Walden University

College of Health Sciences

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Krystal Evans

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Walden University
2020

Abstract

Experiences of Postpartum Women With Nurse-Delivered Education and Postpartum Depression

by

Krystal Evans

MSN, Jacksonville University, 2014

BSN, Jacksonville University, 2011

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing

Walden University

September 2020

Abstract

Postpartum depression affects many women globally, yet largely remains underdiagnosed. It is thus important for nurses to have all available tools when delivering education and care to the postpartum patient. Yet, there is a lack of information on the experiences of postpartum women related to postpartum education and postpartum depression. The purposes of this quantitative study, for which Beck's postpartum theory was the framework, were to explore postpartum women's perceptions of education experiences and to determine if a correlation exists between the satisfaction with education and scores on the Edinburgh Postnatal Depression Scale. Sixty study participants who were 6-8 weeks postpartum completed the questionnaire, with 22 participants meeting the inclusion criteria of being between the ages of 18-40 and not formally diagnosed with depression or postpartum depression in the past. Study participants completed a demographics survey, the modified client satisfaction tool, and the Edinburgh Postnatal Depression Scale on the Survey Monkey website. Data from the modified client satisfaction tool analyzed with a scatter plot revealed that there was an uneven distribution of satisfaction scores. Spearman's rho correlation analysis revealed no statically significant correlation between the satisfaction of study participants and the development of postpartum depressive symptoms. The findings may encourage future researchers to examine whether there is a connection between low satisfaction and the development of postpartum depressive symptoms. The implications for social change include providing a greater understanding of postpartum depression and how healthcare workers and families can better support postpartum patients.

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Dedication

I dedicate this dissertation to my family for all their affirmations and love and for their dedicated partnership for success in my life.

Acknowledgments

First and foremost, praises and thanks to God, for his blessings throughout this journey and giving me the ability to complete the research successfully.

I would like to thank the following people, without whom I would not have been able to complete this research, and without whom I would not have been able to make it through this journey and earn my PhD!

My sincerest thanks to my committee chair, Dr. Donna Bailey, for her guidance, encouragement, and patience throughout this process. I would also like to thank my committee member, Dr. Margaret Harvey, and URR member, Dr. Eileen Fowles, for their professional insights and feedback provided to me at each milestone completed.

Last but certainly not least, my biggest thanks to my family for all the support you have shown me throughout this research. For my parents who have always told me how proud they are of me and always given me encouraging words. For my kids, Alaysia and Brooklyn, sorry for not always being able to be attentive to your needs and maybe being a little grumpier than normal! And for my husband, Joseph, thanks for all your support, without which I would have stopped these studies a long time ago. You have shown amazing support and patience throughout this journey. You have been a shoulder to cry on and a listening ear when needed. Without you this process would not have been a reality, and I will forever be thankful that God has placed you in my life.

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Chapter 1: Introduction to the Study

Postpartum depression is one of the most underdiagnosed, yet prevalent, issues facing women who have recently given childbirth and is estimated to affect nearly 13% of all women having a child (Jolley & Betrus, 2007, p. 765). This percentage represents more than 17.5 million women per year (United Nations, 2018). Yet, experts contend that the number of women who experience postpartum depression is much higher. Some of the key reasons why postpartum depression is so vastly underdiagnosed include disagreement among providers about whether postpartum depression differs from other forms of depression and the shame some women feel about suffering from postpartum depression (Brummelte & Galea, 2016; Jolley & Betrus, 2007, p. 766; Shorey et al., 2018).

Therefore, it is important for nurses to have all the available tools necessary to be able to assist patients who are suspected of having or being susceptible to developing postpartum depression. The tools needed include methods of diagnosing postpartum depression, such as the Postpartum Depression Screening Scale developed by Cheryl Tatano Beck (Jolley & Betrus, 2007, pp. 774-775) or the Edinburgh Postnatal Depression Scale (Cox, Holden, & Sagovsky, 1987), and critical skills learned through facility education as well as education received from other sources such as scholarly journals and continuing education credits. Yet, even with all the tools available, postpartum depression goes underdiagnosed in most postpartum patients (Jolley & Betrus, 2007, p. 765).

One possibility for the underdiagnosis of postpartum depression is that other factors may be hindering the diagnosis of symptoms in this population. One of the

components that is not often mentioned as being a critical factor in a patient's potential development of postpartum depression is the patient's needs for education, coaching, and encouragement (Beck, 1993). Research shows that postpartum depressive patients suffer from increased levels of anxiety and emotional lability (Jolley & Betrus, 2007, p. 768) requiring elevated levels of emotional support (Raby, Dowse, & Bennet, 2008, p. 199). This may become an issue in a unit that may not be adequately staffed to handle the elevated needs of postpartum mothers and their newborn children.

Buchko, Gutshall and Jordan (2012) explored the importance of education on the postpartum unit, stating that there is an overabundance of education nurses must teach patients in an insufficient amount of time. Buchko et al. found inadequate education to be related to the prevalence of emergency room visits among postpartum patients and newborn children for symptoms such as the development of a fever or cough, poor weight gain, infections at the cord site, and death. Postpartum women were often dissatisfied with the postpartum education they received after delivery (Buchko et al., 2012).

Managing the potential for postpartum depression in a proactive way has the potential to impact positive social change in a variety of ways. First and foremost is the impact on new mothers. By identifying their potential to develop postpartum depression, the healthcare team can facilitate proactive interventions to prevent or manage it. As part of the team, the patient and her family can also be actively involved in monitoring for signs and symptoms.

For the healthcare facility and staff, this proactive stance can prevent negative feedback from the family, thus maintaining the organization's reputation with the family and community. Communities can also benefit because the costs of postpartum depression affect the use of resources especially in a context marked by the scarce allocation of funding for care and services (Tsivos et al., 2015). Additionally, organizations and communities benefit because early identification and management help to avoid the long-term care consequences of postpartum depression, such as behavioral issues because a child may not have bonded successfully with their mother as a result of the condition (Chung et al., 2018; Tsivos et al., 2015).

This chapter begins with background information on postpartum education and patient satisfaction in postpartum units. I then present the problem statement and explain the purpose of the study. The research questions and hypotheses follow, along with overviews of the theoretical framework, Beck's postpartum theory, which emphasizes approaching the postpartum patient from a holistic view (Beck, 1993; Marsh, 2013), and the methodology for the study. After defining key terms. I then explore the assumptions, scope and delimitations, limitations, and significance of the study. The chapter concludes with a summary of key points.

Background

Articles referencing postpartum depression screening tools and nursing education focus on many different aspects of the interaction between postpartum depression, major depressive disorder, and the impact of screening for postpartum depression on patients. Some researchers have examined the study topic from a theoretical perspective; Marsh

(2013), for instance, examined postpartum theory as a middle-range theory and its applicability to nurses working on postpartum units. In more applied research, Raby et al. (2008) described who postpartum patients are and what their needs are while they are on the postpartum unit, and Jolley and Betrus (2007) compared postpartum depression and major depressive disorder to determine if typical depression screenings were adequate for postpartum patients. Regarding depression screenings, Hanusa, Scholle, Haskett, Spadaro, and Wisner (2008), Schumacher and Zubaran (2008), and White (2008) explored differences between the Postpartum Depression Screening Scale and the Edinburgh Postnatal Depression Scale.

Hegedus and Beck (2012) explored the viability of a translated Postpartum Depression Screening Scale in Hungary. Buchko, Gutshall and Jordan (2012) examined the quality and efficiency of Postpartum Education. Jolley & Betrus (2007) compared postpartum depression and major depressive disorder to determine if typical depression screenings were adequate for postpartum patients. Marsh (2013) examined postpartum theory as a middle-range theory, and its applicability to nurses working on postpartum units. Raby, Dowse, & Bennet (2008) described who postpartum patients are, and what their needs are while they are on the postpartum unit.

Some researchers have examined the quality and efficiency of postpartum education and patient satisfaction. Buchko et al. (2012) examined the quality and efficiency of postpartum education while Wagner and Washington (2016) examined the effectiveness and satisfaction patients had with a modified postpartum education delivery plan. Both Buchko et al. and Wagner and Washington examined the delivery of education in postpartum units, with Wagner and Washington specifically looking at satisfaction of patients, but neither set of researchers examined if a relationship exists between patient satisfaction and postpartum depression rates.

Examining the effectiveness and quality of postpartum education is an important first step in determining whether the education itself has an impact on the patient. Determining patient satisfaction is the next important step. This entails exploring what the perception of the education itself is from the patient's perspective. Buchko et al.'s (2012) and Wagner and Washington's (2016) studies provide insight on whether patients who are satisfied with their postpartum education develop postpartum depression symptoms such as mental confusion, emotional lability, or loss of control once they have left the clinical setting. Although this research provides information on the impact of postpartum education on the overall satisfaction of the postpartum patient, there remains a gap in knowledge about how mothers are affected by the education they receive on the postpartum unit.

Problem Statement

Postpartum depression is estimated to impact approximately one in 10 of all women, yet it remains largely underdiagnosed (Jolley & Betrus, 2007; Tsivos, Calam, Sanders, & Wittkowski, 2015). Key reasons why postpartum depression is so underdiagnosed include disagreement among providers about whether postpartum depression differs from other forms of depression and the shame some women feel while suffering from postpartum depression that prevents them from openly seeking help (Jolley & Betrus, 2007). Without treatment, postpartum depression may continue for years, disrupting a woman's life and potentially interfering with her ability to bond with her child and the development of the family dynamic (Jolley & Betrus, 2007).

Maternal-infant bonding is an essential aspect of human development. Children are vulnerable in their early years to the impact of inadequate bonding and nurturing which may impact the child's development of self-regulatory skills, language, and cognitive abilities (Chung et al., 2018; Tsivos et al., 2015). Postpartum depression interferes with these normal processes for the child, mother, and family. Yet, researchers have not specifically examined how education may or may not correlate with early signs of the development of postpartum depression of first-time mothers.

Though the period the family spends in the hospital or clinic is brief, nurses try to alert new mothers to postpartum depression via education so symptoms can be recognized early (Buchko et al., 2012). Mothers who are dissatisfied with the education they receive in the facility may be more likely to experience postpartum depression due to not being receptive to or understanding how to use the information and coping methods provided to them (Logsdon, Tomasulo, Eckert, Beck, & Dennis, 2012).

Buchko et al. (2012) explored the importance of education on the postpartum unit, stating that there is an overabundance of education nurses must teach patients in an insufficient amount of time. The researchers found inadequate education to be related to the prevalence of emergency room visits among postpartum patients and newborn children for symptoms such as the newborn child developing a fever or cough, poor weight gain, infections at the cord site, and death (Buchko et al., 2012). Postpartum women frequently reported dissatisfaction with postpartum education during their stay on the postpartum unit (Buchko et al., 2012).

Wagner and Washington (2016) examined the premise of delivering education in a classroom setting. The provision of postpartum education could potentially address the time constraint identified in Buchko et al.'s (2012) research, but class size must be taken into account. Wagner and Washington noted that patients who had traditional one-on-one education were more likely to report that they were greatly satisfied with the education they received than those who participated in the group setting. It would be important to note if patients who report that they are satisfied with their education are still suffering from symptoms of postpartum depression once they have left the clinical setting. Thus,

the specific research problem addressed in this study was a lack of information on the experiences of postpartum women related to postpartum education and postpartum depression.

Purpose of Study

Marsh (2013) stated that there is a disparity of knowledge regarding postpartum depression. Understanding the way in which patients react from a holistic approach is an important factor in understanding the constructivist viewpoint of this postpartum depression research. It is important to understand the patient's own experiences to develop effective interventions for postpartum depression in the future (Beck, 1993; Marsh, 2013). Researchers must design their studies to consider patients' experiences to help allow nurses to achieve the best possible patient outcomes (Jolley & Betrus, 2007; Raby et al., 2008). The purposes of this quantitative study were to (a) explore the perceptions of education experiences of postpartum women and (b) evaluate whether a correlation can be drawn between satisfaction with postpartum education and the development of postpartum depressive symptoms.

Wagner and Washington (2016) examined the premise of delivering education in a classroom setting, which could have potentially helped with the time constraint. The researchers noted that patients who had traditional one-on-one education were more likely to report they were greatly satisfied with the education they received than those who participated in the group setting (Wagner & Washington, 2016). As such, it would be important to note if patients who report that they are satisfied with their education are

still suffering from symptoms of postpartum depression once they have left the clinical setting.

Research Questions and Hypotheses

Research Question 1: Does the data from the modified client satisfaction tool on postpartum women's satisfaction with patient care correlate with their satisfaction with teaching received in the hospital setting using the same tool?

$H_0$1: There is no significant relationship between postpartum women's satisfaction with patient care and teaching received in the hospital.

$H_1$1: There is a significant relationship between postpartum women's satisfaction with patient care and teaching received in the hospital.

Research Question 2: Does the data on patient satisfaction with education from the modified client satisfaction tool correlate with an increased risk for postpartum depression based on the Edinburgh Postnatal Depression Scale?

$H_0$2: There is no significant relationship between patient satisfaction with their education and development of symptoms of postpartum depression.

$H_1$2: There is a significant relationship between patient satisfaction and development symptoms of postpartum depression.

Framework

Postpartum depression can have a serious impact on the development of the family during the crucial bonding and developmental stages following the delivery of the newborn (Jolley & Betrus, 2007). The theory that is most applicable to the study of postpartum depression is Cheryl Tatano Beck's postpartum theory (Beck, 1993; Marsh, 2013). Beck designed this middle-range theory to help nurses observe and recognize the signs of postpartum depression, giving them information from the perspective of the patient that they can use to implement interventions (Marsh, 2013).

The importance of approaching postpartum depression from a holistic view is one of the most important aspects of the postpartum theory (Beck, 1993; Marsh, 2013). Postpartum theory provides a framework by which nurses can learn to implement interventions for patients both during pregnancy and after the birth of the child (Marsh, 2013). This is especially important for postpartum patients who are going through a life-changing event such as the birth of a child (Beck, 1993; Marsh, 2013).

Abdollahi, Lye, and Zarghami (2016) described several postpartum theories that examine postpartum depression from cognitive, behavioral, social, and evolutionary perspectives. The cognitive theories suggest that certain aspects of the mother's personality may increase her susceptibility to developing postpartum depression (Abdollahi et al., 2016). Behavioral theories suggest that postpartum depression may be related to major events that impacted an individual's typical support, including divorced parents and self-esteem issues (Abdollahi et al., 2016). Social and interpersonal theories of postpartum depression posit that one's environment has a sizable impact on the mental

health of an individual (Abdollahi et al., 2016). Evolutionary theories regarding postpartum depression suggest that withdrawing from the bond between mother and child may be due to an adaptation to less-than-desirable situations, removing the mother's investment in the child (Abdollahi et al., 2016).

Nature of the Study

I used a quantitative longitudinal survey approach to explore the experiences of postpartum women and determine if there is a correlation between women who are unsatisfied with the education they receive while they are in the hospital and postpartum depressive symptoms. According to Creswell (2014), the quantitative longitudinal survey design is used when data are collected over a period instead of a single interaction. A longitudinal survey design was necessary to examine if there is a connection between patient satisfaction and the development of postpartum depression. Though there have been studies whose authors examined the satisfaction of postpartum patients with education and development of postpartum depression independently such as in Wagner and Washington (2016), there is a gap in the literature when examining the impact education has on the development of postpartum depressive symptoms.

Definitions

Education: In the context of this study, refers to the education that is delivered while the patient is on the postpartum unit (Ho et al., 2009).

Emotional lability: A woman's sense that her emotions are out of her control, as characterized by crying for no reason, being irritable, having explosive anger, and fearing never being happy again (Alligood & Tomey, 2010).

Loss of control: The sense that the aspects that once reflected a woman's personal identity are no longer present since the birth of her infant (Alligood & Tomey, 2010). Women who experience loss of control are fearful that they may never be their self again (Alligood & Tomey, 2010).

Mental confusion: One of the symptoms of postpartum depression, which is defined as a marked inability to concentrate, focus on a task, or make decisions (Alligood & Tomey, 2010). There is a general feeling of being unable to regulate one's own thought processes (Alligood & Tomey, 2010).

Postpartum depression: Depressive episodes during the postpartum period that last for more than 2 weeks (Shorey et al., 2018).

Sleeplessness: An abnormal inability to sleep; the condition should not be ignored as a typical adjustment without investigation (Clemmens, Driscoll, & Beck, 2004).

Assumptions

Assumptions related to this phenomenon of interest would include an assumed relationship between patient education and mental confusion. The assumption would be that patients that are properly educated regarding care for themselves as well as their children, support groups for when they feel overwhelmed, as well as coping techniques related to stress reduction should theoretically not suffer from mental confusion. This assumption is necessary to minimize the focus on the capacity of the individual to learn and instead focus on the education itself.

A second assumption that would have to be made is that each nurse is allotted enough time to properly educate each patient regarding these points of interest. The assumption would have to be made that the units that staff these nurses would adhere to guidelines like those suggested by Raby et al. (2008) when considering the appropriate staffing ratios on a postpartum unit. This assumption minimizes the nurse's workload as being a contributing factor to the way in which the education is delivered on the postpartum unit.

Scope and Delimitations

The specific questions to be answered by conducting the study are centered around the potential relationship between patient satisfaction with the education they receive during their hospital stay and onset of symptoms of postpartum depression. Very little research exists regarding the actual impact that education may have as a factor in the development of postpartum depression, whether negative or positive. This constitutes a gap in the maternal-child health literature that is important for nurses to understand so that the appropriate interventions can be designed for optimal mother-baby health.

The population included mothers aged between 18 and 40 years old. This population was chosen to incorporate a broad spectrum of women having children while minimizing outliers related to age. Participants were sorted based on whether they have had depression diagnosed in the past based on the result of a demographic survey to help reduce the impact of previous depression being detected when screening for postpartum depression.

Generalizability may not be applicable to this study due to the use of stratified sampling to isolate the population into women between the ages of 18 and 40 years old. Outcomes of the study may be generalized potentially to other members that fall within the demographics of this postpartum population. This lack of diversity may prevent generalizations but help to build on the knowledge of the postpartum depression and help pave the way for future studies surrounding the important topic of how we can best serve postpartum women as healthcare providers.

A different framework that was considered for this study was the biopsychosocial theory by Lara-Cinisomo et al., (2016). This framework seeks to describe predictors for postpartum depression within immigrant and U.S. born Latina women. While this framework offers an in-depth exploration of predictors of postpartum depression for this specific population, it limits the scope by focusing only on that specific population.

Beck's postpartum theory offers a comprehensive look at postpartum depression from a holistic approach, examining not only the risk factors associated with postpartum depression but also the role of the healthcare team and potential interventions (Beck, 1993; Beck 2006). Middle range theories tend to be easily adaptable to nursing practice, which means healthcare professionals can use a theory like Beck's postpartum theory in their current roles as healthcare professionals (Marsh, 2013).

Limitations

Due to the nature of the study the sample excludes some members of the potential population, specifically those that do not meet the inclusion criteria of being aged between 18 and 40. This exclusion of members of the population purposefully excludes potential members of the population that may be outliers. To address this limitation, it was important to capture demographic data to note any changes between the responses and what the specific demographics captured are.

Internal validity was addressed using appropriate sampling methods and tools to measure the data such as SPSS. External validity was attained by acquiring an appropriate sample size to draw meaningful conclusions about the population where the data provides statistical significance to either accept or reject the null hypotheses of this study. Biases were addressed by confirming if the patient had previously been diagnosed with postpartum depression by a medical professional in the past. Additionally, patients were given the assessment to complete on their own to remove the researcher from indirectly influencing the participant's responses. Lastly, patients were encouraged to answer as truthfully as possible to provide the most accurate data possible.

Significance

Social change is important and can result in the creation of interventions that impact the community positively, creating social identities or group norms (Thomas, McGarty & Mayor, 2009). One of the ways in which this is accomplished is through interventions that aim to change the perspective on phenomena, such as examining how guilt impacts the desire to implement changes that benefit individuals outside of the affected population.

The most important potential for social change that an intervention that targets postpartum depression would have is to provide the postpartum patient the tools they need to care for themselves and their newborn child. By giving these new mothers the appropriate tools to care for themselves, as well as teaching them coping techniques for handling stress, nurses may be able to become a key factor in reducing the prevalence of postpartum depression among mothers during a time of emotional and social adjustment (Raby et al., 2008). Spreading awareness of postpartum depression to the community and family members so that mothers do not have to feel ashamed for the feelings they may experience after the birth of their child would be the desirable outcome of this study.

The significance of this study has huge implications for nursing on the postpartum unit. By examining interactions between patient education, staffing levels and the prevalence of postpartum depression, we can determine the best course of action (Jolley & Betrus, 2007). This may be to develop education interventions that streamline the education process, or instead work to mandate staffing ratios that provide the nurses adequate time to educate patients.

Money is another factor that must be taken into consideration. Due to the limitations set by private insurance companies in the healthcare sector, the healthcare team must be aware of not only how long a postpartum stay may be, but also who may refer a postpartum patient to be evaluated and treated for symptoms of postpartum depression that may be detected during the postpartum stay (Logsdon et al., 2012). In most instances, the amount of time spent in the hospital after the child is born is less than the two-week timeframe as outlined in Shorey et al., (2018).

This study is most important for the patient, as every potential life saved is one important step towards achieving the best possible patient outcomes. The greatest social goal that can be achieved by this study would be to raise the awareness of postpartum depression and help these women overcome their fear of being judged by a society that does not understand the transitions and challenges they face daily (Thomas, McGarty, & Mayor, 2009).

Summary

To determine if there was a relationship between patient satisfaction and postpartum depression, it was important to examine the patient's perspective from their own point of view, while measuring data regarding postpartum depression in a follow-up after they are six week postpartum due to the typical hormonal imbalances a woman may have within the first six weeks after giving birth to a child. This data may lead to life-saving interventions that may be used in the clinical setting.

Chapter two examines the information currently present in the literature, examining the postpartum theory of Beck (1993). Much of this chapter focuses on the

studies conducted by researchers such as Wagner and Washington (2016), focusing on what we know so far about postpartum education and patient satisfaction with postpartum education. The chapter then focuses on presenting how the literature relates to key concepts of the study and demonstrates the need for further research. The theoretical framework of the study will then be explored, demonstrating how concepts from the postpartum theory (Beck, 1993) will help shape the way in which the study was conducted.

Chapter 2: Literature Review

Introduction

The purposes of this quantitative research study were to (a) explore the perceptions of education experiences of postpartum women and (b) evaluate whether a correlation can be drawn between satisfaction with postpartum education and the development of postpartum depressive symptoms. The current literature indicates the importance of examining the education efficiency and quality. In their studies, Buchko et al. (2012) and Wagner and Washington (2016) sought to understand the impact that education has on the postpartum mother, the effectiveness of education, and potential ways in which the delivery of the education itself may impact the postpartum mother during a critical time in her development. Yet, much of the literature does not include an examination of the specific question of how the perception of the education itself impacts the postpartum mother's usage of the tools. The question remains of what happens if the education is not effective.

Specifically, the research problem was a lack of knowledge of the experiences of women related to postpartum education and depression. An exploration of postpartum women's perceptions will enable a determination of whether a relationship exists between those who are dissatisfied with the education they received while they were on the postpartum unit and the onset of symptoms of postpartum depression. I will begin this chapter by explaining the purpose of the research study and revisiting the central issue that was examined. In the next sections, I explore the literature review search strategy and

the theoretical foundation. An exploration of the key concepts and variables in the study follows in the literature review.

Literature Search Strategy

When searching for literature related to postpartum depression, I accessed databases that included the CINAHL full text database and the Association of Women's Health, Obstetric, and Neonatal Nurses' journal database, as well as the books *Nursing Theorists and Their Work* and *Practice of Nursing Research*. Key words and phrases used to search these resources included *postpartum*, *newborn*, *patient need*, and *education*. Boolean search strings included the following: postpartum AND depression, postpartum AND education, postpartum AND depression AND education, nurse AND staffing AND postpartum, staffing AND ratios AND mandated, staffing AND ratios AND mandated AND California, and postpartum AND newborn AND patient AND need.

I excluded articles that were more than 15 years old except for work conducted by Cheryl Tatano Beck. Beck has contributed a large body of work in the area of postpartum depression, and it would have been counterproductive to not examine the researcher when reviewing the literature on postpartum patients. There are not many recent articles regarding postpartum depression and education, but the work done by Wagner and Washington (2016) includes an exploration of some of the themes I sought to examine.

Theoretical Framework

The theory that was most applicable to this study of postpartum depression was Cheryl Tatano Beck's postpartum theory (Beck, 1993; Marsh, 2013). Beck formulated this middle-range theory to help nurses observe and recognize the signs of postpartum depression, giving them information from the perspective of the patient through which they can implement interventions (Marsh, 2013). Beck (2006) argued that postpartum depression should be viewed as a major depressive disorder.

Beck (1993) developed postpartum theory after observing participants during an 18-month postpartum depression support group. During this time, Beck recorded 12 interviews with study participants. These interviews and observations led to the identification of four stages of postpartum depression: encountering terror, dying of self, struggling to survive, and regaining control (Beck, 1993). Women interviewed noted that they experienced episodes of anger that had not been present prior to the birth of their child (Beck, 2006). These feelings led to fear from the mother that increased levels of anger may lead them to harm their children, but most mothers attempted to focus on caring for their children instead of themselves (Beck, 2006).

Postpartum depression may mean the difference between the life and death of both mother and child (Beck, 1993; Jolley & Betrus, 2007; Marsh, 2013). As such, it is important to use a theory that has an approach that takes into consideration both the severity of postpartum depression as well as the intricacy of the diagnosis. Using a theory that only broadly examines relatable topics may not provide an intervention that produces meaningful results. Postpartum theory considers postpartum depression from a holistic

point of view (Beck, 1993; Marsh, 2013); researchers who use the theory seek to develop interventions that can be used in nursing practice (Lasiuk & Ferguson, 2005).

When examining the literature, the relevance of Beck's postpartum theory is evident. As stated by Marsh (2013), it is important to consider a holistic approach when implementing interventions for postpartum patients. Burns and Grove (2009) further demonstrated this need, describing the need for empathy when exploring the mental state of postpartum patients. Alligood and Tomey (2010) also described postpartum theory as a middle-range theory that is directly applicable to practice in most instances.

Literature Related to Application of the Theory

One of the most important concepts that Beck (2006) described is that postpartum depression is not only normal, but it is treatable. Beck powerfully described the reaction of mothers to reading the items in the Postpartum Depression Screening Scale, stating that some mothers would begin to cry in relief upon realizing that they were not the only ones suffering from symptoms such as loss of control over their emotions. Other symptoms the women were able to recognize were the loss of their own personal identities and feelings of guilt over the loss of joy after the birth of their child (Beck, 2006).

The importance of approaching postpartum depression from a holistic view is one of the most important aspects of the postpartum theory (Marsh, 2013). Postpartum theory provides a framework by which nurses can learn to implement interventions for patients both during pregnancy and after the birth of the child (Marsh, 2013). This is especially important for postpartum patients who are going through a life-changing event such as the birth of a child (Marsh, 2013).

Beck (2006) drew distinctions between postpartum depression and other disorders that may arise during the postpartum period, such as the typical maternity blues, postpartum panic disorder, postpartum obsessive-compulsive disorder, postpartum psychosis, and postpartum bipolar II disorder. Knowing there are differences is an important step in understanding the patient's needs. Beck (2006) reaffirmed that there are two major tools that have a high sensitivity to symptoms of postpartum depression: The Edinburgh Postnatal Depression Scale and the Postpartum Depression Screening scale. For this research, I used the Edinburgh Postnatal Depression scale, because the tool has high sensitivity and is inoffensive and because copies of the tool can be obtained for free, making it cost-effective for research purposes (Logsdon et al., 2012).

While depression is noted as a symptom, it is not always one of the earliest symptoms reported by women suffering from postpartum depression (Beck & Gable, 2001). Anxiety, irritability, insomnia, agitation and confusion are all noted as being the first symptoms women suffering from postpartum depression experience, which makes screening for these symptoms imperative for early detection of symptoms of postpartum depression (Beck & Gable, 2001).

Application of the Framework

Brummelte and Galea (2016) also described the mother-infant relationship and the impact postpartum depression may have on the development of the child. The mother's development of postpartum depression can potentially impact the child's maturation and interactions with caregivers (Brummelte & Galea, 2016). While it is noted that women with depression are at risk for postpartum depression, 40% of women experience their first bout of depression during the postpartum period two-to-three months after the birth of their child (Brummelte & Galea, 2016).

One interesting characteristic of postpartum depression is that as you move further along the spectrum, there is a correlation with reports of sleep deprivation (Clemmens et al., 2004). Clemmens et al. (2004) discussed the importance of not dismissing reports of fatigue and sleep deprivation as normal symptoms of adjustment to the newborn without referring the woman for acute diagnosis and potential follow-up care.

Role of the Nurse

In 2010, Segre, O'Hara, Arndt, and Beck conducted a two-part study that examines postpartum depression from the perspective of the nurse (2010a) and the perspective of the women (2010b) to determine the current viewpoint of the nurses that are delivering postpartum education to patients and the recipients of that care. This two-part study answers the questions "Do nurses believe they should provide postpartum treatment" and "Do patients believe nurses are capable of delivering postpartum treatment (Segre et al., 2010a, 2010b).

After surveying 520 nurses, 93.7% responded that they either “strongly agreed” or “agreed” that it would be a good idea for nurses to screen for depression using a brief tool (Segre et al., 2010a). More than 50% of the nurses surveyed admitted that they already provided counseling in some capacity, with less than 1% believing nurse-led counseling would be a bad idea (Segre et al., 2010a).

This demonstrates most nurses believe that they should be providing counseling services in some capacity, with nearly 71% believing the most optimal delivery of counseling would be through home visits, a common practice in the United Kingdom that is not used frequently in the United States for postpartum women (Beck, 2006; Segre et al., 2010a). When examining the perspective of the women, the question of their belief in the nurse’s ability also provided a strong response. Over 90% of the 823 women surveyed believed that nurses were qualified to not only conduct postpartum depression screening, but also would feel comfortable with postpartum nurses providing the counseling services as well (Segre et al., 2010b).

More than 50% of the women surveyed were “definitely willing” to see a nurse to receive postpartum counseling (Segre at al., 2010b). This demonstrates a general confidence these women have in the abilities of the nurse, as not only a qualified member of the healthcare team but a partner in the delivery of healthcare initiatives (Segre at al., 2010b).

The role of the nurse is crucial during this time of anxiety and uncertainty for the postpartum mother. It's important for the postpartum nurse to help provide guidance to the postpartum mother, such as providing her with a list of support groups and being realistic with the postpartum mother regarding postpartum depression and potential symptoms as outlined by Beck (2006). The postpartum nurse should reassure the postpartum mother that suffering from symptoms of postpartum depression does not make the new mother weak or at fault, and that it is treatable (Beck, 2006).

Postpartum women have been noted to be cautious when describing in detail the things they feel to members of the healthcare team, in fear of being judged for their emotions (Clemmens et al., 2004). As such, it is important for all members of the healthcare team to be open and encourage the patient about being honest about her feelings to make sure she is receiving the right care for her situation (Clemmens et al, 2004).

Clemmens et al. (2004) make a point to note that while women may not report symptoms of postpartum depression in their first appointment with their physician, it is important to make them feel comfortable enough to report these feelings if they do arise later. Having open communication between the patient and the healthcare team is a key element for the diagnosis of postpartum depression (Clemmens et al., 2004).

Edinburgh Postnatal Depression Scale

Logsdon et al., (2012) conducted a study to examine the importance of building a community for postpartum women, and the recognition of symptoms of postpartum depression earlier in the pregnancy and postpartum period. This study states that use of the Edinburg Postnatal Depression Scale in the healthcare setting is convenient, inoffensive, cost-effective and ready to be used in practice immediately (Logsdon et al., 2012).

Ease of use of the Edinburgh Postnatal Depression Scale and its cost-effectiveness are two strong reasons researchers like to use the tool (Logsdon et al., 2012). When examining the role of the postpartum nurse, it is important to prepare the mother with as many tools as possible and knowledge of the community, so she may recognize the symptoms of postpartum depression and know what actions to take if they notice they are developing those symptoms (Logsdon et al., 2012).

Jolley and Betrus (2007) explored the usage of multiple tools for screening postpartum depression and explore the use of tools to determine whether there is a more appropriate tool we should use for screening than the postpartum depression screening scale. It was determined that there was little difference between the Edinburgh Postnatal Screening Scale and the Postpartum Depression Screening Scale, which shows both tools are potentially effective in detecting symptoms in postpartum patients (Jolley & Betrus, 2007). The outcome also proved that there were major differences between other tools that test for other symptoms of depression not specific to postpartum depression (Jolley & Betrus, 2007).

When examining the literature, other theories are also used when exploring postpartum patients. Wagner and Washington (2016) use Cox's Interaction Model of Client Health Behavior to examine the interaction between the nurse and patient during discharge teaching to measure patient satisfaction with care. Incorporating a portion of this theory would help strengthen the portion of the study that deals with patient satisfaction.

The study conducted by Wagner and Washington (2016) helps to bring to the forefront one piece of the postpartum theory: the need to consider the patient's experience holistically. It would be imperative to understand if a relationship exists between the development of symptoms of postpartum depression and a patient's satisfaction with the education they receive during their hospital stay. This study helped expand the postpartum theory by examining specific risk factors regarding postpartum education, and potentially help develop interventions that help reduce the development of symptoms of postpartum depression.

When examining tools that measure an outcome like depression it's important to understand the correct way in which to implement the tool and measure outcomes (Beck & Gable, 2001). For the Edinburgh Postnatal Depression scale the tool is measuring the way in which the patient has felt over the last seven days, which differs from the measurement of the last two weeks measured by the Postpartum Depression Screening Scale (Beck & Gable, 2001).

Beck and Gable (2001) discuss the importance of erring on the side of sensitivity when using instruments to measure postpartum depression. The concern was that using a number that reports a lower number of incidents would be a disservice to the postpartum mother, as cases of postpartum depression may go unreported, undiagnosed and untreated (Beck & Gable, 2001). As such, using the lower acceptable ranges for the Edinburgh Postnatal Depression scale of "12" for major postpartum depression and "9" for minor or major depression was crucial in detecting and recommending treatment of symptoms of postpartum depression (Beck & Gable, 2001).

Using the Edinburgh Postnatal Depression Scale, Ho et al., (2009) measured the importance of discharge education and the impact it had on postpartum women. It was found that women who received discharge education that included information regarding postpartum depression experienced less depression than the control group that received the normal education provided by the hospital used for the study (Ho et al., 2009). This demonstrates the importance of providing detailed information regarding postpartum depression so that women are aware of the symptoms, and understand they are not abnormal for experiencing symptoms of postpartum depression.

While the study conducted by Ho et al. (2009) has interesting findings, the inclusion criteria were very limited. Inclusion criteria included being married, between the ages of 20 and 35, and having no postnatal complications (Ho et al., 2009). As stated by Raby et al. (2008), 45% of births have a labor complication of some sort. This means nearly half of the population have been excluded due to complications they have had, which may not be representative of the actual population.

Farr, Denk, Dahms and Dietz (2014) examined the data available from New Jersey hospitals related to the delivery of the Edinburgh Postnatal Depression Scale that is delivered after the birth of a child. It was determined that women that were under the age of 25, Medicaid recipients, less educated, or wanted a child later in life were more likely to report receiving education related to depression at the time of delivery (Farr et al., 2014). Additionally, only 56% of women of ethnicities outside of Caucasian reported receiving prenatal education regarding depression (Farr et al., 2014).

Farr et al., (2014) had a sample that was less strict than the McCarter-Spaulding and Shea (2016) study. Farr et al., (2014) did not exclude mothers that had a child that was admitted to the Neonatal Intensive Care Unit (NICU). It would have been beneficial for the authors to dive deeper into the demographics of the population so that generalizability can be determined as it relates to the larger group.

Literature Review Related to Key Variables and Concepts

Satisfaction with Patient Care and Education

McCarter-Spaulding and Shea (2016) examined the effectiveness of postpartum education on the postpartum mother and determined there was little difference between the group that received specialized postpartum depression education and a control group that received the normal postpartum education. While this is the case, the study may have been skewed as the population was 89% Caucasian, with about 95% having attained at least a high school diploma, and 81% had received at least some college education (McCarter-Spaulding & Shea, 2016). (McCarter-Spaulding & Shea, 2016). It would be

important to achieve a more diverse group of participants to draw conclusions about the population.

Chung et al., (2018) conducted a study regarding the quality of mother-infant interaction may be impacted by inclusion of postpartum parenting education for first-time mothers in Taiwan. While the impact of the education was obvious regarding the mother-infant interaction, the education itself was not found to specifically increase the response to the infant's distress (Chung et al., 2018).

One key component of the Chung et al., (2018) study was the fact that mother-infant interaction can be impacted by the delivery of postpartum education. Mother-infant bonding has been shown to greatly impact the infant's development of self-regulatory skills, language development and overall cognitive ability as described by Tsivos et al., (2015) and Chung et al., (2018). The study by Chung et al., (2018) plays an important role in establishing the need for postpartum education in the hospital setting.

Wagner and Washington (2016) examine the impact of changing the delivery of postpartum education on patient satisfaction with the education delivered. This study examined the way in which postpartum patients perceive their education, which was an important first piece of the study regarding patient satisfaction with education and development of postpartum depression. The study was strong foundationally but would have benefitted from using the data collected about satisfaction to examine whether there was an impact on the development of postpartum depression.

Wagner and Washington (2016) examined the way in which women perceived the education they received on a postpartum unit. This study directly addressed the question of the perception of women on a postpartum unit, and their preference in how the education itself is delivered, either in a group or traditional one-on-one setting (Wagner & Washington, 2016). This study did not specifically target a population though the average age of the women was between 26 and 28 years old respectively (Wagner & Washington, 2016).

To build upon this research, it was important to expand upon the findings and examine whether women in this population that are reporting they are satisfied with their education still develop symptoms of postpartum depression. Additionally, expanding the diversity of study participants was one weakness identified by the researchers that may be addressed by using multiple sites for the study that service different cities and demographics (Wagner & Washington, 2016)

Postpartum Depression

Clemmens et al. (2004) expand upon the previous work of Beck (1993), examining how sleeping disturbances impacts the postpartum mother. While sleeplessness can be attributed to the typical transition into motherhood, it is important to not dismiss this as typical, and may in fact be a sign that the patient is deepening into postpartum depression (Clemmens et al., 2004).

When examining the development of postpartum depression among the studied population, there have not been any targeted studies that specifically examine the development of postpartum depression in this population. This creates a gap in the literature and a need for examining the way in which mothers between the ages of 18 and 40 feel about the education they receive on the postpartum unit, and if a relationship exists between the way they perceive the education and the development of symptoms of postpartum depression.

McCarter-Spaulding and Shea (2016) found there was little difference in the impact specialized postpartum depression education had on a group in comparison to a control group that received the normal education. While this is the case, the study does not address a scenario in which no education is delivered. Chung et al., (2018) do examine this, and found that the mother-infant interaction was largely impacted by the delivery of postpartum education. Wagner and Washington (2016) focused on the preference of how postpartum women preferred to receive education while on the unit. One component that was missing in this study is whether postpartum women were satisfied with the education they received (Wagner and Washington (2016).

Summary and Conclusions

This chapter has explored the purpose of the research study and the central issues within this chapter. Topics included the logic used when searching for articles and the thought process regarding the selection of the theoretical foundation for the study. The last section of the chapter explored the key concepts and variables that build the foundation of this research study.

The literature describes the importance of approaching postpartum patients from a holistic view (Beck, 1993; Marsh, 2013). By examining the experience of postpartum women with discharge education, Wagner and Washington (2016) examined what the perspective of postpartum patients were on a unit that delivered both group and traditional one-on-one education. Jolley and Betrus (2007) additionally conclude that proper administration of the Edinburgh Postnatal Depression Scale or Postpartum Depression Screening Scale may help diagnose postpartum depression.

The goal of this study was to connect the individual pieces of the Jolley and Betrus (2007) findings regarding delivery of a postpartum depression screening tool while examining the data from a study constructed similarly to the Wagner and Washington (2016) study to examine whether a relationship exists between women that are less satisfied with their education while on the postpartum unit and development of symptoms of postpartum depression.

This study addressed the gap that has been left in the literature regarding exploring the way in which education potentially impacts mothers between the ages of 18 and 40 and the development of symptoms of postpartum depression based on the Edinburgh Postnatal Depression Scale. Focusing on this population may lead to the development of best practices or interventions targeted at this at-risk population.

Chapter 3: Research Method

Introduction

The literature describes the importance of approaching postpartum patients from a holistic view (Beck, 1993; Marsh, 2013). Wagner and Washington (2016) examined the perspective of postpartum patients on a unit that delivered both group and traditional one-on-one education. Jolley and Betrus (2007) additionally concluded that proper administration of the Edinburgh Postnatal Depression Scale or Postpartum Depression Screening Scale may help providers in diagnosing postpartum depression.

The goals of this study were to explore the perceptions of education experiences of postpartum women and to determine if there was a relationship between postpartum women's satisfaction with the education provided while in the hospital after childbirth and the development of postpartum depression. As I discuss in this chapter, I used the Edinburgh Postnatal Depression Scale and a modified version of Cox's client satisfaction tool to gather data on participants' perceptions and experiences related to postpartum depression. This chapter begins with an introduction to the research method, including an examination of the setting, research design and rationale, methodology, instrumentation, and procedures for recruitment. This overview is followed by an examination of threats to validity, ethical procedures, and a discussion of data security and analysis. I conclude with a final summary of the topics covered in this chapter.

Setting

This study took place at a local nonprofit hospital. The hospital is an extension of one the largest nonprofit Adventist health systems, and the hospital's BirthCare center has approximately 19 labor rooms and 22 postpartum rooms. The hospital provides private patient rooms, which encourages all parents to room-in with their baby to promote bonding with the newborn and an opportunity to get to know the baby in an environment where they provide plenty of support with their trained staff. The hospital is designed to accommodate the entire stay, from labor and delivery to recovery.

The organization's key members of the study are highly trained and specialized registered nurses, an advanced registered nurse practitioner, and specialized board-certified lactation consultants who care for the patients and their newborn throughout the postpartum stay. The hospital has parent education staff who provide expert information, including parent discharge materials and infant CPR training, as well as breastfeeding support provided by an internationally board-certified lactation consultant.

Research Design and Rationale

The independent variable was patient satisfaction with care and education they receive while they are on the postpartum unit. I measured the independent variable using a modified version of the client satisfaction tool used by Wagner and Washington (2016). The dependent variable was the development of symptoms of postpartum depression, which was measured by delivering the Edinburgh Postnatal Depression Scale (Cox et al., 1987).

The dependent variable in this study was the development of symptoms of postpartum depression. Patient satisfaction was measured using a modified version of the client satisfaction tool used by Wagner & Washington (2016) and screening for postpartum depression was completed by administering the Edinburgh Postnatal Depression Scale The use of these measurement tools allowed me to isolate the satisfaction the patient had with the education they received while on the postpartum unit and development of symptoms of postpartum depression. I employed the two sources of evidence to answer the following research questions:

Research Question 1: Do the data from the modified client satisfaction tool on postpartum women's satisfaction with patient care correlate with their satisfaction with teaching received in the hospital setting using the same tool?

Research Question 2: Do the data on patient satisfaction with education from the modified client satisfaction tool correlate with an increased risk for postpartum depression based on the Edinburgh Postnatal Depression Scale?

The central phenomena of this study were the experiences of postpartum women with their discharge education and postpartum depression. The overall intent was to find ways to allow nursing to move closer towards achieving the best possible patient outcomes. By examining interactions between patient education and the prevalence of postpartum depression, researchers can determine the best course of action for patient care (Jolley & Betrus, 2007). The design of this study was a quantitative longitudinal survey, using two different instruments to examine the experiences of postpartum women with the education they receive while on the postpartum unit, then subsequently

measuring for symptoms of postpartum depression. To determine if any correlations existed, I used a Spearman's rho test.

A quantitative design was the best choice for this study, as there are empirically proven quantitative tools that have been designed to measure the independent and dependent variables of this study (Cox et al., 1987; Wagner & Washington, 2016). In addition, using a quantitative survey design was cost-effective and provided a fast turnaround for data. I was able to e-mail the survey link to study participants for them to complete on their own time as needed.

Time constraints for this study included the 6-week waiting period between the initial administration of the client satisfaction tool and the Edinburgh Postnatal Depression Scale. It was important to engage the population at some point during this gap to keep the study relevant to the participants and limit the amount of attrition that might have occurred related to the time gap. A resource constraint was the number of postpartum patients on the unit. Initially, this was an even larger concern in the planning phases of this study, as the original population only included first-time mothers. Although this population was included, they were not the focus of this study.

Another resource constraint was the need to be present when delivering the client satisfaction tool. This constraint was addressed by leaving copies of the tool with the charge nurses to be delivered at discharge along with the demographic survey to ensure participants met the criteria to participate. Quantitative research is effective when the goal of research is to study a portion of a population to make inferences about the greater population using statistical measurement (Creswell 2014). Using a survey prior to

discharge helped to provide information about the experience of postpartum women as they were required to reflect on their experience while they were still in the environment.

Methodology

Population

The population for this study was postpartum women between the ages of 18 and 40. Determining the sample size of a study is one of the most important factors that must be decided by a researcher to establish validity and reliability of a study (Creswell, 2014). To accomplish this task, the researcher must understand the importance of three different values that determine the appropriate size of the sample for the population that is being studied (G. J. Burkholder, personal communication, 2012). The three values that must be determined are the statistical power, the value of the alpha measurement, and the estimated effect size the phenomenon may have on the entire potential population that may be impacted by the results of the study (G. J. Burkholder, personal communication, 2012). Once I determined these three values, I was able to begin searching for individuals to participate in the study.

Sampling and Sampling Procedures

When considering the sample size required for a phenomenon such as postpartum depression, it was important to note the lack of concrete numbers that truly depict the number of women impacted by postpartum depression, or any of the symptoms that are known to be associated with postpartum depression. As such it would be best to assume as outlined by G. J. Burkholder (personal communication, 2012) using a value of .3 for a medium effect.

The sample size that was required for this study was 20 participants according to the calculator from Creative Systems (2019) using a population of 100 for average births per month in the unit and a confidence level of 95% with a confidence interval of 20. As the participants will likely fall within 20 points on the modified client satisfaction tool, based off this information was determined that this was an appropriate sample size.

It would be beneficial to conduct this study with a larger population to establish the validity of the findings, and as such a sample size closer to 35 would be a better goal for this research. This would also help control for any participants that do not complete the two assessments as outlined in the study and would give more raw data that may be compiled if not.

The sampling technique for this study was a simple convenience sample of postpartum women. Women were excluded if they do not meet the age criteria or they self-identify as having a history of depression. Demographic information was gathered to determine several factors regarding the patient's history to ensure they qualified to become study participants (see Appendix A). This includes sorting for age, amount of time postpartum, previous history of depression, and number of children the study participant has given birth to.

Instrumentation

Modified Patient Satisfaction Tool. The data collection tool was a modified version of the client satisfaction tool used by Wagner and Washington (2016). Validity for this tool was established by three university professors that were familiar with the Cox model and Obstetrical nursing (Wagner & Washington, 2016). This study measured the same type of data, specifically the satisfaction of postpartum patients with the delivery of postpartum care. Reliability for the tool was established with a Cronbach's alpha of .983.

The data was captured using a 5-point Likert scale that measured the satisfaction each patient had with the education they received while on the postpartum unit. Data for the experience with education on the postpartum unit portion of the study was collected. The nine questions use a 5-point Likert scale ranging from "Strongly disagree" to "Strongly agree" and focused on postpartum education received during their stay on the unit. Appendix B contains the modified client satisfaction tool.

The scale was estimated to take between five and ten minutes to complete. The scale was presented to potential participants during their discharge class by the unit's nurse educator. Items was ranked on a scale of 1-5, 1 representing "Strongly Disagree" and 5 representing "Strongly Agree". Scores of 31 or less was considered as "dissatisfied with education" whereas scores of 32 or above was considered as "satisfied with education". These cutoffs were chosen as a score of 32 represents at least five of the nine questions being answered as agreeing with the statements of satisfaction while being unsure of satisfaction on the other four items.

Edinburgh Postnatal Depression Scale. The second tool that was examined was the Edinburgh Postnatal Depression Scale (see Appendix C). This tool has been validated in multiple studies and has been translated into languages such as Spanish (Cox et al., 1998; Garcia-Esteve, Ascaso, Ojuel & Navarro, 2003). The shortened Edinburgh Postnatal Depression Scale consists of 10 questions that seek to understand the way in which these new parents are adjusting to their new life at home with their newborn child (Cox et al., 1987). Questions have scaled responses ranging from "Most of the time" or "Sometimes" to "not very often" or "Not at all" about experiences the mother may have had within the last week of their lives (Cox et al., 1987).

The tool additionally gives the information for how scoring for each question should be handled to determine which responses were graded which way, with answers having a range of values that encompass the spectrum of a value of "0" and a value of "3" (Cox et al., 1987). The maximum amount of points assessed to questions was a value of "30", but a score of 13 denotes a strong concern for those patients. For this study, a score of "9" indicated` a concern as outlined by Beck and Gable (2001), with a score of "12" representing major postpartum depression that should be referred to a physician.

Studies have additionally compared the Postpartum Depression Screening Scale by Beck (1993) and the Edinburgh Postnatal Depression Scale and noted there were little differences between the two, making both a viable option for use in detecting symptoms of postpartum depression (Jolley & Betrus, 2007). Through one analysis conducted, it was determined that the Postpartum Depression Screening Scale was equally as accurate in predicting the onset of depressive symptoms in women after six to eight weeks

(Hanusa et al., 2008). This demonstrates the strength of reliability and empirical validity regarding the detection of postpartum depression among these women using any of these scales. Issues of validity and reliability can be easily solved using a scale that is known to present data that can be interpreted in a meaningful way. Reliability may be further established with statistical analysis that can draw meaningful conclusions about the answers to the questions on the scale.

Procedures for Recruitment, Participation, and Data Collection

The sample was drawn using informed consents given to the patients prior to discharge, asking for participation in the study by giving their phone number or e-mail address to the researchers to contact them after they are six weeks postpartum. This consent was on a sheet of paper provided by the charge nurse during the unit's discharge education for all mothers on the unit. Participants were also given the option to participate in the quantitative portion of the study by completing the postpartum depression scale at their six-week follow up visit in the doctor's office.

After obtaining approval from Walden University's Institutional Review Board (IRB), I obtained approval from the healthcare system as well as the affiliated doctors associated with the healthcare system in order to begin the recruiting process. The recruiting process took place within the BirthCare unit to gain study participants for Phases 1 and 2 of the study. Participants were asked if they would like to take part in the study and were given an informed consent to indicate their willingness to participate. It was important to administer the first survey before the patient leaves the clinical setting to ensure the data collected was relevant and not skewed due to time having passed after

discharge. After the discharge survey was completed, participants were asked to provide a phone number and/or email address to participate in the second survey of the study. The researcher gave the participants an option to complete the quantitative portion of the study at their six-week follow up appointment in the doctor's office

Data was collected at the end of the patient's stay, prior to discharge from the postpartum unit. Participants completed the survey independently. Data for the second portion of the study was collected from the same participants of the first survey portion at six weeks postpartum. The mailers were sent out using a multi-step process in order to get as much participation from potential study participants as possible through multiple contacts that clearly depict the steps to the study, and the steps needed to be taken by the study participant, all within a short timeframe, approximately a week between steps as suggested by Salant and Dillman (1994) in Creswell (2014).

The steps included emailing the initial mailer alerting the participant of the tool being mailed out, the tool being emailed out, a follow-up sent to all participants, and a final emailing of the survey with read receipts to those who have not yet responded to previous email requests. The participants were provided with the Edinburgh Postnatal Depression scale to complete. Upon completion of the study, the participants received an email thanking them for their involvement in this study. Any follow up needed based on the results of the study those participants were notified.

The Edinburgh Postnatal Depression Scale was administered using a 4-step process, where the first email was a reminder sent out three weeks after the initial survey, the second email was the actual Edinburgh Postnatal Depression Scale sent out after six weeks, the third communication was a reminder to those that have not completed the Edinburgh Postnatal Depression Scale one week after it has been sent out, and the last communication was a thank you for participating in the study two weeks after the scale has been sent out. Participants were given the option to complete the scale at their six-week checkup at the doctor's office as an alternative.

Data Analysis Plan

Data was analyzed using SPSS, with each participant's answers having a case number assigned so that the data can be correlated between both portions of the study. The null hypothesis for Research Question 1 was, There is no significant relationship between Postpartum women's satisfaction with patient care and teaching received in the hospital. The alternative hypothesis was, There is a significant relationship between Postpartum women's satisfaction with patient care and teaching received in the hospital.

The null hypothesis for Research Question 2 was, There is no significant relationship between patient satisfaction with their education and development of symptoms of postpartum depression. The alternative hypothesis was, There is a significant relationship between patient satisfaction and development symptoms of postpartum depression. Demographic information was obtained regarding the participant's age, marital status, income, and number of children delivered prior to the current birth.

The data was analyzed using a Spearman's rho. Spearman's rho is useful when examining correlation between two variables by conducting a correlation analysis (Corder & Foreman, 2014). Spearman's rho is helpful when there may be a correlation between two variables that is not specifically linear in nature (Corder & Foreman, 2014). This was appropriate to examine the relationship between patient satisfaction with the education they receive while on the postpartum unit and development of symptoms of postpartum depression.

Data was sorted by case numbers to correlate the findings with the data collected during the first portion of the study. The data from the first portion of the study was used to determine what the satisfaction level of the patients were with the education they received while they were on the postpartum unit, while the data in the second portion will test for symptoms of postpartum depression.

Threats to Validity

Threats to external validity included the impact of generalizing due to the narrow focus of the study using a convenience sample to sort the population into "Women having a child between the ages of 18 and 40". This sampling approach was necessary to isolate the sample being studied, specifically women that were less likely to have experience raising a child of their own to determine if a relationship exists between patient satisfaction with the education they receive on the postpartum unit and the development of postpartum depression.

The threat to external validity was minimized by not making wide generalizations regarding the study's findings, instead understanding that this was one of many studies that may be necessary to draw more general conclusions. The sample was drawn using consents given to the patients at discharge, asking for their participation in the study by giving their phone number or e-mail address to the researcher to contact them after they were six weeks postpartum.

The survey was given in the hospital setting to further help reduce external threats to validity, as the setting does not impact the study when given in the naturalistic setting. Internal validity may be impacted by the selection of the sample, mortality of the study, as well as maturation of the study participants. This was addressed by using a selection of participants that were not too narrowly sorted to reduce the chance of typing study participants with false-positive results. Mortality of the sample was addressed by having a significant number of participants to reach full saturation. Maturation was not a factor, as the timeframe for administration of the survey and tool was the same for all participants.

Ethical Procedures

Ethical concerns regarding this study included concerns regarding patient privacy and informed consent regarding study participation. To attain informed consent, a form was constructed that outlined that study participation is optional, will in no way have an impact on their stay in the hospital, and all information obtained through the study will remain confidential.

Patient privacy was achieved through the generation of case numbers so that no sensitive information was seen by other researchers or other individuals that may be reading the journal. A master list of the patient assignments was kept for contacting the patients regarding the follow-up administration of the Edinburgh Postnatal Depression scale in phase two of the experiment.

Data Security

Data was kept secure by keeping it on flash drives that are encrypted to prevent access to the data from parties not involved in the processing of the data. In addition, the data was kept in an encrypted folder on the researcher's computer to prevent the complete loss of data due to losing a flash drive, as well as preventing losing the data on the computer in a similar manner for similar circumstances.

Summary

Chapter 3 included an introduction to the research method, design and rationale, as well as instrumentation and information about recruitment of study participants. The next topic explored participation requirements and data collection techniques, followed by an overview of threats to the study's validity, ethical concerns, and issues regarding data security and analysis.

This chapter describes the quantitative longitudinal survey of Experiences of Postpartum Women with Education and Postpartum Depression. Providing a deeper understanding of the two quantitative portions of the study, the methodology, the participants, and how the data collection was obtained are the purposes of this chapter.

Chapter 4: Results

Introduction

I originally had intended to (a) explore the perceptions of education experiences of postpartum women and (b) evaluate postpartum women for postpartum depression. At the request of Walden University's IRB, I changed the study purpose statement to include the following: (a) explore the perceptions of education experiences of postpartum women and (b) determine if a correlation can be drawn between the satisfaction with education and scores on the Edinburgh Postnatal Depression Scale. I modified the purpose to remove the diagnosis of postpartum depression. This change was made per the request of the IRB to prevent me from making a diagnosis and making recommendations for treatment that were outside the scope of my practice. The research questions and hypotheses were as follows:

Research Question 1: Does the data from the modified client satisfaction tool on postpartum women's satisfaction with patient care correlate with their satisfaction with teaching received in the hospital setting using the same tool?

$H_0$1: There is no significant relationship between postpartum women's satisfaction with patient care and teaching received in the hospital.

$H_1$1: There is a significant relationship between postpartum women's satisfaction with patient care and teaching received in the hospital.

Research Question 2: Does the data on patient satisfaction with education from the modified client satisfaction tool correlate with an increased risk for postpartum depression based on the Edinburgh Postnatal Depression Scale?

$H_0$2: There is no significant relationship between patient satisfaction with their education and development of symptoms of postpartum depression.

$H_1$2: There is a significant relationship between patient satisfaction and development symptoms of postpartum depression.

I will begin this chapter by discussing necessary changes to the data collection method and providing demographic information pertaining to the sample. I will also present key results, with a focus on the way in which the data collected answers the research questions. This will be followed by a summary of the information found in the chapter.

Data Collection

Data collection changed due to the COVID-19 pandemic occurring in 2020 (Centers for Disease Control and Prevention, 2020). Healthcare facilities in my home state were closed to nonessential employees, and all nonessential procedures were postponed or canceled to ensure the safety of essential employees. This changed the nature of the data collection phase as I had planned to meet participants and follow up after they were 6 weeks postpartum. The Walden IRB determined that I could instead reach out to social networks and utilize the Walden Participant pool, offering a $10 gift card to potential study participants.

I submitted the proper paperwork to the Walden IRB and began data collection for this research with IRB approval number 05-13-20-0616659. Response rates were overwhelming, and I was able to gather many participant responses (n = 67). Data collection was completed within 48 hours beginning on May 15th, 2020 and ending on May 16th, 2020. Enough participants were gathered by opening the survey online through social networks alone. I sorted the responses to ensure they met the proper criteria before officially closing the survey and sending out participation gifts to study participants. Of the 67 participants responders, six did not complete any portion of the survey including the demographic survey, and one person only completed the demographic survey changing the potential population of study participants (N = 60). All 60 of these participants were provided their gift by either e-mail or postal service based on their preference and information provided in the demographic survey.

The first step of understanding the results was to screen the data for participants who were not eligible to participate based on the information captured in the demographics survey. Participants who indicated they had a previous history of postpartum depression had their data removed from the sample (n = 32). This review of the demographic survey further impacted the sample size as 38 study participants stated that they had been formally diagnosed by a medical professional for either depression or postpartum depression in the past (n = 22).

No further cleaning of the data was necessary as no outliers were present in the data based on a visual check of a scatterplot of the data using IBM SPSS Statistics 25. After removing the participants who did not qualify, the final sample size still met the criteria for the study. Although the sample size was impacted by the results, the sample was still representative of the study population based on county information (Data USA, 2020).

Table 1 shows that most study participants were under the age of 35 (n = 19). Almost all participants (n = 21) were married or cohabitating, with only one person listed as single. Nearly all participants had at least some college (n = 21). Most household incomes were $50,000 or above annually (n = 18). Table 1 shows most participants were Caucasian (n = 14), with the second largest ethnicities being African American (n = 3) and Hispanic (n = 3) leaving one each of Asian (n = 1) and Other (n = 1). Additional analysis shows 86.4% of participants had either one child (n = 16) or no children (n = 3) prior to this delivery, and 72.7% of participants delivered a single birth during this pregnancy (n = 16).

When examining the study sample compared to the expected composition of my home county (Data USA, 2020), I concluded that nearly all the population numbers were within 5% of the expected demographic sizes when comparing the data to Table 1 (Caucasian 70.7% vs 63.6%, Hispanic 14.5% vs 13.6%, African American 10.6% vs 13.6%, Asian 1.83% vs 4.5%). Additionally, the median income was $50,361, a number that aligns with the 36% of households with incomes between $50,000 and $75,000 reflected om Table 1.

Table 1

Descriptive Statistics

Age in years	Frequency	Percent	Valid percent	Cumulative percent
18–24	1	4.5	4.5	4.5
25–30	11	50.0	50.0	54.5
31–35	7	31.8	31.8	86.4
36–40	3	13.6	13.6	100.0
Total	22	100.0	100.0	
Household Income	Frequency	Percent	Valid Percent	Cumulative percent
< $25,000	1	4.5	4.5	4.5
$25,001	3	13.6	13.6	18.2
$50,000	8	36.4	36.4	54.5
$75,000	10	45.5	45.5	100.0
Total	22	100.0	100.0	
Ethnicity	Frequency	Percent	Valid percent	Cumulative percent
African American	3	13.6	13.6	13.6
Asian	1	4.5	4.5	18.2
Caucasian	14	63.6	63.6	81.8
Hispanic	3	13.6	13.6	95.5
Other	1	4.5	4.5	100.0
Total	22	100.0	100.0	

Results

Most of the population were Caucasian women (*n* = 14) between the ages of 25 and 35 (*n* = 18) with a household income of $50,000 or more (*n* = 18) that are married or cohabitating (*n* = 21) having attended at least some college (*n* = 21). The demographics show the population of this study closely matches the population of the researcher's home county when examining ethnicity and income (Data USA, 2020).

Data was analyzed using IBM SPSS Statistics 25, conducting a Spearman's rho statistical test with a 5% alpha. Spearman's rho is useful when examining data that changes together but may not change at a constant rate like they would in a Pearson product moment correlation (Corder & Foreman, 2014). The data that was collected was measuring the satisfaction with the education received on the postpartum unit and the development of postpartum depressive symptoms so the data itself may not be linear in nature.

Spearman's rho is more sensitive to changes that happen between the two datasets that do not occur at the same rate in a linear fashion which will help determine if there are correlations that occur between two data sets whose data changes in a way that may not be evenly distributed than what you find in the Pearson product moment correlation test, making it useful for examining the correlation between patient satisfaction and the development of postpartum depressive symptoms (Corder & Foreman. 2014).

When examining the first research question it must be determined if a relationship exists between the satisfaction of study participants regarding the education they received while on the postpartum unit. The data shows that nearly one-third of the study participants (n = 7) scored their satisfaction at 32 or less, indicating they were not fully satisfied with the education they received. While this was the case, most people were satisfied with the care they received while in the patient care setting (n = 15).

The average satisfaction score received from study participants was 33.55, showing that while they were mostly satisfied the average score was within 2 points of the satisfaction cutoff score set for this research at 32. Although some participants were not satisfied with education (n = 7), it is clear that the null hypothesis--that there is no correlation between the scores based on the scores being unevenly distributed—must be accepted.

To determine correlation for the second research question we must examine if a relationship exists between the satisfaction scores and the development of postpartum depressive symptoms using a Spearman's rho. Conducting a Spearman's rho using a 95% Confidence interval assuming a medium effect with the final sample size (n = 22) resulted in a correlation coefficient of -.078 with a two tailed significance of .730. When analyzing relationships using a spearman's rho it is expected that the closer the result is to 1.000 or -1.000, the more significant the relationship is (Corder & Foreman, 2014).

The results of conducting the Spearman's rho presented little correlation (p = -.078) as seen in Table 2. This demonstrates there is little to no relationship between the two variables being examined; the development of postpartum depressive symptoms and patient satisfaction scores. As there is not likely a relationship between the variables being examined, we must accept the null hypothesis that there is no correlation between the satisfaction of study participants and the development of postpartum depressive symptoms. There was no correlation between the study variables using the spearman's rho, so no post-hoc analyses were conducted using the data.

Table 2

Nonparametric Correlations

		Postpartum Results	Satisfaction Results
Postpartum Results	Correlation Coefficient	1.000	-.078
	Significance (2-tailed)		.730
	N	22	22
Satisfaction Results	Correlation Coefficient	-.078	1.000
	Significance (2-tailed)	.730	
	N	22	22

Summary and Conclusions

Chapter four included an explanation of the changes to the data collection method due to the COVID-19 pandemic, the results of research including the demographic information of study participants and the way in which the data collected answers the research questions. When examining the data, though there were many instances of dissatisfaction, most patients reported being satisfied with patient care (n = 15) regardless of the results of the Edinburgh postnatal scale. In Chapter five we will further examine the data, interpreting the findings of the study and examining the limitations of the study. Chapter five will conclude with examining the implications this research has for future studies and recommendations for future study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purposes of this study were to examine the experiences of postpartum women with the education received on the postpartum unit and evaluate whether a correlation can be drawn between satisfaction with postpartum education and the development of postpartum depressive symptoms. Results of a Spearman's rho led me to determine that the two items were not correlated in a statistically significant way producing a correlation coefficient of -.078.

Interpretation of the Findings

This study expands on the findings of Wagner and Washington (2016), addressing some of the limitations of their study regarding the demographic information collected by including a more diverse group ethnically. Wagner and Washington reported their population was 89% Caucasian, whereas Caucasians only makes up 63% of the population in this study. The education level of the population was very similar to the one in McCarter-Spaulding and Shea's (2016) research with 95% of the participants having at least some college.

This study's results did not show a direct correlation between postpartum education and the development of postpartum depressive symptoms. There was no direct link between the satisfaction with the education itself. Other researchers have found, however, that a lack of education does impact the development of postpartum depressive symptoms (Ho et al., 2009), showing that education plays a large role, though not in the exact way examined in this study.

The findings in this study align with those of McCarter-Spaulding and Shea (2016) that show a negligible difference between the postpartum education being delivered. One limitation of the McCarter-Spaulding and Shea study was related to the diversity of the population included in the study, with 89% of study participants in their study reported as being Caucasian. I included a more diverse population in this study.

Although the population was more diverse in ethnicity, they had education levels that were similar to the population in McCarter-Spaulding and Shea's (2016) study with 95% of respondents in both studies reporting having at least a high school diploma. In this study, 95% of respondents (n = 21) indicated they also had attended at least some college, which may have had an impact on the results of the study. Seeking out participants who represent a more diverse educational background may help determine if there is a larger implication related to education of participants and the development of postpartum depressive symptoms.

Chung et al. (2018) determined that there was an important need for postpartum education in the hospital setting. Although the researchers found that it was important for education to be delivered to ensure the mother-infant interaction is not hindered, they did not consider that some of the knowledge acquisition may be impacted by the postpartum mother already having children prior to the current birth and by the education received during the birth of their previous children.

To expand on this theory, it would be useful to determine if the impact of education delivered to the postpartum patient delivering their second or later child has the same impact as when their first child was born. Chung et al. (2018) and Tsivos et al. (2015) both described the importance of mother-infant bonding in relation to the development of self-regulatory skills, language development, and overall cognitive ability. Thus, it is important to determine how we can best support mothers to ensure the best possible patient outcomes for mother and child.

Wagner and Washington (2016) described the impact on changing the education delivery method and the satisfaction of postpartum patients. Wagner and Washington posed that it is possible that due to mothers being multiparous, they may have felt as though some of the information or their comfort level may have been higher than first-time mothers. This may have led them to feel as though some of the information was unnecessary based on their previous experience or education. Participants in this study may have been impacted by this bias as well, as 86.4% of participants had already delivered at least one child prior to this study (n = 19).

The data for the first-time mothers in this study (n = 3) shows they were more likely to potentially develop postpartum depressive symptoms with an average Edinburgh Postnatal Depression scale score of 16.67 with scores of 15, 16, 19. These participants were potentially less satisfied with education having an average satisfaction score of 32.33 with scores of 32, 32 33 respectively. This may indicate a potential dissatisfaction with postpartum education for first-time mothers. A larger sample size would be needed

to draw meaningful conclusions regarding the impact education has on first-time mothers and the development of postpartum depressive symptoms.

This study helps to address the gap identified by Wagner and Washington (2016) regarding the population's age. In their study, Wagner and Washington had a sample with an average age of between 26 and 28 years old. While the exact age was not captured, this current sample had 50% of the participants between ages 18 and 24 (n = 1) and 31-40 (n = 10). Including more participants from the 18-24 age range may provide more primiparous participants, potentially giving a better view of the impact education has on the development of postpartum depressive symptoms.

Although satisfaction with education did not have a direct impact in this study, gathering this information is important for ensuring that researchers view postpartum depression in a holistic manner as Beck (1993) intended. Any information researchers can find on the topic may potentially help reduce the development of postpartum depressive symptoms or aid in the development of interventions targeting the development of postpartum depressive symptoms. Progress in these areas will help the interdisciplinary team achieve the best possible patient outcomes.

Beck (2006) descriptions of the reaction of postpartum mothers beginning to cry when reading the items in the survey shows the importance of continuing the examination of postpartum depression. Although there are similarities between postpartum depression and other disorders that arise during the postpartum period, understanding how postpartum depression differs from postpartum psychosis, maternity blues, and other disorders that impacts postpartum women will help researchers to deliver interventions

that are targeted and purposeful for those that need them (Beck, 2006). Learning how postpartum depression impacts the postpartum patient is key to diagnosing and treating the symptoms that postpartum patients exhibit (Beck & Gable, 2001). Recognizing if the postpartum patients are satisfied with the education they received helped provide insight toward developing early detection of symptoms of postpartum depression as outlined by Beck and Gable (2001).

Although there was no correlation between the satisfaction of patients with education and the development of postpartum depressive symptoms, exploration of the topic will help the interdisciplinary team prioritize which interventions are most effective. This will allow the postpartum nurse to provide guidance to the postpartum patient. Nurses may also be able to have an open and honest dialogue that provides the postpartum patient with realistic expectations of the potential symptoms and provide them with resources such as support groups.

The role of the postpartum nurse is critical during the postpartum period. Nurses provide reassurance to the postpartum patient that suffering from symptoms of postpartum depression does not make the new mother weak or at fault and that there are steps they can take to seek out treatment (Beck, 2006). By acting as a patient advocate, nurses have already demonstrated to this population that they are willing and capable partners, as evidenced by over 90% of the 823 women surveyed by Serge, O'Hara, Arndt, and Beck (2010b) who said they believed that nurses were qualified to not only conduct screening but also providing counseling services for coping with postpartum depression.

The examination of this factor helps cover one important aspect of the development of postpartum depressive symptoms: the view of the patient regarding their education. Examining this aspect helps us understand both the effectiveness of the education itself and the delivery of the education to the patient from the patient's perspective. Getting the perspective of the patient allows us to develop patient-centered initiatives that help achieve the best possible patient outcomes.

The examination of postpartum depression and the development of postpartum depressive symptoms is crucial to ensure nursing is able to help deliver the best possible patient outcomes, examining the different aspects of postpartum depression holistically (Beck, 1993; Marsh, 2013). Wagner and Washington (2016) take this approach by examining the way in which postpartum patients viewed the education they were delivered in two different modalities. This helps us begin to consider the impact education has on the postpartum patient.

Examining the impact education has on the development of postpartum depressive symptoms helps us to determine if there are interventions the interdisciplinary team should consider when planning care for the postpartum patient. Examining the delivery of a postpartum depression screening tool and examining the impact education could potentially have combines the work of Jolley and Betrus (2007) and Wagner and Washington (2016) to determine what important next steps should be taken.

Limitations of the Study

There were a few limitations of the study that should be improved for the future. When collecting the demographic data, the survey question regarding previous history of postpartum depression or other major depressive disorders did not have an option to select that none of these apply to the study participant. This caused an unnecessary hardship on the participant, as they may not have realized they could skip the question instead of answering it.

This may have also impacted the survey participants that had to be excluded from participating in the study, as if they did not see a selection that none of these apply they may have selected whichever item they thought best described their own perception of symptoms they believe they have displayed in the past. Additionally, this may impact the results of those that skipped the question as some may have skipped it because it did not apply, while others may have skipped the question because they chose not to answer it.

Another limitation of the study is related to the age captured on the demographic survey. Not capturing the specific age hinders the ability to further define the characteristics of the population. Asking for the age of the participant may have provided data that could be examined based on each individual age instead of age ranges that were broad, such as the impact education had on 29-year-old women instead of only being able to generalize about the age range of 25 – 30 years old.

The population was limited when examining the education of study participants. Most of the population reported they had attended at least some college education (n= 21). It would be valuable to perform the study with a larger percentage of participants having no college education to determine if the education level of the participants impacted the participant's perception of the education delivered or their ability to cope to the lifestyle transition in a different manner than those who had not attained a higher education level. While McCarter-Spaulding and Shea (2016) noted education level was not a predictor of postpartum depression, less than 5% of their sample had less than 12 years of education.

When examining the generalizability of the study we must examine the trend of the data collected. The data collected showed that many most participants were satisfied with the education they received with most of the data regarding the satisfaction within a range of 32 – 36 points of satisfaction (n = 19). This shows that we can generalize that women were satisfied with the education they received, with only two being mostly dissatisfied (24 and 26 points respectively) and 1 being very satisfied (40 points).

Generalizability can be established in the common themes found throughout this study and others that have overlapping areas of interest. This study and the work conducted by McCarter-Spaulding and Shea (2016) and Wagner and Washington (2016) found that education did not have a significant impact on the development of postpartum depressive symptoms, which stand in contrast to the findings of Ho et. al, (2009). These findings may be different based on the inclusion criteria of Ho et. al, (2009) being

stricter, requiring participants to be between 20 and 35 with no postnatal complications, or cultural differences between Taiwan and the United States.

Generalizability is negatively impacted by the education level represented by this study's sample, and thus cannot be generalized to the larger population. It may be appropriate to stratify the sample in the future to ensure our sample is a true representation of the population's education level, socioeconomic status, age and number of children to ensure the sample can be generalized to provide insight into the larger population.

Recommendations

Recommendations for future studies related to the research topic would be to examine if there is a connection between low satisfaction and the development of postpartum depressive symptoms. While there were some examples of low scoring satisfaction, most were favorable (n = 15), only 2 scores ranked in the 20 – 30-point range. This means that most study participants were moderately to highly satisfied with the education they received while on the postpartum unit.

In future research, it would also be valuable to examine the education that is being delivered on the unit prior to examining the satisfaction of the study participant. Conducting this study where education is not favorably viewed by the participants may show a different trend like the one identified by other researchers such as the outcomes identified in areas where education was not delivered to participants (Ho et al., 2009).

In future studies, it would be valuable to increase the sample size of participants. Changing the sampling method may provide a more targeted approach to locating and qualifying potential participants. Though 67 responses were received seven participants did not answer any part of the survey, and the exclusion criteria eliminated 53.33% of potential participants (n = 32) based on previous history of depression or postpartum depression.

Implications

The potential for positive social change this study provides is more data on the complexities of postpartum depression. At the individual level, the potential impact would be a greater understanding of postpartum depression and how education impacts the postpartum patient. For the family, gaining a better understanding of postpartum depressive symptoms will help them support the postpartum patient during the transitionary phase and beyond.

The information gained from exploring this topic allows the discipline of nursing consider the impact our education has on the postpartum patient. Organizations should consider the education they deliver to the postpartum patient and the implications it has on the postpartum patient and newborn (Ho et al., 2009). Policies should be put into place to ensure the education delivered is purposeful and well received by patients to ensure the best possible patient outcomes, as lack of education is a detriment to the postpartum patient (Ho et al., 2009).

While there was not a direct correlation between the variables based on this sample it does not mean that other aspects of education do not have a measurable impact on the development of postpartum depressive symptom as noted in other studies (Ho et al., 2009). It's important to continue conducting research on postpartum depression to ensure we are caring for our postpartum patients appropriately.

When examining methodological implications, the study was able to gather a significant number of participants prior to the exclusion criteria. Changing the inclusion criteria may lead to a larger population from which a greater level of generalizability may be drawn. Using a convenience sample helped gain a large amount of interest but locking down some of the desired characteristics of the participant prior to conducting research by stratifying the sample for characteristics such as age and education may yield a more representative population for examination (Creswell, 2014).

A quantitative analysis was used to examine the data in this study as empirically proven quantitative tools such as the Edinburgh Postnatal Depression Scale and Client Satisfaction tool already existed. These tools were designed to measure the independent and dependent variables of the study and helped provide a cost-effective method that ensured a fast turnaround on data collection through the use of Survey Monkey.

Quantitative research is useful when the goal of the research is to gain insight about the larger population using different types of statistical measurements to make inferences (Creswell, 2014). Using the calculator from Creative Systems (2019) yielded a requirement of 20 study participants when considering a population of 100 average births per month, with a confidence level of 95% and confidence interval of 20, based on the 20 points spread likely to be exhibited on the modified client satisfaction tool.

The original time constraints of the 6-week waiting period between the initial administration of the Client Satisfaction tool and the Edinburgh Postnatal Depression Scale was removed by collecting data only from those that were at least six weeks postpartum. The resource constraints of the number of patients on the postpartum unit and the need to be present to administer the instruments were addressed with the use of Survey Monkey to administer the data collection instruments. Due to using thank you gifts, the researcher had to limit the number of study participants to ensure they did not exceed a budget of $600.

Spearman's rho was used to examine the data gathered in this study using IBM SPSS 25. Spearman's rho is best used when the relationship being examined is not specifically linear in nature (Corder & Foreman, 2014). This study examined the relationship between patient satisfaction with the education they received while on the postpartum unit and the development of postpartum depressive symptoms which may not be linear in nature.

Threats to external validity of this study included making generalizations about the data collected after setting strict inclusion criteria. This has been addressed by stressing the importance of considering what can and cannot be generalized based on the final population and data collected from that group. Wide generalizations were not made; this study should be seen as one of many necessary to draw more general conclusions about the greater population.

Internal threats to validity were addressed by ensuring the inclusion criteria were not so strict that the resulting population drawn upon had an increased likelihood to present false positives. Mortality and Maturity of the sample was addressed by providing both portions of the instrument at the same time. This reduced the risk by reducing the amount of time between each instrument's delivery, having all data collection happen in one interaction.

Theoretical implications for this study strengthen the need for better understanding of postpartum depression. As research is conducted, we help spread awareness that postpartum depression is not only normal, but can be treated (Beck, 2006). Addressing postpartum depression holistically is one of the founding principles of Beck's postpartum theory (Marsh, 2013). The theory was designed to provide nurses with a framework by which we can learn to implement interventions aimed at achieving the best possible patient outcomes (Marsh, 2013).

Empirically, the prevalence of postpartum depression research has decreased as researchers find similarities between postpartum depression and other major depressive disorders (Jolley & Betrus, 2007). While this is the case, Beck (2006) stresses the importance of classifying postpartum depression as a major depressive disorder of its own, so we can gain better understanding of how to care for the postpartum patient in the clinical setting.

For the clinical setting, it's important nurses maintain the strong relationships described in Serge, O'Hara, Arndt and Beck (2010b), where over 90% of the postpartum women surveyed believed that nurses were both qualified to conduct postpartum depression screening and counseling services, potentially in a home visit (Beck 2006; Serge et al., 2010a). This can be achieved by continuing to be patient advocates, encouraging the patient to be honest about her feelings to ensure the appropriate care and interventions are utilized (Clemmens et al., 2004).

Nurses must continue to deliver education to the postpartum mother that is purposeful to their unique needs (Chung et al., 2018). The education the patient receives impacts the mother-infant bond and the development of self-regulatory skills, language development and overall cognitive ability (Chung et al., 2018; Tsivos et al., 2015). Being mindful of the education being delivered and the method by which we deliver it can have significant impact to the patient and newborn child (Chung et al., 2018; Tsivos et al., 2015; Wagner & Washington, 2016).

Postpartum depression is a topic that should continue to be explored by scholars in the future. Gaining information about postpartum and symptoms of postpartum depression allows the interdisciplinary team to consider the interventions implemented and education that is delivered to the postpartum patient. This research helps fill some of the gaps identified but can be expanded on with future research focusing on specific demographic opportunities.

Conclusion

Research into postpartum depression, symptoms and factors that impact the development of postpartum depressive symptoms will continue to be important for future research to ensure nursing continues to be strong advocates for patients as members of the interdisciplinary team. The impact that interventions may have on the postpartum patient helps develop evidence-based practice for nursing and help move patient care toward achieving the best possible patient outcomes based on the results of research such as this.

While the results of this study were not significant, the literature reviewed along with the intertest of the study participants is a testament to the need for exploring Postpartum Depression and achieving the best possible patient outcomes for both postpartum patients and their children. Even though the data was not significant this study helps explore an area of postpartum depression that had opportunities and contributes to the body of knowledge by not only compiling data on the studies within while advocating for further examination of the way we look at education and patient satisfaction in other interesting ways.

It is important that researchers continue to ask important questions regarding postpartum depression. Conducting research on difficult topics such as postpartum depression will help us change and tell our impact story as a profession. Nursing research allows nurses to be a patient advocate to members of various vulnerable populations while strengthening our position as a partner to all members of the interdisciplinary healthcare team.

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Appendix A: Demographic Survey

- **Age in Years (Select One)**
  - **18 – 24**
  - **25 – 30**
  - **31 – 35**
  - **36 – 40**
  - **41+**
- **Marital Status (Select One)**
  - **Single**
  - **Married or Cohabitating**
  - **Divorced or Separated**
- **Education (Select One)**
  - **High School Diploma or Less**
  - **Some College**
  - **Bachelor's Degree or Higher**
- **Household Income (Select One)**
  - **<$25,000**
  - **$25,001 – $49,999**
  - **$50,000 – $74,999**
  - **$75,000 or More**
- **Ethnicity (Select One or More)**
  - **African American**
  - **Asian**
  - **Caucasian**
  - **American Indian/Alaskan Native**
  - **Hispanic**
  - **Other**
- **Number of Children Prior to this Delivery**
  - **0**
  - **1**
  - **2 or more**
- **Number of Children Delivered This pregnancy**
  - **1**
  - **2**
  - **3 or more**

- **Have you been diagnosed by a medical professional for any of the following (Select all that apply)**
  - **Anxiety**
  - **Depression**
  - **Postpartum Depression**

Appendix B: Modified Patient Satisfaction Tool

The following data collection tool was a modified version of the client satisfaction tool used with permission from Wagner and Washington (2016).

Please fill in the circle that best corresponds to your experience during your hospital stay.

The nurse understood my learning needs regarding my self-care and infant care

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

The nurse gave me encouragement in teaching me care of myself and care of my infant

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

I got my questions answered in an individual way

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

I was included in decision making about my discharge teaching

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

The discharge information I received in the hospital will help me take care of myself and my infant at home

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

The topics covered in my discharge teaching were of particular interest to me

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

The discharge teaching I received was of high quality

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

The nurse did a good job doing my discharge teaching

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

Overall, I was satisfied with my discharge teaching

○ Strongly Agree ○ Agree ○ Not Sure ○ Disagree ○ Strongly Disagree

Appendix C: Edinburgh Postnatal Depression Scale

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

The EPDS consists of 10 questions. The test can usually be completed in less than 5 minutes. Responses are scored 0, 1, 2, or 3 according to increased severity of the symptom. Items marked with an asterisk (*) are reverse scored (i.e., 3, 2, 1, and 0). The total score is determined by adding together the scores for each of the 10 items.

Referral Cut-Off Scores
The cut-off score for women is 9. Any score above 9 should receive a referral.
The cut-off score for men is 10. Any score above 10 should receive a referral.
Any person who scores 1 or higher on question #10 should be referred immediately.

Instructions for Users
The caregiver is asked to underline 1 of 4 possible responses that comes the closest to how s/he has been feeling the previous 7 days.

All 10 items must be completed.

Care should be taken to avoid the possibility of the caregiver discussing her/his answers with others.

The caregiver should complete the scale her/himself, unless s/he has limited English or has difficulty with reading.

We would like to know how you are feeling. Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.	
I have felt happy: Yes, all the time Yes, most of the time No, not very often No, not at all,	This would mean: "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the past 7 days:

1. I have been able to laugh and see the funny side of things
As much as I always could
Not quite so much now
Definitely not so much now
Not at all

*2. I have looked forward with enjoyment to things
As much as I ever did
Rather less than I used to
Definitely less than I used to
Hardly at all

3 .I have blamed myself unnecessarily when things went wrong
Yes, most of the time
Yes, some of the time
Not very often
No, never

4. I have been anxious or worried for no good reason No, not at all
Hardly ever
Yes, sometimes
Yes, very often

*5. I have felt scared or panicky for no very good reason
Yes, quite a lot
Yes, sometimes
No, not much
No, not at all

*6. Things have been getting on top of me
Yes, most of the time I haven't been able to cope at all
Yes, sometimes I haven't been coping as well as usual
No, most of the time I have coped quite well No, I have been coping as well as ever

*7. I have been so unhappy that I have had difficulty sleeping
Yes, most of the time
Yes, sometimes
Not very often
No, not at all

*8. I have felt sad or miserable
Yes, most of the time
Yes, quite often
Not very often
No, not at all

*9. I have been so unhappy that I have been crying
Yes, most of the time
Yes, quite often
Only occasionally
No, never

*10. The thought of harming myself has occurred to me Yes, quite often
Sometimes
Hardly ever
Never

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)
J. L. Cox, J.M. Holden, R. Sagovsky
From: *British Journal of Psychiatry* (1987), 150, 782-786.