Improving Postpartum Depression Education within the Microsystem

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Improving Postpartum Depression Education within the Microsystem

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July 25, 2024
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Abstract

BACKGROUND: Postpartum depression (PPD) is a significant mental health issue affecting a substantial percentage of new mothers, ranging from "baby blues" to severe forms like postpartum psychosis. Maternity nurses play a crucial role in early detection and education due to the gap in postpartum care follow-up appointments, which can delay necessary interventions.

LOCAL PROBLEM: Despite the critical role of maternity nurses, there is variability in their preparedness to educate and support patients regarding PPD during the immediate postpartum period. This study aims to enhance maternity nurses' knowledge and confidence in providing PPD education through a quality improvement (QI) project within a microsystem.

METHODS: A literature review was conducted using the CINAHL, Medline, and APA PsycInfo databases to identify relevant studies on PPD education for maternity staff. Four articles meeting inclusion criteria were analyzed, providing evidence-based strategies for staff education. The QI project employed the Plan-Do-Study-Act (PDSA) cycle, including pretest and posttest surveys to assess knowledge improvement following an educational intervention.

RESULTS: The QI project demonstrated a significant increase of 54% in maternity nurses' knowledge and self-efficacy regarding PPD education. Key findings include improved understanding of PPD symptoms, risk factors, and available resources among participating nurses.

CONCLUSIONS: Enhancing maternity nurses' education on PPD through targeted interventions is essential for improving patient outcomes and support during the critical postpartum period. Continued efforts to integrate evidence-based practices into nursing education and practice are recommended to address the multifaceted challenges of maternal mental health.

Keywords: Postpartum depression, maternity nurses, staff education, quality improvement, perinatal mental health, PDSA cycle
Improving Postpartum Depression Education within the Microsystem

Problem Description

Postpartum depression (PPD) has been a newsworthy topic for decades, featured on Dateline and 60 minutes to shed light on this difficult issue. PPD has resurfaced to the forefront of medical news over the past two years due to an incident in Duxbury, Massachusetts where a mother with PPD slipped into postpartum psychosis resulting in the death of her three children and an attempt to take her own life. Postpartum depression, also known as peripartum or perinatal depression, is a “medical illness involving feelings of extreme sadness, indifference and/or anxiety, as well as changes in energy, sleep, and appetite” (Varma, 2023, para. 2). PPD occurs in 6.5% to 20% of women and is diagnosed when a new mother has at least five out of the nine depressive symptoms present for a minimum of two weeks. These nine symptoms include depressed mood that is present most of the time, loss of interest or pleasure, insomnia or hypersomnia, agitation, worthlessness or guilt, fatigue, suicidal ideation or attempts, impaired concentration, and a change in weight greater than 5% over the course of one month (Mughal et al., 2022). PPD has many levels to it, ranging from the “baby blues” and symptoms of anxiety to postpartum psychosis. The “baby blues” is a short-lasting condition which usually resolves within two weeks, where new mothers experiences irritability, unexplained crying, restlessness, and anxiety (American Psychiatric Association [APA], 2023). On the other end of the spectrum, postpartum psychosis is a serious medical emergency, only occurring in one to two out of every 1,000 births, where a new mother surpasses depression symptoms and can experience insomnia, agitation, auditory hallucinations, and extreme paranoia (APA, 2023; Torres, 2020). Many times, new mothers are so focused on caring for their children that their own mental health takes a backseat, allowing for symptoms to worsen.
One of the most crucial periods in delivering PPD education is in the days immediately following childbirth. The current situation presents an assumption that PPD education will be handled within the Obstetrician and Gynecology (OB/GYN) offices in the postpartum period. However, research has shown that these appointments may not happen for up to six weeks. Maternity nurses are in a unique position to provide education to new mothers and their support systems during these few days. It is prudent that maternity nurses have a consensus of the most current education and available resources to support new mothers and families during this time. In the admission process to the birth center, all mothers fill out another Edinburg Postnatal Depression Scale (EPDS) to collect data looking for risk factors and signs of PPD. Though this information is collected, not much is done with it other than requesting a social work consultation. It is vital for maternity nurses to feel confident in their delivery of the education and be able to supply supplementary information and resources that are effective in helping new mothers and their families access these resources when signs of PPD first become apparent.

**Available Knowledge**

**Background**

Most women do not present for their own postpartum evaluation until four to six weeks after delivery, allowing for symptoms to develop during a critical period while they suffer silently and become reluctant to discuss their symptoms with their providers and support system (Lewis, 2019). With such a large gap between delivery and follow-up care, one of the most critical periods for providing PPD education is during the childbirth hospital stay. Patients delivering within hospitals are typically admitted for one to three days, which gives nurses and providers a wonderful opportunity to ensure that their patients have a good understanding of what PPD is, the signs and symptoms, as well as potential resources available. It is important for
maternity nurses to be able to provide the education themselves, rather than just relying on social work or providers, due to the intense relationship that is built and fostered throughout the time spent caring for these patients. A literature review was conducted to examine the available knowledge regarding perinatal nurse education on PPD to enhance staff’s ability to provide improved patient care. The information has been analyzed to implement a quality improvement (QI) plan within the microsystem to bolster maternity nurses’ knowledge and confidence in providing education to patients with PPD.

*Search Methods*

All articles included in this literature review were obtained through the Cumulative Index to Nursing & Allied Health Literature (CINAHL) Complete, Medline, and American Psychological Association (APA) PsycInfo databases. The Boolean phrases and keywords to complete the search included “postpartum depression OR PPD OR Postnatal depression OR PND or postpartum blues” AND “staff education OR staff learning OR nurse education OR nurse learning” AND “prevention OR intervention OR treatment OR program.” After duplicates were removed, the search resulted in a total of 56 potential articles. The inclusion criteria limited results to include academic journals from 2014 to 2024 with a subject major heading of “depression, postpartum”. The exclusion criteria eliminated articles relating to patient education rather than staff education, articles where PPD was not the primary focus, articles in different languages, a post test sample for continuing education, and articles that were below a Level 3 evidence on the Evidence Pyramid found in Appendix A. This search criteria yielded a total of four research articles to be analyzed. Appendix B demonstrates the Preferred Reporting Items for Systemic Reviews and Meta-Analyses (PRISMA) flow diagram of this search.
Critical Appraisal of Evidence

As stated previously, maternity nurses are in a distinct position to assess perinatal patients for PPD and provide the necessary education during the immediate postpartum hospital stay. Link et al. (2022, p. 30) analyzed the “where, when, and how” of the “introduction of” PPD “content” for perinatal nurses to increase their “knowledge and self-efficacy” in providing this vital education. This study provided a 30-minute web-based interactive learning model to perinatal nurses within a rural public hospital from October of 2018 to August of 2019 and to students enrolled in a Bachelor of Science in Nursing (BSN) program over the course of three semesters between 2019 and 2020. The results from this research demonstrated that BSN students gained the most knowledge regarding nursing interventions related to PPD while maternity nurses gained the most knowledge regarding assess for risk factors and correct scoring of the EPDS (Link et al., 2022, p. 35). Link et al. (2022) utilized a significance level of p < 0.05. The data analysis demonstrated significant differences for students in three out of five general knowledge items and four out of five items relating to knowledge of perinatal nursing interventions, while nurses demonstrated significant differences in one out of five general knowledge items and two out of five items relating to knowledge of perinatal nursing interventions (Link et al., 2022, pp. 33–34). The self-efficacy assessments demonstrated significant increases in all areas for both students (p = 0.000) and nurses (p = 0.000) (Link et al., 2022, p. 34). Limitations of this study include the potential lack of generalizability due to small sample size and time restraints of participants due to their demanding workloads outside of the study. The researchers data collection on BSN students was also affected by the COVID-19 pandemic. A strength of this study was that it was a controlled trial, qualifying it as a level 3 on the evidence pyramid (Appendix A). The implications for these results allow hospital
administrators and prelicensure nursing program directors to have a basis for implementing online training modules like the one described above which will lead to improvement in patient care outcomes.

Lewis (2019) conducted a controlled study of a maternity unit within a regional hospital located in the Southern United States. The article states that “adequate patient education” on PPD not only “increases an individual's knowledge” of maternal mental health, but also “promotes better communication” about the subject “between the patient and provider (Lewis, 2019, p. 7). This study utilized a pretest and posttest design where 2-hour continuing education programs were provided to staff members within the Women’s Services Unit covering information about PPD, the hospital's current PPD and baby blues patient education handout, and how to properly document that patient education was completed. The pre and post-test results demonstrated a significant (p < 0.001) increase in staff knowledge of PPD and a confidence interval of 0.96 indicating the educational intervention improved the amount of patient education being provided to patients (Lewis, 2019, pp. 9–10). The major limitation of this study was that it was conducted at one institution resulting in a small sample size, therefore limiting the generalizability of the study. The major strength of this study was that it was a controlled trial, qualifying it as a level 3 on the evidence pyramid (Appendix A). The implications of this study include the need for further investigation into the use of continuing education for perinatal nurses to combat the stigma around maternal mental health and improve health care workers ability to provide effective PPD education to their patients.

Wang et al. (2022) produced a systematic review and meta-analysis evaluating psychological training of nursing staff as a means for optimizing care for patients with PPD. This review yielded thirteen studies to be analyzed, eleven of which were face to face training models
and two of which were digital training models. The inclusion criteria for the review included study populations “limited to the discussion of nurses and midwives or health visitors as trainees”, interventions “limited to psychological training programs”, comparisons to “control group of the included studies” which have “not received psychological training or have received standard treatment training” of PPD, and finally “studies were eligible if the” EPDS “was used to report the depressive symptoms of pregnant women or women within 1 year after childbirth” (Wang et al., 2022, p. 2). The major results of this meta-analysis established that 76.9% of the studies demonstrated “enhancing nurses’ and midwives knowledge” and education skills regarding PPD (Wang et al., 2022, p. 5). Both face to face and digital training showed significant (p < 0.00001 and p = 0.002, respectively) reductions in the risk of PPD symptoms in patients (Wang et al., 2022, p. 6). Though digital training was seen to be more effective in the studies that were analyzed, more research will need to be conducted due to the small number of digital training studies included. The review also revealed that training programs of three to five days and eight days of training demonstrated more significant (p = 0.03 and p = 0.0002, respectively) reduction in patients’ PPD symptoms than training programs less than two days (p = 0.08) (Wang et al., 2022, p. 7). Limitations of this study include that most of the questionnaires were self-reported and there was a lack of appropriate blinding in most of the studies included leading to a risk of bias. Major strengths of this systematic review include the thorough evidence that psychological training can be utilized to “promote nurses’ and midwives’ competence” in educating and managing PPD symptoms within their patient population, along with the “clinically significant benefits in symptoms mitigation” that were observed (Wang et al., 2022, p. 8). As a systematic review and meta-analysis, this article qualifies as a level 1 on the evidence pyramid (Appendix A). The results provided in this review will serve as an important reference
in creating continuing education material for nurses’ and midwives’ managing the care of patients with PPD.

Tzitiridou-Chatzopoulou et al. (2024) produced a dynamic bibliometric review evaluating digital training on treatment for women with PPD for maternity nurses and midwives to improve care for patients and protect infants. The review yielded a total of 585 articles to be included in the bibliometric analysis through a ten-step search formula using keywords such as “postpartum depression”, “training”, “postpartum disease”, “knowledge”, “digital transformation”, “emerging technologies”, “healthcare personnel, “nurses” and more (Tzitiridou-Chatzopoulou et al., 2024, p. 5). The search demonstrated that the last decade has introduced much more research into PPD and the style of education for nurses and patients, with a large uptick in use of digital education styles since the COVID-19 pandemic. The increase in use of digital training can be a double-edged sword as it creates a great opportunity for nurses and patients to have more access to information, but as the world returns to a more normal state the use of digital training and telehealth might not be the most effective way to educate people. In the post pandemic world, society will start to see “barriers to telehealth that” occurred previously “resurface” as many practitioners return to in person treatment methods (Tzitiridou-Chatzopoulou et al., 2024, p. 14). These methods of digital training will be incredibly helpful in keeping healthcare professionals not only “updated on telehealth” coverage, but also the most current evidence-based practices and research to “effectively manage postpartum diseases” (Tzitiridou-Chatzopoulou et al., 2024, p. 14). The evidence demonstrated through this collection of bibliometric data shows that continuing education through digital training “not only improves and increases the quality of healthcare for patients,” but it helps to reduce the “incidence of postpartum depression” and is “crucial for mitigating the symptoms” of PPD (Tzitiridou-Chatzopoulou et al., 2024, p. 16). The
limitations highlighted in this study include that a disproportionate number of studies that focused on women with advanced levels of education and higher socioeconomic status (SES) and that a large fraction of the studies analyzed contained “limited sample sizes” with “imbalanced comparison group sizes” and focused on low-risk pregnancies. The major strength of this study is that it is a systematic review, qualifying it as a level 1 on the evidence pyramid (Appendix A). The major implication of this study is highlighted in the need for continuing education and the “practical implementation” of new training in “clinical settings” to improve “the essential nursing skill of teaching and supporting” patients “throughout the postpartum period” (Tzitiridou-Chatzopoulou et al., 2024, p. 16).

Evidence Synthesis

In depth PPD education and resource education needs to be provided to labor, delivery and postpartum healthcare professionals. Maternity nurses have a unique opportunity to bridge the gap in patient education throughout the duration of postpartum hospital stays, and therefore need to continuously educate themselves on the most relevant research and treatments about PPD. The articles included in this literature review confirm the need for more PPD continuing education as well as highlighting the important role nurses and midwives play in patient education as a means of mitigating PPD symptoms. The level 3 articles provide great resources for ideas and implementation strategies, while demonstrating the evidence and effectiveness of PPD education for nurses and midwives. The level 1 articles analyzed in this review of available knowledge provide invaluable data and research on the overall effectiveness of a QI project such as this one. These results provide notable implications for this QI project as it is imperative to transition the current PPD education of the microsystem to provide continuing education opportunities to ensure the healthcare professionals can be the best resources to their patients. A
change is needed in the maternity field and as some of the strongest advocates for patients, nurses are in a critical position to make important improvements for new mothers and their families.

Rationale

The Plan-Do-Study-Act (PDSA) method was utilized to implement this QI project. The spring semester was used to plan the QI project by identifying the problem on the maternity unit, compiling a review of the literature available on PPD and the resources available, and outlining the global and specific aims. In June and July of 2024, after the project proposal had been approved, the do phase of the QI project included a pretest survey for nursing staff, followed by an educational handout about PPD including resources available to patients, and finally a posttest. The details of the implementation of the intervention can be found in the Methods section of this proposal. The study element of the PDSA cycle involved evaluating the level of knowledge gained on the signs, symptoms, and resources available for patients with PPD from the educational handouts through the results from the pre- and post-surveys. The act portion of the project entailed translating the data to identify key findings and adjusting the educational information to provide the most effective intervention. This information will then be disseminated to the management and staff of the microsystem, as the key stakeholders, to allow the intervention to be further developed to best meet the needs of the microsystem.

Global Aim

The global aim of this QI project was to increase maternity nurses’ knowledge and confidence in providing PPD education to patients. This process began with examining the current level of knowledge of the maternity nurses about the issue and providing supplemental education to bridge any knowledge gap. The process ended with evaluating the increase in level
of knowledge the staff has achieved. By working on this process, it was expected that the baseline knowledge of the signs and symptoms of PPD and the resources available would be increased within the staff of the microsystem. It is important to work on this now to ensure that nurses can deliver the most relevant information to support new mothers in taking care of their own mental health and are provided with all the resources available.

**Specific Aim**

The specific aim of this quality improvement project was to increase the maternity nurses knowledge of PPD and the resources available to patients. The goal of this project was to have at least 50% of participants report a better understanding of the signs, symptoms, and resources available for PPD. The goal was to be achieved by July 31st, 2024.

**Methods**

**Context**

Postpartum depression can be costly to the mother’s and families affected, especially when left undiagnosed and untreated. A study conducted by Epperson et al. (2020, p. 1711) demonstrated that households affected by PPD spent 22% more on “all-cause medical and pharmaceutical insurer spending” with an average of $36,049 compared to $29,448 of families not affected by PPD in the first year after delivery. Within these households, the study also revealed that more than 50% of the total spending was for the mothers with an average of $19,611 (Epperson et al., 2020). Early detection and intervention is key in helping mother’s combat PPD and achieve better mental health overall. The QI project implemented on the unit promotes better understanding of PPD for maternity nurses to promote enhanced care, allowing patients to seek help earlier and access more resources hopefully resulting in lower costs for
patients. The organization would benefit by continuing to utilize this intervention as it has minimal cost to them but will greatly impact the quality of care of patients.

**Cost benefit analysis**

One of the goals of implementing this QI project was to limit the cost of the intervention by making it more accessible and easier to implement. To achieve this goal, the free survey platform Qualtrics® was utilized, ensuring no monetary cost for the development and study of the intervention. The education provided to participants may be provided as a physical handout or through a digital source. A physical handout would only be provided to participants on a request basis to accommodate different learning styles while reducing the cost of printing handouts and waste. The cost of paper and printing would be acquired by the macrosystem; with the cost of paper averaging about $0.01 per sheet, the cost accrued by the macrosystem should be minimal as the digital copy will be the main source of education. A quick response (QR) code will be used to share the link to the survey with participants, but this was also created using a free online tool. No financial costs were acquired by the project lead while implementing the QI project. The minimal cost to implement this QI project far exceeds the cost acquired by the patients and the microsystem when patients are readmitted or admitted to a mental health facility.

**Intervention**

The intervention implemented on this maternity unit was an educational handout containing information on PPD as a continuing education supplement for nurses. This intervention included PPD signs and symptoms, risk factors, treatment options, and resources available to patients. Along with this basic information about PPD, material on postpartum anxiety and baby blues was integrated in the education. These subsequent subjects are important to understanding the vast array of influences on PPD, therefore are important to include.
**Study of the Intervention**

To study the intervention implemented, a pre and post-test survey accompanied the educational handout about PPD and the resources available to patients. The pretest was used to determine the initial level of knowledge participants had about PPD. The pretest was also used to collect initial demographic data on the participants length of time as a maternity nurse. After the pretest was completed, participants were asked to review the information provided to them through the educational handout. After reviewing the intervention, participants were instructed to complete the posttest that contained the same questions as the pretest. This allowed for the project lead to accurately study if the intervention had improved patients knowledge of PPD and the resources available to patients.

**Measures**

The goal of this QI project was to measure the knowledge maternity nurses gained with the use of the PPD educational handout. This was done by measuring the percentage difference in correct answers from the pretest to posttest. Measures that were reported in the Qualtrics® survey will include participant demographics, the number of times each answer was selected, and the variations between the pre- and posttest. These measures allowed the leader of this project to analyze the data to determine if the information presented is effective in improving participants’ knowledge of PPD. Reliability of this QI project will be reached if participants consistently show an increase in knowledge after reviewing the educational handout and demonstrate that this intervention can be reproduced under similar conditions.

Appendix C demonstrates the survey that was distributed to maternity nurses in the microsystem. The first question of the survey was a multiple-choice question to determine how long each participant had been a maternity nurse. This was an important question to ask as it
helped the project lead determine how much exposure to postpartum depression and information about perinatal mental health the participants have had. The remaining questions were quantitative questions to determine each participants level of knowledge about the information provided in the educational intervention. Question 3 and question 11 both utilized the Likert scale to determine how knowledgeable participants felt about PPD and PPA in the pretest and posttest, respectively. The pretest and posttest questions were identical in order to properly analyze participants knowledge improvement. Questions 4, 5, 12 and 13 were “true/false” questions regarding the prevalence of PPD and PPA. Questions 6 through 9 and questions 14 through 17 were “select all that apply” questions concerning PPD and PPA signs, symptoms, risk factors, treatment options, and resources available to patients.

Analysis

The results from the Qualtrics© survey were be analyzed from June to July 2024. To determine whether the intervention had been successful, the results of the pretest were compared to the posttest to determine if the nurses had gained more knowledge about PPD and the resources available to their patients. The pretest determined the nurses’ prior knowledge of the signs, symptoms, risk factors, treatment options, resources available, baby blues and postpartum anxiety before reviewing the continuing education handout. The results of the posttest determined if the educational intervention provided had increased the participant’s knowledge about these topics. Descriptive statistical analysis was utilized to interpret the data. Frequency and percentage was reported for the quantitative data collected. The data has been presented in graphs and tables in the results section.
Ethical Considerations

The ethical considerations of this QI project included participants rights to confidentiality and anonymity. Confidentiality was maintained as this project did not require any identifying information that could be linked back to participants. Anonymity was important to ensure that participants understood there were no consequences for a potential gap in knowledge. This project was only to be used to create an opportunity for improving postpartum depression education. By doing this, the project lead allows more participants to be involved while preserving their rights to enhance the care provided to patients and privacy. Finally, it was important that the results of this QI project be reported accurately and honestly. If the results of the project did not align with the intended outcome, this would have been accurately reported. The University of New Hampshire Department of Nursing Quality Review Committee has reviewed this quality improvement project to determine the exempt status from the Institutional Review Board.

Results

Initial Steps of the Intervention

The intervention phase of this QI project took place over a four-week period. The project lead developed a pretest and posttest survey to accompany the continuing educational handout for PPD. The original survey was determined to be too long and did not include the educational material directly in the linked form; therefore, it was revised to include a total of 15 questions with the education included in the survey between the pre- and posttest. Due to time constraints, the project lead adjusted the goal of having a 75% participation rate of staff down to 50%. With the help of the microsystems administrative assistant, the survey was emailed to 47 maternity nurses. The survey’s QR code was posted throughout the unit to encourage participation. Of the
nurses that received the survey, 32 nurses participated in the intervention. Due to incomplete responses eight surveys were omitted, leaving a total of 24 surveys to analyzed and resulting in a 51% participation rate. The survey was open for a total of 16 days. Figure 1 demonstrates the timeline of the intervention. Figure 2 demonstrates the number of surveys completed relative to the day of implementation.

**Figure 1**

*Intervention Timeline*
Process Measures and Outcomes

Of the 24 respondents, 46% had been a maternity nurse for five years or less, 17% of participants had been a maternity nurse for five to ten years, and 38% had been a maternity nurse for more than fifteen years (Figure 3). This information was important to collect to determine the level of previous knowledge the participating nurses had on PPD and PPA. Figure 4 demonstrates the distribution of how knowledgeable participants felt before and after reading the educational intervention. The pretest results show that 8% of participants “somewhat” disagreed that they felt knowledgeable about PPD and PPA, while 67% and 25% of participants “somewhat” agreed and “strongly” agreed, respectively. The posttest results demonstrated a shift to the nurses feeling more knowledgeable overall with only 4% and 42% of participants selecting “somewhat disagree” and “somewhat agree”, respectively, with a great increase to 54% of participants selecting “strongly agree”.
**Figure 3**

*Distribution of how long participants have been maternity nurses.*

<table>
<thead>
<tr>
<th>Number of years as a Maternity nurse</th>
<th>0-5 years</th>
<th>5-10 years</th>
<th>10-15 years</th>
<th>15+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11</td>
<td>4</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4**

*Comparison of knowledge gained pre- and post-intervention.*

The pre- and posttest each contained seven identical questions to best compare the knowledge improvement. Participants showed a 13% knowledge improvement on how many
women suffer from PPD and a 25% knowledge improvement on how many women suffer from PPA (Figure 5; Figure 6). In recognizing the signs and symptoms of PPD and PPA, 96% of participants selected all the correct answers after reviewing the education compared to the 79% of participants in the pretest, resulting in a 17% increase in knowledge (Figure 7). Figure 8 demonstrates a 14% increase in the number of participants who correctly selected the risk factors for PPD and PPA; 79% of participants selected all the correct responses in the pretest and 92% of participants selected all the correct responses in the posttest. Regarding treatment options for patients, there was a 13% knowledge increase of participants as only 88% of participants selected all correct answers in the pretest, while 100% answered correctly in the posttest (Figure 9). Figure 10 demonstrates a 9% increase in knowledge about the resources available to patients with PPD and PPA, as 88% of participants answered correctly in the pretest compared to 96% in the posttest.

**Figure 5**

*Knowledge of how many women are affected by PPD.*
Figure 6

Knowledge of how many women are affected by PPA.

Figure 7

Knowledge of the signs and symptoms of PPD and PPA.
Figure 8

Knowledge of risk factors of PPD and PPA

Figure 9

Knowledge of treatment options for patients with PPD and PPA
Figure 10

*Knowledge of resources available for patients with PPD and PPA*

![Bar chart showing knowledge of resources available for patients with PPD and PPA](chart.png)

**Contextual Elements**

A noteworthy contextual element that influenced the intervention was the difference in interaction and contact the project lead had with the different shifts as well as the interactions between full-time versus part-time and per diem workers. The breakdown of staff ratios can be found in Table 1. The project lead attended two staff meetings to explain the intervention and survey to staff, allowing for more interaction with all shifts and all levels of staff. Most of the project lead’s interactions happened with day shift nurses due to the clinical hours with a preceptor. The project lead was able to bridge this gap between shift differences by gaining permission to visit the unit on a nightshift to focus just on those maternity nurses. The project lead worked to incentivize staff to participate in the educational intervention and believes that being present on the unit at night allowed these workers to have a better understanding of the
reason behind the intervention, motivating them to participate. The QR code had been posted on
the unit for a week before the project lead was able to visit the unit on a night shift, so it was
beneficial to remind staff to scan the code to participate in the education.

Table 1

<table>
<thead>
<tr>
<th>Staff Breakdown (N=53) n(%)</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Fulltime</td>
</tr>
<tr>
<td>Parttime</td>
</tr>
<tr>
<td>Per diem</td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Dayshift</td>
</tr>
<tr>
<td>14 (26%)</td>
</tr>
<tr>
<td>10 (19%)</td>
</tr>
<tr>
<td>4 (7%)</td>
</tr>
<tr>
<td>Nightshift</td>
</tr>
<tr>
<td>14 (26%)</td>
</tr>
<tr>
<td>17 (13%)</td>
</tr>
<tr>
<td>9 (9%)</td>
</tr>
<tr>
<td>Totals</td>
</tr>
<tr>
<td>28 (52%)</td>
</tr>
<tr>
<td>17 (31%)</td>
</tr>
<tr>
<td>9 (17%)</td>
</tr>
</tbody>
</table>

Observed Associations

The pretest and posttest each contained 35 potential correct answers to the questions
regarding PPD and PPA. The minimum score achieved was 24 and the maximum score was 35.
with the average score being 33 (Table 2). With the collected scores, there was a p-value of
0.008 demonstrating statistical significance in the education providing improving the participants
knowledge of PPD and PPA. The participant who spent the least amount of time on the survey
was seen to have the lowest score on the pretest while the participant who spent the most time on
the survey answered all questions correctly on both the pretest and posttest. It is seen that the
most improvement in knowledge occurred in the participants recognizing the signs and
symptoms of PPD and PPA as well as identifying risk factors for PPD and PPA. As mentioned
previously, these two questions had a 17% and 13% knowledge increase, respectively. The most
substantial outcome of this QI project was the increase in how knowledgeable participants felt
about the subject. As demonstrated in Figure 4, there was a great shift in participants feeling
more knowledgeable about the subject, which is of immense importance to their ability to
properly educate and take care of patients suffering from PPD and PPA. As a QI project, the
underlying goal of this education was to enhance the care provided to patients by supporting the nursing staff with continuing education like the education provided in the intervention.

Table 2

Survey scores with significance value and duration of completion.

<table>
<thead>
<tr>
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<th>Pretest</th>
<th>Posttest</th>
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Table 3

Duration of survey completion

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<th>Time (minutes)</th>
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<td>Maximum duration</td>
<td>38</td>
</tr>
<tr>
<td>Average duration</td>
<td>6</td>
</tr>
</tbody>
</table>

*Note.* Data for this table was rounded to the nearest whole minute.

Unintended Consequences

Although implementing the project was a success, a major unintended consequence was the significant delay in the implementation process. The delay in implementation was twofold. New processes for reviewing and approving student projects had been put in place, but the project lead and Direct Entry Master of Nursing program faculty mentors were not made aware of these new policies. This delayed implementation as the project lead navigated the new process and waited for approval. The second level of delay was due to the need to change the project focus from patient education to staff education. The original project focusing on patient education of PPD was ruled as research, not a QI project, therefore the project lead had to pivot
to providing staff education. The reworking of the project proposal and education delayed implementation along with a second approval process delaying implementation further.

**Missing data**

In total, 32 surveys were started with only 24 having been completed to the end. Most of the incomplete surveys had made it through the pretest and were presented with the education but the posttest was left incomplete. In the future, it would be beneficial to have each question be required to answer before moving on to encourage the completion of all surveys. The incomplete surveys were omitted from the data collection, resulting in missing data which could have improved the efficacy of this project. It was also brought to the project lead’s attention that one of the resources for patients might not have been available by the time the intervention was implemented. When the survey was created the resource in question was still available, but the employee in charge of this service had since left and it is now in question whether the program is still available. This could be the reason some of the participants did not select this answer in the posttest, despite the resource being included in the education.

**Discussion**

**Summary**

**Key findings**

The data gathered from this QI project suggests that maternity nurses within the microsystem benefitted from reviewing and being provided with continuing education opportunities regarding postpartum depression. A 54% increase was seen in the participants strongly agreeing that they felt knowledgeable about PPD and PPA after reviewing the educational intervention. It is clear that opportunities like this project can leave a lasting impact by helping to keep nurses up to date on the most current information. This is important because it
allows maternity nurses to provide enhanced care to patients through recognizing signs and symptoms as well as the patients with risk factors. These were the two categories the data showed the most improvement in nurses’ knowledge, at a 17% and 14% knowledge increase, respectively. It is also important to note that the majority of the participants, 46%, from this microsystem have been maternity nurses for 0-5 years (Figure3). During the first few years of learning a specialty like labor and delivery or postpartum care, it is important to support staff in solidifying their knowledge about maternal mental health as well as providing them with the resources to fill in any knowledge gaps. The education provided in this intervention was a great way for the microsystem to support their staff in this way.

Relevance to Rationale

The PDSA cycle framework utilized in the implementation of this QI project allowed for the successful collection and analysis of data. The plan portion of this QI project took place in the 2024 spring semester. This time was used to identify the problem on the maternity unit, compile a review of the available literature and outline the specific aim. The do portion of the cycle took place at the end of June and into July of 2024 after a revised project proposal has been approved. This phase included a pretest survey for nursing staff, followed by the educational handout, and finally a posttest survey. The study portion of the cycle was completed through the analysis of the pre- and posttest results using the Qualtrics© platform. As the maternity nurses filled the survey out throughout the study portion of this QI project, the project lead was able to monitor the progress of participants and how well the intervention was performing. Moving forward in the act portion of the cycle may prove to be beneficial in the long-term development of PPD education and continuing education for the microsystem. Data analysis of the results demonstrated that despite increasing participants knowledge of PPD, some participants still
“somewhat disagree” or “somewhat agree” to feeling knowledgeable of PPD and PPA, rather than “strongly agree.” The microsystem would benefit from adjusting the education based on staff feedback and perform further PDSA cycles to enhance their continuing education until all staff fall into an “agree” category.

Relevance to Specific Aim

The global aim of this QI project was to increase the knowledge and confidence that the maternity nurses within the microsystem have in providing PPD education. The specific aim of this QI project was to demonstrate an increase in knowledge of PPD in at least 50% of participants. The data analysis demonstrated a 54% increase in how knowledgeable nurses felt about PPD, supporting the specific aim. With this, there was an increase in knowledge across all individual categories of the survey as demonstrated in the results section of this report.

Project Strengths

There were many project strengths demonstrated throughout this QI project. First, the user-friendly design of the survey and education allowed the intervention to not only be easy for participants to navigate, but also enables other maternity microsystems to reproduce the intervention. This was of great importance as it creates the potential for a larger impact and enhanced care for the postpartum population. Second, this intervention was further supported by the lack of perinatal mental health education in the field as demonstrated through the comprehensive literature review completed for this project. Finally, a major strength of this project was the relationship the project lead had with the staff of the microsystem and their passion about the topic. The staff within this microsystem were enthusiastic about participating and assisting the project lead with this project as they demonstrated great compassion and drive to enhance the care they provide to their patients. The effort to assist the project lead with this
project, especially through the changes to the original project design, showed the dedication the staff has to caring for their patients.

Interpretation

Impact of the Intervention

The data gathered from this quality improvement project demonstrated that most of the nursing staff who participated in the pretest and posttest surveys feel as though their knowledge about postpartum depression increased after reviewing the implemented education. The results demonstrated a shift from 8% “somewhat” disagreeing, 67% “somewhat” agreeing, and 25% “strongly” agreeing they felt knowledgeable about the subject to 4%, 42% and 54%, respectively. These outcomes proposed that the maternity nurses within the microsystem have an increased understanding of PPD and PPA signs, symptoms, and risk factors, as well as an increased awareness of the prevalence of PPD and PPA and the resources available to their patients. An increased awareness and understanding of perinatal mental health allows the microsystem to provide enhanced care to postpartum patients by increasing early identification of PPD allowing for earlier treatment, decreased severity of the disorder, and better outcomes for patients.

Comparison of Results

The findings of this QI project aligned with the previous research discussed in the critical appraisal of evidence. Link et al. (2022, p. 30) demonstrated that providing enhanced PPD education to not only maternity nurses but nursing students is an important step in increasing their “knowledge and self-efficacy” in delivering education to patients about this critical topic. Lewis (2019, p. 9) implemented a study similar to this QI project, utilizing pre- and posttest surveys after an educational intervention, which demonstrated significant (p<0.001) increase in
staff knowledge. Both of these studies created a great basis for this QI project, and it was reassuring to see similar results in the maternity nurses of this microsystem. Furthermore, the findings of the articles discussed in the critical appraisal of evidence demonstrated the lack of education regarding perinatal mental health overall, but specifically postpartum depression. The outcomes demonstrated through Link et al. (2022), Lewis (2019), and this QI project, along with the results of the meta-analysis by Wang et al. (2022) and the dynamic bibliometric review completed by Tzitiridou-Chatzopoulou et al. (2024) demonstrate the need for continued studying and improvements to this subject area.

**Impact of the Project on People and Systems**

Expanding postpartum depression education and improving the knowledge of the maternity staff allows for enhanced care for the patients of the microsystem. The important implications of this QI project and the overarching goal of upgrading patient care include reducing the prevalence of PPD and PPA, allowing for patients to access more resources regarding perinatal mental health. Providing this education within this specific microsystem setting is crucial as labor and deliver, as well as postpartum, nurses build an incredibly special bond with their patients, putting them in a position to provide well-rounded education throughout the patients’ stay. Delivering this education at such a critical time period, the microsystem is setting patients up for success in knowing where, when, and how to advocate for themselves and their mental health. On top of this patient focused approach, improving staff knowledge indirectly helps the macrosystem by possibly reducing the readmission rate due to perinatal mental health issues due to early identification and intervention.

**Difference Between Observed and Anticipated Outcomes**
The anticipated outcomes of this quality improvement project was for participants to have an increase in knowledge of PPD statistics, signs and symptoms, risk factors, treatment options, and resources available to patients. The observed outcomes demonstrated slight increases in PPD and PPA statistics, treatments and resources while revealing greater increases in knowledge about signs, symptoms, and risk factors. The most profound outcome was the increase in how knowledgeable the participants felt about the information provided in the intervention.

**Opportunity Costs and Strategic Tradeoffs**

As previously discussed, patients and families affected by PPD on average spend 22% more than the average family who are not affected by perinatal mental health issues (Epperson et al., 2020, p. 1711). This QI project has demonstrated that the education provided can easily be included into continuing education material within the microsystem. The platform used to create the survey, Qualtrics©, was free for the purposes of this QI project and the educational intervention was created by the project lead from resources already available through the microsystem, therefore free of cost. Further implementation and PDSA cycles to improve education would be of minimal costs using the same tactics. The tradeoff for implementing an education intervention, like the one in this QI project, is exponentially less than the cost to families and to the microsystem for treatments for PPD and PPA. Therefore, the microsystem and macrosystem would greatly benefit by continuing to implement further postpartum depression education for maternity nurses.

**Limitations**

**Limits to Generalizability**

The first notable limitation of this QI project was the small sample size. Maternity nurses have a demanding workload, especially in this microsystem which has seen an influx of patients
due to nearby maternity units within the surrounding area closing. The nurses may not have felt they had the time or mental capacity to participate during such a busy time. The small sample size was also influenced by the limited two-week timeline of the intervention due to delays in the implementation of this project. The second notable limitation was that this QI project was limited to only one PDSA cycle due to the implementation delays and time constraints.

Factors Limiting Internal Validity

The factor limiting internal validity was that participation in this QI project was completely voluntary. Out of all of the maternity nurses employed within the microsystem, 59% of the staff began the survey. Due to incomplete responses, only 44% of the staff were able to be included in the project. This may have skewed the data analysis for a few different reasons. First, some participants may have had previous exposure to more PPD education than others. Second, some staff may not have participated for fear of their lack of knowledge about the subject. Third, staff may not have participated due to their schedules as per diem or part time employees. Finally, there could have been confusion for the participants who answered all of the pretest questions correctly, therefor they did not complete the posttest. This eliminated these specific survey results from analysis due to the incomplete survey status.

Efforts Made to Minimize and Adjust for Limitations

Throughout the implementation process of this QI project, many efforts were made to minimize the limitations discussed. First, the survey was anonymous ensuring to eliminate worries about repercussions from data collected and decrease the chance for bias. Secondly, when introducing the project to the microsystem it was made clear that there would not be any consequences for staff who participated based on their results further encouraging participation. Finally, throughout the data collection it was recognized that some data was missing due to
incomplete posttests and the project lead sent out email reminders to the maternity nurses encouraging the completion of these surveys. Some participants were able to complete their surveys after receiving these reminders, resulting in a more complete data collection.

Conclusion

Usefulness of the work

With postpartum depression affecting one in seven women, it is one of the most common complications of childbirth (Allard, 2023, p. 1, Payne & Maguire, 2019). Maternity nurses are in an incredibly special position to not only recognize potential signs, symptoms, and risk factors for PPD in their patients, but to also educate new mothers and their support systems in those critical first few days after delivery. By ensuring adequate education of the nurses caring for postpartum patients, the microsystem enhances patient care and understanding leading to earlier detection and treatment of PPD and PPA (Lewis, 2019). This QI project aimed to increase maternity nurses’ knowledge of PPD as a means to bridge the gap in patients’ knowledge about prevalence, signs, symptoms, risk factors, treatment, and resources. Improving nurses’ knowledge about perinatal mental health directly affects the education provided to patients therefore indirectly reducing the incidence of PPD and lowering the amount of readmissions and cost to patients struggling with their perinatal mental health. The results found in this QI project reflect similar findings from other studies and stress the importance of nurse driven education throughout patient care during the postpartum period.

Sustainability

Sustaining the establishment of PPD continuing education for the maternity nurses within the microsystem can be implemented in a few different ways. The most practical way to sustain the intervention would be to include the education with a follow-up test in the microsystems.
yearly competencies. This would ensure that the staff see this information at least once a year, along with the most updated information regarding PPD and PPA. Another easy way to sustain the intervention would be to provide the educational document in the units resource binder, ensuring that the information is always on hand for staff to reference. Finally, when new information and resources become available, it would be prudent for the education information to be updated and emailed to staff with the new information. By doing this, the staff will have a chance to review the old material as well as learn about the new material that has been developed.

**Potential for Spread to Other Context**

Education on postpartum depression is not only important within the maternity world but is important to spread this educational material beyond just nurses and patients. It is imperative for significant others, family members, friends, and the community to be educated on signs, symptoms, and risk factors. These support persons are the first line of defense when it comes to identifying a patient in need of assistance as they spend the most time with them after childbirth and discharge from the hospital. This would also serve to de-stigmatize perinatal mental health, and serve to begin more conversations within the community, ultimately creating a better support system for those suffering from PPD. It would be prudent to educate providers and nurses from other specialties as they may come across a new mom who is being seen for non-postpartum reasons, but displaying signs of PPD. By spreading the education and awareness across the nursing field, patients are better set up for success in finding the resources available to them.

**Implications for Practice and Further Study in the Field**

It is no secret that further research in perinatal mental health needs to be conducted. Postpartum depression has been a topic of discussion for many years, while the literature review
for this project demonstrated a lack of studies and information surrounding the best ways to educate and support these patients. The major implication of this QI project was to upgrade the education about perinatal care in order to reduce the prevalence of PPD and PPA while allowing patients to access more resources and support. The results of this project, as well as the results discussed in the *critical appraisal of evidence* section, demonstrate the need for further investigation into the best way to improve continuing education for nurses regarding this subject.

**Suggested Next Steps**

The next step for further development of PPD education within this microsystem would be investigating what other information needs to be reviewed by staff and included in the educational material. Once this is complete, the educational material and survey can be updated in order to prepare for another PDSA cycle. This same process can be redone until the unit’s clinical educator and managers are reassured in the material’s ability to continuously improve the maternity nurses’ knowledge about postpartum depression. Once the educational material is finalized, it would also be beneficial to provide the information to similar microsystems and macrosystems in order to have a larger impact on patient care.
References


Cleveland Clinic. (2022, April 12). *Postpartum anxiety.* https://my.clevelandclinic.org/health/diseases/22693-postpartum-anxiety


Link, K. A., Tinius, R., & Logsdon, M. C. (2022). A web-based educational intervention to increase perinatal nurse and pre-licensure student knowledge and self-efficacy in

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https://www.ncbi.nlm.nih.gov/books/NBK519070/


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Torres, F., M.D., MBA, DFAPA. (2020, October). *Postpartum psychosis*. Cleveland Clinic.

https://my.clevelandclinic.org/health/diseases/24152-postpartum-psychosis


https://doi.org/10.3390/healthcare12101015


https://doi.org/10.1016/j.midw.2021.103160
Appendix A

Level of Evidence Pyramid

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<th>Evidence Pyramid</th>
<th>Level 1: Systematic Reviews &amp; Meta-analysis of RCTs; Evidence-based Clinical Practice Guidelines</th>
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<tbody>
<tr>
<td></td>
<td>Level 2: One or more RCTs</td>
</tr>
<tr>
<td></td>
<td>Level 3: Controlled Trials (no randomization)</td>
</tr>
<tr>
<td></td>
<td>Level 4: Case-control or Cohort study</td>
</tr>
<tr>
<td></td>
<td>Level 5: Systematic Review of Descriptive and Qualitative studies</td>
</tr>
<tr>
<td></td>
<td>Level 6: Single Descriptive or Qualitative Study</td>
</tr>
<tr>
<td></td>
<td>Level 7: Expert Opinion</td>
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Level I Evidence

- **Systematic Review or Meta-Analysis of Randomized Controlled Trials**: See box below for more information about systematic reviews and meta-analysis.

- **Clinical Practice Guidelines**: Systematically developed statements to assist clinicians and patients in making decisions about care; ideally the guidelines consist of a systematic review of the literature, in conjunction with consensus of a group of expert decision-makers, including administrators, policy makers, clinicians, and consumers who consider the evidence and make recommendations.

The level of evidence of systematic reviews and meta-analyses depends on the types of studies reviewed.

**Systematic Review**: A summary of evidence, typically conducted by an expert or expert panel on a particular topic, that uses a rigorous process (to minimize bias) for identifying, appraising, and synthesizing studies to answer a specific clinical question and draw conclusions about the data gathered.

**Meta-Analysis**: A process of using quantitative methods to summarize the results from multiple studies, obtained and critically reviewed using a rigorous process (to minimize bias) for identifying, appraising, and synthesizing studies to answer a specific question and draw conclusions about the data gathered. The purpose of this process is to gain a summary statistic (i.e., a measure of a single effect) that represents the effect of the intervention across multiple studies.
**Level 2 Evidence**
- **Randomized Controlled Trial (RCT):** A true experiment (i.e., one that delivers an intervention or treatment in which subjects are randomly assigned to control and experimental groups); the strongest design to support cause and effect relationships.

**Level 3 Evidence**
- **Controlled Trial:** Experimental design that studies the effect of an intervention or treatment using at least two groups: one that received the intervention and one that did not; participants are NOT randomly assigned to a group.

**Level 4 Evidence**
- **Cohort Study:** A longitudinal study that begins with the gathering of two groups of patients (the cohorts), one that received the exposure (e.g., to a disease) and one that does not, and then following these groups over time (prospective) to measure the development of different outcomes (diseases).
- **Case-Control Study:** A type of research that retrospectively compares characteristics of an individual who has a certain condition (e.g., hypertension) with one who does not (i.e., a matched control or similar person without hypertension); often conducted for the purpose of identifying variables that might predict the condition (e.g., stressful lifestyle, sodium intake).

**Level 5 Evidence**
- **Systematic Review of Descriptive and Qualitative Studies:** See box to the left for more information about systematic reviews.

**Level 6 Evidence**
- **Single descriptive or qualitative study Qualitative research:** Method that systematically examines a phenomenon using an inductive approach & exploration of meaning of phenomenon; purpose is to understand & describe human experience, explore meanings & patterns; data are often narrative.

**Level 7 Evidence**
- **Expert opinion:** Recommendations from persons with established expertise in a specific clinical area often based on clinical experience; not considered a research method because systematic (or critical) inquiry is lacking.
Appendix B

PRISMA Flow Diagram

**PRISMA 2009 Flow Diagram**

- **Identification**
  - Records identified through database searching (n = 86)
  - Duplicate records removed (n = 30)

- **Screening**
  - Records after duplicates removed (n = 56)
  - Records screened (n = 14)

- **Eligibility**
  - Full-text articles assessed for eligibility (n = 4)
  - Records excluded (n = 42)
    - 21 greater than 10 years old
    - 7 not academic journals
    - 14 Did not include major heading of postpartum depression.

- **Included**
  - Studies included in qualitative synthesis (n = 2)
  - Full-text articles excluded, with reasons (n = 10)
    - 3 patient education related
    - 2 PPD not the primary focus
    - 1 in a different language
    - 1 posttest for continuing education
    - 3 Below Level 3 Evidence

- **Studies included in quantitative synthesis (meta-analysis) (n = 2)**
Appendix C

Postpartum Depression Education Survey and Intervention

PPD Education Survey

Q1 Dear nursing staff,

My name is Mackenzie, and I am a nursing student at the University of New Hampshire. Some of you may remember me from this spring semester as I completed my clinicals with Lauren Ling. I am working on a quality improvement (QI) project to gain insight and improve our knowledge of Postpartum Depression (PPD). I have created a PPD educational handout along with a pretest and posttest to gauge the overall level of knowledge of staff before and after reviewing the handout. By participating in this intervention and completing the survey you are participating in the QI project.

As a participant in this project, you may benefit from a refresh of PPD and improve your knowledge to better take care of your patients. Taking part in this QI project is completely voluntary but would greatly be appreciated. Any data collected as part of your participation will be included in project records anonymously.

If you have any questions about this project or would like more information you may contact me at mackenzie.sturdevant@unh.edu. If you have questions about your role as a participant or the process of this QI project, you may contact Elizabeth Evans at elizabeth.evans@unh.edu.

The survey and education should only take 10-15 minutes. Your time and responses are greatly appreciated. Thank you for your consideration and assisting me in this project.

Mackenzie Sturdevant

Q2 How long have you been a Labor & Delivery/Postpartum nurse?

- 0-5 years (1)
- 5-10 years (2)
- 10-15 years (3)
- 15+ years (4)
Q3 I feel knowledgeable about Postpartum Depression (PPD) and Postpartum Anxiety (PPA).

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

Q4 Postpartum Depression can affect as many as 1 in 7 women after childbirth.

- False (1)
- True (2)

Q5 Postpartum anxiety (PPA) affects between 11% and 21% of new mothers following childbirth.

- False (1)
- True (2)

Q6 Select the signs and symptoms of PPD and PPA:

- Loss of interest or pleasure in activities once enjoyed (1)
- Loss of energy or increased fatigue (2)
- Feeling worthless or guilty (3)
- Difficulty thinking, concentrating, making decisions, and/or racing thoughts (4)
- Lack of interest in the baby, not feeling bonded to the baby, or feeling very anxious about/around the baby (5)
- Constant worry (6)
- Disturbances of sleep and appetite (7)
- Inability to sit still (8)
- Feeling on edge or fearful (9)
- Needing constant reassurance (10)
Q7 What are some PPD & PPA risk factors? (select all that apply)

- Previous diagnosis of depression/anxiety (1)
- Family history of depression/anxiety (2)
- Had a difficult or traumatic birth (3)
- Lack of support from family, friends, or partners (4)
- Are under the age of 20 (5)
- Unplanned pregnancy (6)
- Challenges with breastfeeding (7)
- Having a baby born prematurely and/or with special health care needs (8)
- Previous pregnancy loss or loss of a child (9)
- Caring for multiple children (10)

Q8 What are some treatment options for PPD & PPA? (select all that apply)

- Talk therapy (1)
- Antidepressant medications (2)
- Social support (3)
- Support groups (4)
- Self-care activities (5)

Q9 What resources are available to patients?

- Wentworth-Douglass Hospital New Parent Support Group (1)
- Wentworth-Douglass Hospital Finding yourself in Motherhood Support Group (2)
- The Seacoast Postpartum Support Group of New Hampshire at Families First Health Center in Portsmouth, NH (3)
- Postpartum Emotional Support, Concord NH (4)
- National Maternal Mental Health Hotline 1-833-TLC-MAMA (1-833-852-6262) (5)
- National Suicide Prevention Lifeline 1-800-273-TALK (8255) (6)
- NAMI, the National Alliance on Mental Illness NAMI Helpline 1-800-950-NAMI (6264) (7)
- Postpartum Support International (PSI) 1-800-944-4PPD (4773) (8)
Q10 **Postpartum depression** is a medical illness involving feelings of extreme sadness, indifference, and/or anxiety, as well as changes in energy, sleep, and appetite that last for longer than two weeks.

**Postpartum Depression** can affect as many as 1 in 7 women after childbirth.

**Signs & Symptoms of PPD include:**
- Feeling sad or having a depressed mood
- Loss of interest or pleasure in activities once enjoyed
- Changes in appetite
- Trouble sleeping or sleeping too much
- Loss of energy or increased fatigue
- Increase in purposeless physical activity (e.g., inability to sit still, pacing, handwringing) or slowed movements or speech [these actions must be severe enough to be observable by others]
- Feeling worthless or guilty
- Difficulty thinking, concentrating, or making decisions
- Thoughts of death or suicide
- Crying for “no reason”
- Lack of interest in the baby, not feeling bonded to the baby, or feeling very anxious about/around the baby
- Feelings of being a bad mother
- Fear of harming the baby or oneself

**Risk factors for Postpartum Depression**
- Previous diagnosis of depression/anxiety
- Family history of depression
- Had a difficult or traumatic birth
- History of domestic violence
- Lack of support from family, friends or partners
- Are under the age of 20
- Unplanned pregnancy
- Financial problems or exposure to other stressful life events
- Challenges with breastfeeding
- Having a baby born prematurely and/or with special health care needs

**Treatment options for PPD**
- Talk therapy
- Antidepressant medications
- Social support
- Support groups
- Self-care activities
The “baby blues” is a short-lasting condition, usually resolves within two weeks, where new mothers experiences irritability, unexplained crying, restlessness, and anxiety.

**Postpartum anxiety** affects between 11% and 21% of new mothers following childbirth.

**Signs & symptoms of Postpartum anxiety include:**
- Constant worry
- Feeling that something bad is going to happen
- Racing thoughts
- Disturbances of sleep and appetite
- Inability to sit still
- Physical symptoms like dizziness, hot flashes, and nausea
- Irritability
- Feeling on edge or fearful
- Needing constant reassurance
- Being overly cautious about situations that aren't dangerous

**Risk factors for Postpartum Anxiety**
- Personal history of anxiety
- Family history of anxiety
- History of Postpartum depression or anxiety
- Previous pregnancy loss or loss of a child
- Lack of support from a partner or support system
- Caring for multiple children

**Treatment options for Postpartum Anxiety**
- Anti-anxiety medications (SSRIs and SNRIs)
- Cognitive Behavioral Therapy/Talk therapy
- Exercise
- Support Groups
- Self-care

**What resources are available to patients?**
- Wentworth-Douglass Hospital New Parent Support Group
- Wentworth-Douglass Hospital Finding yourself in Motherhood Support Group
- The Seacoast Postpartum Support Group of New Hampshire at Families First Health Center in Portsmouth, NH
- Postpartum Emotional Support, Concord NH
- National Maternal Mental Health Hotline 1-833-TLC-MAMA (1-833-852-6262)
- National Suicide Prevention Lifeline 1-800-273-TALK (8255)
- NAMI, the National Alliance on Mental Illness NAMI Helpline 1-800-950-NAMI (6264)
- Postpartum Support International (PSI) 1-800-944-4PPD (4773)

**References**


Start of Block: Posttest

Q11 I feel knowledgeable about Postpartum Depression (PPD) and Postpartum Anxiety (PPA).

○ Strongly disagree (1)
○ Somewhat disagree (2)
○ Neither agree nor disagree (3)
○ Somewhat agree (4)
○ Strongly agree (5)

Q12 Postpartum Depression can affect as many as 1 in 7 women after childbirth.

○ False (1)
○ True (2)

Q13 Postpartum anxiety (PPA) affects between 11% and 21% of new mothers following childbirth.

○ False (1)
○ True (2)
Q14 Select the signs and symptoms of PPD and PPA:

☐ Loss of interest or pleasure in activities once enjoyed (1)
☐ Loss of energy or increased fatigue (2)
☐ Feeling worthless or guilty (3)
☐ Difficulty thinking, concentrating, making decisions, and/or racing thoughts (4)
☐ Lack of interest in the baby, not feeling bonded to the baby, or feeling very anxious about/around the baby (5)
☐ Constant worry (6)
☐ Disturbances of sleep and appetite (7)
☐ Inability to sit still (8)
☐ Feeling on edge or fearful (9)
☐ Needing constant reassurance (10)

Q15 What are some PPD & PPA risk factors? (select all that apply)

☐ Previous diagnosis of depression/anxiety (1)
☐ Family history of depression/anxiety (2)
☐ Had a difficult or traumatic birth (3)
☐ Lack of support from family, friends, or partners (4)
☐ Are under the age of 20 (5)
☐ Unplanned pregnancy (6)
☐ Challenges with breastfeeding (7)
☐ Having a baby born prematurely and/or with special health care needs (8)
☐ Previous pregnancy loss or loss of a child (9)
☐ Caring for multiple children (10)

Q16 What are some treatment options for PPD & PPA? (select all that apply)

☐ Talk therapy (1)
☐ Antidepressant medications (2)
☐ Social support (3)
Support groups (4)  
Self-care activities (5)  

Q17 What resources are available to patients?  
- Wentworth-Douglass Hospital New Parent Support Group (1)  
- Wentworth-Douglass Hospital Finding yourself in Motherhood Support Group (2)  
- The Seacoast Postpartum Support Group of New Hampshire at Families First Health Center in Portsmouth, NH (3)  
- Postpartum Emotional Support, Concord NH (4)  
- National Maternal Mental Health Hotline 1-833-TLC-MAMA (1-833-852-6262) (5)  
- National Suicide Prevention Lifeline 1-800-273-TALK (8255) (6)  
- NAMI, the National Alliance on Mental Illness NAMI Helpline 1-800-950-NAMI (6264) (7)  
- Postpartum Support International (PSI) 1-800-944-4PPD (4773) (8)