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Postpartum Depression Interventions

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POSTPARTUM DEPRESSION INTERVENTIONS

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Abstract

PPD affects up to 19% of women worldwide. Possible behavioral changes include poor child outcomes, altered mother-infant bond, and even abuse of the child by the mother. The purpose of this systematic review is to synthesize current research to answer the question, what nursing interventions best treat postpartum depression affecting mothers of low SES in developed countries. The methodology included 10 articles in research of interventions related to sleep, exercise, and social support. Of these interventions in the discussion, exercise is the most effective. Peer support increases maternal mood and likelihood of seeking professional help. Volunteer support is effective if the volunteer has a personal history of PPD. Maternal sleep interventions are largely ineffective but improving infant sleep patterns improve maternal mood. Better education during late pregnancy and early postpartum may decrease depressive symptoms and increase the likelihood of women seeking professional help.

Keywords: PPD, nursing interventions, sleep, exercise, social support, peer support, partner support

Postpartum Depression Interventions

Postpartum depression (PPD) affects between thirteen and nineteen percent of mothers worldwide. The illness can lead to problems for the children involved such as behavioral issues and a poor bond between the mother and child (Lewis et al., 2018). Another maladaptation of untreated PPD is physical harm to the child inflicted by the depressed mother (Pessagno & Hunker, 2013). The disease often goes untreated due to lack of knowledge and education proven by women working through or ignoring their symptoms.

Risk factors continue to be researched daily regarding postpartum depression. A few factors exacerbating PPD include: sleep deprivation, poor support systems, poverty, lack of resources such as health insurance or distance from mental health services, and the stigma surrounding mental illness (Dørheim, Bjørvatn, & Eberhard-Gran, 2014; Pessagno & Hunker, 2013; Jones, Jomeen, & Hayter, 2015; Radunovich et al., 2017; Fonseca & Canavarro, 2017). Other risk factors for PPD include anything that may decrease a postpartum woman's self-image or further impact hormone levels.

With approximately 1 in 7 women diagnosed worldwide, postpartum depression is undoubtedly a pervasive disease. The illness is often missed with screenings, then under-reported by women with symptoms (Naysmith et al., 2015; Pessagno & Hunker, 2013; Fonseca & Canavarro, 2017). First time mothers are even less likely to report because of the social stigmas (Pessagno & Hunker, 2013). Women with PPD struggle with daily stressors, their inability to care for their child, and judgment from friends, family, and neighbors; however, the consequences of suffering in silence are often more detrimental to the families pervaded by postpartum depression.

Background

While impeding the self-esteem of the mother, postpartum depression (PPD) also impairs the mother's ability to care for her child, causing potential long-term developmental complications for the infant. The altered mother-child bond often includes difficulty breastfeeding with early introduction of solid food, and parental neglect to engage the child, leading to social and cognitive delays. The quick switch from breastfeeding to food instigates gastrointestinal upset in the infant as well as frequent emergency room visits due to loss of immune protection provided in the mother's breast milk (Brummelte & Galea, 2016). Such cases have led to broader media coverage and an increase in research for the disease.

Since the year 2000, more research and screening tools have been developed for postpartum depression. Several countries have also taken more of an interest in mental health issues with nationwide recommendations to screen for PPD. There have been setbacks to these initiatives such as in 2011 when studies emerged showing early intervention of PPD would not improve maternal-child outcomes, but those studies were proven to be insufficient by U.S. taskforces in various states, as well as the continued research started by the *Affordable Care Act* in 2010. Starting in 2003, several states, Texas being first, began requiring pregnant women and new mothers to be educated on PPD to improve outcomes and encourage treatment with the onset of symptoms. There have also been multiple campaigns started to raise awareness, especially within the United States. A few states actually named a month for PPD with others forming awareness campaigns, distributing material with information to the public. With the beginning of the *Affordable Care Act*, an amendment known as the MOTHERS Act was

introduced with specific clauses for PPD education, care, and funding for women with PPD (Rhodes & Segre, 2013).

According to the National Mental Institute of Health, postpartum depressive symptoms may begin during the perinatal period, toward the end of the third trimester; however, most women experience an onset between one week and one month following delivery (nimh.nih, n.d.). Women experiencing depression after a stillbirth or miscarriage are not included; only live births are reported (*Statistics,* 2013). The prevalence of PPD is high internationally, due to a global concern of the disease.

The population focused on in this study include first-time mothers of low socioeconomic status (SES) in developed countries. These are women who are already at increased risks for chronic physical diseases due to poor education and lack of resources. Low SES mothers are more likely to suffer from mental illness because of higher stress levels accompanying low income, poor living situations, long commute to trustworthy physicians and treatment centers, and potentially poor social support (Radunovich et al., 2017). The rates of diseases, especially mental, rise even more outside of the urban and suburban areas. Women living in rural areas or small towns have more difficulty seeking treatment from a doctor due to the lack of availability and the stigma surrounding mental illness in tight-knit or small communities. Simpler interventions mothers can do at home at a low cost which are readily accessible may be able to make a more significant impact in these communities.

First-time mothers are profoundly influenced by the opinions of others compared to mothers with multiple children. The first-time mothers report more feelings of shame and guilt when suffering from postpartum depression as well as less willingness to report

symptoms to a doctor for treatment, or even friends for support (Pessagno & Hunker, 2013). Encouraging all mothers to seek help for PPD symptoms is necessary to protect their children.

One pregnancy featuring postpartum depression increases the risk for mothers to experience the illness with subsequent pregnancies. The study by Rasmussen et al. focuses on women with no previous history of depression; women who have a prior mental medical history have a 31% chance of developing postpartum depression (Rasmussen et al., 2017; Lewis et al., 2018). Mental health screenings during pregnancy are especially important to determine the risk a mother has of developing PPD.

Significance

Nurses have a wide range of roles in healthcare from assisting the physician to providing in-depth education to patients and families; nurses are involved in every aspect of care, including the various stages of pregnancy, birth, and the postpartum period.

With hospital births, a nurse is available to the new mother for a short period of approximately 24-36 hours before the mother and child are discharged home. Parents need to report difficulties at well-child check-ups or seek out medical help to treat issues early and improve outcomes. A follow-up visit may be completed in the postpartum period by a midwife or another licensed medical professional if indicated.

According to Brummelte and Galea, visits from midwives or perinatal nurses improve PPD symptoms in affected mothers (2015). Nurses in Northern England have the option of referring PPD mothers to a home care organization where other nurses will conduct regular home visits to assess mental and parenting statuses as well as provide support and care (Jones, Jomeen, & Hayter, 2015). Home health services are available in

other developed countries as well. The nurses have the responsibility to suggest referrals to the doctor, a social worker, and to other resources available within the patients' communities, including therapy and psychiatric services.

Psychiatric advanced practice nurses can lead therapy sessions as an intervention for PPD. In one study, the nurse led a psychotherapy group and assisted in gathering data for the research study (Pessagno & Hunker, 2013). Getting treatment from a doctor well-versed in PPD may prove difficult for some women; therefore, nurse-led interventions and therapies may decrease wait times (Pessagno & Hunker, 2013). In a specific organization responsible for various therapies in the United Kingdom, nurses meet with patients at intervals during treatment to screen for the success of therapy and referrals (Naysmith et al., 2015). Another task of nurses is providing proper education.

Nurses are responsible for educating patients in hospitals and other healthcare settings; however, community involvement is as equally important. Increasing awareness of PPD and symptoms may encourage more mothers to seek treatment as well as educate family members about when to pursue help for their depressed loved ones (Fonseca & Canavarro, 2017). Spouses have the crucial role of prompting their wives to get professional help for PPD, therefore, nurses should support the significant others as much as the mothers. Without support at home, the woman has little likelihood of going to a medical professional for help (Fonseca & Canavarro, 2017).

Most studies focus only on the treatment of depressive symptoms or the maternal-child bond, but not both (Brummelte & Galea, 2015). Nurses can begin to make this change when conducting postpartum depression screenings, visiting mothers in the postpartum period, and even during well-child visits. Nurses should educate first-time

mothers on simple interventions the parents can do at home to promote positive mood and health.

Problem Statement

With an increasing number of case studies and recognition of postpartum depression, discerning attainable treatments and results is becoming progressively more difficult for mothers to determine when and what kind of treatment to seek. The nurse's role is to access the evidenced-based material to decide the best modalities before assisting and educating mothers on simple, cost-effective treatments.

Purpose Statement

The purpose of this systematic review is to synthesize current research to answer the question, what nursing interventions best treat postpartum depression affecting mothers of low socioeconomic status in developed countries?

Variables

This study is looking at interventions to assist women of low socioeconomic status in developed countries suffering from postpartum depression. The independent variables being assessed are the nursing interventions used to manipulate treatment of PPD. Nursing interventions have been defined as, “Any treatment the nurse performs to enhance patient outcomes based on clinical judgement and knowledge” (Craven, Hirnle, & Henshaw, 2017, p. 1444). The dependent variable is the phrase, treat postpartum depression. Included in this study are the treatments: improved sleep quality, exercise, and partner support.

For this study, developed countries include those that recognize and treat PPD. The most common countries cited in the articles are the United States, Canada, and the

United Kingdom. Multiple other countries are included, but all have the resources needed for public campaigns and research institutes or colleges to gather further information on PPD.

Low socioeconomic status in this study is depicted as those who earn under the national average each year, whether they are low middle class or in the lower class. The Federal Poverty Line was also assessed for studies conducted in the United States for those who live below the 185th percentile. In the majority of the studies used, a mixture of socioeconomic statuses is present, but each has at least a small population of about 30% of lower class people.

Methodology

Intermittently from February to August 2018, database searches were used to find information on postpartum depression interventions. Databases utilized were CINAHL Complete, Medline, Academic Source Complete, Health Source, PsycARTICLES, Psychology and Behavioral Sciences Collection, and American Doctoral Dissertations. Keywords included “postpartum depression,” “exercise,” “sleep,” “social support,” “partner support,” “yoga,” “peer support,” “physical activity,” “insomnia,” and “nursing interventions.” Because of the number of databases used and specific keywords, a comprehensive list of articles were acquired. For limiters, articles had to be published within the last five years, include full text, be available in English, and be from a peer reviewed journal. This combination of criteria allowed the most credible information on the topic. The total number of hits from all searches was greater than 10,000. In order to narrow the results, titles were scanned. Those that did not appear to directly relate to answering the research question were excluded. If articles could not be excluded based on

title, abstracts were read. Those that sounded promising to answering the research question were saved and the full text article was reviewed. Other inclusion criteria include the population of mothers with postpartum depression, further identified by: low socioeconomic status and developed countries. Out of all of the searches, 39 studies were saved for possible inclusion in the sample. The saved studies were critiqued for quality and the ability to answer the research question. Once critiqued, the sample size was 10.

Findings

The sample consists of ten articles drawn from seven databases. The majority of the articles are quantitative (6 articles) in nature (Buttner et al., 2015; Demissie et al., 2013; Fonseca & Canavarro, 2017; Lewis et al., 2018; Radunovich et al., 2017; Symon & Crichton, 2017) while three articles qualify as systematic reviews (Leger & Letourneau, 2015; Owais et al., 2018; Pritchett, Daley, & Jolly, 2017), and the last one is a qualitative study (Pritchett et al., 2017). The literature is primarily correlational in nature with little descriptive data.

The findings table gives the basic demographic information for each study including authors, year published, and type of study.

Table 1

Findings Table

Author	Type of study/level of evidence	Sample Size	Findings
Buttner, M.M. et al. (2015)	Quantitative (I)	57 participants	Gentle Vinyasa Flow yoga class twice weekly; combination of home workout (30 minutes/week) and group class (2 hours/week); mean attended 11.46/16 classes Telephone interviews, face-to-face clinic interview, HDRS, and PHQ-9 questionnaire used. Yoga group had significant decline in depressive s/s & incline in well-being compared with control
Demissie, Z. et al. (2013)	Quantitative (II)	529 women	General exercise during pregnancy and its effect on PPD No significant association found between exercise and PPD symptoms 2 telephone interviews, 2 in-clinic questionnaires used **(**EPDS) over 3 months
Fonseca, A. & Canavarro, M.C. (2017)	Quantitative (II)	231 men	Women with higher income have stronger partner support Higher level of depression, less likely to seek help Women more likely to seek informal than professional help Informal discussions of mental health may encourage seeking professional help Internet survey – EPDS
Leger, J. & Letourneau, N. (2015)	Systematic Research Review (I)	6 articles	Volunteers with a background of PPD are more effective for decreasing maternal depression s/s; mothers who identified the need for peer support experienced benefits of overall feelings of well-being Face-to-face does not have better results than telephone support Peer support conducted as: telephone only, telephone and face-to-face, and face-to-face only 83% used EPDS
Lewis, B.A. et al. (2018)	Quantitative (I)	122 women	Sleep should be improved to prevent PPD – limit caffeine, cluster feed infant before bed, no lights on at night Unclear if poor sleep caused depressive symptoms or if depression causes sleep disturbance Telephone-based/mail questionnaires used as interventions to prevent PPD Mail questionnaire also used Baseline at 6 months postpartum with f/u at 7 months; study inconclusive

Owais, S, et al. (2018)	Systematic Research Review (I)	11 studies	Sleep interventions include: nurse support, written education material, chamomile tea, back and foot reflexology, essential oils, psychology sessions, ferrite magnets, Pilates, and co-sleeping. Massage and exercise most effective at improving sleep quality Sleep quality improved for up to 8 weeks postpartum, but not beyond 33% used EPDS
Pritchett, R.V., Daley, A.J., & Jolly, K. (2017)	Systematic Research Review (I)	1734 participants within 13 articles	Exercise in groups, exercise counselling, and exercise with other interventions significantly reduced PPD symptoms when all done together. Exercise plus co-interventions (exercise + diet/exercise + social support) made significant impact on maternal mood Exercise alone did not have a significant impact 85% used EPDS; 46% of the articles showed significant decrease in postpartum depression
Pritchett, R. et al. (2017)	Qualitative (IV)	21 participants	Women self-determined exercise routine; low intensity exercise promoted mental calmness Exercise improves confidence, sense of self, mood, energy levels, and calmness Exercise out of the home reduced social isolation and improved support Low intensity exercise promoted mental calmness Most preferred exercise as initial treatment over antidepressant medications Many women reported to prefer exercise as treatment for PPD than other interventions. 35-45 minutes face-to-face interviews of women diagnosed with depression (postpartum period)
Radunovich, H.L. et al. (2017)	Quantitative (III)	444 women	Relationship status buffers stressors r/t parenthood or depressed women avoid relationships Qualifier - income less than or equal to 185% of FPL Results: Mental health score below national average & 35% positive for depressive symptoms Presence of a partner lowered depression score PAM – better relationship quality = less depression Flyer to recruit then face-to-face interview
Symon, B. & Crichton, G.E. (2017).	Quantitative (II)	80 mothers	Improved infant sleep patterns affect maternal mood Mean results achieved at 2.8 nights Decreased infant awakenings from 98% to 31% 85% reduction in depressive symptoms Some mothers began expressing desire for second baby Time and cost-effective to teach clinicians to educate mothers Single clinic visits with provided written material and website reference used to educate mothers on establishing infant bedtime routine CPF (Confidence, Pleasure, Frustration) scale shows significant improvement

Common themes among the articles include scales used and commonality of interventions. The most used scale among the articles is the Edinburgh Postpartum Depression Screening (EPDS) used in five of the studies (Demissie et al., 2013; Fonseca & Canavarro, 2017; Leger & Letourneau, 2015; Owais et al., 2018; Pritchett, Daley, & Jolly, 2017). Of the interventions, exercise proved to be the most effective with the greatest significant decrease in depressive scores and the greatest number of articles supporting the treatment (Pritchett et al., 2017; Pritchett, Daly, & Jolly, 2017; Buttner et al., 2015). Social support is also highly effective depending on the circumstances. For volunteer-based support, it is most effective for the depressed mother if the volunteer has a history of PPD (Leger & Letourneau, 2015). For partner-based support, a good relationship between the couple is necessary for the depressed mother to feel comfortable enough to speak to the partner about symptoms. A better relationship also increases the likelihood the woman will seek professional help due to encouragement from her partner (Fonseca & Canavarro, 2017; Radunovich et al., 2017). Few studies were found supporting interventions for sleep, but improving infant sleep was proven to decrease maternal depression (Symon & Crichton, 2017).

In general, the articles supported the interventions being tested, including: improving sleep, exercise, and social support. Sleep of the mother or infant was improved in two studies (Owais et al., 2018; Symon & Crichton, 2017). Next, exercise improved maternal mood and decreased depressive symptoms in three articles (Buttner et al., 2015; Pritchett, Daley, & Jolly, 2017; Pritchett et al., 2017). Finally, partner or peer support demonstrated effectiveness in all three studies examined (Fonseca & Canavarro, 2017; Leger & Letourneau, 2015; Radunovich et al., 2017).

Discussion

Three of the articles included in the study address interventions related to sleep (Lewis et al., 2018; Owais et al., 2018; Symon & Crichton, 2017). Lewis et al. attempted to prove correlation between sleep disturbances and increased depressive symptoms through telephone interviews and mailed surveys; however, the results were inconclusive, requiring further research (2018). Owais et al. is a research review of a wide variety of interventions to improve sleep but did not test a correlation with maternal mood. Of the interventions reviewed, exercise and massage were the only two to show significantly improved sleep patterns in the postpartum period; however, sleep improvements were only effective through the eighth postpartum week. Symon and Crichton et al. tested the relationship between infant sleep patterns and maternal mood (2017). A one-time education was performed at a clinic with each woman at the beginning of the trial, equipping the new mothers with tools to establish an infant bedtime routine. Improvements were seen within three nights with a significant decrease in infant nighttime awakenings and reduced depressive symptoms. This study showed inconclusive results on maternal sleep patterns (2017).

Four articles focus on exercise as an intervention for PPD (Buttner et al., 2015; Demissie et al., 2013; Pritchett, Daley, & Jolly, 2017; Pritchett et al., 2017). Buttner et al. tested a Vinyasa-style yoga designed specifically for the study (2015). A control group was used to determine significance of findings. Significance was found in decreased depressive symptoms and increased maternal well-being from baseline to post-trial and between the test and control groups (2015). Demissie et al. studied the effects of exercise during later stages of pregnancy on postpartum depressive symptoms (2013). The study

did not show a significant correlation between exercise and PPD symptoms unlike similar studies; therefore, further research is needed (2013). Pritchett, Daley, and Jolly reviewed research related to exercise interventions and their effects on PPD (2017). All exercise routines held a significant impact on maternal mood except individual exercise without co-interventions. Group exercise classes, exercise counseling, and exercise with co-interventions were routines that improved depressive symptoms (2017). Pritchett et al. performed a self-determined, qualitative study of exercise and its impact on maternal mood (2017). Women reported increased mental calmness with activities such as walking while others preferred more intense regimens. Some women enjoyed the separation from their family as well as the increased social connection related to exercise at a gym; however, other women stated their schedules were too busy and opted for in-home exercise. Overall, exercise improved maternal mood, decreased depressive symptoms, improve body image and self-confidence, and mental well-being. Most women stated a preference for exercise as a first-line of treatment, choosing to avoid antidepressant medications (2017).

The final three articles addressed social support interventions (Fonseca & Canavarro, 2017; Leger & Letourneau, 2015; Radunovich et al., 2017). Fonseca and Canavarro used an internet survey to test maternal relationships with partner and willingness to seek treatment for PPD (2017). Women with strong partner support are more likely to seek professional help, though those with greater depressive symptoms are less likely to seek any help, including peer support. Women with higher income showed less likelihood of PPD and increased partner support over women with low socioeconomic status. The majority of women expressed a preference for informal

support such as a spouse or partner rather than professional help (2017). Leger and Letourneau reviewed research for peer support given by trained volunteers to women with PPD symptoms (2015). Interviews were conducted as over the phone, in person, or as a combination of the two. The study shows face-to-face interviews do not qualify a significant difference over telephone-based. Of the six articles included in the study, five proved significant improvements in depressive symptoms. The article that was not significant was the only article to not ensure volunteers had personal PPD experiences. Despite volunteer training and availability of resources, the mother must view herself needing peer support intervention before it can be effective (2015). Radunovich et al. focused on mothers with low socioeconomic status and health concerns (2017). The majority of women in the study held higher than average scores of mental illness; however, those with strong partner support scored lower. The presence of a partner alone did not decrease depressive symptoms unless the partner was scored as supportive by the mother. It is not clear in the study if women with partners have less depression or if depressed women avoid relationships (2017).

Implications

Nursing Education

Nursing education could be impacted by the results of this study. Less invasive techniques and non-pharmacologic interventions are more likely to be accepted by the general public. Teaching upcoming students of such techniques equip them for improved holistic care of patients. Educators may be better equipped on specific interventions - such as sleep, exercise, and support - to teach students based on this study. Educating the

community of interventions for improved maternal mood may work to prevent depressive symptoms before they begin.

Nursing Practice

New nurses and those in practice receive more in-depth knowledge of preventing and treating depressive symptoms. Implementing evidence-based practice interventions related to improved sleep, exercise, and social support could significantly improve patient outcomes related to postpartum depression. Women of low SES are more likely to practice interventions that do not cost them money such as those discussed in this study. Being knowledgeable of and encouraging the use of community resources for PPD benefits community practice by improving patient outcomes and use of community care by patients.

Future Research

Future research should focus on replicating the studies at different times during the antepartum and postpartum periods to test for the best efficacy of treatments. A wide variety of time frames are included, but more consistency may show further improvements of interventions implemented at different phases in the postpartum period. A higher occurrence of education from healthcare staff is likely to improve patient outcomes and increase the potential number of interventions that may be used by better equipping healthcare providers for situations involving PPD. An increase in depression screenings during the third trimester of pregnancy and in the early postpartum weeks should be further looked into to diagnose potential PPD earlier to increase efficacy of interventions.

Strengths & Limitations

Several strengths and limitations of this study need to be addressed. Strengths of this study included the use of a research mentor experienced in nursing research, the interest of the author in the topic selection, the availability of current research in the literature on the topic, and having an entire semester to complete the project.

Limitations of this study included the inexperience of this nursing researcher, other obligations and classes occurring at the same time as the research, inability to use all databases, small sample size, and time limitations of the mentors. The limitation of databases used could have introduced a sample bias, as well as limiters in the databases such as full text and English only. Personal biases of the researcher include an expectation of sleep being the best intervention for mothers with PPD as well as believing women with low SES would have more treatments available. Cost was not considered a limiting factor because of the use of interlibrary loan.

Recommendations

Recommendations for replication of this study include the use of a larger sample, a focus on a single intervention, more focused time on the research project, peer review input during the research process, and better time management without extended breaks during the research process. Qualitative research would strengthen the study. More randomized, controlled trials with large sample sizes are needed for more accurate results. Clinical guidelines are unavailable for this topic.

Conclusion

The purpose of this study was to determine the efficacy of various nursing interventions on postpartum depressive symptoms. The nursing interventions tested

include: exercise in groups and individually, exercise counseling, peer support, partner support, maternal sleep, and infant sleep. Results of this study indicate exercise and support from a volunteer or spouse as most effective for PPD; volunteers must have a personal history of PPD for the highest efficacy. Improving infant sleep patterns also improves outcomes. Implementation of proven interventions decrease depressive symptoms as well as improve maternal mood and confidence. While further studies in greater detail are needed to better demonstrate the value of nonpharmacologic interventions, a solid basis is presented in this study. Educating women during pregnancy of interventions to prevent or decrease prevalence of PPD may improve patient outcomes by decreasing recovery time and severity of symptoms. Better education may also encourage women with PPD symptoms unresolved by in-home nonpharmacologic treatment to seek professional help. Postpartum depression can be treated in many cases with quality education of effective interventions.

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