Rural Women's Explanatory Models of Postpartum Depressive Symptomatology

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Abstract

Purpose: To construct explanatory models of postpartum depressive symptomatology (PPDS) from the perspective of rural women and to compare these models to the traditional medical model.

Sample: Purposive sample of 20 rural women from one Midwestern state who self-identified as having had PPDS in the past year.

Methods: This qualitative descriptive study was informed by Kleinman's (1980) explanatory model of illness and used a semi-structured interview guide. Telephone interviews were audio-recorded and transcribed verbatim. Data analysis included content analysis within the categories of Kleinman's (1980) explanatory model.

Findings: Rural women were more likely to attribute their PPDS to nonphysiological causes than physiological causes. Rural women reported the onset, duration, and symptomatology of PPDS were similar to what is outlined in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Women considered the effects of PPDS to be far-reaching and serious. Rural women in this study preferred a variety of often nonpharmacological treatment options and care from informal networks to that available from health care providers. Although the rural women in this study did not believe PPDS could be prevented, they believed women could better prepare themselves for PPDS by having a support system in place and by planning for practical life concerns.

Conclusions: Nurses and other health care providers and researchers should consider rural women's explanatory models of PPDS when considering interventions and program development for women in rural communities.

Keywords: Postpartum depression, Postnatal Depression, Qualitative, Maternal depression, depressive symptoms, Rural Nursing Theory

Rural Women's Explanatory Models of Postpartum Depressive Symptomatology

Postpartum depressive symptomatology (PPDS) occurs in 8–19% of women and may include symptoms of sadness, anxiety, weight change, sleep disruption, and loss of interest in life, with onset in the weeks and months following the delivery of a baby (American Psychiatric Association [APA], 2013; Centers for Disease Control and Prevention [CDC] (n.d.); O'Hara & McCabe, 2013). PPDS differs from the "baby blues," a mood disruption experienced by most women during the first 2 weeks after giving birth, and from postpartum psychosis, a rare and severe condition that may endanger the safety of the mother and child (Jones, Chandra, Dazzan, & Howard, 2014).

Rural women may be at greater risk for PPDS (Mollard, Hudson, Ford, & Pullen, 2015; Villegas, McKay, Dennis, & Ross, 2011). Nurses and other health care providers should understand how a target population views and explains illnesses to relate to patients and to provide the best care (Kleinman, Eisenberg, & Good, 1978; Buus, Johannessen, & Stage, 2012). Because PPDS is understudied in rural populations, it is unknown how rural women view PPDS and what they consider their best treatment options. Studies that elucidate how rural women view and explain PPDS can help nurses develop appropriate screening, intervention, and treatment plans that will better serve the rural patient population.

The purpose of this study was to construct explanatory models of postpartum depression symptomatology from the perspective of rural women and to compare these models to those of the traditional Western health care "medical model" of PPDS.

Background

PPDS is primarily viewed as a medical phenomenon in the United States even though women do not always describe the etiology of their symptoms as medical (Abrams & Curran,

2009; Ugarriza, 2002). Postpartum depression is generally diagnosed based on the criteria listed in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*) under major depressive disorder, with a peripartum onset specifier (APA, 2013). To fit into these diagnostic criteria, women must have an onset of symptoms during either pregnancy or the first 4 weeks postpartum. PPDS is not a diagnostic term but includes postpartum depressive symptoms whether the women who experience them meet all *DSM-5* criteria.

Traditional Western health care practices, to which will now be referred to as the "medical model," includes views that PPDS has an exclusively physiological etiology (Beck, 2002; Brummelte & Galea, 2015). Theories of a physiological cause of PPDS have included changes in hormone levels, nutritional status, and delivery method, among others. The treatment of choice in the medical model is generally pharmacological antidepressant therapy (Brummelte & Galea, 2015; O'Hara & McCabe, 2013). In previous research, women who had experienced PPDS did not describe their experience as corresponding with the medical model (Abrams & Curran, 2009; Ugarriza, 2002).

Kleinman (1980) developed his explanatory model of illness as a medical anthropologist who noticed cultural variations in the way illness was viewed and explained. Kleinman also noted nurses and other health care providers viewed illness differently from the affected patients (Kleinman, 1980). An individual's explanatory model of a particular illness is formed by ethnic and cultural beliefs, personal experiences, and acquired explanations of the illness. Kleinman's (1980) model is based on the idea that by understanding how the patient views her illness, the health care provider will be better able to care for the patient, find treatment methods with which the patient will comply, and discover unrecognized causal or other mechanisms of the illness (Kleinman, 1980).

Kleinman's (1980) explanatory model has been applied in research to several mental health topics in many cultural variations across the world. In the United States, researchers have applied his model to depression in African American women (Waite & Killian, 2009), depression in older Hispanics (Sadule-Rios, Tappen, Williams, & Rosselli, 2014), and postpartum depression in nonrural women (Ugarriza, 2002). Ugarriza (2002) found that, unlike the medical literature at the time, her study participants did not provide an exclusively physiological explanation for their experience, and that women felt more public education and support services for new mothers were necessary.

PPDS has unique considerations when looking at a rural culture as is detailed in Long and Weinert's (1989) Rural Nursing Theory. Attributes of Rural Nursing Theory include that rural dwellers see health as the ability to work, making them less likely to seek care if they are still able to function in their daily role. Thus, a rural woman who is still able to function in the daily tasks of motherhood may not consider herself in need of care despite experiencing PPDS. Rural dwellers prefer informal networks of care to formal health care, and may face greater stigma in receiving healthcare due to the lack of anonymity in rural communities (Long & Weinert, 1989). These factors may be more significant when considering mental health problems as in some rural cultures mental health problems are viewed as a personal weakness (Lee & Winters, 2004).

Rural women are understudied, but from what is known, rural women may be at greater risk for depression throughout their life span (Groh, 2013; Simmons, Yang, Wu, Bush, & Crofford, 2015) and specifically during the postpartum period (Mollard et al., 2015; Villegas et al., 2011). Due to increased levels of stigma of mental illness in rural communities (Robinson et al., 2012; Smalley et al., 2010), mental health is especially understudied. These factors, combined with the stigma of PPDS which occurs during a time often portrayed as universally

happy and peaceful for new mothers (Pinto-Foltz & Logsdon, 2008), may leave PPDS under recognized in rural women.

Although PPDS may be seen with stigma in rural cultures, rural women experience PPDS and therefore need treatment and understanding. The best way to understand a woman's experience is to ask her about it, because women are the experts on their own lives. To the researchers' knowledge, there have been no studies using Kleinman's (1980) explanatory model in rural women with PPDS.

Methods

Research Design

A qualitative descriptive design was used in this study. Qualitative descriptive methodology is naturalistic, and creates a close description of participants' experiences in their own voice (Sandelowski, 2000). Qualitative descriptive methods focus on the "what," "why," and "how" of human experience and are appropriate methods for understudied areas of research (Lambert & Lambert, 2012).

In this study, 'rural' was defined as a nonmetropolitan county (a county with no urban areas ≥ 50,000) (White House Office of Management and Budget [OMB], n.d.). This definition of rural was chosen as it is used at the federal level, thus opening up sources of funding and advocacy across many levels to improve programs in rural communities.

Sample

The purposive, criteria-based sample consisted of 20 rural women from one Midwestern state who self-identified as having depressive symptoms in the postpartum period. Data saturation was reached at 12 participants. Data was collected on 8 additional participants to strengthen and confirm findings. To be included in the study, a participant had to be a woman

who had given birth within the past year; be at least 19 years old (the legal age of majority in this state); and reside in a rural setting. Women who were currently pregnant were excluded from this study so possible pregnancy-related depressive symptoms would not be confused with PPDS. Additionally, due to the interviewer's language abilities and the conversational nature of qualitative methods, non–English-speaking women were excluded from the study.

Recruitment

After Institutional Review Board (IRB) approval (IRB #392-15-EP), recruitment materials were distributed through several means in a Midwestern state. Recruitment materials were posted at rural Women, Infants, and Children (WIC) clinics and rural health care providers' offices. An advertisement was placed on social media, and a recruitment letter was mailed to rural women who had given birth in the past year who were identified through a purchased direct mail list. Six women were recruited through WIC clinics, five through health care providers, four through social media, four through word of mouth, and one through the letter campaign.

Women were given the option to call, text, or send e-mail messages to the researcher to screen for eligibility. Twenty-three women contacted the researcher. One woman did not meet the inclusion criteria because she had not given birth in the past year. Two women were eligible but did not complete the consent form and were lost to follow-up. Fifteen participants made initial contact through text message, two through telephone, and three through e-mail message. A $25 gift card was offered as a participation incentive.

Data Collection

Participants were interviewed by telephone for 30 to 60 minutes using a qualitative interview guide based on Kleinman's (1980) questions that explored the individual's

description of what causes PPDS (etiology), how it works (time and mode of onset of symptoms, course of illness), how it affects the body (pathophysiology), and how it should be treated (See table 1). Interviews were audio-recorded and transcribed verbatim. All participant transcripts were assigned a pseudonym to ensure confidentiality.

Table 1

Interview Guide Questions

Interview Guide
Grand Tour questions:
First, just to get to know you a little better, tell me a little bit more about yourself? Tell me about your baby? How would you describe your pregnancy? How would you describe your birth experience? Tell me about how it has been since your baby has been born?
Etiology
What do you think causes some new mothers to experience sad or down feelings? Why do some women get down and sad feelings after having a baby and others do not?
Onset of Symptoms
What makes sad or down feelings start for new moms when they do? Tell me about how your sad or down feelings started
Pathophysiology
When a new mother has sad or down feelings—how does that affect her? Was that your experience?
Course of Illness
When new mothers have sad or down feelings, how long do those feelings last? How long did your sad or down feelings last? What kind of problems do those sad or down feelings cause for a mother who experiences them? Tell me more about (insert particular problem). How serious are those problems?
Treatment
What can a new mother do to take care of her sad or down feelings? Tell me about what you did to take care of sad or down feelings? What doesn't work to take care of sad or down feelings for new mother? Did you try anything to take care of your sad or down feelings that didn't work? Should a new mother seek help from another person if she has sad or down feelings? Who should that person be? Did you try to seek help from anyone for your sad or down feelings? Is there anyone a new mother should not go to for help when having sad or down feelings? Is there any way to prevent a new mother from experiencing sad or down feelings? Do you think your sad or down feelings could have been prevented?

Data Analysis Methods

Data analysis methods included descriptive statistics for the demographic quantitative component of the study and content analysis for the transcribed qualitative component.

Descriptive statistics for quantitative data. The variables on the demographic questionnaire that were used in the descriptive statistical analysis included: age of participant, age of infant in months, race, education level, delivery method (cesarean or vaginal birth), infant feeding method (breast-feeding or bottle-feeding), population in participant's community, and distance in minutes to the participant's health care provider. The mean and standard deviation, frequency or percentage was calculated on these quantitative variables where appropriate.

Content analysis for qualitative data. Content analysis is a reflexive and interactive form of data analysis that is informational and summarizes the collected qualitative data (Sandelowski, 2000). Content analysis is an appropriate form of analysis for understudied areas in which a simple reporting of the data and a straightforward description of the phenomena of study are desired (Vaismoradi, Turunen, & Bondas, 2013).

The content analysis process began with a mindful strategy to ensure the trustworthiness of the results. The researchers utilized four concepts of trustworthiness as identified by Whittemore, Chase, and Mandle (2001), to guide content analysis: (a) criticality, (b) authenticity, (c) credibility, and (d) integrity. The study maintained criticality by identifying a research analysis process that was detailed and rigorous. To make sure the results were authentic, the voice of each participant was portrayed in a way that was true to her individual experience. To ensure

credibility, the experiences of the participants were depicted in an accurate and believable way. And finally, to ensure the study's integrity, the researchers worked as a group to conduct thorough checks of trustworthiness and removal of bias by the researchers.

Miles and Huberman's (1994) methods of content analysis were employed on the qualitative data in this study with the three main elements of data reduction, data display, and conclusion drawing. Two investigators analyzed the data and met over a series of meetings to interpret and discuss findings (Figure 1).

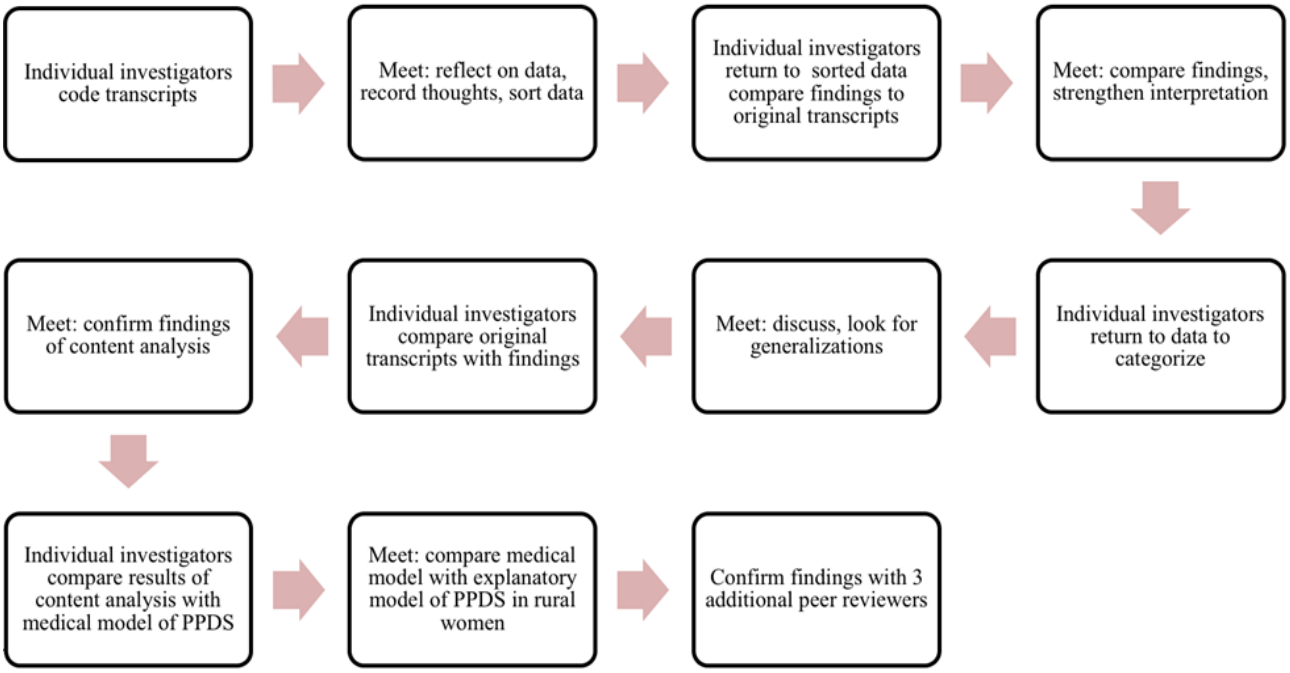

Figure 1.

Content Analysis Process

The lead investigator had interviewed the study participants, and the second investigator served as the peer reviewer. The role of the peer reviewer was to ask difficult questions, challenge biases, and push the investigation toward the next level in analysis, and interpretation (Lincoln & Guba, 1985). Upon completion of the two investigator's analysis, the researchers

compared the explanatory models of the participants with the medical model of PPDS. The medical model of PPDS used for comparison in this study included the onset, symptoms, and duration listed in the *DSM-5* for major depressive disorder with a peripartum onset specifier; a primarily physiological etiology; and pharmacological antidepressants as the treatment of choice (O'Hara & McCabe, 2013). Three additional peer reviewers verified the results and interpretation of the study. To ensure transparency of the research process an audit trail was kept, and any documentation pertaining to the study, whether private or shared, was saved and securely stored.

A member check method outlined by Milne and Oberle (2005) was used during the participant interview. This process included clarifying and summarizing what the researcher believed were participants' major points so that, if necessary, participants could clarify and change their accounts to be better understood by the researchers. An example might be, "I am hearing you say you believe your symptoms got better as time went on. Do you agree with that?"

Results

Demographic statistics

The mean age of participants was 27.25 years (*SD* = 5.55). The mean number of children each woman had was 2.55 (*SD* = 1.23). The mean age of the infants was 5.2 months (*SD* = 3.90). Fifteen women identified as Caucasian, three as Hispanic, one as Native American, and one as African American/biracial. Fourteen women had a high school education, three women had bachelor's degrees, two had associate degrees, and one woman had not completed high school. Eleven women had cesarean births. Seventy percent of women were bottle-feeding. The average community size was 14,380 persons (*SD* = 17,831), and the mean distance from a participant's home to her health care provider was 21.75 minutes (*SD* = 18.9).

Etiology

The etiology of the explanatory model included what participants believed caused PPDS. Nearly all participants named multiple causes for PPDS. The main categories of etiology included physiological, lack of support, and trouble adjusting to the maternal role.

Physiological. Many women discussed PPDS had a physiological component in its etiology. Women often mentioned "hormones", and birth experience, such as having a cesarean section, as related to their PPDS.

Although Nicole thought her PPDS was multifactorial, physiological changes played the largest part in causing her PPDS.

> I didn't know why I was feeling like that, and just the hormone side of it . . . especially C-sections too. You're pregnant. You go into a room. You come out. You're not pregnant. So your body just sort of freaks out because it doesn't know what to do now. It's just like when somebody gets their leg chopped off and their body doesn't realize it. It's kind of similar.

Support. Women in this study often attributed their PPDS to a lack of support. Natalie said she lacked support from the beginning of her pregnancy. "I felt I had absolutely no help or support at all. Like nobody made my experience exciting . . . I felt like it was a bad thing that I got pregnant and was having a baby."

Sara believed she was unsupported due to her rural location and that lack of support played a role in her PPDS.

> If I was living in a bigger town, I think I would feel completely different, you know? But I just don't have any friends here. I don't have any family here. I don't work here. You know, so it's kind of—for me it's situational.

Maternal role. Many women attributed their PPDS to difficulty in transitioning to the maternal role. Women discussed low self-efficacy, feeling overwhelmed with the maternal workload, feeling like a failure as a mother because of problems breast-feeding, or difficulty with the role change that occurs when moving from a professional role to a maternal role.

Catherine explained, after the birth of her baby, she did not think she was suited to be a mother, and this caused her PPDS.

> I feel like I don't have that motherly touch. Like some moms are excited to have a baby. They're thrilled. Me, I was thrilled, but then as soon as the baby was here, I was scared. I was nervous because I'm like, I've never been taught how to take care of a baby. I was never loved like this by my mom.

Andrea believed being overwhelmed in the maternal role caused her PPDS. "You're bringing another human life into this world, you know? That whole overwhelmed feeling, are you gonna be good enough? Are you doing the right thing? Are you gonna make it? For me, that's what it was."

Onset of Symptoms

All but a few women identified their depressive symptoms beginning sometime in pregnancy or during the first month postpartum. Most women could not identify exactly when their PPDS started. However, some women had a specific moment when they believed their PPDS began. Steph said,

> I had him on a Friday and I went back to school on a Tuesday. And I thought I was fine . . . When I came out of my first class and walked outside I felt like the whole world was looking at me and I felt like pure shame and embarrassment that I wasn't pregnant.

Pathophysiology

The pathophysiology of PPDS for this explanatory model included the manifested symptoms. The symptoms reported by participants in this study corresponded closely with those identified in the *DSM-5* for major depressive disorder. Every woman reported sadness or loss of interest or pleasure. The other most commonly reported symptoms were sleep disruption, eating change, anxiety, and agitation.

Megan explained her depressive symptomatology included fatigue, feeling down, and lacking motivation. "I would have good days, and then other days where I didn't feel like even getting myself out of bed. I just felt exhausted, and I just felt degraded…"

Nicole described how her self-care decreased with the demands of caring for an infant and how it played a part in her PPDS. "Now that I have the baby to worry about, you forget to eat. You forget to shower. You don't brush your hair every day, and just everything for yourself kind of goes downhill."

Jessica's PPDS included guilty feelings that the reality of her motherhood did not meet the cultural ideal and that she had quit breast-feeding.

> Everyone kind of has this idealistic picture of what it's like to have a baby. Sort of the warm, fuzzy feelings of love and contentment, and when you don't have that, you feel guilt, and you feel like, "Why is my experience not like that? Is it something I'm doing, or not doing? Is it because I'm not breast-feeding anymore?"

Course of Illness

The course of illness included the duration, seriousness, and effects of PPDS. All but one woman stated the course of illness was greater than two weeks. Many women, including Natalie, thought PPDS was long lasting or were unsure of how long it might last. Natalie reflected, "Sometimes I think it's going to last forever, that's how I feel. Like I see the light at the end of the tunnel, but I feel like it's a far tunnel, like it's a long tunnel I'm going through."

When asked whether PPDS is serious, women often repeated stories they had heard from television or the Internet about other women who had hurt their children or committed suicide. One participant attributed the behavior of a woman who robbed a local bank to PPDS.

Lindsey, who had experienced suicidal thoughts, was clear about the seriousness of PPDS and the need for resources for women who have suicidal ideation.

> Knowing that with my experience, and with my friend's experience, that it comes down to wanting to kill yourself or commit suicide, I think it's very serious, and I don't think there's enough information out there that it could happen, or what to do when it does happen.

The effects of PPDS were seen in almost all aspects of participants' lives. Women described difficulty bonding with their infants, and how their depressive symptoms negatively affected their other children and significant others. Christina discussed how having trouble getting out of bed affected her children. "The kids were worried about me. I was worried about them. They thought 'Oh, mom is sick again,' you know."

Elena discussed her husband's lack of understanding of her feelings and its effect on their relationship. "I started crying over just simple things. I started crying, and I tried to explain to him how I was feeling. But he just took it as being overdramatic."

Rachel stated she wanted her husband's support, but, because of her symptomatology, she remained distant. She explained,

> There's nothing that your husband can do, but you want your husband or spouse to be there, and they're not. If they're not there, then you want them to be home. But when they're home, it's almost like sometimes you just don't want them around.

Best Course of Treatment

When asked, what is the best treatment for PPDS, most women mentioned multiple methods of treatment, most commonly nonpharmacological methods. Christina believed the best way to treat PPDS was to focus on and care for herself, even if that meant going against medical advice not to bathe after a cesarean birth.

> I took long baths even though I wasn't supposed to; I got a cesarean, like, I don't care. That helped. I got the sleep that I needed after I realized that she's going to be okay, and I started to force feed myself

Several women, including Steph, expressed the importance of talking to others, especially to women who had experienced PPDS. "You have to talk to somebody because just hearing that it happens, and it happens with other people, and other people's experiences. It resets in you that it's okay, and that it happens, and it goes away."

Many women discussed pharmacological antidepressants as a treatment option for PPDS. Discussions about antidepressants were polarized between extremely positive, or extremely negative opinions. Sara was positive about her experience with antidepressants.

> Before I was on medication, I was sad all the time. I didn't want to leave the house. And you know, since being on medication, I have energy, I don't want to sleep all the time, I get things done, I'm productive—you know, it's like night and day.

In contrast, Andrea thought her health care provider's offer of medication to treat her PPDS was dismissive of her experience.

> I do not agree with a lot of the doctors that for every depression they suggest a pill . . . I literally believe that a pill is gonna make it worse, or just addict you in one way or another to a chemical… And to live, you need to be emotional, you know?

Women said improving practical life by having either childcare or more spousal and familial support was a way to improve PPDS. Women mentioned such coping mechanisms as reading books, gathering further information from the Internet, or getting out of the house.

A minority of women described maladaptive ways to feel better such as isolating oneself or just forcing oneself to "get over it." Autumn had the misinformed view that a woman can willfully stop her depression. "It lasts as long as you want it to last. Like, you have to open your eyes and realize that you have a child you need to take care of."

Where to Seek Treatment

When asked where a woman should seek treatment for her PPDS, the women most often recommended an individual from an informal network, such as a friend or family member. A healthcare provider was generally recommended as a second-choice option after a friend or family member.

Irene mentioned accessing one's informal network before considering a health care provider. She said,

> I'm able to get through it just by talking to family, so that would be my first recommendation, somebody that they trust, and somebody they're close with. If they don't have that, I would probably tell them to go talk to a doctor.

After her positive experience with her doctor, Autumn recommended seeking help from a health care provider.

> She would tell me it's normal for mothers that are like this, even if you're a young mother, or an older mother. She would say that there are mothers that have had previous kids, and then all of a sudden they get postpartum with the kid they just had…I thought I was the only one that ever felt like that.

Other mothers, such as Laura, explained seeing a health care provider seemed risky because of misconceptions that a health care provider might declare a woman unfit as a mother for having PPDS. She said, "I think most people would go to their friends, and I think it's scary for anyone to reach out to anyone in health care because they are required to report it."

Prevention

All women in this study believed PPDS could not be prevented. Lindsey, who had a history of PPDS, described how she tried to prevent a subsequent episode. "I actually tried everything this time. I tried being open. I tried talking to people about it before it happened. I don't know. I feel it's just either you get it, or you don't."

Christina agreed. "No, I don't think there's a way to prevent it at all. I thought I was doing everything perfectly fine, and then it just came out of nowhere . . . I think it just happens."

Most women believed although PPDS could not be prevented, a woman could prepare herself for the possibility of it by preparing for practical life concerns such as finances and child care.

Discussion

Rural women's explanatory models were different from the "medical model" of PPDS in this study. Regarding onset, duration, and manifested symptoms, rural women's explanatory

models and the "medical model" corresponded. The differences between the medical model and rural women's explanatory models of PPDS were in the etiology, treatment preference, and recommended sources of help for PPDS.

In the medical model of PPDS, grounded in post-positivism, the cause of PPDS is considered physiological (Brummelte & Galea, 2015; O'Hara & McCabe, 2013). Very few women in this study named physiological factors as the sole cause of their PPDS, most attributing PPDS to multiple causes. The role physiological factors play in PPDS is an example of an incongruity between models and is notable when considering health care practices surrounding PPDS. Additionally, even if it was discovered PPDS was of physiological origin, the patients' perception of its cause should be addressed. Nurses and other health care providers who stay in tune with their patient's experience and explanatory model will allow for appropriate treatment and improve patient satisfaction (Callan & Littlewood, 1998).

Women often discussed their PPDS was caused by a lack of support. Support, whether it is social or in practical tasks, is a potential target for interventions in rural populations. An example might be targeting support systems with awareness and strategies to support the new mother in rural communities. Women commonly discussed struggles in PPDS and the maternal role. Interventions focusing on improved maternal self-efficacy, breast-feeding support, childcare and practical life support, may alleviate PPDS in some rural women.

Most rural women in this study agreed with the "medical model" regarding onset and believed their PPDS had begun in pregnancy or during the first month postpartum. Additionally, the rural women in this study reported duration and manifested symptoms that matched the criteria stated in the *DSM-5* and medical model.

Unlike the medical model, which uses antidepressant therapy as the primary treatment for PPDS, most rural women reported a preference for a variety of treatment options. Additionally, rural women may prefer alternative and complementary therapies in treating their symptoms (Shreffler-Grant, Hill, Weinert, Nichols, & Ide, 2007; Weinert, Nichols, & Shreffler-Grant, 2015). Nurses should implement preferred, safe treatment interventions for new mothers in rural communities. When rural providers consider antidepressant therapy, patient beliefs about antidepressants should be discussed and patients should be educated about the expected effects of antidepressant therapy (Bauer et al., 2014; Fawzi et al., 2012). When appropriate, treatment modalities such as talk therapy, a support group, or other resources that may aid in practical and social support should be offered (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012; Uebelacker et al., 2013).

Most commonly, women in this study recommended some form of self-care as an important element in treating PPDS, including attention to necessary self-care, such as eating and bathing, and such suggestions as checking in with oneself and taking time to meditate or relax. The next most common suggestions were talking to someone, and seeking practical and social support.

Although women universally said PPDS could not be prevented, most women thought there were ways one could prepare for the possibility. Nurses and other healthcare providers should educate themselves and their patients on behaviors that may alleviate stress and depressive symptoms such as meditation, self-care, and physical activity (Cooney et al., 2013; Marchand, 2012). Additionally, women should be encouraged to plan ways to reduce stressors after their babies are born. Childcare options may be limited in rural communities and is a service area that could be increased or improved to support rural mothers and reduce PPDS.

Rural women in this study tended to prefer informal networks for advice and care before seeking formal health care services. This finding confirms Rural Nursing Theory that emphasizes the importance of the informal network in rural cultures (Long & Weinert, 1989). Some participants had the misconception that disclosing PPDS to a health care provider would result in the loss of custody of their infant. These misconceptions have been reported in the literature (Byatt et al., 2013). Nurses and other health care providers caring for rural women should focus on making themselves approachable and correcting misconceptions. Those nurses planning PPDS interventions in rural communities should consider targeting awareness and support campaigns to new mothers' informal networks.

Although the seriousness and effects of PPDS are not focused on in the medical model of PPDS, rural women's explanatory models of PPDS found PPDS serious and its effects far-reaching. Women particularly emphasized how PPDS affected relationships with their significant others and older children and impaired bonding with their infants. Nurses and other health care providers but should be cognizant that these non-physiological effects may be more distressing for the woman than her depressive symptomatology. Taking the relational factors of PPDS into account strengthens the argument for creating awareness and intervention campaigns that include or target mothers' informal networks.

Limitations

Using qualitative methods is indicated in baseline research on an understudied area such as the subject of this study, but limits the generalizability of the results. Participation did not require a diagnosis of depression, so the experiences of women in this study may not be transferable to women with a diagnosis of major depressive disorder. The use of a postpartum depression screening scale in this study may have strengthened the findings by determining the levels of

severity of symptomatology for the various participants. The recruitment efforts did not reach all rural women who self-identified as having PPDS. The use of a gift card incentive may have influenced recruitment and thus affected the trustworthiness of results.

The use of telephone interview limited the interview experience to verbal communication. It is unknown whether the use of telephone as opposed to in-person interviews decreased rapport or trustworthiness of the researcher to the respondents. It is also unknown whether the anonymity provided through telephone interview discouraged or encouraged women's participation.

Implications

These findings have several important implications with respect to nursing practice and research. Nurses should take note of these implications to become leading advocates for rural women with PPDS.

Practice Implications

First, and most clearly, PPDS is prevalent among women in rural communities, and this population tends to understand and explain PPDS in ways that diverge from prevailing medical models. Rural women's explanatory models of PPDS are not only culturally relevant but also clinically significant insofar as they shape coping behaviors, treatment preferences, patients' openness to health care providers' explanatory models that often emphasize a physiological etiology, and the likelihood of noncompliance with pharmacological treatment plans.

The data supported that rural women seek care from informal networks before formal networks and that they prefer a variety of treatment options. Nurses and other health care providers should take a proactive approach in making themselves available as a care source to rural women by discussing PPDS during pregnancy and the postpartum time frame. When appropriate, non-medical interventions should be considered first line. When antidepressant

therapy is prescribed, patients should be educated on the expected effects in order to increase compliance. Providing resources for practical life support, such as referrals to social support services, and increasing quality childcare options may decrease PPDS for some rural women.

Research Implications

Perhaps the most important implication from this study is the need for additional research in this area. Additional qualitative studies exploring specific aspects of the explanatory model of PPDS should be considered. Future studies should compare explanatory models of PPDS between rural and urban women. The emphasis of this study was rural culture, thus data were not analyzed for race or ethnicity. Analysis of this dataset for race and ethnicity should be considered in the future. More comprehensive and robust studies assessing the prevalence of PPDS in rural populations are needed. Further research about variables such as maternal self-efficacy and social support networks, and their association and interaction with PPDS among rural women, are indicated. Further study on the relationship between PPDS and breastfeeding, as well as PPDS and cesarean birth are needed. This study highlighted that rural women have polarized views on pharmacological methods as a treatment for PPDS without a strong indication as to why this variation existed. Future studies focused on pharmacological treatment for PPDS and rural patient opinion on this treatment method are important. Additionally, intervention studies focused on preparing for and treating PPDS in rural women are needed. Studies focused on explanatory models of PPDS in rural nurses and other health care providers would add to the findings in this study, and to the overall picture of rural health care practices surrounding PPDS.

Conclusion

In this qualitative descriptive study informed by Kleinman's (1980) explanatory model of illness, rural women most often attributed their PPDS to multiple causes and reported the onset,

duration, and symptomatology of PPDS were like what is outlined in the *DSM-5*. The effects of PPDS on rural women's lives were far-reaching and considered serious. Rural women in this study preferred a variety of treatment options and care from informal networks to that available from formal health care services. Although the rural women in this study did not think PPDS could be prevented, they believed women could better prepare themselves for the experience of PPDS by having a strong support system and preparing for practical life concerns prior to delivery. Nurses, other health care providers, and researchers should take these explanatory models and the use of informal care networks into consideration when evaluating patients, designing treatment plans, formulating policies, and designing community-level interventions, such as education and outreach. Apart from these conclusions, it is clear further research on PPDS in rural women is strongly indicated.

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