n = 26, 76.5%), followed by African American (n = 4, 11.8%). Of the sample, 41.2% (n = 14) were primiparous, and 58.8 % (n = 20) were multiparous. The most prevalent delivery method was vaginal delivery (n = 20, 58.8%), followed by cesarean section (n = 14,

41.2%). The most prevalent type of insurance was United Healthcare (*n* = 12, 35.3%) (See Table 1).

During the pre-data period, there were 32 positive depression screenings indicating a risk of developing depression during the postpartum period. Edinburgh Postnatal Depression Screening score frequencies for pre-data include the following: 11 depression screenings with a score of 10 (*n* = 11, 34.4%), 11 with a score of 11 (*n* = 11, 34.4%), two with a score of 12 (*n* = 2, 6.3%), two with a score of 13 (*n* = 2, 6.3%), four with a score of 14 (*n* = 4, 12.5%), one with a score of 17 (*n* = 1, 3.1%), and one with a score of 20 (*n* = 1, 3.1%) (See Table 2).

During the post-data period, there were 34 positive depression screenings indicating a risk of developing depression during the postpartum period. Edinburgh Postnatal Depression Screening score frequencies for post-data include the following: 13 depression screenings with a score of 10 (*n* = 13, 38.2%), seven with a score of 11 (*n* = 7, 20.6%), three with a score of 12 (*n* = 3, 8.8%), five with a score of 13 (*n* = 5, 14.7%) three with a score of 14 (*n* = 3, 8.8%), two with a score of 15 (*n* = 2, 5.9%), and one with a score of 16 (*n* = 1, 2.9%) (See Table 3).

All positive depression screens were analyzed for the completion of the recommended follow-up method. Before implementing the QI project, the rate of completed social work consults was 96.9 % (*n* = 31), and 3.1% (*n* = 1) were missed. The rate of completed OBGYN notifications was 62.5% (*n* = 5), and 37.5% (*n* = 3) were missed. Following the implementation of the QI project, the rate of completed social work consults increased to 100% (*n* = 34), and 0% (*n* = 0) were missed. The rate of

completed OBGYN notifications increased to 81.8% (n = 9), and 18.2% (n = 2) were missed (See Figure 1).

A frequency analysis was calculated to compare the rate of completed follow-up methods for positive depression screens for pre-and-post data. The frequency analysis results indicated an improvement in the rate of completed follow-ups for both social work consults and OBGYN notifications.

Discussion

Following the implementation of a formalized depression screening protocol, completed follow-up methods for positive depression screenings were improved. Of the positive depression screens during the post-data period, all 34 patients completed social work consults prior to discharge. This indicates a 3.1% improvement from the prior completion rate of 96.9%. Therefore, the aim to increase completed social work consults prior to discharge by 10% was not achieved, although a noted increase to 100% is clinically significant. Additionally, completed OBGYN notifications improved by 19.3% following the implementation of the project, which demonstrates successfully completing the aim to increase the rate of completed OBGYN notifications for positive depression screens by 10%.

Along with completed follow-ups for positive depression screens, missed follow-ups showed progression during the post-data period. No social work consults were missed after project implementation compared to the one missed prior. Missed OBGYN notifications improved by 19.3% during the post-data period. Overall improvement was seen with both completed and missed follow-ups for positive depression screens after implementing a formalized depression screening protocol.

Limitations for this study include the following: data collected for this study was aggregated data as opposed to individual data, leading to the inability to complete statistical analysis. Instead of collecting completed or missed social work consults and OBGYN notifications for each patient with a positive depression screen, data were collected in totals by category instead of at the individual level. Time constraints for the study impacted the number of positive depression screens. Allotting a longer time period for study would likely indicate a greater number of identified positive depression screens.

Based on the study findings, it can be recommended that implementing a formalized depression screening protocol positively impacts mothers, infants, and providers. Utilizing a screening protocol leads to improvement in PPD screening, treatment for women who screen positive, and linkage to mental health care (Miller et al., 2019; Puryear et al., 2019). Following the implementation of the depression screening protocol, there was an increase in the completed follow-ups for positive depression screens. Completed follow-ups will increase awareness of treatment options, and where mothers can go to seek help for depression symptoms if needed.

It is recommended that providers have access to continued education regarding PPD and the screening process to continue providing the standard practice of care to women. Education for providers regarding the depression screening protocol and the appropriate next steps to take for a positive depression screen was beneficial in improving the completion of follow-up methods. Utilizing a depression screening protocol leads to increased provider confidence, and increased levels of knowledge leading to favorable outcomes for mothers.

Further studies should continue to focus on screening women in the perinatal period for risk of developing PPD, along with the completion of follow-up methods for those positive screens. Focusing on the benefits of implementing a depression screening protocol will ultimately change the standard practice of care provided to women in the perinatal period.

Conclusion

Postpartum depression is prevalent and often underdiagnosed, therefore screening for PPD should constitute being a substantial component of the maternal postpartum care processes. Diagnosis of depression in the postpartum period is often challenging due to the multitude of barriers that limit effective recognition and barriers to connections to care for follow-up. Implementation of a formalized depression screening protocol is an effective intervention to help improve the completion of follow-up methods for positive depression screens, which connects women to care sooner, which may decrease adverse maternal and infant outcomes.

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Appendix A

Table 1

Demographic Characteristics of Participants

		n	%
Ethnicity	Caucasian	26	76.5
	African American	4	11.8
	Asian	3	8.8
	Pacific Islander	1	2.9
	Subtotal	34	100
Primigravida vs. Multip	Primigravida	14	41.2
	Multip	20	58.8
	Subtotal	34	100
Delivery Method	C-Section	14	41.2
	Vaginal	20	58.8
	Subtotal	34	100
Insurance Type	United Healthcare	12	35.3
	Cigna	6	17.6
	BCBS	6	17.6
	Medicaid	3	8.8
	Unsure	1	2.9
	Other	6	17.6
	Subtotal	34	100
	M	Maximum	Minimum
Age	31	40	22

Note. Retrospective data collected from March 1, 2023-May 1, 2023. The output was obtained using IBM SPSS Statistics, Version 27. Blue Cross Blue Shield (BCBS).

Table 2

Edinburgh Postnatal Depression Screening (EPDS) Score Pre-Data

		n	%
	10	11	34.4
	11	11	34.4
	12	2	6.3
EPDS Score	13	2	6.3
Frequency	14	4	12.5
	17	1	3.1
	20	1	3.1

Note. 32 positive depression screenings were collected during the pre-data period. The output was obtained using IBM SPSS Statistics, Version 27.

Table 3

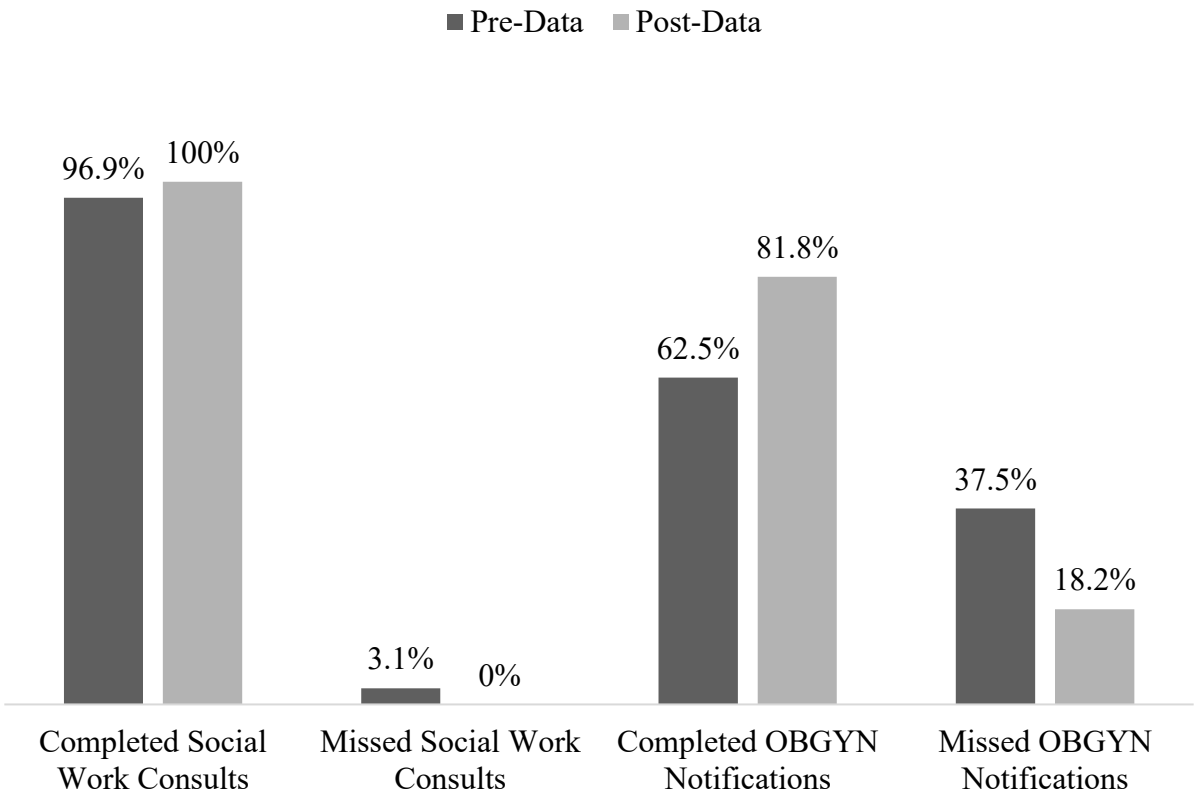
Edinburgh Postnatal Depression Screening (EPDS) Score Post-Data

		n	%
EPDS Score Frequency	10	13	38.2%
	11	7	20.6%
	12	3	8.8%
	13	5	14.7%
	14	3	8.8%
	15	2	5.9%
	16	1	2.9%

Note. 34 positive depression screenings were collected during the post-data period. The output was obtained using IBM SPSS Statistics, Version 27.

Figure 1

Positive Edinburgh Postnatal Depression Scale (EPDS) Score Follow-Up Completion Rates



Note. A total of 66 positive depression screens in postpartum patients were collected and analyzed for the completion of the appropriate follow-up method. Observed frequencies and percentages for follow-up methods for both the pre and post-data are presented.