

INVESTIGATION OF THE EDINBURGH POSTNATAL DEPRESSION SCALE'S  
QUESTIONS IN THE SCREENING OF POSTPARTUM DEPRESSION IN MEN

By

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### **Abstract**

The contemporary man is envisioned as an actively involved, nurturing, and compassionate father. As men become more involved in childcare and society's expectations change, their transition to fatherhood needs to be followed more closely during the postpartum period. It is important to understand that as men become more gender equal in their parenting roles, they may also be facing new vulnerabilities during the postpartum period, such as postpartum depression (PPD). A depressed parent could have a negative impact on the entire family, including childhood development; therefore men should be included in postpartum screening for depression in order to enhance family centered care and health. This study was designed to investigate whether the Edinburgh Postnatal Depression Scale (EPDS), which is widely used to screen for PPD in women, is an appropriate tool for men.

Six men in their first year postpartum were interviewed between January 2013 and June 2013. The participating men were from a small northern community in the Peace Country region of Alberta, Canada named Grande Prairie. They were married or common-law, employed, and had regular weekly contact with their children. In order to understand how men interpreted the EPDS, cognitive interviews were conducted following guidelines by Willis (2005) to examine the following four cognitive methods of retrieval: comprehension, decision making, memory recall, and response making. Interviews were transcribed and a content analysis was conducted to determine how men interpreted the EPDS questions.

The results revealed valuable insights regarding the methods of retrieval and how men interpreted the questions of the EPDS. Information about comprehension revealed extreme interpretations of several words and phrases while decision making seemed to be affected by follow-up discussion or ambiguity about the responses provided. Memory recall was affected as

participants' had difficulty remaining within the context of the last seven days. For some of the EPDS questions, response making was influenced by participants' tendency to deny their current situation or their inability to relate to a question.

The findings provided valuable information regarding the use of the EPDS to screen for paternal PPD. It is recommended that nurses consider men's interpretations of the EPDS questions as part of the PPD screening. Further research is needed to determine appropriate EPDS cutoff scores for men in the postpartum period and the use of the EPDS in different populations, such as in urban centers.

*Keywords:* men, father, postpartum depression, Edinburgh Postnatal Depression Scale

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## **Chapter One: Introduction and Background**

Postpartum depression (PPD) is a disorder primarily recognized as a women's disorder (Melrose, 2010). PPD is a serious health concern and is known to cause extreme symptoms such as "dysphoria, emotional lability, insomnia, confusion, fatigue, appetite disturbances, feelings of worthlessness and hopelessness, extreme anxiety, guilt, diminished interest or pleasure, decreased concentration, inability to make decisions, and in extreme cases, suicidal ideation" (Letourneau et al., 2012, p. 69). Increased mortality in children and women is also seen as a result of PPD (Letourneau et al., 2012). A substantial number of cases have been reported involving the incidence and prevalence of paternal PPD and are nearly as high as half the number of women diagnosed with the same (Melrose, 2010). Despite this reality, PPD in men still remains an overlooked phenomenon in today's healthcare. Not only does paternal PPD have direct negative effects on the father's mental health, it also affects the overall wellbeing of his partner and family (Melrose, 2010). The Edinburgh Postnatal Depression Scale (EPDS) was originally developed for the purpose of diagnosing women at risk for developing PPD; however, it is becoming a more common tool in determining men's risk as well (Melrose, 2010). For this reason, I wanted to investigate whether the EPDS questions could be appropriate in screening for PPD in men.

### **Background and Motivation**

As an instructor in second year Maternal Child in Public Health, I teach nursing students how to screen for PPD in new mothers using the EPDS to prepare students for family health clinics and home visits. When I take the students to the postpartum unit in the hospital, part of the discharge teaching involves informing the mothers about the signs and symptoms of PPD and providing contacts to resources if immediate assistance is needed. Maternity nursing was foreign



to me as my previous work experience was more focused in critical care so I became highly analytical of the maternity environment. When I taught on the maternity unit, I felt that the father's mental health was ignored in his life-altering transition to fatherhood. Teaching was limited to the mother's awareness on certain topics and the father was not required to be in the room or sign any documents that clarified he understood all the discharge teaching regarding both personal and infant care. For example, on the particular unit on which I was teaching, mothers, and mothers only, had to sign a document that stated they understood all of the discharge teaching regarding infant care, and individual care as well as mental health awareness. Fathers were often pulling up the car when this document was being signed and the unit staff were predominantly concerned with ensuring that the mother received the teaching and signed the documents before leaving. When I inquired about the father's responsibility in understanding the discharge teaching regarding mother/infant care and possible mental health issues, the staff replied that his health or his understanding of infant care was not considered to be a priority in their nursing care.

### **Project Relevance**

The lack of regard for men's postpartum mental health, as witnessed on the maternity child floor in my teaching experience, is also clearly evidenced and recognized in the literature. For the last 80 years, healthcare has remained focused and committed to studying and treating the effects of PPD in women (Bartlett, 2004; Castle, Slade, Barranco-Wadlow, & Rogers, 2008). There is little research to investigate the effects of fatherhood on the psychological and mental well-being of men (Bartlett, 2004). This evidence is also supported by Paulson and Bazemore (2010) who state that, "the prevalence, risk factors, and effects of depression among new fathers are poorly understood" (p. 1961). Although men have been understudied in this area, recent

studies suggest and support that men, like women, are at an increased risk for depression in the postpartum period (Paulson & Bazemore, 2010).

Paternal PPD not only can cause disequilibrium in the new father's mental health, but negatively affect his children. For instance, behavioral problems in children are associated with paternal PPD and can lead to increased rates of social challenges in children (Ramchandani et al., 2008). Several recent studies have found that undesirable child outcomes can be a result of paternal depression in the postpartum period (Paulson & Bazemore, 2010). Ramchandani et al. (2008) warn that these "current findings point to a persisting, and clinically significant level of disturbance, with more significant implications for the future functioning of children, and for society" (p. 7). Therefore, the need to further investigate methods that will help to identify the risk of PPD in men is important in maintaining the mental health and well-being of all.

Identifying risk is often done using screening tools. The next section of this paper will discuss four common screening tools and provide rationale as to why the EPDS was used for this project.

### **Common Screening Tools**

Paternal PPD is a recognized phenomenon and can lead to negative childhood and societal outcomes. Clients are screened at varying points in the postpartum period using a short questionnaire that investigates experiences and emotions associated with the postpartum period to identify the risk for PPD. There are different measurement tools that measure risk for PPD. According to Melrose (2010), examples of the most frequently used tools in screening for risk of paternal PPD are the EPDS (a short form of the Epidemiologic Studies Depression Scale) (Cox et al., 1987), the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1983), the Beck Depression Inventory (BDI) (Beck et al., 1961), and the Gotland Male Depression Scale (GMDS) (Zierau et al., 2002). In the next section, I will provide a brief summary of these most

common scales and provide rationale as to why I chose to focus on the EPDS for this study's purpose.

The AUDIT was originally created to detect and identify hazardous drinkers or those in the early stages of alcohol abuse (Zierau et al., 2002, as cited in Melrose, 2010). It is a 10-item questionnaire and takes no specialized training to administer, and it identifies new fathers at risk of harm due to their hazardous alcohol use, but fails to measure any other symptoms of depression (Melrose, 2010).

The BDI is well recognized and has also been proven to be a highly valid and reliable tool; however, it was originally developed to screen clients in the psychiatric setting and has been revised several times since its creation in 1961 (Beck et al, 1961, as cited in Melrose, 2010). Thus, the BDI was not created to specifically screen for PPD. Some issues with the BDI that have been noted include inflated scores as some of the measurement questions include usual occurrences associated with postpartum life, such as lack of sleep, tiredness, and weight changes (Melrose, 2010). Also, this scale requires specialized training and is under copyright with the American Psychological Association. It is therefore not freely accessible like the EPDS and AUDIT (Melrose, 2010).

Finally, the GMDS is also a 10-item questionnaire and focusses specifically on male symptomology of depression, does not require specialized training and is freely accessible on the internet (Zierau et al., 2002, as cited in Melrose, 2010). Studies on the reliability and validity of the GMDS are limited and the questions consider general depression in males and do not focus on the postpartum experience (Melrose, 2010).

The EPDS is a 10-item questionnaire that takes about five minutes to complete and does not require specialized training to administer and score the scale (Cox et al, 1987, as cited in

Melrose, 2010). The EPDS has been used for over twenty years and has proved to be an efficient and common tool in screening for risk of PPD and is freely obtained on the internet (Melrose, 2010). However, it is not known to what extent this tool may be appropriate in screening for risk of PPD in men in particular in regard to the controversial EPDS cut-off scores for men. Studies done regarding the validation of the EPDS have suggested the need for lower cut off scores when screening men (Melrose, 2010). According to Melrose (2010), the current cut off score of 12/13 was suggested by Cox (1994) and Cox and Holden (2003). However, there is significant controversy about the appropriate cut off score and it has been suggested that nine is more sensitive to depressive symptomology in women (Dennis, 2004, as cited in Melrose, 2010). In spite of the debate regarding cut off scores in women, the scale continues to be used internationally as a screening tool for women as higher scores and lower scores do not necessarily indicate depression is present or not present (Melrose, 2010). If cut off scores are not of prime importance for women, the same could be said for men. The purpose of the scale is to indicate possible symptoms of depression but ultimately clinical judgment prevails over scores on a tool (Melrose, 2010). Since the EPDS is the most widely used scale, I want to understand how men interpret the questions on the EPDS to allow for a better understanding of how this tool can be used in screening for paternal PPD. See Appendix A for a sample of the EPDS.

To provide some background of how the literature review was developed and initiated as well as how the project was developed, a further description and definition of key concepts will be provided in the following section.

### **Key Concepts**

In this section a brief overview of PPD will be provided to obtain understanding of the diagnosis and characteristics of this disorder. Because PPD has been traditionally seen as women's disorder, a review on gender and masculinity in contemporary society may allow for

some insight as to why men may be at risk for PPD. An overview of gender and masculinity is necessary to contextualize the father's societal role and expectations with the hope of providing some evidence that contemporary parenting roles are more egalitarian in nature. The role change could put men at risk for PPD related to societal expectations becoming more similar than different. Also, while the EPDS has been used to screen men in some instances, a historical review of the scale may provide better understanding of how the scale can be applied in screening for paternal PPD.

**Postpartum depression (PPD).** PPD is a major depressive disorder and requires five crucial symptoms to be present for a minimum of two weeks in order to allow for a diagnosis (Hirst & Moutier, 2010). In addition, PPD is regarded as an anxiety disorder, which is based on the recognition that anxiety is a major symptom in PPD (American Psychiatric Association, 2013). Symptoms of PPD include depressed mood, decreased pleasure in taking part in activities (anhedonia), decreased energy, sleep pattern changes, weight changes, indecisiveness or inability to concentrate, feeling guilty or worthless, psychomotor retardation or agitation, and suicidal thoughts/ideation (Hirst & Moutier, 2010). For PPD to be considered as a diagnosis, onset must be within four weeks of delivery but many experts in the field have extended this period to up to 1 year postpartum (Hirst & Moutier, 2010).

**Gender and masculinity.** With a trend towards a more equal role in parenting than seen in the past, it is essential to review how overlapping male and female gender roles affect men's transition to fatherhood. Interestingly, the transition to fatherhood has not promoted the need for medical attention in the postpartum period because of the historical constructions of hegemonic masculinity (Miller, 2011). Historically, men have not been referred to as "caring", "involved", or "present" and are more consistent with the expectations and characteristics associated to the

new age father (Miller, 2011). Thus, an examination of gender, gender differences, and masculinity and their redefinition in recent decades may allow for a clearer perspective of how and whether screening men for PPD is a relevant intervention.

Gender plays an influential role in how mental illness presents itself (American Psychiatric Association, 2013). There has been a slow transition in recent decades in which gender roles are overlapping, as is evidenced by more women entering the work force with full time careers and more men are assuming caregiving responsibilities (McGill, 2011). Because of this, “new norms of fatherhood now emphasize men’s involvement with their children in addition to their transitional role of financial provider” (McGill, 2011, p. 1). Today’s cultural norm of the new father includes that he is involved in the day to day care of his child, such as bathing, feeding, nurturing, and listening (McGill, 2011). The “modern-day” father accepts and values his more active role in parenting and takes value from practices that help in maintaining and providing for the well-being of his children. And while this new role appears to be congruent with the new father’s needs and wants, there is also an added responsibility and conflict that accompanies this change. For example, men are still seen as providers in contemporary society and continue to feel responsible in their role to maintain financial stability however in doing so, time to participate and effectively deliver more equal caregiving duties may result in gender role conflict.

According to the DSM-V (American Psychiatric Association, 2013), gender differences “are a result of both biological sex and individual self-representation” (p.16). While men’s roles are evolving to becoming more active in assuming parenting responsibilities, dominant societal perspective of gender roles should be revisited to re-examine and reshape existing norms that are

not consistent with today's father (Miller, 2011). O'Connell-Binns (2009) provides an example that demonstrates the need for an approach that incorporates gender equity:

Taking a holistic view of the family promotes gender equity and should make it easier to support fathers in need. The Equality Act (2006) has created an important new duty for organizations, which includes NHS. Since April 2007, the gender duty requires organizations to promote equality of opportunity between men and women and to be aware of their specific needs when planning services. (p. 4)

The topic of men as fathers needs to be addressed differently with the goal of challenging gender norms as a means to lessen societal inequalities (Miller, 2011). In particular, men's traditional dealings with conflict and power issues are very different in today's society. Men and women are becoming equal in regards to power and conflict issues. The social construction of parenthood, traditionally, has not addressed a more involved modern day father in the caring of his children (Johansson, 2011). By acknowledging this change in a man's increasingly involved role in parenthood, there is a change from inequalities in this arena to a more gender-equal role in parenting as well as a "sign of changes taking place within hegemonic masculinity" (Johansson, 2011, p. 166).

Hegemonic masculinity refers to the social, political, and cultural influences on how male characteristics, "masculinities", present themselves and are subordinated (Yarwood, 2011). As men take on more responsibility in parenting duties, traits such as nurturer, good listener, and caregiver are becoming more gender equal terms that are attributed to both fathers and mothers (Johansson, 2011). This egalitarian trend on parenthood is redefining how society regards and defines masculinity. Increased involvement in caregiving responsibilities on the father's part allows for a new and more complex view of men's gender role. In essence, societal trends and

needs are helping lessen the gap in caregiving responsibilities of children with men and women becoming more neutral entities in parenting. The man's redefined masculinity and more gender neutral role is calling for the need to screen fathers in the postpartum. Men and women are becoming more neutral in their roles and hegemonic masculinity has made a more egalitarian approach necessary when caring for both men and women in the postpartum period. At present, it is not a requirement to screen men in the postpartum period for depression. However, if men's and women's postpartum responsibilities and adjustments appear to be more similar due to a shift in cultural norms, it is essential for healthcare to include fathers as clients in the postpartum screening to provide a more comprehensive assessment while maintaining the clients' right to equality and access to care.

**EPDS.** The EPDS scale has been used successfully to screen women for risk of PPD for several years in healthcare. As men and women become more equal in their roles as parents, men may also become vulnerable to some of the same stresses and vulnerabilities experienced by women in the postpartum period. Matthey, Barnett, Kavanagh, and Howie (2001) support there is a definite need to screen new fathers in their transition to parenthood even though scales have not traditionally been used to screen new fathers. According to their research, the real reason for not using scales to screen men in the postpartum period is simply due to "lack of work on the assessment of mood in new fathers" (Matthey et al., 2001, p. 176).

While PPD was once considered a form of Major and Minor Depression, the new guidelines in the DSM-V (American Psychiatric Association, 2013) have also included anxiety disorders as having a connection to Major and Minor Depression disorders. There are two items that specifically measure anxiety on the EPDS and therefore the EPDS screens for both anxiety and depression in men and women (Matthey et al., 2001). The interconnectedness of depression



and anxiety disorders, the items on the EPDS which measure both depression and anxiety, and the more egalitarian gender role assignment in parenthood provide valid reasons for using the EPDS as the screening tool for risk of paternal PPD.

The evolution of men's role as a more involved and nurturing father and understanding the redefinition of masculinity in today's society provide some added knowledge and background regarding men's risk for PPD. This new definition of masculinity in contemporary society calls for the recognition of men's vulnerability in the transition to fatherhood.

### **Project Description**

In order to answer how men interpret the EPDS and to gain insight on how this important screening tool can be used with men in nursing practice, a small study of six men from an oilfield community in Northern Alberta, Canada was conducted. Men in the study from various backgrounds were given the EPDS followed by a number of probing questions. These probing questions were to investigate the various cognitive processes that addressed men's comprehension, decision making, memory recall, and response making when in relation to the EPDS. Cognitive interviews, following guidelines by Willis (2005), were conducted on a one to one basis by the researcher. The data collected were then analyzed using a content analysis approach to examine the four cognitive processes as the basis for gaining knowledge about how men interpret the questions when nursing use the EPDS to screen for paternal PPD.

### **Chapter Summary**

There is an increased need to screen for PPD in men given their changing roles in parenting. Since the EPDS is the most widely used tool and has been tested as being highly reliable and valid for over two decades, the EPDS appears to be a suitable tool to use in screening for PPD in men. However, there is limited understanding of how men interpret the questions of the EPDS in the literature and nursing practice. An investigation regarding men's

understanding and perceptions of the various words and questions is necessary as the basis for using this tool to screen for PPD in men. Understanding how men perceive certain questions or words on the questionnaire may provide some insight on how to use this valuable tool in the clinical setting.

To gain a better perspective of how PPD might affect men in the postpartum period, the next chapter examines how transition theory may provide some explanation as to why men's mental health may become susceptible to vulnerabilities in his role change to fatherhood. Furthermore, a literature review was conducted to address several background questions about the effects of the transition to fatherhood on men's biopsychosocial health and the prevalence of paternal PPD. The review also addressed gender-specific considerations and experiences in paternal PPD. In addition, an overview of previous studies about the use of the EPDS in men is provided.

In chapter three, the research design, methodology, and procedures of this study are detailed. The research design, interviewing technique, sampling, the EPDS, data collection, scientific rigor, and ethical considerations are also described in chapter three. In chapter four, a summary of the findings and analysis of the coded data are provided. The discussion of the meaning of the results is found in chapter five. In this final chapter, the findings are discussed in relation to the appropriateness of the scale while outlining the study's limitations, nursing considerations, nursing implications and areas that require further research. The references and appendices follow the final chapter and include tables and figures referred to throughout the paper.

## **Chapter Two - Literature Review**

This chapter substantiates the need to further investigate paternal PPD by reviewing existing research pertaining to my background questions. This review will provide a synthesis of existing knowledge in relation to the overarching question of how men interpret questions on the EPDS. I will first provide a summary of the literature search while describing the background on the extent of this thorough review. I will also discuss the theoretical framework of transition theory and utilize this framework to define and characterize PPD. Transition theory is a recognized framework in nursing and may help to provide a theoretical context for examining paternal PPD in nursing. In addition, a review of men's transition to fatherhood will also be included to better understand and uncover if and what vulnerabilities new fathers may experience. If the transition to fatherhood can create disequilibrium, then it is important to further establish if paternal PPD has been identified in the research as prevalent in today's society.

A review on the prevalence of PPD in men is important to understand for the extent to which men experience changes in mental health during the postpartum period. It is also important to understand why men are not currently part of the routine postpartum screening in healthcare. A review was done to determine whether men have gender specific symptomology that has led to this gender bias in healthcare to investigate why men have been ignored in screening for PPD. Finally, an examination of the EPDS and paternal PPD was done to gain information of the possible appropriateness of the scale and examine how the scale has already been studied, including cut-off scores. The goal of the information obtained in this review was to gain insight and direction of how to conduct the methodology of this project.

## Literature Search

The literature search was conducted via the CINAHL, PsychInfo, and MEDLINE databases. My investigation of the literature involved performing a search of postpartum depression in men. In order to do this search and to achieve high recall, several natural language terms were used in reference to the postpartum period: “postpartum”, “post-partum”, “post partum”, “postnatal”, “post-natal”, and “post natal”. “Depression” and “depress\*” (the asterisk was used to consider all words related to “depress”, such as “depression”, “depressive”, “depressed”) were the other search terms used while the search terms in reference to men utilized the following: “men”, “man”, “father\*” (the asterisk was used to include all words related to “father”, such as “fathering”, “fatherhood”), and “paternal”. Because “baby blues” does not refer to PPD and occurs only in the first two weeks postpartum, I chose to omit this term as the purpose of this study is to investigate the risk of paternal PPD as known in women. No limitations, other than considering only English sources, were applied and all articles were scanned via their abstracts or full text, if available, and were chosen accordingly.

The inclusion criteria involved any article that included men and PPD or men and difficulty in the transition to fatherhood. Difficulty was determined as “anxiety”, “depression”, “filicide” or any assessment of men using a screening tool or interviews in the postpartum period. Articles that spoke of peripartum depression in men were also included. The articles excluded were those that spoke of bipolar disorder because it often was not clear whether men had a pre-existing bipolar disorder prior to the postpartum period. The articles used for the purpose of this literature review were written in English and were mainly from North America and Europe. Most articles were research articles. Dissertations, editorials, and university newsletters also comprised a part of the literature search. After reading the chosen articles

several times, the articles that met the inclusion criteria were chosen and printed. See Appendix A for the number of articles printed and used from the literature review. The following section will allow for the theoretical context and framework of paternal PPD in nursing and its possible relevance to the contemporary father's transition to fatherhood. See Appendix B for the preliminary literature search.

### **Transition to Fatherhood and PPD**

Any role change, according to the transition theory, can have an effect on both mental and physical health. Examining this theory in more in detail provided some meaning and rationale as to why men's transition to fatherhood and the risk for paternal PPD may need more attention in the nursing world. Moreover, transition theory seemed most suitable for this study and is commonly used in nursing as a guide to decision making (Meleis, Sawyer, Im, Messias, & Schumacher, 2000).

**Transition theory.** Transition theory focusses on the transitions that may render clients more vulnerable to experiences that affect their health and illness. Examples of events that may lead to vulnerabilities are developmental and lifespan experiences, such as parenthood, and social and cultural transitions, such as family caregiving (Meleis et al., 2000). The vulnerabilities experienced due to these changes may lead to, "potential damage, problematic or extended recovery or delayed or unhealthy coping" (Meleis et al., 2000, p. 12). Transition to parenthood is included as a developmental and lifespan transition that may allow men to become vulnerable to maladaptive coping behaviors or feelings. In general terms, depression can have several detrimental effects on the "perception of self, behavior, social relationships and work relationships" (Wilkinson & Mulcahy, 2010, p. 252).

Postpartum depression is a type of major depression that is caused by vulnerabilities that are physiological, biological, and sociological in nature (Harvard Medical School, 2011).

Because PPD occurs after the major life transition to parenthood, the transition framework allows nurses to understand that the client is vulnerable to maladaptive coping behaviors and illnesses due to vulnerabilities experienced in the postpartum period. Goodman (2004) indicates that PPD and PPD symptoms usually occur within the first 3 to 4 weeks postpartum and are characterized by:

[D]epressed mood, anxiety, compulsive thoughts, difficulty concentrating, poor sleep even when the baby is sleeping, poor appetite, agitation, irritability, loss of control, feelings of inadequacy, inability to cope, irrational fears, fatigue, loss of libido, feelings of guilt, and despair.” (Harvard Medical School, p. 410)

As PPD affects 10 percent of men in the first year after childbirth, it is important to understand that men must be included in the population at risk for developing PPD (Harvard Medical School, 2011). Transition theory, in some respects, allows the nurse to consider the family as a whole and treat all of those in the experience cope more efficiently with the lifespan change of transition to fatherhood.

**Transitional life experiences in men.** To better understand how transitional life experiences may affect the new father in his new role, it is imperative to understand how gender relates to how the manifestation of depression occurs in men and uncover a man’s unique experience with depression. A review of the literature regarding the transition to fatherhood was conducted to better comprehend what vulnerabilities the new father experiences in his new role and how he may cope.

Very little is known about the actual effect of fatherhood as men have not been the primary focus of studies done in the postpartum period and specifically PPD (Condon et al., 2004). A man's entry to fatherhood and the role he carries has evolved over the years where fathers are now increasingly involved in their children's care. In particular, research from North America and Europe has demonstrated the need for active paternal involvement for the benefit of childhood development as well as the father's general well-being (Genesoni & Tallandini, 2009). Moreover, men in these continents are currently more involved in infant care in comparison with previous past generations. The role of men in infant care has evolved from a passive to an active one over the past 30 years and has created a large impact on a man's psychosocial health. With this evolution of men's role, the transition to fatherhood is a time of possible mental health vulnerability that women, families, and society as a whole need to recognize and identify.

McGill (2011) indicates that men find value in their role of fatherhood. As gender roles become less defined and responsibilities between mothers and fathers become more equal or overlapping, men have recently begun to identify their masculinity with the traits that are associated with being a "good" parent (Plantin, Olukoya, & Ny, 2011). In the past, involving the father was predominantly for the benefit of the mother and the child, but now with the changes in male gender roles and the redefinition of masculinity in respect to fatherhood, his transition as an active parent will help him successfully identify, accept, and realize his potential in that role (Plantin et al., 2011). Men's willingness and need to bond also have become an integral and meaningful aspect in the transition to fatherhood. For example, most men want to be part of the labor and delivery of their children as a means to start the bonding process (Plantin et al., 2011).

While the transition to fatherhood can be positive, there are many challenges and role conflicts that accompany it. Many new fathers find entry to fatherhood as "more uncomfortable

than rewarding” (Castel, Slade, Wadlow, & Rogers, 2008, p. 181). Castle et al. (2008) warn that “this societal expectation of a shift to a more active role for fathers may have both practical and emotional implications” (p. 180) on the father’s mental health. For example, even though it may be more acceptable and expected of men to be warm, nurturing fathers, there is still the societal expectation that men remain the traditional providers in North America and Europe (Genesoni & Tallandini, 2009). Hence, the transition to fatherhood may make men vulnerable in the postpartum period as they are required to remain true to both their traditional role while at the same time fulfilling society’s expectations of the “new age” father. This vulnerability could lead to inner conflict in which men become susceptible to disequilibrium. As men are already less likely to seek help and are not a primary focus in the postpartum screening, and considering their vulnerability in transitioning to fatherhood, routine screening of men is an important and efficient way to detect paternal PPD as a whole (Nazareth, 2011).

Thus, consistent with the transition theory, men’s transition to fatherhood is not always an easy one. Due to men’s more active role in parenting, their societal obligations to fulfill these responsibilities make them vulnerable to negative outcomes. For this reason, an investigation via the literature was completed regarding the prevalence of PPD in men was done to determine if there is evidence that support that the contemporary father has shown risk or developed PPD.

### **Prevalence of PPD**

With men’s evolving role as more involved fathers, the prevalence of paternal PPD has also increased. According to Melrose (2010), in her review of publications between the years of 1980-2002, there are an increasing number of men afflicted with PPD. The incidence and prevalence of paternal postpartum depression has also been reported in various studies to “be nearly half as high as the percentage known to be occurring in women” (Melrose, 2010, p. 199).



Pilyoung and Swain (2007) report that among small community based samples in the United States, 25.5% of men were depressed at four weeks postpartum and four percent of men were depressed at eight weeks postpartum. A larger sample study by Ramchandani and colleagues (as cited in Pilyoung & Swain, 2007), who used a large international sample of 12,884 fathers, showed that prevalence of paternal PPD can range from 1.2% at six weeks postpartum to 11.9% at 12 weeks postpartum. A more recent review of 43 studies presents an overall prevalence of men with paternal PPD at 10.4% in the prenatal and postpartum periods (Nazareth, 2011). While statistics vary across the studies, it is clear that the results of these studies indicate the existence and prevalence of paternal PPD. Therefore, in light of the evidence, it is important to refocus healthcare to include men in the postpartum screening. However, despite this research, it is still unknown why men have been excluded in the routine postpartum screening for PPD. The following review will attempt to address this gender bias by focusing on men's depressive symptomology and providing some insight as to whether these factors may explain the lack of screening for paternal PPD in current healthcare settings.

### **Gender and Depression**

Gender bias may be one of the reasons for why men have been excluded from being routinely screened in the postpartum period. Another reason may be due to diagnostic bias. Veskrna (2010) indicates that while women are twice as likely to experience depression over men, PPD in men may be underreported due to diagnostic bias. Because the diagnosis of depression requires behaviors such as seeking help and self-disclosure, which are norms typically not attributed to men, the rate of depression in men may be underestimated. Men, who are socialized to be strong and independent, will not be inclined to profess when they are feeling depressed. Instead, it is more common for men to deny to themselves as well as to others that

they are depressed. Denial may be viewed by men as a way to maintain their masculinity. Moreover, men do not overtly show signs or symptoms of depression. Therefore, “traditional masculinity norms result in a lack of recognition and barriers to treatment of depression in men” in today’ (Veskrna, 2010, p. 421).

Since the 1990s, studies have refocused their attention to researching whether men are showing symptoms of depression during the postpartum period (Madsen & Juhl, 2007). Traditional studies of PPD have attributed women’s physiology and hormonal fluctuations in the postpartum period as the primary cause of PPD (Madsen & Juhl, 2007). However, O’Connell-Binns (2009) indicates that hormonal changes are not the primary cause of this life altering disorder in men. In fact, there are many gender related factors that may put men at risk for PPD. One factor being men often do not have as many support networks as women hold (Condon et al., 2004). Strong social supports have been associated with positive coping in the postpartum period but men tend to not have these networks (Castle et al., 2008).

Another gender related risk factor related to men is their sense of responsibility to provide material goods for the household; thus putting financial and work stress specifically on men (Condon et al., 2004). Because women are often the ones to stay home initially with the new baby, financial responsibility to provide for the new family is frequently attributed to the new father (Condon et al., 2004). Generational differences in child rearing also play an important role in putting new fathers at increased for gender related risk for PPD and may be a factor affecting men’s ability to model appropriate fathering to their children due to the absence of an involved father in their own childhood (Condon et al., 2004; Genesoni & Tallandini, 2009). In addition, if a man’s partner is diagnosed with PPD, he is more likely to develop PPD (O’Connell-Binns, 2009).

While PPD may be a reality for both men and women in the postpartum period, it is important to note that men and women experience and show signs and symptoms of depression differently. Depression in men may manifest as: “aggression, obsessing over work, substance abuse, destructive thoughts and refusing help” (O’Connell-Binns, 2009, p.4). Men are most likely to engage in first time partner violence in the two month postpartum period and extra-marital affairs are also common as a result of paternal PPD (Melrose, 2010). Men may resort to maladaptive coping behaviors, such as substance abuse or other risk-taking behavior rather than seeking emotional support from a professional (Condon et al., 2004). Moreover, because of these maladaptive coping behaviors, men are at risk of being marginalized due to the erratic behavior they may exhibit as a sign of depression (O’Connell-Binns, 2009). Consideration of men’s postpartum experience then becomes a healthcare concern as male symptoms and behaviors do not align with the usual signs and symptoms of depression typically associated with women.

According to Condon et al. (2004), younger fathers may actually “have a more idealized view of pregnancy, childbirth and parenthood compared to young women” (p. 57). This idealistic view may affect how men deal with the realities of the postpartum experience once they transition to fatherhood. While postpartum women experience a decrease in marital satisfaction due to a lowered self-esteem resulting from greater physical, emotional, and overall lifestyle demands that a new child brings to the family unit, men are known to have feelings that are unique to their gender and are more likely to include “feelings of anxiety, neediness, and a sense of loneliness” (Delmore-Ko, 2000, p. 7). Thus, men’s experiences during the postpartum period can be quite different than those of women.

As evidenced in the literature review, paternal PPD is indeed relevant and pertinent in today’s society as men transition to parenthood. The way men exhibit the signs of depression is

different than women and may be part of the reason for the exclusion of men in routine postpartum screening. Because this study is using the EPDS as a means to screen men, it is important to gain a broad understanding of how and if this scale has been studied and used to screen men for PPD. The EPDS scale is currently used internationally as the primary tool to screen for risk of PPD in women during the postpartum period. It is for this reason that a review of the literature regarding this scale was done as it is the scale most commonly used in Northern Alberta and is pertinent to health services offered in the area where the participants were studied. The following section will provide some background on the EPDS, how it has been used to screen for paternal PPD, and how the results of the studies may give further insight on cut off scores and item endorsement.

### **EPDS and Paternal PPD**

Various tools have been used to screen the risk of PPD in men however, not one tool has been proven to be the most effective. Examples of tools that have been used in the screening of paternal PPD include the Beck Depression Inventory (BDI), the Gotland Male Depression Scale (GMDS) and the EPDS. The EPDS is the most widely cited tool in the literature in the PPD screening for both men and women. The EPDS is a relatively easy and quick scale to use with 10 questions that can be completed in approximately 10 minutes, is freely available on the internet and does not require any specialized training or knowledge to administer (Melrose, 2010). Moreover, the validity and reliability of the EPDS were tested by Matthey, Barnett, Kavanagh, and Howie (2001) and the results suggest that the scale could be an effective tool to measure postpartum distress in fathers.

Despite supportive evidence of the reliability and validity of the EPDS, Condon et al. (2004) point out several issues which may indicate the need for further investigation of the scale in relation to its use in identifying PPD risk in men. Condon et al. (2004) reviewed several

studies that focused on the EPDS as the main tool to screen couples at risk for PPD. One issue that arose from this review indicated that there was a need to identify the “depressive equivalents”, such as alcohol abuse, to further investigate whether men and women may be at equal risk for PPD (Condon et al., 2004, p. 57). Madsen and Juhl (2007) also found that men who scored below the cut-off point in the EPDS, scored high on the Gotland Male Depression Scale (GMDS). The GMDS is a tool that is tailored to male specific symptomology for depression (Madsen & Juhl, 2007). In their study, Madsen and Juhl (2007) advise that including questions that test and examine for male specific symptoms of postpartum depression is crucial to providing an accurate screening of paternal PPD. However, the authors also indicated that it is still important to consider the traditional symptoms included in the current EPDS.

Most studies are focused primarily on the screening of women with only a secondary focus on men (Condon et al., 2004). According to Madsen and Juhl (2007) “only a few studies have their main focus on paternal depression” (p. 26). There may be other indicators of PPD, other than those in direct relation to a woman’s postpartum experience, that are more specific and applicable to the new father’s experience (Condon et al., 2004). For example, a study by Matthey et al. (2001) examining the reliability and validity of the EPDS revealed that seven items on the EPDS scale were not endorsed at the same level of difficulty for men and women. In particular, only 2.3% of men endorsed the crying item (Matthey et al., 2001). This low rate of endorsement was not likely due to a response bias, but more likely due to the fact that “men do not cry when unhappy, but rather express their unhappiness through other behaviors, such as drinking aggression, or psychomotor retardation” (Matthey et al., 2001, p. 182).

Another crucial factor that makes it difficult to determine whether the EPDS could be appropriate in determining PPD in men in these studies is the variation in the score cut-off points

(Condon et al., 2004). The tool, in its current use, has a maximum score of 30 with any score 10 or above being perceived as a possible risk for depression. In Matthey et al.'s (2001) study, a cutoff point of 5/6 when screening men for PPD was provided. On the other hand when Tran, Tran, and Fisher (2012) tested the validity of the EPDS, their study showed a suggested cut off point of 4/5, which is one point lower than that of the Matthey et al. (2001) study. Edmondson, Psychogiou, Vlachos, Netsi, and Ramchandani (2010) suggest a cut-off point of greater than 10, which is significantly larger than two aforementioned studies. Madsen and Juhl (2007) also report this variance in their review of several studies using the EPDS and found 2-24% of fathers as having PPD. This large variance in cut-off points of the EPDS in the screening of paternal PPD does not allow for consistency and makes it difficult to conclude the meaning of the scores. In light of these findings, more research is needed in this relatively new area (Madsen & Juhl, 2007).

It is necessary to understand how men interpret the questions on the scale to determine whether the questions apply and investigate paternal postpartum experiences. Thus, the purpose of this study is to examine men's interpretation of the questions on the EPDS as the basis for ascertaining whether the EPDS may be an appropriate tool to screen for men's risk for PPD. The investigation of men's interpretations of each question may provide a baseline from which further development, scoring cut-offs, and question omissions/additions/modifications can occur. To do this effectively, I pursued the following research question: How do men in the postpartum period interpret the questions on the EPDS with respect to various types of cognitive recall?

### **Chapter Summary**

Paternal PPD is a recognized phenomenon in the literature and has been tested several times internationally. While PPD remains an integral part of the screening process in the

postpartum period, men are not prioritized in current healthcare environments. Because paternal PPD remains a relatively “new” phenomenon in nursing, more research is needed to review existing screening tools to determine if they effectively screen the gender specific symptoms of paternal PPD. Whether men or women are more likely to experience PPD should remain irrelevant as the prevalence of paternal PPD has been demonstrated through use of various screening tools, more specifically the EPDS. While many studies have tested the reliability and validity of this valuable tool through quantitative studies, studies that investigated the “meaning” of the questions as interpreted by men were not found.

The EPDS is widely used internationally in the screening of women and is becoming increasingly used for PPD screening in men. The advantages of using the EPDS are that it is accessible, cost effective, and user friendly while requiring minimal training/knowledge to administer (Melrose, 2010). For this reason, more investigation is needed on how this valuable and cost effective tool is interpreted by men to provide knowledge of whether the EPDS can indeed be used to diagnose men for risk of paternal PPD.

As established in the literature review, men’s transition to parenthood results in a man’s vulnerability to PPD, but depression is experienced and shown differently in a new father than in new mothers. It is for this reason that it is important to investigate men’s interpretation of the questions on the EPDS to provide the nurse with information on how to use the EPDS scores and responses in screening for risk of PPD. In order to obtain this information, it was necessary to find an appropriate way to acquire the personal thoughts and motivations for the answers provided on the scale. The following chapter will outline and describe the research design, methodology and procedures used to investigate how men’s interpretation of the questions on the EPDS was studied.

### **Chapter Three – Research Design, Methodology, and Procedures**

The purpose of this study is to understand how men in the postpartum period interpret the questions on the EPDS. The knowledge gained regarding men's understanding of each question on the EPDS may provide insight as to whether the scale may be an appropriate tool. Moreover, if the EPDS seems appropriate, how can this tool be used while maintaining men's specific and unique depressive symptomology at the forefront? In addition, knowledge about men's interpretation of the EPDS items and their responses may also inform how to interpret cut off scores as predictors of PPD risk.

Cognitive interviewing as detailed by Willis (2005) was chosen to best answer the research question as it aims to examine response error by focusing mainly on the cognitive processes involved in providing a response on questionnaires rather than the entire administration process (Willis, 2005). For this reason, the cognitive interviewing technique was chosen to investigate men's interpretation of the questions on the EPDS. In the first part of this chapter, I will refer to the research design and discuss how cognitive interviewing is used to investigate questionnaires. I will also describe the sample, including details about how the sample was recruited and provide a description about the area from which the participants were recruited. Furthermore, I will briefly explain how the answers on the EPDS are scored to allow for some understanding on how the scale is used in practice. In addition, I will outline how the data was collected and analyzed using a content analysis approach. Finally, I will elaborate on how scientific rigor and ethical considerations were maintained throughout the entirety of the project.



## **Research Design**

A qualitative approach was used to examine how men interpret the questions on the EPDS. Cognitive Interviewing was chosen and has been used specifically for survey and questionnaire investigations (Willis, 2005). The identified approach is ideal for this study as it specifically examines four methods of retrieval dedicated to comprehension, decision making, memory recall, and response making (Willis, 2005). These retrieval methods allow insight on how the men may interpret words, decide on an appropriate answer, remember events, and choose responses on the EPDS.

Thus, using cognitive interviewing appeared to be the best way to inform how men came to their answers by having them answer specific questions that tested different cognitive processes. The intent of researching the questions in this way was to provide nurses with a better understanding of how men came to their responses and what those responses meant to men. As there are ten questions on the scale, the most appropriate way to study the EPDS in this way was to construct an interview guide that included probing questions to investigate specific cognitive processes that influenced men's responses. The data obtained from these probing questions were used as the basis for a qualitative analysis, with the goal to inform nursing practice and provide nursing considerations regarding the use of the EPDS in men. Importantly, the research was not conducted to change the current EPDS, but rather to develop an understanding of how to interpret the scale in nursing practice when screening men for PPD. The cognitive processes that men use to answer these questions may affect how nurses use the scale scores to guide whether a male subject is at a potential risk for PPD or not.

### **Cognitive Interviewing**

Cognitive interviewing was used to gain a better understanding of how men are uniquely interpreting and responding to the questions on the EPDS. Survey methodologists and psychologists created this method through interdisciplinary collaboration (Willis, 1999).

Cognitive interviewing provides a way to better comprehend the, “phenomenon under study, and the way in which the survey questions we are testing address that phenomenon” (Willis, 2005, p. 103). Willis (1999) regards the subjects as the “experts” because they are considered the most knowledgeable on the subject due to their direct relation to the topic. For example, men in the postpartum period become the experts on the topics that the questions investigate on the EPDS as they are currently directly involved in the postpartum experience.

Cognitive interviewing is often conducted to evaluate “response error” in questionnaires involving comprehension, recall, decision, and/or response processes (Willis, 2005, p. 13). Willis (2005) indicates that response error “represents the discrepancy between a theoretical ‘true score’ and that which is reported by the respondent” (p. 13). Perhaps, the subject may report on the EPDS that they have cried once in the last seven days, when they have cried three times in the last seven days. If there is a trend of underreporting observed among the subjects then “bias” is observed and can be interpreted as “net error” (Willis, 2005, p. 14). If one respondent happens to incorrectly answer the question then the result can be determined as having “no overall bias” as this error is observed at the individual level only (Willis, 2005, p. 15).

Moreover, cognitive interviewing aims to examine structural problems in the questionnaire, by learning more about the topic that is being examined in the questions (Willis, 1999). Cognitive interviewing also measures non-cognitive issues associated to the questionnaire (Willis, 1999). These issues may be due to layout, skip patterns, or order of questions (Willis,

1999). For instance, the EPDS mentions only at the beginning of the scale that the time frame the questions refer to is in the last seven days. Therefore, at times, respondents might answer they have cried once, but they are referring to the time period since the birth of the child rather than the last seven days.

In order to investigate response error and its effect on the phenomenon being tested, cognitive interviewing examines the following four ways information is retrieved through questions based on investigating: (a) question comprehension, (b) memory recall of relevant information, (c) process of decision making, and (d) process involved in making a response (Willis, 1999). These methods of retrieval align with the processes that people follow in order to provide the answers to the questions. The following section will detail the cognitive interviewing method and how the four processes of comprehension, memory retrieval, decision making and response making are viewed.

To study the comprehension, the intent and meaning of specific words or phrases are examined (Willis, 1999). For memory retrieval, information about the ability to recall and the strategies subjects use to recall the information is tested (Willis, 1999). For instance, does the subject review certain events by remembering whether it was a day that he was at work or if it was close to a special holiday, such as Christmas? Examination of decision making involves discovering whether the subject was able to focus enough time to respond to the question accurately, meaningfully, and truthfully (Willis, 1999). Finally, information about response making is used to better understand how the subject responds and this is done by determining whether the subject is able to find an answer on the survey that matches the answer he initially gave spontaneously (Willis, 1999).

Probing techniques are used in cognitive interviewing “to study the manner in which targeted audiences understand, mentally process, and respond to the materials we present-with a special emphasis on potential breakdowns in this process” (Willis, 2005, p. 3). Cognitive interviewing can be done through think-aloud or the use of verbal probing techniques (Willis, 1999). The think-aloud technique, which is led by the subjects, involves telling the interviewer how they arrived at an answer and the interviewer asks very little except to ask “what are you thinking?” (Willis, 1999). This technique is advantageous as there is little to no bias from the interviewer, the questions are open-ended and minimal interviewer training is needed (Willis, 1999). However, the disadvantages of this technique include the need to train subjects, subject resistance, the ability of the subject to get off topic, the possibility of subject bias in information processing and the onus of the interview falls completely on the subject (Willis, 1999).

Verbal probing involves the researcher asking the original question followed by other probing questions which test various ways information is retrieved, such as in memory recall (Willis, 1999). The six different types of probes are comprehension/interpretation, paraphrasing, confidence judgment, recall, specific, and general (Willis, 1999). This technique has become more popular with cognitive researchers for many reasons including that the control of the interview is given to the researcher which lessens subject responsibility and ability to get off topic (Willis, 1999). Training of subjects is minimal as the questions are directed by answering prepared questions and gives some structure to the interview process (Willis, 1999). The disadvantages are minimal, but occasionally artificiality becomes an issue as the validity of the probing questions may be subject to interview interpretation (Willis, 1999). Bias is also possible when using verbal probing as questions may be leading. However, this can be mitigated by creating open ended questions or offering various alternatives within the question (Willis, 1999).

Probing can be done concurrently or retrospectively (Willis, 1999). Concurrent probing, which is used most frequently, involves the following sequence: the interviewer asks the survey question, the subject responds, the interviewer asks the probing question(s), the subject responds (Willis, 1999). In concurrent probing, the researcher may ask more than one probing question per survey question and in retrospective probing the interviewer asks all the survey questions and follows with the probing questions (Willis, 1999). Although potential for bias in both approaches is possible, the retrospective approach to probing can be problematic as subjects may not remember their original answer and try to “come up” with an answer that isn’t true to their original thought (Willis, 1999).

There are both scripted and spontaneous probes (Willis, 1999). Scripted probes are the questions that are developed by the researcher prior to the interview as opposed to spontaneous probes which are questions that derive from the respondent’s answers and are not developed prior to the interview (Willis, 1999). Since the most effective types of interviews consider both scripted and spontaneous probes, both techniques were used in this study.

Although sample sizes tend to be smaller in cognitive interviewing, “modest levels of documented comprehension problems might motivate the designers to attempt to make simplification of the questionnaire” (Willis, 1999, p. 29). For example, if 25% of the respondents in a highly educated sample have difficulty comprehending a term on the questionnaire, the researcher might expect to see the same in a more representative sample and modification may then be justified (Willis, 1999). See Appendix C and D for probing questions and categorization of questions in respect to the cognitive processes.

## **Sampling**

In cognitive interviewing the size of the sample has not been of significant concern (Beatty & Willis, 2007). Instead, this method of interviewing is used to “identify question characteristics that are believed to pose problems with some unspecified frequency” rather than as a representation of a large population (Beatty & Willis, 2007, p. 295). The only guidance given is that the sample represents a variety of respondents that include people who are relevant to the questionnaire. Because recruitment was difficult in this area as most men often worked away from the home, I chose to focus on a small sample with rich data to help identify certain characteristics that arose from men’s interpretation of the EPDS. This small sample, as per cognitive interviewing, seemed appropriate as the purpose of cognitive interviewing is not based on the quantity of participants but on the quality of the data (Beatty & Willis, 2007).

A convenience sample was chosen as the best means to fulfill the recruitment needs for the scope of this project. Wood and Ross-Kerr (2011) indicate that “a convenience sample (sometimes called an available sample) is a non-probability sample that happens to be available at the time of data collection” (p. 161). It is advised to include subjects of varying ages, genders, and socioeconomic status (Willis, 2005). Six subjects were recruited over six months in order to obtain enough data from meaningful analysis. As Grande Prairie Regional College hosts space to instructors who are from various parts of the Peace Country region, it was expected that the sample would be from a variety of areas in the region. Recruitment occurred at Grande Prairie Regional College using the snowballing technique which is a form of networking using one person to find others who fit the sample criteria (Streubert Speziale & Carpenter, 2007).

Originally, the plan was to interview men from various areas of the Peace Country region but most came from Grande Prairie, Alberta. Grande Prairie is a city that is comprised mainly of

oilfield and gas workers who work away from the home for several weeks/hours at a time so a variety of participants was difficult to attain. In order to obtain the sample of six, recruitment took place over six months. There were a few cancellations due to busy schedules and inability to commit to the one and a half hour time frame. Several contacts in the various departments at the college were provided with a sealed written description of the study to hand out to prospective candidates. After having difficulty attaining the minimum sample of six men, snowballing was extended to include recruitment from friends and acquaintances, some of whom were nurses. These nurses did not recruit patients and did not use any Alberta Health Services sites to do this recruitment. It took approximately six months to reach the minimum goal of six participants.

Men who met the following criteria were included: men with one or more children, unmarried or married, who live or lived with their partners in the immediate postpartum period for at least three months and were within the last two years postpartum. Also, subjects were English speaking in order to ensure that the questions were understood to the best capacity. Specific criteria for age, marital status and number of children were not required for this study's purpose. Demographic information was collected by having the sample fill out a brief questionnaire (see Appendix E for the form).

A sample of six men in the first year postpartum was recruited from the city of Grande Prairie, Alberta which is located in northern rural Alberta, a province in Canada. Grande Prairie Municipal District, County 1, as of 2011, has a population of 55,302 of which 37,630 are 18 years old or over (Statistics Canada, 2011). Those between the ages of 18 and 59 year old comprise 47,995 of the population (Statistics Canada, 2011). Of the 22,215 males 15 years and over, 12,665 of them are living either common law or are married to their partner (Statistics

Canada, 2011). The majority of the male population is English speaking with 27,115 out of the total of 27,960 males in the area reporting that English is their first official language (Statistics Canada, 2011).

### **EPDS**

The EPDS has a list of four responses from which the participant can choose and each response is attributed its own unique score. For example the following is seen on item one of the EPDS, “In the past 7 days, I have been able to laugh and see the funny side of things...” with the following four possible responses: “as much as I always could”, “not quite so much now”, “definitely not so much now”, and “not at all”. If the participant chose “as much as I always could”, then a score of 0 is attributed to that response. For each item response, there is an attributed score of 0, 1, 2, or 3 depending on what response was chosen.

The scores for each item on the EPDS, which is 10 questions, are tallied to obtain an overall score. For this study, the EPDS guidelines were used as they are currently for women in the clinic setting. At present, a score of 10 or higher indicates a risk for postpartum depression in women.

### **Data Collection**

Semi-structured interviews were conducted using scripted questions guided by Willis’ cognitive interviewing methods of retrieval, which are comprehension, decision making, memory recall and response making. Each EPDS question had a set of questions that probed for the aforementioned four methods of retrieval. Spontaneous probing was used to obtain more information when needed. The duration of the interviews ranged from approximately 1.5-3 hours. While Willis (1999) advises that interviews should not exceed one hour, none of the participants complained or stated that they were uncomfortable with the 1.5 hour time. Because



one-on-one interviews are necessary for achieving the essence of cognitive interviewing, face-to-face interviews were conducted in the preferred meeting place of the subject. Meeting places included the participant's home, my home, my office and restaurants. A list of interview questions is available in Appendix C.

A mock interview was done with a male colleague who had grown children in order to pilot test the questionnaire and obtain an understanding of how the questions were answered and understood. Results from an initial "mock" interview indicated that the best way to answer the research question would be to organize the data according to the following categories based on four methods of retrieval: comprehension, memory recall, decision making, and response making (Willis, 2005). In addition, a more general introductory overarching question was added to allow for more rich data that was not limited to a specific type of retrieval method. With this overarching question, I was better able to obtain the subject's true meaning without directing/leading him with the specific questions testing the four methods of retrieval. By analyzing the data in this way, it was possible to discover and investigate more accurately "how" men came to their responses. See Appendix D for categorization of questions in table form.

Before each interview, the participant was asked to fill out the demographic information form. Usually over coffee, the participant was given the opportunity to discuss any concerns he had or if he had any questions about the interview process. For the first two interviews, the EPDS scale was administered and recorded by the interviewer while using the interview guide with the probing questions. However, it was noticed that the answers were not spontaneous and sometimes the interviewer would have to repeat the EPDS question and responses several times for the subject to fully grasp the idea of the question. It was therefore decided that it was better to have the participants fill out the EPDS scale first and then ask the follow up questions based on

the interview guide. This change from concurrent probing to retrospective probing improved the flow in the remaining four interviews and successfully helped solve the issue of repeating the questions several times to obtain an answer. This interview technique change also aided in obtaining spontaneous answers which are more consistent of how the scale is administered in practice. In addition, obtaining this type of spontaneous response making appeared to better align with how the EPDS is applied and used in nursing practice and thus a more accurate measure of what occurs in clinic visits.

Interviews and voice memos were recorded using a digital recorder and subsequently transcribed by a transcriptionist. Reflexive notes were also written after each interview to maintain clarity and understand my researcher bias and how this may affect the next interview that I was to conduct. In these reflexive notes, I included my own feelings, field notes, and other thoughts that may have occurred/influenced the data.

### **Data Analysis**

The objective of this analysis was to discover men's interpretations of the questions as well as determine how this interpretation may influence nursing practice and implementation of the scale when screening for risk in new fathers. There are several ways to analyze the qualitative data resulting from cognitive interviews. Willis (2005) indicates that there has not been one specified way and that cognitive interviewers often rely on more informal means of analysis.

Each transcript was read several times before attempting to start the coding process (Elo & Kyngas, 2008). This rereading of material helped form a more complete picture of the data before looking at the individual pieces. If transcripts were received within days of each other, a minimum of a one week break was given between them before coding the next in order to decrease the risk of one interview influencing my thoughts of the other.

A content analysis approach was used to analyze the data. Elo and Kyngas (2008) indicate that content analysis is a method that is able to draw “replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action” (p. 108). A deductive content analysis approach was the most appropriate choice as it involved re-examining something that already exists in a new context (Elo & Kyngas, 2008). This study involves examining a scale that is proven to adequately screen for women’s risk of PPD and use it to screen for men’s risk of PPD. For this reason, the deductive content analysis was the most suitable method to analyze the data as it allows for both a structured or unstructured approach and can be used in deductive content analysis. Coding in an unstructured approach involves taking the data to develop various categories. A structured approach, on the other hand, takes the content from the data that applies to a specific categorization frame and excludes the rest. Therefore, in an unstructured approach categories emerge from the data while in a structured approach content, the categories are created and content from the data is applied to each category.

NVivo was used to organize the transcripts and code the data in a systematic way. Initially, data was going to be analyzed per question so coding was done using categories that aligned with Willis’ four methods of retrieval: comprehension, decision making, memory recall, and response making. It was important to use these categories as they address the “how” in my research question. Therefore, the four cognitive methods of retrieval were the best way to organize the data initially followed by the creation of subcategories allowing for the analysis to be true to the deductive content analysis approach which moves from the general to the specific (Elo & Kyngas, 2008).

The analysis was initially thought to be more effective if the data were categorized according to the four methods of retrieval of comprehension, decision making, memory recall, and response making in respect to each of the ten questions. However, this method of organizing the data provided little clarity and was repetitive in nature. Moreover, this way of organizing the data made it difficult to attain and achieve meaning so in an attempt to rectify this lack of clarity broad categories were made using each method of retrieval with subcategories under each method. This change in how the content was analyzed provided more insight, structure and meaning to the data. When data were organized by using the four methods of retrieval as broad categories, the coding made more sense and the picture became clearer and more significant. Thus, after several efforts at coding the data, organizing the data in regards to the four methods of retrieval while assigning one to two subcategories allowed for the data to answer the “how” in the research question. Subcategories were represented by quotes in their entirety to allow context. Elo & Kyngäs (2008) support this practice of using quotes by stating that “the most suitable unit of analysis is whole interviews or observational protocols that are large enough to be considered as a whole and small enough to be kept in mind as a context for meaning unit during the analysis process” (p. 109).

### **Scientific Rigor**

Streubert Speziale and Carpenter (2007) indicate that “the goal of rigor in qualitative research is to accurately represent participants’ experiences” (p.49). Credibility, dependability, confirmability, and transferability are all techniques that help achieve and maintain scientific rigor in qualitative research (Streubert Speziale & Carpenter, 2007). Credibility is established by conducting research activities that support the likelihood of credible findings and can be done by having participants verify the final report or themes as accurate to their experiences. (Streubert Speziale & Carpenter, 2007). In order to exert credibility, participants were offered to review the

final report once it was finished. Also, during the interview, the researcher verified with the participant if the researcher's conclusions of the participant's statements interview were correct. This was done by restating conclusions or insights directly after questioning the participant to ensure that the researcher understood the information or responses in the same light as the participant. In addition, the participants were often asked to clarify responses through added open ended questioning.

Dependability refers the ability to replicate the results using the same type of methodology and often overlaps with the processes involved in achieving credibility (Streubert Speziale & Carpenter, 2007). Therefore, dependability cannot occur without credibility (Streubert Speziale & Carpenter, 2007). This was done by recording and describing all processes that occurred in the methodology of this study, such as detailing the research design, sampling, data collection, data analysis, and ethical considerations.

Confirmability allows for transparency in the research process and often involves leaving an "audit trail, which is a recording of activities over time that another individual can follow" (Streubert Speziale & Carpenter, 2007, p. 49). Reflexive notes and field notes were done after interviews during the research process to maintain awareness of and reduce unintended researcher bias while maintaining a systematic process for the interview process, data collection, and data analysis (Polit & Beck, 2012). Reflexive notes were reviewed several times during the research process to assist in attaining objectivity while performing the data analysis. Questions often emerged from the reflexive notes were considered and often provided the information used to direct the discussion of the results and allowed the researcher to conclude the meaning from the data.

Confirmability was also achieved by reading and rereading the transcripts several times and by applying a systematic process for coding using the NVivo software to help organize the data and achieve meaning. Moreover, the chosen method of content analysis was ideal for maintaining objectivity as it allowed “for making replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action” (Elo & Kyngäs, 2008, p. 108). In addition, Polit and Beck (2008) advise that confirmability is established when the “the data represent the information participants provided, and that interpretations of those data are not figments of the researcher’s imagination” (p. 539). This was achieved by using direct quotes as the units of analysis.

Finally, attempts were made to promote transferability, which refers to “the probability that the study findings have meaning to others in similar situations” (Streubert Speziale & Carpenter, 2007, p. 49). Cognitive Interviewing is used in small studies to provide information regarding the items on questionnaires. Rather than seeking to obtain generalizable information about the experiences of men, the focus of cognitive interviewing is to obtain information about the appropriateness of questionnaire items. Transferability was enhanced by drawing on men’s interpretations to provide insight regarding the possible appropriateness of the EPDS. Moreover, as content analysis is “concerned with meanings, intentions, consequences, and context” (Elo & Kyngäs, 2008), the method aligns well with maintaining and achieving meaning that is applicable to others in like situations.

### **Ethical Considerations**

Ethics approval (13G01) from the Research Ethics Board at Trinity Western University was obtained prior to participant recruitment. Informed consent was obtained by written confirmation from the study’s participants (See Appendix G). Participants were also given the

choice of whether they wanted to be contacted by the researcher in a subsequent follow-up and were offered an opportunity to obtain the final product of the thesis should they choose. The identities of the participants were protected by assigning each participant with a code (e.g. Participant 1). The interviews were done in private and all voice recorded interviews were deleted as soon as they were transcribed. The transcriptionist was also asked to sign a confidentiality agreement which required the transcriptionist not to disclose any of the information heard in the recordings. She was also responsible for completing the transcript using the participant codes that were provided and assigned by the researcher. Voice recorded interviews were not shared with anyone and transcribed interviews were kept under lock and key and were only viewed by the researcher or her assigned advisors. The researcher obtained the participants' consent to keep the transcribed interviews for a period of five years in order to allow access for further research on the same topic. These transcriptions have been kept in a password protected electronic file. After the five year time frame, the transcriptions will be permanently deleted and all paper copies will be shredded. See Appendix H for informed consent form.

In the current guidelines attached to using the EPDS for PPD screening, any participant who scores 10 or higher on the scale, as indicated on the EPDS, is at risk for possible depression (See Appendix B). There was one participant who met this criteria but he was already seeing a therapist. Another participant had scored at the cut off of 10 so I provided him with a list of local healthcare providers and/or local mental health supports which may deal with depressive symptoms in men. However, he said he felt fine and was happy with his situation in our post interview follow up discussion. Unfortunately, there are currently no advertised support groups for men with PPD in the region. See Appendix I for a table of participant scores.

**Chapter Summary**

Based on the evidence, both parents should be screened for PPD as a means to normalize depression in men and women to enabling the development of better treatment and diagnosis programs (Nazareth, 2011). At present, routine screening for PPD is currently limited to postpartum women. In order to include men in this screening process, a small convenience sample of male participants was recruited to provide data that was used to ascertain whether the EPDS could be an appropriate tool to screen for men's risk of PPD. Using the outlined methods of data collection and data analysis, the appropriateness of the questions of EPDS in the screening for risk of paternal PPD provided some understanding via Willis' four methods of retrieval. The following chapter will present the results of the data analysis in detail.



## **Chapter Four: Results**

The results provided interesting information regarding men's interpretation of the scale and will be outlined in this chapter. First, a description of the sample will be provided using the demographic information obtained from each participant to provide some context to the results. Second, a brief outline of the EPDS will be included, detailing how the scale is scored. Third, some general findings will be presented based on the participants' scores. Fourth, the results in respect to the four methods of retrieval will be provided under the following categories: comprehension, decision making, memory recall and response making. These categories are also the methods of retrieval and were used as a means to organize and code data. In coding the interviews using Willis' (2005) four methods of cognitive retrieval, I was able to gain some insight on how men interpreted the questions on the EPDS. Finally, a brief summary of the results as a whole will be discussed.

### **Sample**

The sample recruited included fathers with one to three children. The men were between 24 and 36 years old and all were married except for one who was living common-law with his partner. Although recruitment was done in the whole Peace Country region of Alberta, all participants were from Grande Prairie, Alberta, a small city in Northern Alberta, Canada. The Peace Country region of Alberta covers but is not limited to, all areas around the major centers of Grande Prairie, Peace River, High Level, and Fairview. All participants were English speaking. Five out of the six participants had some kind of post-secondary education, four of the participants were oilfield workers, and the remaining two were a student and a plumber. The participants' weekly contact hours with their children ranged from 25-56 hours and their time in the postpartum period ranged from 2-12 months. It is important to note that the sample recruited was fairly homogeneous in nature with only one of the participants showing risk of depression.

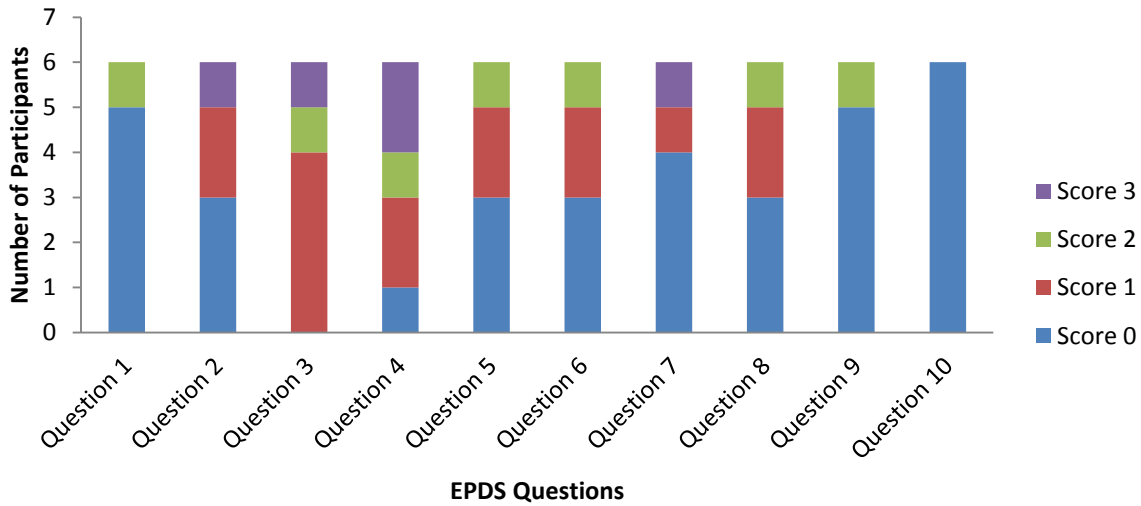
These two characteristics of the sample may have affected the type of data collected from this particular sample and should be taken into consideration when reading the results. See Appendix F for demographic information.

### **General Discussion of Scores**

Results were organized and analyzed in regards to each method of retrieval: comprehension, decision making, memory recall, and response making. A broad look at the results in terms of scoring was also examined to provide a better understanding of how this particular sample scored question by question on the EPDS. This examination was done to allow for some insight into the possible appropriateness of each question.

A stacked bar chart was created to visualize the relative frequencies of response options for each of the EPDS questions. In this particular sample, two of the six participants had higher scores that indicated risk for PPD at 10 and 21 (See Appendix I). The former stated that he did not feel that he needed help and felt stable in his relationship with his children and wife while the latter was in counselling for depression at the time of the interview. Results were also examined per question to provide a general overview of the scores per question as seen in Figure 1 (See Appendix J for a more detailed graph):

Figure 1. Graph of Results by Score.



After looking at the chart and the results in general, there were questions that were answered the same by the majority or all of the participants. Question one investigated whether men have been able to laugh/see the funny side of things and the majority, except for one, stated that there had been no change. While it seems that these men’s ability to have fun or see humor did not change in the postpartum period, Participant five (P5), who was in counselling for depression, scored a two on that particular question.

In question two, which asked if the participants have looked forward to enjoyment to things in the last seven days, half of the sample denied any change in the postpartum, while two participants had a low score of one. However, P5, who was also depressed and scored 21 on the EPDS, scored highly on this question with a score of three. In brief, half the sample experienced change in this domain, including the participant who was depressed scoring the highest.

Question three asked if men have blamed themselves unnecessarily for things. None of the participants scored zero on this particular question. Four of the participants had a low score of one on the question. However, it was P1, who had an overall score of 10 on the scale and P5,

who was in counselling, who scored higher on this question at two and three respectively. The higher scoring participants for this particular question were also the ones that had higher total scores on the EPDS.

In question four, which asked if the participants have been anxious or worried in the last seven days, only one participant scored zero. Two of the other participants had a low score of one. P1 and P5, who both had at risk for PPD scores on the EPDS, scored highly on this item at three and two respectively. Participant four (P4) scored a three on this question. Thus, most of the participants in this sample were feeling anxious or worried during the postpartum period.

In question five, men were asked if they have had feelings of being scared or panicky in the last seven days. While half of the participants scored zero on this question, the other half experienced change postpartum. Two of the participants scored one on this question, but again it was P5, the participant who was depressed, who scored highest on this question at two. The same results seen in question five were repeated in question six, which asks if men have felt like things were getting on top of them in the last seven days. Again, out of the three participants who experienced change in this domain, the higher scoring participant was P5 who had a score of two.

In question seven, which asked if participants have been so unhappy that they have had difficulty sleeping in the last seven days, four of the participants scored zero. P1, who had an overall at risk score of 10, scored a one. However, yet again, P5 scored highly on the question with a score of three. In this question the two higher scoring participants both had higher overall scores on the EPDS. Similar responses were seen in question eight which asked if men have felt sad or miserable in the last seven days. Three of the participants received a score of zero, while the other half of the sample experienced change in the postpartum regarding this item, both P1

and P5 are included in this half who endorsed this item. P5, who was depressed, had the highest score of two on this item, while the other two participants scored one.

It was noted that the questions that showed emotional vulnerability tended to have lower scores from the participants. The last two questions, nine and ten, were examples of emotional vulnerability and had little to no endorsement from the participants. For question nine, men were asked if they were so unhappy that they have been crying in the last seven days. Five out of the six participants scored a zero on question nine. However, P5 is observed again as the participant with the higher score of two. Question ten asked participants if they had thought of harming themselves in the last seven days. The entire sample scored zero on question ten including P5, who scored higher than the rest on all of the previous nine questions.

While the above discussion regarding scoring provides some insight in how these men scored on the EPDS, their interpretation of the questions still remains unclear. In order to gain a better understanding of the participants' interpretations of the questions, the following sections will examine the results in more detail in regards to each of the four methods of retrieval. Words and phrases were examined and commonalities and differences in the participants' answers were compared and presented to demonstrate how these four methods of cognitive recall were exercised and affected.

### **Comprehension: Extremes**

Participants' responses were affected by their interpretation of various words evidenced by their emotional connection to specific words and events that were examined on the EPDS. This emotional interpretation of words and/or events often influenced how they answered certain questions. For example, some participants would become uncomfortable and showed this by either laughing or relating the words to events that seemed in some sense overly extreme. In particular, words used to describe the emotional spectrum of events appeared to create either

distress or extreme interpretations. For instance, many of the participants related questions to life and death like events. These interpretations may then have had an effect on how the participants answered the question as seen in question four, when P4 related “worried” to tragic or fatal events that involved his family. When asked to elaborate, he readily answered, “well you know, car accident, or avalanche for myself, or you know”. More often than not, participants paused and became perplexed when answering “emotionally loaded” questions.

This idea of extreme interpretation was seen again in question five, when participants described the words “scared” and “panicky” in response to dangerous situations. Participant Six (P6) stated that “scared” and “panicky” are “pretty extreme responses to me”. They weren’t responses that he felt were everyday responses or even applicable unless he “was scared for a good reason”. He also laughed when he answered the question which may suggest some discomfort with these descriptors. Moreover, the definitions provided for the words “scared” and “panicky” were also consistent with extreme interpretation and seemed to relate to events or emotions that caused extreme anxiety. When explaining what scared meant to them, participants used the following descriptions: “out of your control”, “something that can harm you”, “you’re gonna feel threatened”, “out of your control and you can’t do a single thing to change”, “helplessness”, “like worry but amplified”. “Scared” was related to a response that indicated some vulnerability on the participants’ behalf: things were out of control and they could not change the circumstances. These feelings were not everyday emotions that they could categorize and therefore many participants identified the question with unlikely or unrealistic daily occurrences.

The word “panicky” also conjured interpretations in the participants that were either life changing or caused feelings of despair. For the most part, “panicky” was linked to feeling out of

control and incapable. Descriptions provided were “incapable of doing anything to change the outcome”, “You’re drowning”, “a responsive mechanism”, “something worse could happen”, “a survival mechanism”, “almost more of an extreme... my house was burning”. Hence, to be “panicky”, meant the subjects again had no control over the situation, were weak, and so consumed by this innate response that they could not turn back to safety. Again, it was seen that the word “panicky” forced men to associate with life/death experiences or with hypothetical events that had never occurred in their own life experience.

In question nine of the EPDS, participants reacted with extreme thoughts and gave examples of life events that were similar. This question asked if participants reacted by “crying” in the last seven days. The participants indicated that crying was something only done in the event of a birth or death of someone close to them. For the most part, subjects could relate to tears being shed after the birth of their child or the death of a loved one. P1 recollected that the last time he cried was when his daughter was born, while P4 stated a somewhat similar circumstance in which his last cry “was just tears of enjoyment”. P5 and P6 linked the act of crying with the death of a loved one or pet, respectively. Crying for most of the subjects reflected a time of extreme joy or sadness, in particular, the birth of their child or the death of a beloved family member or pet. Crying was not related to an everyday occurrence, event, or emotion and was only associated to significant transitional life altering events.

In question 10, harming oneself was also interpreted in the extreme sense of its possible meaning. The phrase was often associated with killing oneself or inflicting purposeful bodily harm. For example, P1 stated harming oneself refers to situations or “people who commit suicide”. This idea of suicide was consistent with the other participants. Participant two (P2) referred to harming oneself as including anything that involved “physical harm” and P6 stated

that his thoughts immediately went to "...cutting. I don't know why, it seems silly". Thus harming oneself was not related to everyday events. These words strictly caused participants to make reference to occurrences that involved inflicting severe bodily harm or purposeful death.

The retrieval process of comprehension was affected by the participants' interpretations to the various words on the scale. Emotionally charged words, such as "panicky", "scared", and "worried" seemed to be linked to extreme life and death type events. Certain phrases such as "bodily harm" were viewed as negative and not something the participants could relate to in their daily lives. Thus, participants' emotionally charged interpretations of specific words and phrases caused extreme interpretations and may have led to the lower scoring observed on several questions on the scale. In addition, the fact that the majority of men in this sample were not depressed may provide some explanation for the lower scoring answers.

#### **Decision Making: Accurate Responses Affected by Discussion and Ambiguity**

Discussion of the question after spontaneously answering the scale seemed to directly affect participants' responses. This out loud discussion allowed for some deeper interpretation of the possible responses and provided clarity to some, while causing confusion to others. In some cases, the discussion would lead to the subject choosing a different response. For example, in question four of the EPDS, participant three (P3) changed his answer after we discussed his answer aloud, "so, I could have said no not ever in the last seven days, but I didn't maybe answer the question 100% properly". Discussion helped P3 reflect more accurately on the events because initially, without the discussion, he answered differently than what really occurred in his life. The decision to change a response also occurred when asked how the participant came to choosing his answer, as seen in the following when referring to his response for question five:



Interviewer (I): Okay, number five. You said in the past seven days, I have felt scared or panicky for no very good reason, and you said, “No, not much”. So again-

P3: It’s probably “No, not at all”.

I: You’d say “No, not at all”?

P3: Yeah. That’s probably a better answer, sorry about that.

In the following example, P2 stated both levels seemed to apply to his situation, “as well as ever – quite well...they seem both very similar answers actually, now that I think about it a little bit more”. P2 felt that the levels were too similar to provide an exact response using the choices provided. This ambiguity seems to have affected the scoring on the scale as well as how the participant answers. In both instances with P2 and P3, the scoring was lowered due to the discussion.

Participants’ decision making skills were affected by their inability to spontaneously provide an accurate answer as seen in the examples provided after the discussion portion of the interview. There were also some issues with the responses being ambiguous and not matching the true response of the participant. This ambiguity or confusion then affected the overall EPDS score once the “out loud” discussion took place. In this case, scores were lowered after discussion.

### **Memory Recall: Difficulty Remaining within the Context of Seven Days**

Participants’ responses were affected by memory recall as they had difficulty at times remembering that the questions were referring to events that occurred exclusively in the last seven days. At times the interviewer would have to remind the participants of this fact in order to obtain an accurate response. In questions two and three, some of the participants needed to be reminded to remain within the context of the last seven days as seen by the following quote by

P1, who reflected on his entire past to answer question two “I keep forgetting it’s seven days (sigh)”. P4 admitted that when answering the questions he “really didn’t take into account the last seven days”.

In question three, half of the participants had difficulty remaining within the context of seven days. P3 indicated that he was thinking further back than the seven days when choosing an answer and as a result, affected his ability to answer the question accurately. This was seen when P3 said, “but there is maybe further down in the past. So maybe I didn’t answer the question 100% properly”. P4 also experienced difficulty remaining within the context of the last seven days and stated “Yeah, I guess it’d probably be in the further seven days that I was kinda thinking about”. P6 stated his answer was more reflective of “over the course of, you know, the four months I’ve been at the company”. The same was seen in question four as P6 had difficulty remaining within the context of the last seven days and he changed his answer due to the same:

Uh, it’s like the last question. It’s not something that... Well to be honest. Oh, in seven days. We can just go off that then. Umm it probably should have been sometimes because I was on call for it.

Hence, participants had difficulty remaining in the time frame of seven days as evidenced in the examples provided. These results suggest response error due to decision making, as the scores were initially higher and then became lower after clarification by the interviewer.

### **Response making: Not an Applicable Feeling or Experience**

There were some questions that did not apply to how the subjects dealt with certain life stressors. In question five, the examples that demonstrate feeling “scared” or “panicky” were not feelings with which participants could identify. For example, P1 stated, “And no, I can’t recall times that I feel scared or panicky”. P2 stated that scared and panicky are emotions that he did

not identify with, while P3 claimed that he didn't know "what makes me scared and what makes me panicking in general? And I just didn't get... yeah, that never" and P4 stated that he wasn't "scared about anything". For these participants, scared and panicky were not considered as identifiable emotions to situations.

In question seven, there were some issues that arose due to the relationship between sleep and unhappiness. The participants, for the most part, did not claim to have difficulty sleeping. Five out of the six participants either rarely or never had difficulty sleeping regardless of the situations or emotions that were occurring at home or work. For example, P6 stated confidently, "I have nooo problem sleeping. Never did". Difficulty sleeping was not an identifiable reaction to unhappiness for most of the subjects. However, P5 claimed to have difficulty sleeping most of the time due to his unhappiness. He then goes on to say he finds his inability to sleep as "overwhelming" as seen in the following example:

I: Hmm, kay. So what kind of emotions did you feel answering that question?

P5: Mmmm a bit overwhelmed as far as I like sleep. I've always liked sleep.

I: Yeah. (laughs)

P5: Sleep is a good thing. I've had some of my best- you know, you're looking at a project and how am I gonna do this? But it's a happy project and then when I go to sleep it's like, "that's how I'll fix that. That's how I'll do that".

I: Yeah.

P5: So I've always liked sleep in that regard and now, now I don't like sleep no more.

(laughs)

P5 also was the father that had had a score of 21 on the EPDS and was in counselling regarding his anger issues he experienced after the birth of his second baby.

In question eight, all of the subjects indicated that they could not really relate to being sad or miserable. The feeling was considered negative and the subjects were not able to provide any examples of when they felt these emotions. For example, when P6 was asked if he ever felt sad or miserable, he answered, "Sad or miserable, no." The responses often were quick in nature and it was one of the few questions that did not require much thought on the participants' behalves. "Sad" or "miserable" were not emotions that the participants could relate to easily. As well, the majority of the sample was not depressed and this may have explained the lower scoring on this particular item.

In question nine, all of the participants could not relate to the action of "crying". Most claimed that crying was not something that they did. There were several examples where participants stated that they could not remember a time when crying was a reaction to anything, except in death or extreme happiness or sadness. P1 stated the only time he cried was at the birth of his children. P5 stated, "And you know, to be honest, I bet you in the last twenty years of my life, I maybe cried once other than this last week". P6 went on to say that crying is "a foreign thing to me". P5 was the only one to have scored on this question and he also was depressed.

Again, in question 10, harming oneself was also not an action to which participants could relate. Harming oneself was seen as an extreme act that all of the participants had difficulty understanding or relating to. All of the participants interpreted harming oneself as a deliberate, violent act that caused bodily harm or suicide and none felt it was something they would consider doing. This is seen when P3 stated:

Like some people I've seen do it. It doesn't make sense to me. Like I've never, ever even ever entered my mind of punching a wall when I was mad... No. Like if I'm going to punch something, it would be somebody.

Inflicting harm on oneself was an experience/emotion that the participants had difficulty relating to.

Feeling scared or panicky, inability to sleep, crying, feeling sad or miserable, or harming oneself were all situations or emotions to which these men could not relate. These events/situations also overlap with their extreme interpretation of words included in these questions. Because there are several questions that men do not relate to, response error made due to response making may lead to lower scores. However P5, who scored dangerously high on the EPDS, stated he had difficulty sleeping and was the only one who scored high on that particular question. Thus, difficulty sleeping was endorsed by the one participant who was depressed which could indicate that this particular question may be appropriate in screening for paternal PPD. In addition, the remaining participants would not score high on these types of questions as they were not depressed or at risk of depression.

### **Response Making: Wanting to Make the Situation Appear More Positive**

There were participants who had difficulty providing an accurate response as they attempted to depict a better situation than what really was occurring in their families. The following is an example from P1 when answering question one on the EPDS, “So I guess I was kinda like ignoring that and was like, really trying to see the glass half full. Half full, trying to be positive, I guess.”

In question two, it was evident that response error due to response making was affected by a participant using denial as a means to portray a more positive situation of his experience. For example, P1 expressed some discomfort in choosing the first answer that came to mind because it made his situation seem negative as evidenced by his comment, “Well, my first instinct was to say rather less ... Like, yeah. That’s sounds wrong but...it is”. P2 admits to

picking the most positive of the four answers, “Honestly? Ummm...I guess, as you were reading out the options again, there was the one where it’s equal – as much as I ever did before – and all the other ones are very negative”.

In question three, P2 expressed his discomfort again with answering the question honestly as he did not want to make his situation appear in a negative way and chose his answer to depict a more positive situation, “Ummm..probably, even though it’s anonymous, it seems like a good answer to choose. It would reflect well on me”. An example of this can be seen again in question four as P1 directly states that he chose his response, “Cause it makes me look better if I put sometimes instead of all of the time”. Another example that indicates that denial affected a participant’s response is when P2 answered question six in the following way: “It might have been, subconsciously, that the first one is quite negative, so maybe as you kept giving the options the answers would get better. I don’t know”. Thus, the accuracy of the responses was directly affected by the participants’ desire to make their situation seem more positive. This denial subsequently affected the scoring and may imply that response making could cause response error leading to underscoring on the scale. In this case, when responses were changed, scores became higher. Therefore, response error secondary to denial in response making may lead to lower scores on the EPDS.

### **Chapter Summary**

In the presentation of the general results as per individual participant scoring, the findings consistently demonstrated that the participant who was in counselling for depression tended to score higher than the other participants on the first nine questions. He was also the participant who had a higher overall score on the EPDS which may indicate that the first nine questions could be items that measure possible indicators for men who have PPD. In addition, nine of the

ten questions on the EPDS were endorsed by the participants, with six of the questions being endorsed by three or more participants. These aforementioned results could possibly suggest that the content on the EPDS may be appropriate in measuring men's possible indicators for risk of PPD. Question ten was the only question that was not endorsed by any of the participants. While this information provided a general picture of the results, the question of how men interpret various aspects of the questions on the EPDS still remained unanswered and therefore the data were also organized to uncover the "how" in the research question via the four methods of retrieval as outlined by Willis (2005).

There were various factors that affected how participants' cognitive processes were impacted. The method of retrieval, comprehension, was affected by the subjects' extreme interpretation of words/phrases/or events. This extreme interpretation may have led to lower scores on the scale or may have been affected by a sample that contained only one depressed participant. Response error noted in response making may have caused lower scores as evidenced after discussion. However, the errors noted due to comprehension and response making could also have been attributed to the fact that the majority of participants in the sample were not identified as being depressed. Notably, response error secondary to response making may not apply to inability to sleep as the one participant who scored highly on that question was depressed.

The method of retrieval of decision making, on the other hand, was associated with a response error that inflated scores, as scores became lower after discussion. The same was observed with memory recall as participants often referred to several months and years into their past rather than remaining within the context of the last seven days and after some clarification, their scores would become lower than the initial screening score. Therefore, response error

associated with decision making and memory recall did not provide lower scores but higher scores on initial screening and thus pose little danger in missing individuals in screening for PPD risk. The next chapter will explore and apply the results to provide some discussion and understanding of whether the EPDS could be an appropriate screening tool for men, while including nursing considerations, implications and areas for further research.



## **Chapter Five: Discussion**

This chapter will primarily involve a discussion relating the findings of the study and how they can inform nursing practice when using the EPDS to screen postpartum men. First, I will outline the limitations of this study. Second, a general discussion will be provided as to whether the results suggest that the EPDS may be an appropriate tool for screening postpartum men. Third, I will explain how men's interpretations of the questions on the EPDS relate to the transition to fatherhood and support the possible appropriateness of using the EPDS in paternal PPD screening. Fourth, I will outline various nursing considerations that may need to be deliberated when screening men using the EPDS to determine risk of PPD in men. Fifth, the nursing implications to both practice and healthcare will be provided should the EPDS be used to screen for paternal PPD. Finally, areas for further research will be discussed.

### **Limitations**

There are several limitations to this study that must be taken into account when considering the results. The size of the sample was too small for generalizability and the demographic of the sample consisted primarily of oilfield workers. It would have been beneficial to examine participants from other occupations and education levels. Also, there were no full-time fathers included in the study. New fathers who have full-time caregiving responsibilities may possibly have had different experiences than working fathers. Further research is needed in the area of full time fathers and fathers who may have different employment and education levels as these are both major social determinants of health. In addition, five out of the six participants' partners were on maternity leave and therefore were at home with the child/children full-time. Results may look very different if both mothers and fathers were both working and sharing primary caregiving responsibilities in the same way. The average weekly contact hours that men

had with their children varied as well and may have influenced their responses to the questions during the postpartum period.

There is also the concern of timing and screening. As indicated by Escribà-Agüir and Artazcoz (2011), men exhibit signs and symptoms of depression at different times than women, with the incidence increasing later in the postpartum period. Because the men were at varying points in their postpartum year, the results may not be a true representation of men at risk for PPD. Moreover, no qualitative research was found that investigated men's interpretation of the EPDS with which to compare findings. While the findings have provided some insight, comparison data may have provided a clearer interpretation of the results.

### **Men's Interpretation of the EPDS and Screening**

The results provided important information regarding the potential appropriateness of the EPDS. In particular, the findings with respect to the four methods of retrieval provided insight about men's interpretations of the questions and how they comprehend, relate, remember, and respond to the questions on the EPDS. This section will discuss the results and their significance to the appropriateness of the EPDS.

P5's situation and his responses were of particular interest as he was the only participant out of six who was depressed. While he was the one participant who scored highly on the EPDS, he was also the only participant in counselling for depression. By experiencing depression in the postpartum period as well as scoring high on the scale, P5 can be seen as one example that substantiates the prevalence of paternal PPD and the need for screening. As one in six of the participants in the sample were at risk for depression, this aligns with findings in the literature that the prevalence of paternal PPD is between 1.2% to 25% of community samples (Escribà-Agüir & Artazcoz, 2011; Edhborg, 2008; Mao, Zhu, & Su, 2011).

P5 had a markedly high score on the EPDS at 21. He also answered highly on nine out of the ten questions on the EPDS which may suggest that he was experiencing and relating to the items on the scale. P5 also was the only participant who endorsed crying on the questionnaire, therefore possibly negating that “crying” is not endorsed by men in the postpartum period as found in Matthey’s et al.’s (2001) study. However, while this provided some information, it was only based on one depressed participant’s responses. Thus, when looking specifically at P5, the EPDS as a screening tool appears to have appropriately detected his depressive symptoms.

When looking at the results overall, the first nine questions on the EPDS were endorsed by one or more of the participants and six of the questions were endorsed by three or more participants, thus suggesting that the content on the EPDS may appropriately be relevant to men’s postpartum experiences. These results also suggested that men and women may have similar experiences in the postpartum period and can be explained by the evolving gender equal roles of parenthood in contemporary society (Johansson, 2011; McGill, 2011). As evidenced in the literature, men and women’s roles in parenting are becoming more equal and their experiences are, too (McGill, 2011).

However, while their parenting experiences are becoming more similar, men and women tend to show signs of depression differently. For instance, Delmore-Ko’s (2000) study indicates anxiety is often more recognized in men when they are depressed. From the results five out of the six participants showed some degree of anxiety in the postpartum period. This may then provide some insight that this item examining anxiety may be relevant to men’s postpartum experience and with men’s depressive symptomology.

The questions that required men to define words that conjured an emotional response, such as “crying”, “panicky”, “harming oneself”, “inability to sleep”, or “worrying”, were, for the

most part, associated with either hypothetical or real life/death experiences. The participants' tendencies to go to the extreme emotionally was consistent with the extreme behaviors men often exhibit when they are depressed, such as acting out violently (Condon, 2006). Extreme interpretations are explained by Condon's (2006) work that describes men who are depressed often act out by exhibiting extreme behaviors such as abusing alcohol and/or acting out violently. These erratic behaviors are often seen in men who have partners who are also depressed and as a result these men tend to have a higher risk of developing PPD as well (Condon, 2006). Men, in reaction to their partner's depression, often become angry and full of resentment (Condon, 2006). Therefore, while the results may suggest that extreme interpretations may lead to lower scores, men's symptoms and reactions to depression align well with the participants' extreme interpretations.

Feeling scared or panicky, inability to sleep, crying, feeling sad or miserable, or harming oneself were also situations to which most of the participants could not relate. These interpretations may again be explained by the current studies on men which "have shown that anger attacks, affective rigidity, self-criticism, and alcohol and drug abuse are symptoms that more often occur in men suffering from depression" (Madsen, 2009, p. 24). Condon et al. (2004) further establish that depression in men may be exhibited through violence, risk taking behaviors, or working long hours. These aforementioned characteristics which show that men are more likely to demonstrate their depression through more overt means may help explain why the participants related many of the words on the EPDS to life altering events rather than everyday occurrences. This finding is supported by Condon et al.'s (2004) work that indicates that men tend to have more extreme reactions when they are depressed.

Men's tendency to exhibit and interpret questions in a more extreme fashion should not discredit the EPDS's effectiveness in screening for paternal PPD. Men's symptoms of depression as seen in Madsen's (2009) review of the literature tend to be more extreme, therefore their interpretation of the words may also be extreme. In essence, men's extreme interpretations of how they comprehend the words on the EPDS align well with how they experience depression. If men are depressed in the postpartum, they may also choose a response that corresponds to how they are feeling. Thus, if a man were to answer with a high score to one of these questions, then the response could appropriately signify that he may be at risk for PPD.

"Crying", in particular, received little endorsement for the participants and was referred to as an act done in great circumstances, such as in life or in death. Matthey et al. (2001) indicate that "crying" may not traditionally be endorsed by men as a symptom of PPD. Although crying is not typically a way men exhibit signs of PPD, the question may still be relevant. For example, if men respond that they have been crying in the last seven days, it could be a sign of an extreme reaction and quite possibly a sign of disequilibrium. Therefore, if men endorse such questions on the EPDS, this may be a high indicator or a "red flag" to the nurse that there may be some risk for depression. This idea was reinforced by the findings as the one participant in this sample that endorsed crying in the last seven days was the participant in counselling for depression.

The questions affected by the participants' tendency to deny or appear more positive in the response making method of retrieval were those that asked whether men felt scared or panicky, overwhelmed, unable to sleep due to unhappiness, and sad or miserable in the last seven days. These questions investigated emotional vulnerability and participants' responses may be explained by how men's socialization to be strong and independent has a direct impact on their tendency to deny feelings that may indicate otherwise (Veskrna, 2010). Moreover, the denial

noted in response making is consistent with their tendency to deny symptoms of depression (Veskrna, 2010). Thus, items that highlighted any type of weakness on the man's part tended to be answered with lower scoring responses and are consistent with the evidence that men may deny symptoms of depression. Men's natural tendency to deny may also explain why the item referring to harming one's self was not endorsed by any of the participants. For these reasons, it is important to consider that while these questions may have had an overall lower endorsement rates from the participants, it may only suggest that men's tendency to deny their feelings plays a large factor in response making. Therefore, the questions may still be appropriate, but denial may influence how men respond and score on the EPDS.

The sensitivity of the EPDS secondary to response error was examined in regards to two methods of retrieval, decision making and memory recall. Both methods of retrieval allowed for higher scoring on initial screening and could signify that the EPDS is more likely to produce a higher score rather than a lower one on initial screening. The response error noted in these methods of retrieval originally inflated scores which may indicate that the EPDS is more sensitive when answered spontaneously.

In addition, this inflated scoring may indicate that the EPDS could be a more appropriate screening tool as it does not "miss" those who may be showing signs of depression. The GMDS, a male specific questionnaire, may underdiagnose risk (Madsen, 2009). Moreover, the suggestion by Edmondson et al. (2010) that a score of greater than 10 (when focusing on major depressive disorder) or greater than 8 (when focusing on general anxiety disorder) on the EPDS are accurate scores in detecting men's risk for PPD also supports the current scale guidelines of using 10 as the cut off score.

The literature also suggests that the EPDS is equally, if not more, effective in detecting risk of PPD in men than a male specific scale. This is further explained by Madsen's (2009) study in which both the EPDS and Gotland Male Depression Scale (GMDS) were administered to postpartum men to screen for PPD. The GMDS focuses on male depressive symptoms and includes: lower stress threshold, aggressiveness, low impulse, feeling of being burnt out or empty, constant, inexplicable tiredness, irritability, restlessness, dissatisfaction, difficulty making ordinary everyday decisions, sleep problems, feelings of disquiet/anxiety/displeasure in the mornings, abusive behavior, hyperactive behavior, an under/over-eating, antisocial behavior, depressive thought content, complaintiveness, depressive illness, alcoholism, and suicide (Madsen, 2009). When screened using the EPDS, 5% of men were discovered as having risk for PPD and when given the male specific scale, the GMDS, the results showed that 3.4 % of men were at risk for PPD (Madsen, 2009). This comparison then, may again suggest that the EPDS is more sensitive when screening for PPD in men and thus, could be a valuable tool in screening men in the postpartum period.

The prevalence of paternal PPD has been evidenced in the literature and also in this study as one participant was in counselling for depression. This evidence suggests there may be a high need to screen men in the postpartum period for risk of PPD and EPDS could be considered as an appropriate tool when screening for paternal PPD. The participant who was depressed could be considered one strong example of the EPDS' appropriateness as he endorsed nine out of 10 items on the scale. Another result to consider that may mark the appropriateness of the EPDS is men's tendency to interpret words or events on the EPDS in an extreme sense. These extreme interpretations should not to be considered as a barrier to the scale but rather provides

information that the scale may be consistent with men's extreme feelings and symptoms of depression.

The appropriateness of the EPDS with respect to the existing cut off scores and inflated scores secondary to the decision making and memory recall methods of retrieval may indicate that the current score of 10 could be considered as appropriate. This also aligns well with the findings in the literature that support a cut off score of greater than eight or 10 (Edmondson et al., 2010). The inflated scores due to decision making and memory recall may also support the findings that the EPDS is more sensitive than the GMDS, a male specific questionnaire (Madsen, 2009). However, men's tendency to deny their feelings also lowered scores and may suggest and support that cut off scores for paternal PPD are still not entirely clear. All considered, it appears that the EPDS could be a valuable and appropriate tool to screen for men's risk for PPD.

Through implementation of this tool, nursing practice may effectively support men in their transition to fatherhood and allow for nurses to provide holistic care that is family and client centered. The following section will discuss how screening men for PPD with the EPDS supports fatherhood as a transitional experience.

### **Use of the EPDS Supports Fatherhood as a Transitional Experience**

Men's transition to fatherhood can prove to be as difficult as women's transition to motherhood when examining today's contemporary view and expectation of the father. As evidenced in this study, men were able to express anxiety and attribute extreme emotions and events to the experiences detailed on the EPDS. This finding solidifies that men's transition to fatherhood creates disequilibrium and can leave the new father susceptible to vulnerabilities associated in his role adjustment. Men's transition to fatherhood, from a societal perspective, has led to variety of sociopolitical changes (Draper, 2003). More women entering the workforce have led to equality in gender and workforce ratios while the possibility of parental leave shows



societal support of the contemporary father (Draper, 2003). Men are also increasingly involved in the birth and delivery process and are often present in this process (Draper, 2003). While medicine has embraced men's participation in this arena, the lack of follow up after the birth does not support the societal view of the contemporary father, who is active and involved as well as susceptible to vulnerabilities in this role adjustment.

Transition to fatherhood may make men susceptible to vulnerabilities that result in maladaptive behaviors. Maladaptive coping behaviors that are recognized in the literature as signs of depression in men have been identified as violence, alcohol abuse, extramarital affairs, etc. (O'Connell-Binns, 2009). This inability to cope can create disequilibrium in everyday life and nurses are often involved in recognizing, screening, and intervening with those at risk due to transitional life experiences, such as change in health status or role status (Meleis et al., 2000). Men's transition to fatherhood and increased involvement in parenting is a solid example of a transitional life experience that requires role readjustment. Nurses are often the primary caregivers and usually are the first to attend to clients who are having difficulty in the face of transition therefore, in order to help men transition to fatherhood, screening men for PPD should also be included in nursing care (Meleis et al., 2000). If PPD has been recognized as prevalent and the gender-related research recognizes that men and women's roles have become more equal in relation to parenthood, then screening men using the EPDS appears to be a needed, valuable, and potentially appropriate approach to screening men's risk for PPD. By performing this risk screening, nursing practice recognizes men as vulnerable to transitional lifespan experiences and supports men in the evolving role of the more active and involved contemporary fathers.

Using the EPDS to screen for paternal PPD supports the transition to fatherhood at a time of vulnerability, and allows the nurse to recognize and assess her clients holistically and equally.

By incorporating the EPDS into practice, which has been validated internationally to detect risk in both men and women, men will obtain equality in their right to treatment and care while providing the nurse with the avenue to accurately screen men's mental health during the postpartum period. However, if the EPDS is to be implemented, there are nursing considerations that need to be taken into account and discussed. The following section will outline these considerations.

### **Nursing Considerations**

The results of this study and the literature review both support the need for screening for PPD risk in men. The EPDS could be an appropriate tool as a first step to the screening process and help detect men at risk for PPD. However, in relation to the results, there are some considerations that need to be addressed in order to fairly and efficiently administer the scale to men. There are several examples of questions that supported a follow up discussion may be necessary as many participants changed their answers after they were asked various probing questions to explain how they arrived at their responses. Along with follow-up discussion, denial is another issue for nurses to consider when scoring their client and interpreting the score. Men's problems with memory recall and remaining within the context of the last seven days to answer the questions appears to affect responding correctly and needs to be addressed to effectively use the EPDS in screening men. Time of screening in the postpartum period for men may need to be different from that of women to maintain best practice as men show signs and symptoms of PPD at different times than women.

**Follow-up discussion.** The participant who indicated that rather than harming himself, he would more likely cause harm to someone or something was consistent with how men respond to and exhibit signs of depression (Madsen, 2009). Furthermore, this is also consistent with men's likelihood to identify and seek help by displaying psychological distress through behaviors of

acting out (Veskrna, 2010). This tendency to resort to violence may suggest that men who are depressed are more likely to show their depression through overt physical expression. Physical expression of anger is often seen in depressed men as they tend to have a preoccupation with things that are more physical in nature, such as over-involvement in sports, hobbies, and sexual activities (Veskrna, 2010). Therefore, it may be beneficial to ask follow up questions to assess for anger in the screening phase. However, while this may provide more information, the EPDS seems to provide an accurate baseline to determine risk in its original state (Madsen, 2009). Interestingly though, the discussion of increased hostility may open up a bigger platform from which the nurse can further investigate and screen for risk that is male specific and ultimately more client specific.

The results showed that some participants changed their scores after they were asked about the response they provided. Edhborg (2008) indicates that it has been suggested that depression or any signs of maladaptive coping are often not reflected in diagnostic interviews or self-reported tools; instead, men are more likely to deny their feelings or exhibit them through other symptoms. Thinking aloud and discussing the answer after giving the response may have led the subject to re-evaluate his original answer and subsequently change it. Therefore, discussing questions after filling out the questionnaire may be required in order to obtain a response that is more appropriate to the client's situation. Furthermore, Edhborg (2008) states that it has been found that men tend to report symptoms of stress and anxiety more readily than depression. Thus, the practice of discussion after a spontaneous response may also be most beneficial when looking at questions that are linked to extreme events/feelings. If a client is changing his answers after some discussion, then the scoring can also change significantly.

As PPD is considered a major depressive disorder, part of diagnosis requires that the person must have at least five key symptoms that interfere with daily function for a minimum of two weeks (Hirst & Moutier, 2010). The symptoms of major depressive disorder are: depressed mood, decreased interest in pleasurable activities, decreased energy, changes in sleep pattern, weight change, decreased concentration or indecisiveness, feelings of guilt or worthlessness, psychomotor retardation or agitation, and suicidal ideation (Hirst & Moutier). The EPDS, however, asks that clients refer specifically to the last seven days. Because the qualifiers must be present for at least two weeks, it may be beneficial to ask clients to further elaborate on the start of symptoms in a post EPDS administration interview to obtain a more accurate picture of when the symptoms of depression initially presented.

**Denial.** The results showed that some of the men wanted to portray their postpartum experience as more positive. This practice of trying to make their experience more positive than what may actually be happening at home may be influenced by traditional views regarding masculinity. For example, self-disclosure and cries for help are “contrary to traditional masculine norms” (Veskrna, 2010). Veskrna (2010) further elaborates on this idea in stating that:

Men tend to be socialized from very early in childhood that to be successful they must be strong, silent, independent, competitive, and to avoid things perceived as feminine. These strengths may also be weaknesses in other circumstances. Because depression implies a failing or vulnerability, men are likely to have trouble admitting that they feel depressed.

Denial of depression is actually one of the ways men may demonstrate their masculinity.

(p. 421)

Men, therefore, may not want to express their true feelings if they differ from the traditional views of masculinity. This means that initial scores may not truly reflect the participants' risk for

PPD because there may be a possibility that men are not comfortable in answering the questions that may suggest they need help. A follow up discussion for each question may be useful in obtaining a more accurate risk screening.

**Reminders.** At several times during the interviews, the majority of participants needed to be reminded that the question was referring specifically to the last seven days. Because some of the participants had difficulty remaining within the context of seven days, it may be useful to remind subjects with each question that they must think back only to the last week. This is an important distinction to make as some participants referred back to childhood or to events that occurred years prior when providing a response. By reminding the men about the last seven days in the postpartum period, PPD specific symptoms may be better distinguished. The scale, as delivered at present, only mentions the “last seven days” at the beginning, before starting the scale (See Appendix B for the EPDS). Therefore, one suggestion may be to repeat the phrase, “In the last seven days, I...” at the start of each question to aid the subject to remain within the time frame of seven days. This reminder may allow for more accurate answers and thus lead to a more accurate screening score. Thus, a change in the existing scale would need to be made in order to re-iterate the “last seven days” at the beginning of each question on the tool.

**Timing and screening.** Men’s experience with depressive symptoms in the postpartum period often present themselves later and increase over the postpartum year (Edhborg, 2008). Escribà-Agüir and Artazcoz (2011) further elaborate on this idea by indicating that paternal PPD occurs later in the postpartum year as the rate appears to increase over the first year. With respect to gender and PPD, at one year postpartum, Escribà-Agüir and Artazcoz (2011) saw that the rate of PPD in both men and women was almost equal at 4.4% for mothers and 4.0% for fathers. Mao, Zhu, and Su (2011) found that there “was no significant difference between maternal and

paternal perceived stress, indicating that fathers experienced similar levels of stress as mothers” at one year postpartum (p. 649). The participants in this sample were at varying points in the postpartum period, so the results may not be an accurate representation of their true risk of PPD. If the EPDS is to be administered in the postpartum period, it should be later in the postpartum year to identify men at risk. In light of this, men should be screened equally but at times that are more applicable to when men begin to experience signs of depression. Moreover, because the incidence of PPD in women and men is more equal at one year postpartum, it may be beneficial to administer the scale at 12 months postpartum to both genders (Mao, Zhu, & Su, 2011). In particular, men might need an initial screening at this point in the postpartum period (Mao, Zhu, & Su, 2011).

All four methods of retrieval identified a need for follow up discussion to clarify participant responses. The nurse may need to consider a follow up discussion to obtain a true score as some participants changed their scores after discussion. Moreover, denial and remaining in context of the last seven days also interfered with obtaining an accurate response. With respect to denial, nurses must consider that the scale may not be answered truthfully by men and is supported by the evidence that suggests this is how men self-report. As seen in the results, denial often lowered scores, making a follow up discussion a possible necessary intervention to avoid missing an indicator of depression. The nurse may also need to remind the client repeatedly during screening process that the questions on the EPDS are referring specifically to the last seven days to obtain an accurate score or each question on the scale needs to be changed to include “the last seven days” at the start of the question. Finally, the EPDS may need to be administered at different points in the postpartum period as men exhibit signs and symptoms at

different times than women. The following section will discuss the nursing implications that may arise if the EPDS is used to screen men for PPD.

### **Nursing Implications**

There may be both advantages and disadvantages to nursing practice and healthcare if the EPDS is used to screen men for PPD. While administering the scale supports equality to care, better nursing assessment, and an efficient way to screening men at risk, it also can impact health care costs, client confidentiality, and the format of the EPDS. In this section, the implications of using the EPDS in regards to its advantages and disadvantages to nursing practice will be outlined and discussed.

**Advantages.** By administering the EPDS, family centered care is ensured. As evidenced in the literature, men's transition to fatherhood can be a time of stress, in particular in the postpartum period when lifespan and mental health transition is most relevant and apparent (Meleis et al., 2000). Moreover, because men's incidence of PPD tends to increase over time during the postpartum period, it is essential to screen men later in the postpartum year. According to the literature, incidence of paternal PPD increases for men later in the postpartum year with both men and women becoming equal in incidence at one year (Escribà-Agüir & Artazcoz, 2011). The evidence regarding equal incidence of PPD at one year postpartum further supports that parenthood is trending towards being more gender equal and risk /experiences may be equal between men and women.

Transition theory supports the need to make nursing assessments when lifespan changes and role changes occur (Meleis et al., 2000). Transition to fatherhood has been ignored in nursing practice, although societal expectations and policies have changed to accommodate and identify this role change in respect to workforce and parental leave benefits (Draper, 2003). By

including the EPDS in the risk screening for paternal PPD, nursing practice becomes more socially and medically responsible to the contemporary father. Thus, screening men using the EPDS may be one fundamental way to recognize men's more gender equal role in their transition to fatherhood as it supports a socially, politically, and culturally responsible nursing practice environment.

**Disadvantages.** One factor to consider when administering the EPDS is that the incidence of depression is higher in men who have partners who have depression (Condon, 2006). According to Condon (2006), one in 10-15 new fathers are likely to have partners with depression and these men are at a much higher risk for developing PPD as well. Therefore, when administering the scale to men in the postpartum men, it would be beneficial to know whether his partner is depressed as well. For example, the participant who was in counselling for depression may have had a partner who was depressed. This knowledge of a partner's depression would require a more in depth investigation on the nurse's part as well as cause possible breach of confidentiality issues. Thus, the client's right to confidentiality may be compromised and the nurse's care becomes ethically compromised. In order to maintain professional and ethically competent care, the nurse would require some disclosure from the man's partner or from the partner themselves, if they were even aware. This could possibly require screening men and women together which could discourage men, who tend to deny depressive symptoms, from participating in clinics as they may not want to disclose information in front of their partner.

In addition, as the results indicate that further discussion may be required after EPDS administration to obtain accurate responses, clinic appointments may need to be longer than present allotted times. This need will then affect the number of people seen and/or increase healthcare costs as more clinic space and nurses will be needed to accommodate further



discussion post screening. Moreover, further training of nursing personnel could possibly be needed to appropriately and accurately facilitate a non-biased discussion post EPDS administration. This training may then require institutions to develop a follow up question tool and train personnel how to facilitate, interpret and rescore individuals appropriately to avoid clinician bias and influence on client responses.

Finally, a change in the instructions of the original scale appears to be needed as participants often did not remember to remain within the context of the last seven days when answering the questions. It seems that re-iterating, “in the last seven days” at the beginning of each question may be beneficial. However, if the nurse is to interrupt the client while he is filling out the scale to remind him to remain within context of the last seven days, this action may interfere with the spontaneity of responses and influence how the client answers.

In order to implement the EPDS, there may be several nursing considerations and implications to the practice environment. To obtain a better understanding of how to better implement the EPDS in paternal PPD screening, there are some areas that require further research. The following section will provide some discussion on areas that may need more study in order to better comprehend the appropriateness of the EPDS in paternal PPD.

### **Further Research**

There are some areas that may require further research in order to better understand the appropriateness of the EPDS in paternal PPD screening. In this section I will discuss three areas that require further research. The first topic of interest that appears to require clarification and further research is cut off scores. The recommended cut off scores that were found in the literature have been debated and vary from study to study. Secondly, to understand if the EPDS can be used in its current format, it may be beneficial to study both men and women's

interpretations of the questions and compare them to obtain a better idea if the current scale questions and guidelines could appropriately screen risk for PPD in both genders. Lastly, it may be beneficial to understand and examine why the scale refers to events/feelings exclusively in the last seven days when PPD symptomology needs to be present for at least two weeks before a client is considered at risk.

Since it appears that the EPDS may be more sensitive than the male specific questionnaire, the GMDS, it may be beneficial to look at cut off scores when administering the scale to men (Madsen, 2009). Veskrna (2010) suggests that the cut-off score on the EPDS may need to be adjusted in order to better screen men's risk for depression. Matthey et al. (2001) suggest lowering the cut off score for fathers as a significant number of men did not endorse crying as a symptom of depression. Most studies that used the EPDS to detect for risk of paternal PPD used the same cut-off score that is used for women, which is 10. Edmondson et al. (2010) conducted a study to validate the EPDS in men and found that a more appropriate cut off score may be greater than 10 when considering major depressive disorder and greater than 8 when considering general anxiety disorder when screening men for PPD. Thus, when administering the EPDS in postpartum men, a cut off score of 10 may be just as effective in screening for risk of paternal PPD. Further research regarding cut off scores for men is needed to ascertain what score is most sensitive to detecting men's risk for PPD.

As men and women become more equal in their gender roles, men's and women's interpretation of the questions may not be significantly different. Research has suggested that the EPDS may be more specific than the male specific GMDS in screening for risk in males (Madsen, 2009). In order to best understand if there is a true difference between men and women

and scoring on the EPDS, then a larger scale study involving both mothers and fathers would provide more information and insight on the data collected in this study.

As mentioned in the disadvantages in scale administration, the EPDS only screens for events/feelings that have occurred in the last seven days. At present, symptoms of depression need to present for at least two weeks before they are considered as a possible warning sign for risk of depression; thus, further investigation will be needed to clarify why the scale only considers the last seven days (Hirst & Moutier, 2010).

### **Chapter Summary**

The findings suggest that EPDS could be an appropriate tool to use in screening for men's risk of PPD. The four methods of retrieval provided some interesting and applicable data that allowed for a better understanding of how and if men's interpretation of the questions affected the appropriateness of the tool in screening for paternal PPD. The extreme interpretations noted in the retrieval method of comprehension showed and aligned well with how men experience depression, such as violence, anxiety, and physical aggression, and did not take away from the potential appropriateness of the scale. Crying was also supported as a valid item on the scale even though some of the evidence may have suggested otherwise. Moreover, the scale cut off score did not appear to need readjusting for men as the methods of retrieval of decision making and memory recall seemed to inflate scores, therefore lower cut off scores did not appear to be needed.

While the results helped to support the possible suitability of utilizing the EPDS in screening men for PPD, there were considerations that needed to be addressed to effectively deliver the scale appropriately. For example, follow up discussion proved to be an effective way to correct for accurate scores as discussion seemed to cause scores to change, sometimes making them lower or higher due to the methods of retrieval. Men's natural tendency to deny their

feelings of depression were also noted and need to be recognized by the nurse to understand how the results may change if men were to discuss questions in more detail. Also, men often needed to be reminded to remain within the context of the last seven days to provide accurate answers. Another consideration to note was the timing of the screening. Men typically exhibit signs and symptoms of PPD later in the postpartum period, therefore time of screening for men will likely need to be different than that of women to maintain best practice.

While these considerations are important, they also have implications for nursing practice. Some of the advantages of using the scale include supporting men's equality in healthcare and right to care. Moreover, the screening tool is supported by the transition framework that allows for nurses to help men transition into their role as fathers and recognize them as possible candidates for role maladjustment in the postpartum period. Paternal PPD screening using the EPDS is one way nurses are able to better care for their clients and treat the family as a whole. Lastly, EPDS screening for paternal PPD allows for men to be recognized as gender equal partners in today's society. Some of the disadvantages include client disclosure of a partner's depression, which may involve a breach of confidentiality. In addition, because follow up discussion may be needed, longer clinic times, more nursing personnel, and tools to conduct further discussion post EPDS screening, will all have effects on budgets and resources.

In order to better understand how appropriate the scale may be for men, further research is needed in some areas. As cut off scores are of some debate, more research needs to be done in order to develop a more concrete cut off score to adequately detect risk of paternal PPD. A larger scale study that compares both men and women would be necessary and beneficial to confirm whether the same score can be used for both genders. Finally, because symptoms of PPD need to

be present for two weeks or more before a diagnosis can be made, further investigation should be done as to why the scale only refers to the last seven days.

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**Appendix A: Edinburgh Postnatal Depression Scale**

## EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

DATE OF DELIVERY: \_\_\_\_\_

As you have recently had a baby, we would like to know how you are feeling. Please tick the box to the answer which comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

*In the past 7 days .....*

**1. I have been able to laugh & see the funny side of things**

- 0) As much as I always could
- 1) Not quite as much now
- 2) Definitely not as much now
- 3) 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 and 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 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
- Yes, sometimes I haven't been coping as well as usual
- No, most of the time I coped quite well
- No, I have been coping as well as ever

**7. \* I have been 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

**SCORING THE EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)**

**QUESTIONS 1 – 5**

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

**QUESTIONS 6-10 marked with an \***

Are reversed scored, with the top box scored as a 3 and the bottom box scored as 0.

Scores of 12 or above distinguish borderline and probable cases from non cases

**Appendix A: Preliminary Literature Review**

Table 1.

Table Outlining the Preliminary Literature Review

Date	Database Searched	Key words used	Result	Progress Log (all articles picked which included any information in abstract regarding PPD and men)	Printed for Proposal	Used
November 2012	<b>CINAHL (1982-present)</b>	<b>Postpartum Depression in Men Search</b>  (Postpartum or post-partum or post partum or postnatal or post-natal or post natal) AND (depress* or depression) AND (men or man or father* or paternal)	383	scanned all articles and picked 148	November 15 <sup>th</sup> 48 articles printed	8
November 2012	<b>PsychInfo (1982-present)</b>	Same as above	383	all scanned and 158 picked.	November 16 <sup>th</sup> , 100 articles printed	17

**Appendix C: Proposed List of Cognitive Interviewing Questions for EPDS**

**EPDS Question #1: In the past 7 days, 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

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you laughed this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does laughing mean to you?

Probe #6: What does “seeing the funny side of things” mean to you?

Probe #7: When do you see the “funny side of things”?



**EPDS Question #2: In the past 7 days, 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

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you looked forward to anything with enjoyment this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does enjoyment mean to you?

Probe #6: When do you look forward to things with enjoyment?

**EPDS Question #3: In the past 7 days, I have blamed myself unnecessarily when things went wrong?**

- Yes, most of the time
- Yes, some of the time
- Not very often
- No, never

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

### **Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you blamed yourself for something unnecessarily this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does blame mean to you?

Probe #6: What type of things do you blame yourself for

Probe #7: What does unnecessarily mean to you?

Probe #8: What does “when things go wrong” mean to you?

Probe #9: When would you consider something as going wrong?

**EPDS Question #4: In the past 7 days, I have been anxious or worried for no good reason**

- No, not at all
- Hardly ever
- Yes, sometimes
- Yes, very often

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you felt anxious or worried this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does anxious mean to you?

Probe #6: What makes you feel anxious?

Probe #7: What does worried mean to you?

Probe #8: What makes you feel worried?

Probe #9: What does “no good reason mean to you”?

**EPDS Question #5: In the past 7 days, I have felt scared or panicky for no very good reason**

- Yes, quite a lot
- Yes, sometimes
- No, not so much
- No, not at all

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

### **Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you felt scared or panicky this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does scared mean to you?

Probe #6: What makes you feel scared?

Probe #7: What does panicky mean to you?

Probe #8: What makes you feel panicky?

Probe #9: In this context, what does “no very good reason” mean to you?

**EPDS Question #6: In the past 7 days, 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

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times things have gotten on top of you this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does "been getting on top of me" mean to you?

Probe #6: What makes you feel like things are "getting on top of you"?

Probe #7: What does cope mean to you?

Probe #8: How do you cope with things?

**EPDS Question #7: In the past 7 days, I have been so unhappy that I have difficulty sleeping?**

- Yes, most of the time
- Yes, sometimes
- Not very often
- No, not at all

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

### **Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you have been so unhappy that you have had difficulty sleeping this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does unhappy mean to you?

Probe #6: What makes you unhappy?

Probe #7: What does difficulty sleeping mean to you?

**EPDS Question #8: In the past 7 days, I have felt sad or miserable**

- Yes, most of the time
- Yes, quite often
- Not very often
- No, not at all

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you sad or miserable this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does sad mean to you?

Probe #6: What makes you feel sad?

Probe #7: What does miserable mean to you?

Probe #8: What makes you feel miserable?

**EPDS Question #9: In the past 7 days, I have been so unhappy that I have been crying**

- Yes, most of the time
- Yes, quite often
- Only occasionally
- No, never

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you felt so unhappy that you have been crying this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does crying mean to you?

Probe #6: What makes you cry?

Probe #7: What does “so unhappy” mean to you?

Probe #8: What makes you “so unhappy”?



**EPDS Question #10: In the past 7 days, the thought of harming myself has occurred to me**

- Yes, quite often
- Sometimes
- Hardly ever
- Never

**Overarching Questions: What were you thinking of when you answered this question?**

**What kind of emotional response did the question invoke? How does this question make you feel? What kind of thoughts went through your mind?**

**Probing Questions**

*Once subject provides response, ask what the level means to them.*

Probe #1: How are you trying to remember the times you thought of harming yourself this past seven days?

Probe #2: How did you come to your answer?

Probe #3: What made you decide to choose this specific answer instead of another?

Probe #4: What were you thinking when answering/choosing this answer?

Probe #5: What does “harming myself” mean to you?

Probe #6: What type of occurrences may cause you to have thoughts of harming yourself?

**Appendix D: EPDS Cognitive Interviewing Questions**

Table 2.

EPDS Cognitive Interviewing Questions Table

Overarching Questions: What were you thinking of when you answered this question? Did the question invoke any emotional responses? How did this question make you feel? What kind of thoughts went through your mind?

EPDS Question	Comprehension	Memory Recall	Decision Making	Response Making
#1	<p>What does laughing mean to you?</p> <p>What does seeing the funny side of things mean to you?</p>	<p>How are you trying to remember the times you laughed this past seven days?</p>	<p>How did you come to your answer?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>When do you see the funny side of things?</p>
#2	<p>What does enjoyment mean to you?</p>	<p>How are you trying to remember the times you looked forward to anything with enjoyment this past seven days?</p>	<p>How did you come to your answer?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>When do you look forward to things with enjoyment</p>

EPDS Question	Comprehension	Memory Recall	Decision Making	Response Making
#3	<p>What does blame mean to you?</p> <p>What does “unnecessarily” mean to you?</p> <p>What does “when things go wrong” mean to you?</p>	<p>How are you trying to remember the times you blamed yourself for something unnecessarily this past seven days?</p>	<p>How did you come to your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p> <p>When would you consider something as going wrong?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What type of things do you blame yourself for?</p>
#4	<p>What does anxious mean to you?</p> <p>What does worried mean to you?</p> <p>What does “no good reason” mean to you?</p>	<p>How are you trying to remember the times you felt anxious or worried this past seven days?</p>	<p>How did you come up with your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you feel anxious?</p> <p>What makes you feel worried?</p>

EPDS Question	Comprehension	Memory Recall	Decision Making	Response Making
#5	<p>What does scared mean to you?</p> <p>What does panicky mean to you?</p> <p>In this context, what does “no good reason” mean to you?</p>	<p>How are you trying to remember the times you felt anxious or panicky this past seven days?</p>	<p>How did you come up with your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you feel scared?</p> <p>What makes you feel panicky?</p>
#6	<p>What does “been getting on top of me” mean to you?</p> <p>What does cope mean to you?</p>	<p>How are you trying to remember the times things have gotten on top of you this past seven days?</p>	<p>How did you come up with your answer?</p> <p>What made you decide to choose this specific answer instead of another?</p> <p>How do you cope with things?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you feel like things are “getting on top of you”?</p>

EPDS Question	Comprehension	Memory Recall	Decision Making	Response Making
#7	<p>What does unhappy mean to you?</p> <p>What does “difficulty sleeping” mean to you?</p>	<p>How are you trying to remember the times you felt so unhappy that you had difficulty sleeping this passed seven days?</p>	<p>How did you come to your answer?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you unhappy?</p>
#8	<p>What does sad mean to you?</p> <p>What does miserable mean to you?</p>	<p>How are you trying to remember the times you felt sad or miserable this past seven days?</p>	<p>How did you come to your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you feel sad?</p> <p>What makes you feel miserable?</p>

EPDS Question	Comprehension	Memory Recall	Decision Making	Response Making
#9	<p>What does cry mean to you?</p> <p>What does unhappy mean to you?</p>	<p>How are you trying to remember the times you felt so unhappy that you have been crying this past seven days?</p>	<p>How did you come to your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What makes you cry?</p> <p>What makes you so unhappy?</p>
#10	<p>What does “harming myself” mean to you?</p>	<p>How are you trying to remember the times you thought of harming yourself has occurred to you in the past week?</p>	<p>How did you come to your answer (s)?</p> <p>What made you decide to choose this specific answer instead of another?</p>	<p>What were you thinking when answering/choosing this answer?</p> <p>What type of occurrences may cause you to have thoughts of harming yourself?</p>

**Appendix E: Demographic Data Form**

Age:

Marital Status:

City/Town of Residence:

How many years at the above town:

Level of Education:

Occupation:

Months/weeks postpartum:

Number of Children:

Ages of Children:

Average hours of contact with children/week:

**Appendix F: Demographic Information**

Table 3.

Table of Demographic Information

Demographic Information	P1	P2	P3	P4	P5	P6
Age	36	24	36	27	31	33
Marital Status	married	married	common law	married	married	Married
Residential City	Grande Prairie	Grande Prairie	County of Grande Prairie	Grande Prairie	Grande Prairie	Grande Prairie
First Language	English	English	English	English	English	English
Education	Post - Secondary	Post-Secondary	High school	Post-Secondary	Post-Secondary	Post-Secondary
Occupation	Plumber	Student/Piano Teacher	Oil Field Tool Tech	Oil Field Power Engineer	Oil Field Sales	Oilfield Customer Service
# of Children	2	1	3	1	2	2
Weekly contact with kids	40 hours	40 hours	25 hours	40 hours	28 hours	56 hours
Time Postpartum	8 months	2 months	8 months	12 months	5 months	6 months



**Appendix G: Letter of Invitation**

Asha Parmar: Principal Researcher

Student: Masters of Science in Nursing

Trinity Western University: Langley, British Columbia

Thesis: Investigation of the Edinburgh Postnatal Depression Scale's Questions in the Screening of Paternal Postpartum Depression

You are receiving this letter because you are a new father. My name is Asha Parmar and I am conducting a study as part of my Masters of Science in Nursing through Trinity Western University. I am currently recruiting nurses to participate in a study to understand how men interpret and respond to the questions on the Edinburgh Postnatal Depression Scale, which is used to screen women for the risk of postpartum depression (depression that occurs after the birth of a child). As a new father, you have likely experienced some new feelings, both positive and negative, in the time period after the birth of your child.

As postpartum depression in men is increasingly recognized as a significant healthcare concern, the Edinburgh Postpartum Depression Scale is increasingly being used to detect risk of postpartum depression in men. However, the extent to which the questions on this scale may be appropriate for men is not known. For this reason, I will be interviewing men to discover what each question means to them. With this knowledge, I intend to make suggestions for revision of the existing scale in order to better identify the factors that are applicable to screening men's risk for postpartum depression.

If you are interested in participating in this research and are over 18 years old, proficient in the English language, have a child who is aged six weeks to one year old, and from the Peace Country area, please contact me at any of the above numbers or email me. I will be happy to

discuss the study with you and will provide you with further information about the study. If you choose to participate, you will be asked to take part in an interview with me at a mutually agreeable location to discuss your experiences in time after the birth of your child. You may also encourage others to participate in the study by providing them with my contact information above. You can always contact me if you have any questions or concerns regarding the project. I will be more than happy to discuss the details of the project with you. I have attached a copy of the consent for your consideration.

I look forward to your response.

Asha

### **Appendix H: Informed Consent**

Investigation of the Edinburgh Postnatal Depression Scale's Questions in the Screening of  
Paternal Postpartum Depression

**Principal Investigator:** Asha Parmar, Masters of Science in Nursing Student, Trinity Western University, Thesis Project

**Advisor committee members:** Richard Sawatzky PhD, RN: Trinity Western University School of Nursing, 7600 Glover Road, Langley, British Columbia, V2Y 1Y1, Canada.

**Purpose:** The purpose of this thesis project is to better understand how men interpret and respond to the questions on the Edinburgh Postnatal Depression Scale. As postpartum depression (depression that occurs after the birth of a child) in men is increasingly recognized as a significant concern, the Edinburgh Postpartum Depression Scale being used to detect risk of postpartum depression in men. However, the extent to which the questions on this scale might be appropriate for men is not known. For this reason, I will be interviewing men to discover what each question means to them. There are two main questions I hope to answer in this study. How do men in the postpartum period interpret the questions on the EPDS with respect to various types of cognitive recall? To what extent do men's interpretations of the EPDS questions necessitate any changes, omissions, modifications or further investigation of the applicability of the existing questions?

**Procedures:** If you choose to participate in this study, the principal researcher will request an interview of about an hour in which you will be asked to answer four to five questions for each of the ten questions of the Edinburgh Postnatal Depression Scale. The principal researcher will lead the interview and will assist and guide you in answering the questions. You do not need to prepare for this interview. You may also request to see the interviewer for a follow up interview

if you feel the need to clarify your responses. You will be asked if you would like the principal researcher to contact you again to provide you with the analysis of the interview in order give you an opportunity to indicate whether the results are true to your responses. In order to do this effectively, you will be asked to answer a few standardized questions which will be sent to you electronically or by paper copy and may take up to an hour to complete. You may mail or provide your responses by a return email or letter. During the interview process the principal researcher will ask if you would like a report of the results and how you would like it be sent to you.

**Potential Risks and Discomforts:** The principal researcher will be asking you questions about how you are feeling in the postpartum period. You may identify with some or many of the feelings investigated on the scale. If you should feel or realize that perhaps you are feeling some type of anxiety, distress, or sadness after the recent birth of your child, you may bring this to the principal researcher's attention. The principal researcher will try to make the interview process as comfortable as possible for you. You will be informed if you obtain a score of 10 or above which may indicate that you are at risk of developing postpartum depression. The principal researcher will guide you in this process by providing you with information on how to seek medical attention and/or mental health support. I will also provide you with a list of local healthcare providers and/or local mental health supports which may deal with depressive symptoms in men.

**Potential Benefits to Participants and/or to Society:** During this process, you may realize that you have felt some of the emotions investigated on the scale in the postpartum period. In realizing this, you will be able to seek some professional attention and seek comfort in knowing that postpartum depression may also be a reality for men as well. Also, your input may help in

revising this scale to be more male specific so that it can be fairly and effectively administered to men in the time period after child birth.

**Confidentiality:** During this research project, all information that is obtained in connection with the study will be kept confidential. This information will only be disclosed with your written permission or as required by the law. Your identity will be removed from all documents and your name will be replaced with a code that can only be interpreted and recognized by the researcher. All paper data and electronic data will be stored in a secured location with the key and password kept by the principal researcher. The data will be kept for the duration of the research study plus 5 years. Your responses will be put in anonymous form and for the use of a possible secondary analysis or study. After 5 years, with the exception of the final research project, the raw and analyzed data will be appropriately disposed of.

A transcriptionist will be hired to type out the interviews. He or she will have signed a confidentiality agreement. The researcher will assign codes, such as “P1” to each file to protect your anonymity and the transcriptionist will be instructed to apply this code to the written document. Recorded information will be hand delivered to the transcriptionist or sent via a password protected file format.

The principal researcher may choose to use your responses as direct quotes within the final report, however, anything that discloses identity will be omitted to protect your anonymity.

**Remuneration/Compensation:** The interviews will take place at the date, time, and place you request and desire. You will not be required to travel by the principal researcher. There is no financial compensation for participation in the study. You will receive a “thank you” card and will not be paid for your contribution. If you withdraw from the study, you will still receive a card.

**Contact for information about the study:** If you have any questions or desire further information with respect to this study, you may contact Asha Parmar. Contact for concerns about the rights of research participants: If you have any concerns about your treatment or rights as a research participant, you may contact the Office of Research, Trinity Western University.

**Consent:** Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without risk or concern. You may identify at any time during the interview or after if you wish to withdraw until the principal researcher is no longer able to extract your data from other interviews. At this stage it would not be possible for the researcher to identify your responses and therefore remove them from the data. You may also, at any time, decline to participate in a second interview. Should you wish to withdraw from the project, please contact the principal researcher to express your concern(s).

### **Signatures**

Your signature below indicates that you have had your questions about the study answered to your satisfaction and have received a copy of this consent form for your own records.

Your signature indicates that you consent to participate in this study and that your responses may be put in anonymous form and kept for further use after the completion of this study.

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**Research Participant Signature**

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**Date**

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**Printed Name of the Research Participant signing above**

**Appendix I: Participant Scores on EPDS**

Table 4.

Table for Participant Scores on EPDS

<b>Participant</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>	<b>Q9</b>	<b>Q10</b>	<b>Total (out of 30)</b>
<b>1</b>	0	1	2	3	1	1	1	1	0	0	10
<b>2</b>	0	0	1	0	0	0	0	0	0	0	1
<b>3</b>	0	0	1	1	0	0	0	0	0	0	2
<b>4</b>	0	1	1	3	1	1	0	1	0	0	8
<b>5</b>	2	3	3	2	2	2	3	2	2	0	21
<b>6</b>	0	0	1	1	0	0	0	0	0	0	2

*Note.* Highest possible score for each question is 3

\*Total scores of 10 or above are considered at risk for possible depression.

\*Participants who scored at or above “at risk” cut-off point.

**Appendix J: Results**

Figure 1.

Graph of Result

