

THE RELATIONSHIP BETWEEN PARENT-INFANT BED-SHARING
AND MARITAL SATISFACTION FOR
MOTHERS OF INFANTS AGED 6 – 12 MONTHS

by

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ABSTRACT

This study examined the relationship between time spent bed-sharing and marital satisfaction for mothers of infants aged 6-12 months. The main purpose of the study was to establish whether time spent bed-sharing predicted any variance in marital satisfaction, and whether or not this depended on classification as an intentional or reactive bed-sharer. A secondary purpose was to establish whether satisfaction with bed-sharing, level of fatigue, or sexual satisfaction mediated the relationship between time spent bed-sharing and marital satisfaction. Data were obtained from surveys completed by mothers ($N = 98$) in committed relationships with a first-born child between the ages of 6-12 months. Time spent bed-sharing was measured by multiplying the number of hours mothers indicated they typically bed-shared in a night by the number of days they typically bed-shared in a week. Marital satisfaction was measured using the Satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976). Participants were classified as reactive bed-sharers if they indicated that they bed-shared due to infant night-time problems, such as the infant not falling asleep, and were classified as intentional bed-sharers if they indicated that their reason for bed-sharing was not in reaction to an infant night-time problem (Ramos, 2003). Regression analysis showed that time spent bed-sharing predicted a small amount of variance in marital satisfaction for the sample as a whole. Moderation analysis showed that the amount of variance predicted in marital satisfaction depended on group classification as an intentional or reactive bed-sharer. For intentional bed-sharers, time spent bed-sharing did not significantly predict marital satisfaction. For reactive bed-sharers an increase in time spent bed-sharing predicted a significant decrease in marital satisfaction. Results showed that none of the intended mediator variables were significantly correlated with time spent bed-sharing. Results support the need for further research in the area of bed-sharing and marital satisfaction, and highlight the importance of recognizing the differences between intentional and reactive bed-sharers. Health care professionals may wish to emphasize safety precautions around bed-sharing for parents who intentionally want to bed-share, and offer alternative interventions for parents who are using bed-sharing reactively as a way to deal with infant sleep problems.

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CHAPTER I: INTRODUCTION

The current research study is introduced in this chapter. The study of parent-infant bed-sharing and marital satisfaction is situated in the context of the family at a point in time when a couple is adjusting to the different night-time sleep environment accompanying the arrival of a new baby into their lives. This chapter reviews the problem statement, the purpose and research questions of the current study, and the perspective and rationale of the study. It also provides a definition of terms and an overview of the study variables.

Problem Statement

The arrival of a new baby marks a period of change for first-time parents, as they negotiate the transition from a couple to a family (Belsky & Kelly, 1994). Although some couples experience an increase in marital satisfaction during the transition to parenthood (Cowan & Cowan, 2000; Shapiro, Gottman, & Carrere, 2000), a precipitous decline in marital quality affects up to 67% of couples within the first year after their infant's birth (Shapiro, Gottman, & Carrere, 2000), making this the most difficult phase of marital adjustment to negotiate. There is a need to understand the factors that might lead to positive or negative changes in couples' marital satisfaction during the transition to parenthood. While many factors considered to contribute to changes in the marital relationship over the transition to parenthood have been explored in the research literature, little research has addressed the link between parent-infant sleeping arrangements and marital satisfaction.

One of the challenges first-time parents encounter is making decisions regarding the care of their infant, in particular, the sleeping arrangements for their new baby. There are two basic schools of thought as to the best form of sleeping arrangements between parents and their infant: co-sleeping, in which the infant sleeps either in contact (bed-sharing) or in close proximity

(room-sharing) with another person, and solitary sleeping, in which the infant sleeps alone in his/her room. In reality, many parents use a mixture of sleeping styles, depending on circumstances. For example, the parents may have decided that their infant will sleep alone in his/her own room, but then bring the baby into their bed when the baby is sick or teething, or after a middle-of-the-night feeding.

Co-sleeping is the most common form of sleeping arrangement in the majority of cultures around the world (Morelli, Rogoff, Oppenheim, & Goldsmith, 1992). In many Western cultures, co-sleeping (particularly bed-sharing) is not part of the mainstream parenting ideology (Ball, Hooker, & Kelly, 1999; Blair & Ball, 2004), however, the number of parents in the United States who said they shared a bed with their infants more than doubled from 1993 to 2000, from 5.5% to 12.3% (Willinger, Ko, Hoffman, Kessler, & Corwin, 2003), a study in Britain reported that 50% of parents acknowledge that their infant spends a portion of every night in bed with them (Ball, Hooker, & Kelly, 1999), and a recent Canadian study reported that 72.4% of mothers indicated they bed-shared with their infants on an occasional or regular basis (Ateah & Hamelin, 2008). It is important to recognize that bed-sharing is not unitary concept; it may be practiced for different reasons, at different frequencies, and/or for different lengths of time. Previous research has distinguished between intentional co-sleepers, who endorse the ideology of co-sleeping, and reactive co-sleepers who do not plan to co-sleep but find themselves co-sleeping as a reaction to a night-time problem (Madansky & Edelbrock, 1990; Ramos, 2003).

Given the rising numbers of co-sleepers and bed-sharers, and the recognition that bed-sharing practices are diverse, it is important to understand the potential implications of co-sleeping (particularly bed-sharing) practices for the family, and to take different types of bed-sharing into account. Considering sleep in the context of the family, we can recognize that the

sleeping arrangements practiced by the family can have an impact on individual family members' well-being (Dahl & El-Sheikh, 2007). The transition to parenthood can be characterized by difficulties, and some authors have suggested that the practice of co-sleeping may interfere with marital intimacy and sexual activity, thus presumably having a negative impact on marital satisfaction (e.g. Spock, 1976; Stein, Colarusso, McKenna, & Powers, 2001; Weissbluth, 1999). Little research has examined whether or not marital satisfaction is related to the sleeping arrangements parents employ with their infants, and no empirical evidence has been obtained to support the assertion that co-sleeping is associated with decreased marital satisfaction.

Purpose and Research Questions

The main purpose of this study is to describe the relationship between time spent parent-infant bed-sharing and the mother's marital satisfaction at a point during the transition to parenthood. Using data from both bed-sharers and non-bed-sharers, this research seeks to determine whether time spent bed-sharing predicts marital satisfaction. The study also explores whether, for bed-sharers, the relationship between time spent bed-sharing and marital satisfaction during the transition to parenthood differs depending on classification as an intentional or reactive bed-sharer. Following from this question, the study explores whether there are any significant group differences between intentional and reactive bed-sharers. A secondary purpose of this research is to determine whether satisfaction with bed-sharing, degree of wives' sexual satisfaction, or degree of wives' fatigue mediates the path between time spent bed-sharing and marital satisfaction. Specifically, it seeks to answer the following questions:

1. Does time spent bed-sharing predict variance in wives' marital satisfaction during the transition to parenthood?

Hypothesis 1: Time spent bed-sharing will contribute significantly to the prediction of marital satisfaction. More time spent bed-sharing will predict lower marital satisfaction.

2. For bed-sharers, does the variance in wives' marital satisfaction predicted by time spent bed-sharing depend on classification as an intentional or reactive bed-sharer?

Hypothesis 2: Classification as a reactive or intentional bed-sharer will moderate the relationship between time spent bed-sharing and marital satisfaction, such that the marital satisfaction of mothers who reactively bed-share will decrease as time spent bed-sharing increases, and the marital satisfaction of mothers who intentionally bed-share will remain at the same level as time spent bed-sharing increases.

3. Are there significant group differences between intentional bed-sharers and reactive bed-sharers in terms of satisfaction with sleeping arrangements, sexual satisfaction, fatigue, infant temperament, and/or marital satisfaction?

Hypothesis 3: Reactive bed-sharers will have significantly less satisfaction with sleeping arrangements, less sexual satisfaction, less marital satisfaction, more fatigue, and higher levels of difficult infant characteristics reported for their infants than intentional bed-sharers.

4. a) Is the path between time spent bed-sharing and marital satisfaction mediated by satisfaction with bed-sharing, sexual satisfaction, and/or fatigue?
b) Does satisfaction with bed-sharing, degree of wives' sexual satisfaction, and/or degree of wives' fatigue mediate the relationship between time spent bed-sharing and marital satisfaction *for both intentional and reactive bed-sharers*?

Hypothesis 4: Satisfaction with bed-sharing, sexual satisfaction, and fatigue will partially mediate the relationship between time spent bed-sharing and marital satisfaction for the sample of bed-sharers and non-bed-sharers as a whole.

Narrowing the focus to bed-sharers only, these variables will mediate the relationship between time spent bed-sharing and marital satisfaction for reactive bed-sharers only. As previously hypothesized, it is expected that there will be no relationship between time spent bed-sharing and marital satisfaction for intentional bed-sharers.

Perspective of Study

This study situates the exploration of the relationship between bed-sharing and marital satisfaction from the perspective of considering sleep behaviours from a family context. There is increasing awareness of the importance of considering the influences of sleep practices from within the context of the family (Dahl & El-Sheikh, 2007). Several reasons have been suggested for why this is an important perspective.

First, sleep problems for one individual often impact the other family members' sleep quality and psychological outcomes. For example, Meijer and van den Wittenboer (2007) found a relationship between infant night crying and marital satisfaction for first-time parents during the first year postpartum. As well, Meltzer and Mindell (2007) found that sleep disruptions in children were associated with decreased maternal sleep quality, mood, stress, and fatigue.

Second, family contexts, including sleeping arrangements, attitudes, and emotional environments, can have implications for the sleep behaviours of the family members. The impact of sleeping arrangements is exemplified in the findings of Worthman and Brown (2007), who studied family sleep patterns and sleep quality in rural and urban Egyptian families, where

co-sleeping is normative. These researchers found that co-sleepers had more regular and undisturbed sleep patterns than non-co-sleepers. Parental attitudes and the emotional environment of the family have been found to have implications for sleep behaviours. For example, Adam, Snell, and Pendry (2007) found that increased parental warmth predicted more hours of sleep in younger children, and that stricter parental rules predicted increased sleep for adolescents.

Third, sleep and family environments can impact clinical, academic, and social domains during periods of development. For example, negative parental mood, parenting hassles, and disturbances in bed-time routines have been found to predict more frequent night-time awakenings for children with asthma (Fiese, Winter, Sliwinski, & Anbar, 2007). As well, El-Sheik, Buckhalt, Keller, Cummings, and Acebo (2007) found that the path between emotional security in the family and academic achievement in the child was mediated by the children's sleep quality.

Thus, according to Dahl and El-Sheikh (2007), "there are multiple reasons to predict complex interactions between sleep and family functioning" (p 2). This perspective underscores the importance of exploring how sleep patterns in the context of the family, including different forms of sleeping arrangements, might impact the functioning of the family. This study narrows this focus to explore the relationship between parent-infant bed-sharing and mothers' marital satisfaction.

Rationale

The relationship between parent-infant bed-sharing and marital satisfaction during the transition to parenthood is not yet well understood. It is a common finding that each partner's marital satisfaction decreases following the birth of their first child (e.g., Belsky & Pensky, 1988;

Shapiro, Gottman, & Carrere, 2000). Bed-sharing is a controversial topic, with opponents of bed-sharing arguing that it may negatively impact the couple's marital satisfaction, and proponents recognizing the potential for increased family bonding. Within this debate, little attention is paid by the opponents to the different circumstances surrounding the decision to bed-share. Thus, it is important to examine whether the effects of bed-sharing differ depending on whether the bed-sharing is intentional or in reaction to infant sleep problems.

How well or how poorly the marriage functions during the transition to parenthood influences the future functioning of the family and each of the family members (Knauth, 2001). Understanding the relationship between marital satisfaction and infant sleeping arrangements during the transition to parenthood may improve how counsellors and health educators converse with parents around the issue of sleeping arrangements, by potentially offering information that could impact the future functioning of the family.

Definition of Terms

In the current study, the terms *marriage* or *married* are used to refer to a couple in a stable, committed, long-term relationship, regardless of legal status. The term *husband* is used to refer to the male partner in the relationship, regardless of legal status. The terms *couple*, *partners*, and *parents* are used interchangeably to refer to the two people who are *married* and are experiencing the *transition to parenthood* together. For the purpose of the current study, the *transition to parenthood* will refer to the time from when the couple gives birth to their first child until the time they complete the research questionnaires, up to 12 months following the birth of their child. For the purpose of the current study, *marital satisfaction* is defined as a subjective evaluation of the current degree of satisfaction experienced with the marriage.

The term *sleeping arrangements* refers to the location of the parents in relation to the location of the baby during the hours of night-time sleep. The term *co-sleeping* refers to the act of an infant sleeping in close proximity to a parent, either in the same room or in the same bed as the parent. The term *bed-sharing* or *bed-sharing behaviour* refers to the act of an infant sleeping in the same bed as their parent(s) for at least a portion of the night. The term *room-sharing* or *room-sharing behaviour* refers to the act of the infant sleeping in the same room as their parent(s) for at least a portion of the night. The term *intentional bed-sharing* refers to bed-sharing which is planned and endorsed ideologically by the parents. The term *reactive bed-sharing* refers to bed-sharing which occurs as a reaction to night-time infant sleep problems.

Variables

The dependent variable in the current study is marital satisfaction. The independent variable is time spent bed-sharing (measured as hours spent bed-sharing per week). Psychological variables of interest are perceived husband support, sexual satisfaction, fatigue, infant temperament, satisfaction with bed-sharing, and perceived husband support for bed-sharing. A possible moderating variable in the relationship between bed-sharing and marital satisfaction is the reason (either intentional or reactive) for bed-sharing. If fatigue, sexual satisfaction and/or satisfaction with bed-sharing are found to correlate with both time spent bed-sharing and marital satisfaction, they will be considered as potential mediating variables.

Chapter Summary

This chapter introduced the topic of bed-sharing and marital satisfaction, highlighting the rationale for the study, and situating it in the perspective of viewing sleeping practices in the context of the family. The next chapter explores the literature on marital satisfaction and bed-sharing in more depth.

CHAPTER II: LITERATURE REVIEW

The review of the literature is presented in this chapter. Marital satisfaction during the transition to parenthood is discussed first. This is followed by a discussion of the choices of sleeping arrangements available for parents and their children, with a focus on parent-infant bed-sharing. The published research cited and discussed in this chapter, and throughout this paper, was obtained through a computer search of the EBSCOhost Research Database, using the specific databases Academic Search Premier, Medline, PsycArticles, and PsycInfo. These databases were searched from the year 1950 through to the year 2008. Statements made regarding the amount of published research on a specific topic refer to findings through a search of the aforementioned databases.

The Transition to Parenthood

Bringing a new baby into the family creates more profound changes for all familial relationships than any other developmental stage of the family; new roles are learned, new relationships are created, and existing relationships are readjusted (Knauth, 2001). A couple's first baby changes the relationship that previously existed between the partners, and can disrupt the sense of union they may have experienced during pregnancy (Clulow, 1991).

While early theorists viewed the transition to parenthood as a crisis (e.g., Dryer, 1963; LeMasters, 1957), a more modern view of the transition is as a developmental stage in the family cycle (Levy-Shiff, 1994). The couple in transition is forced to make major adaptations and adjustments to their new life, and each couple may manage these changes differently and with differing degrees of success.

Marital Satisfaction during the Transition to Parenthood

While there is substantial variability in the way couples react to the birth of their first baby, there is a consensus that the transition to parenthood necessitates some change in the marital relationship, regardless of how different those changes may be for each couple (Belsky, Spanier, & Rovine, 1983). However unique the experience may be, the general assumption is that the arrival of a new baby tends to disrupt the marital functioning, contributing to a decline in marital satisfaction (Belsky & Rovine, 1990).

Marital satisfaction may decline over time regardless of whether or not the couple makes the transition to parenthood; however, a steeper decline generally occurs for couples following their transition to parenthood. Shapiro, Gottman, and Carrere (2000) found that 67% of wives who became mothers experienced a decline in marital satisfaction, while 49% of wives who remained childless had a declining trend in marital satisfaction during the same period of time. Not only did a greater proportion of wives who became mothers experience a decline in marital satisfaction, but they also experienced a significantly sharper rate of decline (Shapiro, Gottman, & Carrere, 2000).

While a decline in marital satisfaction during the transition to parenthood has often been reported, this change is often undetectable until several months after the baby is born (Belsky, Spanier, & Rovine, 1983; Shapiro, Gottman, & Carrere, 2000; Wallace & Gotlib, 1990). In fact, marital satisfaction has been found to peak at one month postpartum before beginning to decline (Wallace & Gotlib, 1990). A significant decrease in wives' marital satisfaction has been found as early as three months, when compared to marital satisfaction levels found during pregnancy (Belsky, Spanier, & Rovine, 1983; Shapiro, Gottman, & Carrere, 2000). It is of interest that this decline in marital satisfaction at three months postpartum was found for wives only, leading to

the conclusion that wives' marital satisfaction is more sensitive to the transition to parenthood than husbands' marital satisfaction (Belsky, Spanier, & Rovine, 1983). Shapiro, Gottman, and Carrere (2000) found that husbands' marital satisfaction is directly related to, or influenced by, wives' marital satisfaction. Husbands' marital satisfaction declines during the transition to parenthood, but it is delayed more than wives', and it may occur in part as a result of, or reaction to, wives' declining marital satisfaction.

A significant decline in marital satisfaction has been found for approximately 67% of couples following the transition to parenthood (Shapiro, Gottman, & Carrere, 2000). To better understand how marital satisfaction is affected during the transition to parenthood, current findings on factors associated with marital satisfaction change are discussed in the following section.

Influences of Marital Satisfaction during the Transition to Parenthood

The quality of the postnatal marital relationship has long-term implications for the outcome of the marriage (Knauth, 2001); it is not surprising that many studies have been undertaken to attempt to clarify the types of changes that couples' relationships undergo and the specific variables that may contribute to these changes. Some of the most important factors considered to impact marital satisfaction over the transition to parenthood are perceived husband support, sexual activity, fatigue, and infant temperament.

Perceived husband support. Many researchers have found support to be a significant determinant of marital quality (Acitelli & Antonucci, 1994; Julien & Markman, 1991; Rothman, 2004). Rothman (2004) found that perceived husband support was one of the strongest predictors of wives' marital satisfaction. Husbands' awareness of their partner and their attention to the couple relationship has also been found to significantly affect wives' marital

satisfaction (Shapiro, Gottman, & Carrere, 2000). In general, research suggests that it is perceived support, rather than actual received or available support, that has the greater impact on an individual's well-being and relationship satisfaction (Fincham & Bradbury, 1990).

During the transition to parenthood, wives' experience of husband support may have a particularly important influence on marital adjustment. This is supported by Cox et al.'s (1999) finding that, when husbands demonstrated more positive behaviours and fewer negative behaviours during pregnancy, wives adjusted particularly well to the transition to parenthood. Wives' perceptions of husband support have been found to decrease over the transition to parenthood. Goldstein, Deiner, and Mangelsdorf (1996) found that women reported less satisfaction with the support provided by their husbands at three months postpartum than they had prenatally. Similarly, Rholes, Simpson, Campbell, and Grich (2001) found that wives' perception of the degree to which their husbands were supportive declined significantly from pregnancy to six months postpartum. Belsky and Kelly (1994) stated that the primary task for husbands during the transition to parenthood is to recognize their wives' need for support and to provide them with that support.

Sexual activity. Couples are often unprepared for the changes in their sexual activity during the transition to parenthood (Ahlborg & Standmark, 2001). Generally, studies have found a decline in sexual activity during pregnancy, with levels of sexual activity reaching a point near zero immediately following birth (Pacey, 2004). This lack of sexual activity is due mainly to biological factors for the woman, such as fatigue, lack of libido, negative body image, and pain associated with repercussions of giving birth (Pacey, 2004). Some couples may resume sexual intercourse before the routine six week postnatal check, but others may not resume intercourse

for many months (Sherr, 1995). Robson, Brant, and Kumar (1981) found that 70% of women reported finding sex enjoyable by 12 weeks postpartum.

Both partners may perceive the lack of sexual intimacy as distressing, but it appears to affect the husbands to a greater extent. Ahlborg and Standmark (2001) found that many husbands feel emotionally rejected if they are unable to engage in sexual activities with their wives. When the baby becomes the focus of attention for the partners instead of the couple's relationship, husbands may become jealous of the deep bond forming between the mother and infant, and may feel left out of this new relationship. They may try to alleviate this distress through the initiation of sexual activities with their wives. According to Ahlborg and Standmark (2001), while it is emotional intimacy and affection that the husband seems to crave most, many women, afraid that any warm and affectionate behaviour will lead to sexual activities in which they are not ready to engage, are rejecting of their advances. This can cause the husband to become withdrawn as he is unable to communicate his needs for intimacy in a way to have them met. This pattern in couples was found to be associated with decreased marital satisfaction (Ahlborg & Standmark, 2001).

Fatigue. Exhaustion is a common issue in couples following the birth of their child. Poor maternal sleep quality is associated with negative mood, greater parenting stress, and poorer daytime functioning (Meltzer & Mindell, 2007). Fatigue decreases the ability of a couple to engage in effective problem-solving (Hart, Freel, & Milde, 1990), and it has been thought that fatigue may affect the couple's marital satisfaction by interfering with their ability to attend to each other or to be sensitive to the needs of one another. There is inconsistent evidence for a relationship between fatigue and marital satisfaction.

Elek, Brage Hudson and Flek (2002) studied the relationship between fatigue and marital satisfaction for 44 couples over the transition to parenthood. They administered questionnaires to participants one month before birth, at 4, 8, 12, and 16 weeks after birth, and during the ninth month after birth. The measured fatigue with a 13 item self-report fatigue scale, and measured marital satisfaction with the Dyadic Adjustment Scale (Spanier, 1976). They found that fatigue increased from before birth to one month after birth, then remained stable. Results showed that fatigue was not consistently related to mothers' marital satisfaction. Mothers' morning fatigue was significantly related to their marital satisfaction at four weeks after birth, and mothers' evening fatigue was significantly related to their marital satisfaction at eight weeks and at nine months after birth. Although they found that mothers' fatigue during the transition to parenthood was sometimes related to her marital satisfaction, this relationship was inconsistent and deemed difficult to interpret (Elek, Brage Hudson, & Flek, 2002). This study was limited by its small sample size, possibly influencing its power to adequately detect any significant relationships between variables.

Infant temperament. In a classic study by Belsky and Rovine (1990), a relationship between infant temperament and marital satisfaction was found. In this context, the term infant temperament is used to describe how easy or difficult parents perceive caring for their infant to be. Belsky and Rovine (1990) measured infant temperament and change in infant temperament at three months and nine months postpartum, respectively. Mothers' perception of the unpredictability of their infant at three months postpartum was found to be an important predictor of whether mothers' marital quality improved or declined over time. At nine months a decline in marital quality was associated with infants that were reported by the wives to have become more difficult, specifically along the dimensions of predictability and adaptability (for

example, the wives with lower marital satisfaction reported that their infants had more irregular daily rhythms of eating and sleeping). It is unclear, however, whether the behaviour of the infant affects the marital relationship, or whether the decreased quality of the marital relationship affects the infant's behaviour.

Section Summary

It is clear that couples' experiences of becoming parents is complex, and that changes in the quality of the couples' postnatal relationship is influenced by many factors. Regardless of the cause, a decrease in marital satisfaction may be detectable as early as three months postpartum for wives, who then may influence their husbands' decline in marital satisfaction. Although many of the variables thought to influence marital satisfaction during the transition to parenthood have been well researched, the proposed association between bed-sharing and marital satisfaction has received little attention.

Sleeping Arrangements of Infant and Parents

One of the many challenges that first-time parents encounter is making decisions regarding the care of their infant, and, in particular, the sleeping arrangements for their new infant (Ramos, 2003). While there are a range of sleeping arrangements to choose from, the two options at either end of the spectrum form the basis for the two main schools of thought as to the best sleeping arrangements between parents and their infant: bed-sharing, in which the infant sleeps in the same bed as a parent, and solitary sleeping, in which the infant sleeps alone in his/her own room. Other arrangements include, for example, the infant sleeping in his/her own bed in the parent's room (room-sharing), the infant bed-sharing with another family member (such as a sibling or grandparent), or the infant sleeping in his/her own bed sharing a room with other family members (such as sibling).

When parents choose a sleeping arrangement, the infant may spend the entire night every night sleeping in that location, or the infant may also occasionally sleep in other locations, either for part of the night or for entire nights. For example, the parents may have decided that their infant will sleep alone in his/her own room, but then bring the baby into their bed when the baby is sick or teething, or after a middle-of-the-night feeding.

Terminology

One of the problems with sleeping arrangement research is the way in which the term ‘co-sleeping’ is often used. Co-sleeping is a somewhat broad term, referring to sleeping arrangements in which the infant is in close proximity to a parent. This could either refer to bed-sharing, in which the infant sleeps in the same bed with the parent(s), or room-sharing, in which the infant sleeps in his/her own bed in the parents’ room. Often it is not made clear whether the researchers were looking at both types of sleeping arrangements, or were looking at bed-sharing but calling it co-sleeping.

It is important to distinguish between bed-sharing and room-sharing in research on infant sleeping arrangements because, although the two forms of co-sleeping are related, they represent two distinct behaviours. Those distinct behaviours may differentially affect the outcomes of the variables studied. Some of the literature cited on sleeping arrangements uses the term co-sleeping without distinguishing between bed-sharing and room-sharing. This makes it difficult to know if the results that are reported pertain either to bed-sharing, room-sharing, or both. Whenever the information is available, I will distinguish between bed-sharing and room-sharing in the research I cite. The focus of the current research is on bed-sharing.

Characteristics of Bed-Sharers

In the United States, bed-sharing has been reported to be more common among low income families, younger mothers, and non-white groups (Willinger, Ko, Hoffman, Kessler, & Corwin, 2003). Similarly, McCoy et al. (2004) found that bed-sharing in the United States was strongly associated with: race and ethnicity; younger mothers; never married mothers; and mothers with little education and no income. Lozoff, Wolf, and Davis (1984) found no association between co-sleeping and lack of available sleeping space.

Bed-sharing characteristics of families in England have been found to vary sharply from characteristics found in the United States. Blair and Ball (2004) demonstrated that bed-sharing is a relatively common practice in England. They found that bed-sharing was not specific to class, and not more common among younger mothers, single mothers, larger families, or socially deprived families. Bed-sharing was found to be more common among the least-deprived families, and to be strongly associated with breastfeeding. They found that bed-sharing prevalence was consistent for infants aged 3 months to 12 months (Blair & Ball, 2004). Only two studies that included Canadians was found (Ateah & Hamelin, 2008; McKenna & Volpe, 2007). McKenna and Volpe's (2007) study was qualitative, surveying over 200 self-selected bed-sharing mothers from Canada, the United States, Australia, and Great Britain. No specific data were provided on the characteristics of these bed-sharers other than they were mostly from middle-class, low risk families. Ateah and Hamelin (2008) reported 72% of their participants indicated that they used bed-sharing on a regular or occasional basis. They reported that their participants were generally well educated (66% of the sample indicated they had completed a college degree or higher) and that more than half indicated an annual income over \$40,000;

however, they did not provide information on any relationships between bed-sharing practices and parents' demographic characteristics.

Endorsement of co-sleeping has been found to differ depending on the age group of the child. Abbott (1992) has suggested that co-sleeping for newborns is endorsed in the United States even among those who generally oppose co-sleeping, and Ramos (2001) confirmed that co-sleeping endorsement for infants (age 0-6 months) was more widespread than for older babies and toddlers (age 6 months – 2 years) in a sample of 216 mothers. Ramos (2003) found that, from a sample of 450 co-sleepers between the ages of 6 months and 5 years, 296 were between the ages of 6 months to 2 years, and 154 were between the ages of 3 and 5 years, indicating that the number of children co-sleeping may decrease with child age.

Influence of Culture

Co-sleeping is the most common form of sleeping arrangement in the majority of cultures around the world (Morelli, Rogoff, Oppenheim, & Goldsmith, 1992). However, in most Western cultures co-sleeping is not part of the mainstream parenting ideology (Ball, Hooker, & Kelly, 1999; Blair & Ball, 2004). The dominant culture of the United States emphasizes independence, and this has been acknowledged to have a significant impact on parents' decisions regarding sleeping arrangements, with the solitary sleep being encouraged right from birth in the United States (Middlemiss, 2004; Morelli, et al., 1992).

Prevalence of Co-sleeping in Western Cultures

Studies examining the prevalence of co-sleeping often use different definitions of co-sleeping, different samples, and different methods of data collection. This makes it difficult to obtain an accurate picture of the prevalence of bed-sharing. One study has found that the trend in the United States has been towards an increase in the practice of bed-sharing from 5.5% in

1993 to 12.8% in 2000 (Willinger, Ko, Hoffman, Kessler, & Corwin, 2003). This study defined bed-sharing as the parent(s) and child usually sharing a bed in the last two weeks. Ball and colleagues (1999) conducted a research project in the North Tees Health District in the northeast of England with 40 couples. They interview parents between 3 to 25 weeks postpartum (the mean was nine weeks) and found that close to 50% of infants in their study shared a bed with their parents at least once per week for all or part of the night. More recently, Ball (2007) found that 39% of infants were bed-sharing at age 6 months, and that bed-sharing prevalence was related to breastfeeding practices. In Ball's (2007) sample, the prevalence rates for infants who were no longer breastfeeding at 6 months were much lower (27%) than the prevalence for infants who still breastfed at 6 months (58%). A recent Canadian study obtained data from 293 mothers of infants aged three months (Ateah & Hamelin, 2008). They reported that 42.7% of mothers indicated that they slept with their infants in the same bed at least three times per week, and that 29.7% reported sharing the same sleeping surface with their infant two or less times per week. Overall, Ateah and Hamelin (2008) reported that 72.4% of the mothers in their study bed-shared regularly or occasionally. Due to the wide variation in measurement of co-sleeping, the overall prevalence in western countries has been estimated at being anywhere from 12% to 80% (Ball, 2002).

The Co-Sleeping Debate

Most of the research on sleeping arrangements has focused on the risks or benefits to the child, and although there is no clear answer as to whether one form of sleeping arrangements is more beneficial than the others, many researchers have found support for each type of arrangement.

In Western cultures, many researchers and practitioners have endorsed the belief that solitary sleep is better, and have advised against bed-sharing, citing an increased risk of smothering and sudden infant death syndrome (SIDS), infant stress associated with co-sleeping, and other negative effects on an infant's development (for a review see Goldberg, & Keller, 2007; Thoman, 2006). The recent American Academy of Pediatrics policy statement maintains the position that bed-sharing is more hazardous than the infant sleeping on a separate surface, and recommends that infants not bed-share during sleep (Task Force on Sudden Infant Death Syndrome, 2005). Unfortunately, much of this is based on the belief that, because some types of bed-sharing are unsafe, then all types of bed-sharing must be unsafe (McKenna & Volpe, 2007).

More recently, researchers have begun to point out many potential benefits from co-sleeping, including protection against SIDS, ease of breastfeeding, and more positive developmental characteristics, and in recent decades the practice of co-sleeping has been on the rise (Goldberg & Keller, 2007; Thomas, 2006). The Canadian Paediatric Society (CPS) published a position statement in 2004 recognizing that co-sleeping is not uncommon in our society, and that room-sharing lowers the risk of SIDS. The CPS recognized that many families will choose to bed-share, and encouraged the use of precautions, such as not bed-sharing when under the influence of alcohol, to ensure safe bed-sharing (Community Paediatrics Committee, 2004).

Reasons for Co-Sleeping

One crucial problem with much of the co-sleeping research is that co-sleeping has typically been treated as a unitary concept (practiced in the same manner, for the same reasons, with the same likely outcomes) regardless of the circumstances under which it is studied (Ball et

al., 1999). It has been argued that the reasons why co-sleeping is practiced, and the manner in which it is practiced, will differentially affect outcomes of co-sleeping (McKenna, 1995).

Parental reported reasons. Ball and colleagues (1999) found that the most commonly reported reasons for co-sleeping among the parents of infants aged 3 to 25 weeks old were to ease the process of night-time breast-feeding, to reduce anxiety over the infant's safety, to soothe their infant, to allow the parent to get more sleep, and to feel closer to their infant (Ball, 2002; Ball et al., 1999). Consistent with these findings, Abel, Park, Tipene-Leach, Finau, and Lennan (2001) conducted interviews with 150 parents of infants aged 2 to 12 months, and found that these parents cited ease of breastfeeding and reduced tiredness as benefits they received from bed-sharing, and also reported having a more settled baby as an additional benefit.

Intentional and reactive co-sleeping. A distinction has been made between intentional co-sleepers and reactive co-sleepers. Intentional co-sleepers are defined as parents who endorse the ideology of co-sleeping, and reactive co-sleepers are defined as parents who do not plan to co-sleep but co-sleep as a reaction to infant night-time problems such as the infant not falling asleep on their own (Madansky & Edelbrock, 1990; Ramos, 2003). Using this distinction, Ramos (2003) surveyed 450 mothers of children between the ages of 6 and 59 months, and found differences in the sleep behaviours of the two groups. For example, she found that intentional co-sleepers were more likely than reactive co-sleepers to spend the whole night co-sleeping, while reactive co-sleepers were more likely to co-sleep for part of the night only.

Consistent with their definition, reactive co-sleepers were more likely to report more frequent difficulties with bedtime issues, and more frequent difficulties with night-time waking issues, than intentional co-sleepers (Ramos, 2003). Ramos (2003) also found that reactive co-sleepers were more likely than intentional co-sleepers to report that their child would spend some

time in solitary sleep because the parent wanted time alone with their partner, and that reactive co-sleepers were more likely to report dissatisfaction with their sleeping arrangements. In a later study, Ramos, Youngclarke, and Anderson (2007) obtained data from 140 parents of children age five years or younger (mean age 26 months), and reported results indicating that intentional and reactive co-sleepers notice similar frequencies of potentially problematic night-time behaviours, but that reactive co-sleepers judge these behaviours to be significantly more problematic than intentional co-sleepers.

Impact of Sleeping Arrangements on Parents

A number of authors have speculated that bed-sharing could have an impact on the marital satisfaction of the couple. One of the first authors to propose a link between bed-sharing and marital satisfaction was Fraiberg (1959, cited in Okami, 1995) who claimed that co-sleeping violated the privacy of the marital relationship. Other authors have suggested that the presence of the child in the marital bed could severely inhibit the sexual intimacy of the adults (Spock, 1976), that it interferes with marital intimacy (Weissbluth, 1999), and that “a third person in the sexual bed is at least a distraction and always a competitor for the concern, attention, and affection” of the couple (Stein, Colarusso, McKenna, & Powers, 2001, p 68). These authors suggest that couples’ satisfaction may most likely be affected through a disturbance of sexual activity. Another belief is that parent-infant bed-sharing may disturb adults’ sleep (Weissbluth, 1999). Beginning with findings of parental satisfaction with sleeping arrangements in general, the following sections discuss how bed-sharing may be related to parental sexual satisfaction, fatigue, and marital satisfaction.

Parental satisfaction with sleeping arrangements. In a survey of mothers with children between the ages of 6 and 24 months, Ramos (2003) found that 55% of reactive co-sleepers

reported dissatisfaction with their sleeping arrangements, while only 29% of intentional co-sleepers reported anything other than “very satisfied” with their sleeping arrangements. Solitary sleepers were more likely to report satisfaction with their sleeping arrangements than either type of co-sleeper (Ramos, 2001). Although both reactive and intentional co-sleepers were more likely than solitary sleepers to report instances of night-time waking, reactive co-sleepers were more likely than both intentional co-sleepers and solitary sleepers to perceive night-time waking as a problem (Ramos, 2001).

Germo, Chang, Keller, and Goldberg (2007) surveyed mothers and fathers (who were not spouses) of children 36 to 69 months of age, and asked them to retroactively rate their satisfaction with sleeping arrangements at child age 12 months, 24 months, and 36 months. They classified children as solitary sleepers, reactive co-sleepers, early bed-sharers, and early co-sleepers. They found a steady decline in sleeping arrangement satisfaction for reactive co-sleepers, but no significant change for other sleeping arrangement groups. The authors suggest that those parents who practice their preferred sleeping arrangements are more likely to remain satisfied, and that changes or instability (which characterized the reactive group) may contribute to dissatisfaction, especially if the switch to co-sleeping was not the preferred sleeping arrangement of the parent.

Sexual satisfaction. Currently there is only speculation, rather than empirical evidence, that bed-sharing is likely to impact the sexual activity of the couple. It does seem plausible that having the baby in the bed with the parents may decrease the amount of sexual activity of the couple, since bed-sharing decreases the amount of time the couple spends alone together in the bed. A lack of “child-free” time has been cited as a deterrent to sexual activity (Woollett & Parr, 1997). Proponents of bed-sharing argue that, although bed-sharing may decrease the availability

of a partner for sexual activity in the bed, it simply means that the couple will find other places to engage in sexual activity (Stein, Colarusso, McKenna, & Powers, 2001). The current study seeks to determine whether bed-sharing is related to the sexual satisfaction of the wife. If bed-sharing is related to sexual satisfaction, it stands to reason that this may mediate the impact of bed-sharing on marital satisfaction, given the close relationship of sexual activity to marital satisfaction (Ahlborg & Standmark, 2001).

Fatigue. It is possible that bed-sharing may affect the level of fatigue of the mother. Bed-sharing is strongly associated with breastfeeding, and breastfeeding infants wake more often in the night than non-breastfeeding infants (e.g., Ball, 2006; McKenna, Mosko, & Richard, 1997). Based on these findings, one might think that mothers who bed-share spend more time awake during the night, and thus may experience more fatigue. However, mothers who bed-share often do not fully awaken to breastfeed, while non-bed-sharing mothers will have to become more fully awake to get out of bed to feed the infant (Baddock, Balland, Taylor, & Bolton, 2007; Ball, 2006).

This evidence suggests that bed-sharing mothers may get more sleep and thus may experience less fatigue than non-bed-sharing mothers. Qualitative evidence also supports the notion that mothers who bed-share feel more rested. A number of studies have cited reasons such as “more sleep for mother” (Baddock, Balland, Taylor, & Bolton, 2007), “reduced tiredness” (Abel, Park, Tipene-Leach, Finau, & Lennan, 2001), and “to allow the parent to get more sleep” (Ball et al., 1999) as reasons for bed-sharing. On the other hand, quantitative evidence suggests that bed-sharers and non-bed-sharers may get similar amounts of sleep. Baddock, Galland, Bolton, Williams, and Taylor (2006) measured total sleep time for 20 bed-

sharing mothers and 20 non-bed-sharing mothers and found no significant difference in total sleep time between the groups.

Although qualitative evidence suggests that bed-sharing mothers may get more rest, quantitative data have found no difference in total sleep time between the groups. No research to date has quantitatively examined the relationship between fatigue and bed-sharing. The current study seeks to determine whether bed-sharing is related to maternal fatigue. If bed-sharing is related to fatigue, it is possible that fatigue may mediate the relationship between bed-sharing and marital satisfaction.

Marital satisfaction. Rothrauff, Middlemiss, and Jacobson (2004) studied American and Austrian families to explore the link between sleeping arrangements and marital satisfaction. They found no difference in marital satisfaction between parents whose infant slept in their own rooms and parents of infants who slept in the parental room. However, a limitation of this study is that it was conducted with parents of 5- to 8-year old children, examining sleep habits retrospectively, while examining marital satisfaction at the time of the study. While this offers information on the possible long-term implications of sleeping arrangements on marital satisfaction, it has a number of limitations. First, it asks mothers to remember the sleep habits of their children as much as eight years earlier. Also, the sample may have consisted mainly of those couples who were not negatively affected by their choice of sleeping arrangements, as those who were negatively affected may no longer have been together by the time this study took place. The study did not examine any other variables which may interact with co-sleeping in their effect on marital satisfaction, such as the reasoning behind the parents' choice of sleeping arrangements. The authors recognized the necessity of further investigation into the factors associated with marital satisfaction in terms of sleeping locations (Rothrauff et al., 2004).

Germo, Chang, Keller, and Goldberg (2007) have been the only other researchers to assess the link between sleeping arrangements and marital quality. They surveyed a convenience sample of 100 mothers of children aged 36 - 69 months. They classified the mothers' children into four types of sleeping arrangements: Solitary sleepers were children who slept in their own room prior to 12 months of age, Early Bed-sharers were children who slept in the parents' bed for part or all of the night prior to 12 months of age, Early Co-sleepers were children who, in the first 12 months, either slept in the parents' room exclusively or alternated between their room and their bed, and Reactive Co-sleepers were children who first began co-sleeping after the first year, or were early bed-sharers or co-sleepers who returned to the parent bedroom after an extended period of solitary sleep. Germo et al. (2007) measured mother's perceived emotional intimacy with their partners using two subscales of the Personal Assessment of Intimacy in Relationships (Schaefer & Olson, 1981). These researchers found that 45% of mothers in their sample were early bed-sharers, 31% were solitary sleepers, 12% were reactive co-sleepers, and 12% were early co-sleepers. They compared mothers across sleep groups, and found no significant differences in marital intimacy across groups. It is unfortunate that, while a sample size of 100 is generally considered to be adequate, dividing the sample into four groups led to a very small number of participants in two of the groups. This may have resulted in the study not having enough power to adequately detect any significant differences between groups.

Both of these studies used group comparison analyses, with neither study finding differences in marital quality across types of sleeping arrangements. The current study seeks to determine if time spent bed-sharing is a better predictor of marital satisfaction than simply classifying type of sleeping arrangement. Time spent bed-sharing is a subtler measure of bed-

sharing behaviour, and may allow findings to emerge that would remain buried behind generalizations in comparisons over groups.

Influence of reactive versus intentional bed-sharing. As seen with parental satisfaction, the impact of bed-sharing on parental wellbeing may be differentially influenced depending on whether the bed-sharing is reactive or intentional. Reactive bed-sharing, by definition, is in reaction to a child's sleep problem, which may be likely to cause the parent to experience a more disrupted sleep. Since sleep disruptions have been linked to higher levels of fatigue (Martin, Wraith, Deary, & Douglas, 1997), reactive bed-sharers may be more likely to have higher levels of fatigue than intentional bed-sharers, whose sleep would not likely be as disrupted.

It is also possible that infant temperament might differ depending on classification as an intentional or reactive bed-sharer. Infants with more difficult temperaments are expected to be found more within reactive bed-sharers. Sleep disturbances are linked to infants with more difficult temperaments (France & Blampied, 1999), and reactive bed-sharers are, by definition, those with infants with sleep disturbances.

Since difficult infants and fatigue (which is connected to sleep disturbances) are both linked to lower marital satisfaction, reactive bed-sharers are expected to have lower marital satisfaction. If bed-sharing is intentional, rather than reactive, parents may have a more positive perception of the behaviour they are undertaking, and it may be less likely to negatively influence satisfaction with the marital relationship.

Section Summary

While there have been many arguments for and against the different types of sleeping arrangements, this debate has centred on the impact that co-sleeping may have on the infant, and only recently has this area of study broadened to include research on the parents' perspectives on

co-sleeping. There are only a few studies to date that have examined the reasons parents give for co-sleeping and their subjective experience of this practice, and only two studies which have looked at the relationship between bed-sharing and marital satisfaction. Further research is necessary to examine how the practice of bed-sharing may affect the mothers of bed-sharing infants. Additional information is also called for in respect to the differing characteristics of reactive and intentional bed-sharers and the differing experiences of mothers of these two groups of bed-sharers.

Chapter Summary

Although many factors have been identified that are associated with changes in marital satisfaction for couples over the transition to parenthood, it is not well understood why some couples have a smooth transition to parenthood and others have great difficulty. Even though decreases in marital satisfaction across the transition to parenthood have generally found to be moderate, even small decreases in the quality of couples' marital relationships can be important during the early years of family formation, as this is a time when enduring patterns of family interactions are being established. It is important to understand levels of marital satisfaction in order to assist couples in navigating the transition to parenthood. Although an association has been proposed between bed-sharing and marital satisfaction, the research to date does not offer an adequate answer.

The current study seeks to answer the question of whether any variability in marital satisfaction at a point in the transition to parenthood can be predicted by the bed-sharing behaviour the couple engages in with their infant. It has been established that bed-sharing is not a unitary concept, and one important aspect of bed-sharing that has been differentiated is the intentionality or reactivity behind the bed-sharing behaviour. Some differences have been

established between intentional and reactive bed-sharers, and the current study seeks to examine the differences further, specifically in respect to satisfaction with bed-sharing, sexual satisfaction, fatigue, infant temperament, and marital satisfaction. The current study will also investigate if the reason for bed-sharing (i.e. reactive versus intentional bed-sharing) interacts with time spent bed-sharing in its prediction of the variance in marital satisfaction. Finally, if sexual satisfaction and/or fatigue are determined to be related to both bed-sharing behaviour and marital satisfaction, they will be analyzed to determine if they mediate some of the variance in marital satisfaction that is predicted by time spent bed-sharing. The next chapter outlines the design and method for the current study.

CHAPTER III: METHOD

This chapter presents information on the procedure, sample, measures used in the current study, and the analytic strategies used. First, the procedure for data collection is outlined, including ethical considerations, the recruitment of participants, and the manner in which participants were involved in the study. Next, the questions and measures that the participants completed are explained, including analyses of the reliability of measures for the current study. Then, the sample of participants is described, including reasons for exclusion of participant data where necessary, and demographic information for those participants included in the analyses. Finally, the analytic strategies conducted to answer the study questions are reviewed.

Procedure

Ethical Considerations

Approval of this study was obtained from the UBC Behavioural Research Ethics Board (see Appendix K). An informed consent sheet preceded each survey to describe the study, and to assure the participants that their participation was voluntary and that they could withdraw at any time for any reason. In order to maintain anonymity and confidentiality, the participants were not asked to provide their name anywhere on the questionnaires, and the data has been kept in a secure location, to which only the researcher and research supervisor have access. There is always the potential for psychological harm to participants when they are answering questions of a sensitive nature. Participants will be offered a list of resources pertaining to the subject matter, and will be encouraged to contact the researcher if they have any concerns.

Recruitment and Data Collection

Women were recruited through the use of internet postings, flyers, and snowball sample emailing. Internet posting were placed on Craigslist, Kijiji, mom's groups on Facebook, and

mom's groups on Meetups.com (see Appendix A). The same internet posting was also sent out through the Education Faculty student listserv at the University of British Columbia (see Appendix A). Flyers were posted in coffee shops, bookstores, baby product stores, libraries, recreation centres, community centres, and grocery stores in Kitsilano, North Vancouver, the Renfrew/Collingwood area, and along Commercial Drive (see Appendix B). Information on each type of posting directed willing participants to access the research survey on the internet through the commonly used, secure site Survey Monkey.

A letter of invitation explaining the study was included at the beginning of each survey to ensure informed consent (see Appendix C). This letter outlined the study, assured the women that their participation was voluntary, and that their responses would be kept anonymous and confidential. It provided contact information for the researcher and the Research Subjects information line at UBC. Before proceeding from the initial letter to the survey questions, participants needed to answer yes to a question ensuring that they understood the parameters of their participation and that they consented to participate. Participants then completed the survey, which included each instrument or question necessary to measure the variables of interest.

Instrumentation

Each variable of interest was assessed using an instrument appropriate for its purpose and for the current participant sample. All measures were self-administered electronically over the internet, and were based solely on self-report.

Demographic Questionnaire

Demographic information was collected to provide a comprehensive description of the participants. Information collected included age, length of marriage/cohabitation, level of household income, employment status, level of education, cultural identification, infant age,

infant gender, number of people living in their home, number of sleeping rooms in the home, and a check to ensure that this is their first child. (See Appendix D for the Demographic Questionnaire).

Sleeping Arrangement Questionnaire

The Sleeping Arrangement Questionnaire (SAQ; See Appendix E) was designed specifically for this study; however, the questions on participant satisfaction with sleeping arrangements, and the question used to classify reactive versus intentional bed-sharing were used following Ramos' (2001) Family Sleep Survey.

The SAQ asked participants to respond to a variety of questions related to their sleeping arrangements. Participants were first asked to indicate which type of sleeping arrangement they currently used most often, choosing from "Room-sharing," "Bed-sharing," "Independent sleep," or "Other." They then rated how satisfied they were with their current sleeping arrangements, on a scale of one to five, from "very unsatisfied" to "very satisfied." They then rated how supportive their perceived their partner to be of their sleeping arrangements, on a scale of one to five, from "very unsupportive" to "very supportive."

Participants were then asked to indicate whether they had ever bed-shared by responding to the question: Do you ever, or did you ever in the past, share your bed with you baby, either for the whole night or part of the night? Respondents who answered "yes" to this question were classified as bed-sharers and moved on to fill out the remainder of the SAQ. Respondents who answered "no" were classified as non-bed-sharers, and skipped the remainder of the SAQ to move on to the rest of the measures.

Consistent with Ramos (2001), the reason for bed-sharing was classified as either reactive or intentional by asking if the bed-sharing happened "because the child has sleep

problems when sleeping alone (such as won't go to sleep, won't stay in bed, waking up crying or afraid, nightmares)?" If the response to this question was "yes, this is the main reason," then the bed-sharing was considered reactive. If the response was "that's not the main reason" or "that's not the reason at all," then the bed-sharing was considered intentional. This classification is consistent with the definition of reactive bed-sharing as that which is initiated in response to the child's sleep problems.

Time spent bed-sharing was measured by ascertaining the number of nights per week the infant shares the bed with the participant, and the number of hours typically spent with the infant in the same bed as the participant during a night when the infant bed-shares. The number of hours typically spent bed-sharing per night was multiplied by the number of nights spent bed-sharing per week, for a total number of bed-sharing hours per week.

Satisfaction with bed-sharing was determined by asking participants to rate on a scale of one to five, from "very unsatisfied" to "very satisfied," how satisfied they are with their child sharing their bed with them. Perceived husband support for bed-sharing was determined using a rating scale from one to five, from "very unsupportive" to "very supportive."

The questionnaire was piloted with two mothers for ease of comprehension and to determine approximate time for completion. Minor changes were made to the wording following feedback from these mothers. (See Appendix E for the Sleeping Arrangement Questionnaire).

Fatigue Scale

Fatigue was measured with the Iowa Fatigue Scale (IFS; Hartz, Bentler, & Watson, 2003). The IFS measures daytime fatigue and functioning in terms of cognitive functioning, energy level, and productivity (e.g., "I have trouble concentrating," "I feel drowsy," "I do a lot within a day"). Participants answer on a 5 point scale, from "not at all" to "extremely" for each

of the 11 items. The IFS yields a total score, with higher scores indicating greater fatigue. Cronbach's alpha has been reported as .86 with mothers of young children (Meltzer & Mindell, 2007). Cronbach's alpha for the current study was .89, indicating good reliability. (See Appendix F for the Iowa Fatigue Scale.)

Sexual Satisfaction

Sexual Satisfaction was measured using one question designed specifically for the current research. This question assessed the participants' satisfaction with sexual relationship with partner on a scale of 1 – 5, with higher scores indicative of greater sexual satisfaction. (See Appendix G for Sexual Satisfaction measure).

Perceived Husband Support

Perceived Husband Support was measured following the Convoy model discussed in Wright and Aquilino (1998). Amount of perceived husband support was determined by wives' response to six questions: "Do you feel able to confide in your partner?" "Do you consider your partner someone you can talk to when upset?" "Is your partner a source of reassurance for you?" "Do you feel your partner respects you?" "When ill, do you feel your partner cares for you?" and "Is your partner someone you talk to about parenting concerns?" Participants answered yes or no to the questions, and a point was assigned for each positive answer, with higher scores suggesting higher perceived husband support. Wright and Aquilino (1998) reported a Cronbach's alpha of .74 in their study of support and caregiver burden. Cronbach's alpha for the current study was computed at .81, indicating good reliability. (See Appendix H for Perceived Husband Support measure.)

Marital Satisfaction

A short form of the Satisfaction subscale of the Dyadic Adjustment Scale (DAS; Spanier, 1976) was used to measure marital satisfaction. This short form of the Satisfaction subscale of the DAS is a 5 item rating instrument designed to measure the relationship satisfaction between married couples or other partners in a dyadic relationship. The original version of the DAS is a 32 question measure, consisting of four subscales (Dyadic Consensus, Dyadic Satisfaction, Affectional Expression, and Dyadic Cohesion). Marital Satisfaction was the variable of interest in the current study; therefore, the Satisfaction subscale was used. A short version of the satisfaction subscale was used to increase the participant completion rate of the survey. Alpha reliabilities between .82 and .84 have been reported for short forms of this scale for female participants (Hunsley, Pinsent, Lefebvre, James-Tanner, & Vito, 1995). Cronbach's alpha for the current study was .90, which indicates good reliability. (See Appendix I for the short form of the Satisfaction subscale of the Dyadic Adjustment Scale.)

Infant Temperament

Infant temperament was assessed using the Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979). The ICQ is a 26 item measure used to assess parental perceptions of infant temperament (e.g., "How much does your baby cry and fuss in general?"). Each item is rated on a 7-point scale, with higher scores being indicative of a more difficult baby. The measure comprises of four subscales: Fussy/Difficult, Unadaptable, Dull, and Unpredictable; however, only the total score was used in the current study. The alpha reliability coefficient for the ICQ has been reported as .79 (Hackle & Ruble, 1992). Cronbach's alpha for the current study was .86, which indicates good reliability. (See Appendix J for the Infant Characteristics Questionnaire.)

Sample

A total of 150 female participants were recruited for this study. The eligibility criteria for participation included women who were able to speak and understand English, who had given birth to their first child between 6 and 12 months prior to taking part in the study, and who were in committed, cohabitating relationships with their child's fathers.

Two participants were excluded because they did not agree to participate in the study. Thirty-four participants were excluded from the data set because they submitted questionnaires that had an excess of missing data (more than 20% missing on any one measure). Participants were also excluded from the data set if they indicated they belonged to any of the following exclusionary criteria: they had more than one child ($n = 10$), or their child was not in the age range of 6 – 12 months ($n = 6$).

The final sample consisted of 98 female participants (see Table 1 for descriptive statistics of the sample). The participants' children ranged in age from 6 – 12 months, as specified in the inclusion criteria, ($M = 8.08$, $SD = 1.88$). Slightly more children were male (52%) than female; all children were the participants' first born. The majority (95%, $n = 93$) of mothers reported that they breastfed their infant. Mothers' age ranged from younger than 19 years old ($n = 1$) to older than 50 years old ($n = 1$), with 51% of the women falling between 30-34 years of age. All mothers were in committed heterosexual relationships, as per inclusionary criteria, with relationship lengths ranging from less than 6 months ($n = 1$) to more than seven years ($n = 25$). The time in relationship of the participants was evenly distributed, with 25.5% of women in relationships 1 – 2, 3 – 4, and 7 or more years in length, and 22% in relationships 5 – 6 years in length.

Eighty-three mothers were of European descent (85%), nine were of Asian descent (9%), and six were from other ethnic groups (6%), which included people of First Nations, African, East Indian, and Hispanic descent. Educational level was relatively high: 74% of the mothers had at least a college degree (7% had a college degree, 47% had a university degree, and 30% had a Graduate degree). All of the mothers in the sample were in a committed relationship with the father of the child they reported on. Most of the families were middle to upper-middle class (61% had an income above \$80,000). The majority of the women in this sample reported they had full time jobs (55%, $n = 54$), although 28 of these women indicated they were currently on maternity leave. Of the remaining 44 participants, 15 indicated they were employed part-time, 16 indicated they were not employed outside the home, and 23 indicated they were on maternity leave but did not indicate whether they have full-time or part-time employment.

Table 1

Demographic and Background Characteristics for the Sample

| Variable | Frequency (Percent) |
|----------------------------|------------------------|
| Mom Age | |
| 19 or younger | 1 (1%) |
| 20 – 29 | 32 (32.7%) |
| 30 – 39 | 61 (62.2%) |
| 40 – 49 | 3 (3.1%) |
| 50 or older | 1 (1%) |
| Relationship Length | |
| 6 months or less | 1 (1%) |
| 1 – 2 years | 25 (25.5%) |
| 3 – 4 years | 25 (25.5%) |
| 5 – 6 years | 22 (22.4%) |
| 7 years or more | 25 (25.5%) |
| Ethnicity | |
| Caucasian | 83 (84.7%) |
| Asian | 9 (9.2%) |
| Other | 6 (6.1%) |
| Education | |
| Some High School | 4 (4.1%) |
| High School Diploma | 2 (2%) |
| Some College or University | 19 (19.4%) |
| College Degree | 7 (7.1%) |
| Undergraduate Degree | 46 (46.9%) |
| Graduate Degree | 20 (20.4%) |
| Income | |
| \$39,000 or less | 5 (5.1%) |
| \$40,000 - \$79, 000 | 31 (31.7%) |
| \$80,000 or more | 60 (61.2%) |
| Did not report | 2 (2%) |

Note. $N = 98$ participants in the sample

Data Analysis

In this section, the research purpose is reviewed, followed by a description of the analytic strategies used to examine the data. The preliminary analyses are described first, followed by the descriptive analyses. Finally, each of the four research questions are reviewed and the strategies used to analyze the data in response to each research question are outlined.

Restatement of Research Purpose

The main purpose of this study was to describe the relationship between time spent parent-infant bed-sharing and the mother's marital satisfaction during the transition to parenthood. Using data from both bed-sharers and non-bed-sharers, it sought to determine whether time spent bed-sharing helped to predict marital satisfaction. It also explored whether, for bed-sharers, the relationship between time spent bed-sharing and marital satisfaction during the transition to parenthood differed depending on classification as an intentional or reactive bed-sharer. Following from this question, the study explored whether there were any significant group differences between intentional and reactive bed-sharers. A secondary purpose of this research was to determine whether satisfaction with bed-sharing, degree of wives' sexual satisfaction, or degree of wives' fatigue mediated the path between bed-sharing and marital satisfaction.

Preliminary Analyses

All data were analyzed using the statistical software program SPSS, version 16.0. The data were examined to determine whether linear analysis was appropriate by investigating the assumptions of linearity, independence, normality, equality of variances, and multicollinearity. Specifically, linearity and independence were examined using scatterplots examining the standardized residuals of the independent and dependent variables. Normality was examined by

graphing a box plot of the standardized residuals and investigating leverage values of outliers. The assumption of equality of variances was examined by constructing a scatterplot and identifying fan or curved shaped patterns. Multicollinearity was examined by analyzing the Variance Inflation Factors (VIF).

To ensure the study had enough power to detect significance at a level of $p = .05$ for the analyses conducted in the study, Cohen's (1992) criteria was used. Following this criteria, the sample sizes necessary for .80 power to detect significant effects were determined. According to Cohen (1992), for correlation analyses, a sample size of 85 is necessary to detect a medium effect size, and a sample size of 28 is necessary to detect a large effect size. For mean difference analyses, a sample size of 64 in each group is necessary to detect a medium effect size, and a sample size of 26 in each group is necessary to detect a large effect size (Cohen, 1992). For multiple regression analyses with up to five variables, a sample size of 91 is necessary to detect a medium effect size, and a sample size of 42 is necessary to detect a large effect size (Cohen, 1992).

Descriptive Analyses

Descriptive statistics were used to identify the frequencies, percentages, means, standard deviations, and range for the demographic and psychological variables. Frequencies and percentages were calculated for moms' age, relationship length, ethnicity, education level, income, and employment status. This information was also calculated for infants' gender and breastfeeding practices. Means, standard deviations, and ranges were calculated for time spent bed-sharing, marital satisfaction, perceived husband support, sexual satisfaction, fatigue, infant temperament, satisfaction with sleeping arrangements, and perceived husband support for sleeping arrangements. This information was calculated for the group of bed-sharers and the

group of non-bed-sharers, and for the group of intentional bed-sharers and the group of reactive bed-sharers.

Research Question 1

1. Does time spent bed-sharing predict variance in wives' marital satisfaction during the transition to parenthood?

Hypothesis 1: Time spent bed-sharing will contribute significantly to the prediction of marital satisfaction. More time spent bed-sharing will predict lower marital satisfaction.

To answer this question, Pearson product-moment correlation analyses were first computed to determine if any demographic variables were significantly correlated with the major study variables (time spent bed-sharing and marital satisfaction). The purpose of this was to check for any demographic variables that would need to be used as control variables in the regression analyses.

Next, a hierarchical regression analysis was computed, with marital satisfaction as the dependent variable. In the first step of the hierarchical regression, only the control variables were included as the independent variables. In the second step, time spent bed-sharing was added. The total variance accounted for in the second regression was compared to the total variance accounted for in the first regression using the R-squared difference test. If the R-squared values are statistically different, then time spent bed-sharing would be determined to have a significant influence on marital satisfaction when controlling for other possible confounding variables.

Research Question 2

2. For bed-sharers, does the variance in wives' marital satisfaction predicted by time spent bed-sharing depend on classification as an intentional or reactive bed-sharer?

Hypothesis 2: Classification as a reactive or intentional bed-sharer will moderate the relationship between time spent bed-sharing and marital satisfaction, such that the marital satisfaction of mothers who reactively bed-share will decrease as time spent bed-sharing increases, and the marital satisfaction of mothers who intentionally bed-share will remain at the same level as time spent bed-sharing increases.

Previous theory and research have determined that there are two types of bed-sharers: intentional bed-sharers (who bed-share in accordance with their parenting philosophies or beliefs) and reactive bed-sharers (who bed-share in reaction to a child sleep problem). The current study sought to determine whether the relationship between time spent bed-sharing and marital satisfaction at a point during the transition to parenthood differs depending on classification as intentional bed-sharer or reactive bed-sharer.

To answer this question, correlation analyses were first computed to determine if any demographic variables were significantly correlated with the major study variables (time spent bed-sharing and marital satisfaction) for the subsample of bed-sharers. The purpose of this was to check for any demographic variables that would need to be used as control variables in the regression analyses.

Once the control variables were determined, the moderation analysis was conducted. A moderating variable interacts with the independent variable in predicting the dependent variable; this interaction may serve as a better predictor of the dependent variable than the

independent variable alone. A moderation regression analysis was conducted to determine whether there were any interactions between the independent variable (time spent bed-sharing) and the moderating variable (classification as intentional or reactive bed-sharer) in its effect on the dependent variable (marital satisfaction). This determined whether the effect of time spent bed-sharing on marital satisfaction depended to any extent on whether bed-sharing was reactive or intentional.

To conduct the moderation analysis, first intentional and reactive bed-sharers were coded as 0 and 1, respectively. Next, time spent bed-sharing was centered to eliminate any multicollinearity effects between the predictor and the moderator (Aiken & West, 1991). To centre the variable, the mean time spent bed-sharing for the bed-sharing sample was subtracted from each of the individuals' scores on time spent bed-sharing. This created a new mean of zero for time spent bed-sharing. Then, the interaction term was created by multiplying the moderator (group classification as intentional or reactive bed-sharer) with the centred predictor (time spent bed-sharing).

These terms were entered into a hierarchical linear regression, with marital satisfaction as the dependent variable, in the following steps: the control variables were entered in step one, centered time spent bed-sharing and group classification (as intentional or reactive) were entered at step two, and the interaction term (centered time spent bed-sharing * group classification) was entered at step three. A moderation effect would be determined as significant if there is a significant change in R^2 when the interaction term is entered in step 3 (Baron & Kenny, 1986).

Research Question 3

3. Are there significant group differences between intentional bed-sharers and reactive bed-sharers in terms of satisfaction with sleeping arrangements, sexual satisfaction, fatigue, infant temperament, and/or marital satisfaction?

Hypothesis 3: Reactive bed-sharers will have significantly less satisfaction with sleeping arrangements, less sexual satisfaction, less marital satisfaction, more fatigue, and higher levels of difficult infant characteristics reported for their infants than intentional bed-sharers.

To answer this question, a series of independent samples t-tests will be conducted for each variable (satisfaction with sleeping arrangements, sexual satisfaction, fatigue, infant temperament, and marital satisfaction) to determine whether there are any significant differences between the means of these variables for intentional and reactive bed-sharers.

Research Question 4

4.
 - a) Is the path between time spent bed-sharing and marital satisfaction mediated by satisfaction with bed-sharing, sexual satisfaction, and/or fatigue?
 - b) Does satisfaction with bed-sharing, degree of wives' sexual satisfaction, and/or degree of wives' fatigue mediate the relationship between time spent bed-sharing and marital satisfaction *for both intentional and reactive bed-sharers*?

Hypothesis 4: Satisfaction with bed-sharing, sexual satisfaction, and fatigue will partially mediate the relationship between time spent bed-sharing and marital satisfaction for the sample of bed-sharers and non-bed-sharers as a whole.

Narrowing the focus to bed-sharers only, these variables will mediate the relationship between time spent bed-sharing and marital satisfaction for reactive

bed-sharers only. As previously hypothesized, it is expected that there will be no relationship between time spent bed-sharing and marital satisfaction for intentional bed-sharers.

A mediator is a variable that accounts for how or why an independent variable predicted a dependent variable. It accounts for at least some of the variance that was already found in the relationship between the independent, or predictor, variable (time spent bed-sharing) and the dependent, or outcome, variable (marital satisfaction). It does not add variance or interact with the predictor variable (time spent bed-sharing), it just accounts for all or some of the variance in the original relationship. According to Barron and Kenny (1986), three conditions must be met for a variable to be considered as a possible mediator: a) the predictor must be significantly associated with the hypothesized mediator, b) the predictor must be significantly associated with the dependent variable, and c) the mediator must be significantly associated with the dependent variable.

Mediation analyses were planned if these conditions were met using degree of wives' sexual satisfaction, degree of wives' fatigue, and/or satisfaction with bed-sharing as potential mediating variables. The mediation regression analyses had the potential to determine whether any of these variables mediate the relationship between bed-sharing and marital satisfaction. This would have meant that some of the variance in marital satisfaction that was predicted by time spent bed-sharing could be accounted for, or explained by, one or more of these mediating variables.

The questions pertaining to mediation were planned to be answered by completing a Barron and Kenny (1986) mediation analysis. According to Keith (2006) and Barron and Kenny (1986) a mediation analysis consists of three steps, with certain requirements that must be met at

each step: 1) the effect of time spent bed-sharing (predictor) on marital satisfaction (dependent variable) is statistically significant in a regression of marital satisfaction (dependent variable) on time spent bed-sharing (predictor); 2) the regression of marital satisfaction (dependent variable) on the mediator results in a statistically significant effect; and 3) the regression of marital satisfaction (dependent variable) on both time spent bed-sharing (predictor) and the mediator results in a reduction of the effect from step one. This analysis was planned to be conducted for each possible mediator – degree of wives’ sexual satisfaction, degree of wives’ fatigue and satisfaction with bed-sharing.

Chapter Summary

The current study used a cross-sectional survey design to examine the relationship between time spent bed-sharing and marital satisfaction. Time spent bed-sharing was measured by multiplying the number of hours mothers indicated they typically bed-shared in a night by the number of days they typically bed-shared in a week. Marital satisfaction was measured using the Satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976). Participants were classified as reactive bed-sharers if they indicated that they bed-shared due to infant night-time problems, such as infant would not fall asleep independently, and were classified as intentional bed-sharers if they indicated that their reason for bed-sharing was not in reaction to an infant night-time problem (Ramos, 2003). Fatigue was measured with the Iowa Fatigue Scale (IFS; Hartz, Bentler, & Watson, 2003). Sexual satisfaction was assessed by asking the participants to rate their satisfaction with the sexual relationship with their partner on a scale of one to five. Amount of perceived husband support was determined by wives’ response to six “yes” or “no” questions. Infant temperament was assessed using the Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979).

After receiving ethical approval from the UBC research ethics board, 150 participants were recruited through internet postings, flyers, and snowball email sampling. Participants Completed the measures online from computers at their own home. A final sample of 98 mothers in committed relationships who had give birth to their first child between 6 to 12 months prior to participating in the study was obtained. The plan for analyzing the data provided by the participants involved calculating descriptive statistics, conducting independent samples t-tests, analyzing bivariate correlations, and conducting a hierarchical multiple regression analysis, a moderation regression analysis, and a mediation regression analysis. The results of these analyses are presented in the next chapter.

CHAPTER IV: RESULTS

The results of the study are presented in this chapter. First, issues of missing data, assumptions, multicollinearity, and power are discussed. Then, descriptive statistics are explored. Information about the frequency of different types of bed-sharing is provided, as well as the amount of time spent bed-sharing. Demographic information is presented for bed-sharers and non-bed-sharers, and for intentional and reactive bed-sharers. Differences between groups are discussed. Information on the means and standard deviations for the psychological variables (marital satisfaction, perceived husband support, sexual satisfaction, fatigue, infant temperament, satisfaction with sleeping arrangements, and perceived husband support for sleeping arrangements) are reported. This information is provided for bed-sharers and non-bed-sharers, and for intentional and reactive bed-sharers. Differences between groups are discussed.

Next, correlational data are presented. Results are reported for correlations between demographic and psychological variables, for the sample as a whole and for bed-sharers only. Results are reported for correlations among the psychological variables, for bed-sharers and non-bed-sharers, and for intentional and reactive bed-sharers. Differences between groups are discussed.

Next, the results are presented for the main research question of whether time-spent bed-sharing is predictive of marital satisfaction. This analysis is run using the whole sample, including both bed-sharers and non-bed-sharers. Then the attention is focused in on the group of bed-sharers only, and the results are reported for the question of whether group classification as an intentional or reactive bed-sharer moderates the relationship between time spent bed-sharing and marital satisfaction. Finally, the question of mediating variables is addressed.

Missing Data

In the current study, missing data may have been due, in part, to participants unintentionally missing questions and, in part, because participants were informed that they did not need to answer any questions that made them uncomfortable. When participants were missing data on more than 20% of a scale, or when they did not respond to the question on sexual satisfaction (since it was the only question for this measure), their entire data set was excluded. In the current sample, 11 participants did not answer any questions, 21 participants had more than 20% of data missing on one or more of the study measures, and two participants did not answer the one question on sexual satisfaction. The data sets of these participants were excluded. If participants were missing data on less than 20% of a scale, the missing data were estimated and replaced using the series mean (Tabachnick & Fidell, 2001).

Preliminary Analyses

The appropriateness of linear analysis for the current data was determined by examining assumptions of linearity, independence, normality, equality of variances, and multicollinearity. Together, the results of the examinations suggested that the data adequately satisfied the assumptions for linear analysis (Tabachnick & Fidell, 2001).

Power analyses were conducted to determine whether the sample size was large enough to detect significant effects for the t-tests, correlation analyses, and multiple regression analyses conducted (Cohen, 1992). It was determined that there was enough power to detect effect sizes when conducting correlation and multiple regression analyses for the current sample; however, only a small number of participants were classified as non-bed-sharers ($n = 17$) and as reactive bed-sharers ($n = 21$), leading to the conclusion that there may not be enough power to detect

significant differences between groups when non-bed-sharers and reactive bed-sharers are included in the analyses (Cohen, 1992). Effect sizes will be provided in these cases.

Descriptive Statistics

The demographic and psychological variables for the sample are described in this section. First, information is provided on the characteristics of the sleeping arrangements utilized by the participants in the study. Next, descriptive information is provided for the demographic variables. This information is provided for the subgroups of bed-sharers and non-bed-sharers, and the subgroups of intentional and reactive bed-sharers. Finally, the means, standard deviations, and range are provided for the psychological variables (marital satisfaction, perceived husband support, sexual satisfaction, fatigue, infant temperament, satisfaction with sleeping arrangements, and perceived husband support for sleeping arrangements). This information is provided for the subgroups of bed-sharers and non-bed-sharers, and the subgroups of intentional and reactive bed-sharers.

Sleeping Arrangements

In the current sample, the majority of the 98 mothers indicated that they had bed-shared at some point in the first year of their infant's life (83%, $n = 81$). Of these bed-sharers, 70.4% ($n = 57$) reported that they were currently using bed-sharing as a sleeping arrangement option at the time of participation in the study. These bed-sharing mothers spent an average of 23.62 hours per week sleeping on the same sleeping surface with their infants. Within the 81 bed-sharers, the majority of mothers indicated that they were intentional bed-sharers (74%, $n = 60$). A distinction has been made between two types of bed-sharing based on parents' reason for deciding to bed-share: intentional bed-sharing is characterized by parents who chose to bed-share based on their belief that it is best for their infant, and reactive bed-sharing is characterized by parents who bed-

share in response to infant sleep problems (Ramos, 2003). Intentional bed-sharers were found to spend an average of 25.23 hours per week bed-sharing, and reactive bed-sharers spent an average of 19.04 hours per week bed-sharing. Table 2 presents the means, standard deviations, and range of time spent bed-sharing for the different groups. Results of an independent samples t-test found no statistically significant differences of time spent bed-sharing between intentional and reactive bed-sharers, $t(79) = .983, ns$, corresponding to a small effect size (Cohen, 1992).

Table 2
Hours per Week Spent Bed-Sharing By Bed-Sharing Group

| Bed-Sharing Group | <i>N</i> (%) | <i>M</i> | <i>SD</i> | <i>Range</i> |
|-------------------|--------------|----------|-----------|--------------|
| Bed-Sharers | 81 (82.7%) | 23.63 | 24.82 | .25 – 70.00 |
| Non-Bed-Sharers | 17 (17.3%) | 0 | 0 | 0 |
| Intentional | 60 (74.1%) | 25.23 | 24.86 | .25 – 70.00 |
| Reactive | 21 (25.9%) | 19.04 | 24.73 | .38 – 70.00 |

Demographic Descriptives

Bed-Sharers and Non-Bed-Sharers

Descriptive information on the demographic variables was determined for the bed-sharers and non-bed-sharers in the current study. Infant age ranged from 6 – 12 months for both bed-sharers and non-bed-sharers, as was indicated by the inclusionary criteria for participation in the study. Mean infant age was 8.01 months ($SD = 1.89$) for bed-sharers, and 7.93 months ($SD = 1.55$) for non-bed-sharers. The frequency of male and female infants was approximately equal for both bed-sharers and non-bed-sharers. For bed-sharers, 55.6% of the infants were male ($n = 45$), and for non-bed-sharers, 47.1% of the infants were male ($n = 8$). The majority of both bed-sharers and non-bed-sharers indicated they breastfed. The percentage of infants who breastfed was slightly higher for bed-sharers (96.3%, $n = 78$) than non-bed-sharers (88.2%, $n = 15$). Slightly more than half (53%) of both bed-sharing and non-bed sharing mothers indicated they were currently on maternity leave. The remainder of the bed-sharing mothers were relatively equally spread between working full-time (17.3%, $n = 14$), working part-time (14.8%, $n = 12$), and not working outside the home (14.8%, $n = 12$). For non-bed-sharing mothers, 11.8% ($n = 2$) indicated they were working full-time, 11.8% ($n = 2$) indicated they were working part-time, and 23.5% ($n = 4$) indicated they were not working outside the home. Frequencies for bed-sharers and non-bed-sharers on the demographic variables of mom's age, relationship length, ethnicity, education, and income are presented in Table 3.

Table 3

Demographic and Background Characteristics of Bed-Sharers (N = 81) and Non-Bed-Sharers (N = 17)

| Variable | Frequency (Percent) | |
|----------------------------|---------------------|-----------------|
| | Bed-Sharers | Non-Bed-Sharers |
| Mom Age | | |
| 19 or younger | 1 (1.2%) | 0 (0) |
| 20 – 29 | 30 (37%) | 2 (11.8%) |
| 30 – 39 | 48 (59.3%) | 13 (76.5%) |
| 40 – 49 | 1 (1.2%) | 2 (11.8%) |
| 50 or older | 1 (1.2%) | 0 (0) |
| Relationship Length | | |
| 6 months or less | 1 (1.2%) | 0 (0) |
| 1 – 2 years | 22 (27.2%) | 3 (17.6%) |
| 3 – 4 years | 22 (27.2%) | 3 (17.6%) |
| 5 – 6 years | 17 (21%) | 5 (29.4%) |
| 7 years or more | 19 (23.5%) | 6 (35.3%) |
| Ethnicity | | |
| Caucasian | 70 (86.4%) | 13 (76.6%) |
| Asian | 6 (7.4%) | 3 (17.6%) |
| Other | 5 (6.2%) | 1 (5.9%) |
| Education | | |
| Some High School | 3 (3.7%) | 1 (5.9%) |
| High School Diploma | 1 (1.2%) | 1 (5.9%) |
| Some College or University | 18 (22.2%) | 1 (5.9%) |
| College Degree | 7 (8.6%) | 0 (0) |
| Undergraduate Degree | 34 (42%) | 12 (70.6%) |
| Graduate Degree | 18 (22.2%) | 2 (11.8%) |
| Income | | |
| \$39,000 or less | 4 (4.9%) | 1 (5.9%) |
| \$40,000 - \$79, 000 | 28 (34.6%) | 3 (17.6%) |
| \$80,000 or more | 48 (59.3%) | 12 (70.6%) |
| Did not Report | 1 (1.2%) | 1 (5.9%) |

Intentional and Reactive Bed-Sharers

Descriptive information on the demographic variables was determined for the intentional bed-sharers and reactive bed-sharers in the current study. Infant age ranged from 6 – 12 months for both intentional and reactive bed-sharers, as was indicated by the inclusionary criteria for participation in the study. Mean infant age was 7.98 months ($SD = 1.92$) for intentional bed-sharers, and 8.12 months ($SD = 1.86$) for reactive bed-sharers. The frequency of male and female infants was approximately equal for both intentional and reactive bed-sharers. For intentional bed-sharers, 55% of the infants were male ($n = 33$), and for reactive bed-sharers, 57.1% of the infants were male ($n = 12$). One intentional bed-sharer did not report the gender of her infant (1.7%). The majority of both intentional (96.7%, $n = 58$) and reactive (95.2%, $n = 20$) bed-sharers indicated they breastfed. Slightly more than half of both intentional (51.6%, $n = 31$) and reactive (57.2%, $n = 12$) bed-sharing mothers indicated they were currently on maternity leave. The remainder of the intentionally bed-sharing mothers were relatively equally spread between working full-time (16.7%, $n = 10$), working part-time (16.7%, $n = 10$), and not working outside the home (15%, $n = 9$). For the remainder of the reactively bed-sharing mothers, 19% ($n = 4$) indicated they were working full-time, 9.5% ($n = 2$) indicated they were working part-time, and 14.3% ($n = 3$) indicated they were not working outside the home. Frequencies for intentional and reactive bed-sharers on the demographic variables of mom's age, relationship length, ethnicity, education, and income are presented in Table 4.

Table 4

Demographic and Background Characteristics of Intentional (N = 60) and Reactive (N = 21) Bed-Sharers

| Variable | Frequency (Percent) | |
|-------------------------------|----------------------------|-------------------------|
| | Intentional Bed-Sharers | Reactive Bed-Sharers |
| Mom Age | | |
| 19 or younger | 0 (0) | 1 (4.8%) |
| 20 – 29 | 23 (38.3%) | 7 (33.3%) |
| 30 – 39 | 35 (58.4%) | 9 (42.9%) |
| 40 – 49 | 1 (1.7%) | 4 (19%) |
| 50 or older | 1 (1.7%) | 0 (0) |
| Relationship Length | | |
| 6 months or less | 1 (1.7%) | 0 (0) |
| 1 – 2 years | 17 (28.3%) | 5 (23.8%) |
| 3 – 4 years | 18 (30%) | 4 (19%) |
| 5 – 6 years | 11 (18.3%) | 6 (28.6%) |
| 7 years or more | 13 (21.7%) | 6 (28.6%) |
| Ethnicity | | |
| Caucasian | 52 (86.6%) | 18 (85.7%) |
| Asian | 4 (6.7%) | 2 (9.5%) |
| Other | 4 (6.7%) | 1 (4.8%) |
| Education | | |
| Some High School | 2 (3.3%) | 1 (4.8%) |
| High School Diploma | 1 (1.7%) | 0 (0) |
| Some College or University | 14 (23.3%) | 4 (19%) |
| College Degree | 6 (10%) | 1 (4.8%) |
| Undergraduate Degree | 26 (43.3%) | 8 (38.1%) |
| Graduate Degree | 11 (18.3%) | 7 (33.3%) |
| Income | | |
| \$39,000 or less | 3 (5%) | 1 (4.8%) |
| \$40,000 - \$79, 000 | 21 (35%) | 7 (33.3%) |
| \$80,000 or more | 36 (60%) | 12 (57.1%) |
| Did not report | 0 (0) | 1 (4.8%) |

Psychological Variable Descriptives

Bed-Sharers and Non-Bed-Sharers

Means and standard deviations for bed-sharers' and non-bed-sharers' marital satisfaction, perceived husband support, sexual satisfaction, fatigue, infant temperament, and satisfaction with sleeping arrangements are presented in Table 5. The term "sleeping arrangements" is used to signify bed-sharing (infant sleeping on the same sleeping surface as the parents) for bed-sharers, and independent sleep (infant sleeping in a crib or other location of solitary sleep) for non-bed-sharers. Two-tailed independent samples t-tests were used to compare bed-sharers and non-bed-sharers on dependent and independent variables. There were no statistically significant differences between bed-sharers and non-bed-sharers' means for marital satisfaction $t(96) = 1.53$, *ns*, sexual satisfaction, $t(96) = 1.47$, *ns*, fatigue, $t(96) = -1.80$, *ns*, or infant temperament, $t(96) = -.799$, *ns*. The effect sizes for the group differences in marital satisfaction, sexual satisfaction, and fatigue were each small to medium, and the effect size for infant temperament was small. Results indicated statistically significant differences in perceived husband support and sleeping arrangements, with bed-sharers reporting less perceived husband support, $t(92) = 2.76$, $p = .007$, and lower satisfaction with sleeping arrangements, $t(96) = 3.06$, $p = .003$ compared to non-bed-sharers.

Table 5

Means of the Psychological Variables for Bed-Sharers (N = 81) and Non-Bed-Sharers (N = 17)

| Variable | Mean | | Standard Deviation | | Range | |
|--|-------------|-----------------|--------------------|-----------------|-------------|-----------------|
| | Bed-Sharers | Non-Bed-Sharers | Bed-Sharers | Non-Bed-Sharers | Bed-Sharers | Non-Bed-Sharers |
| Marital Satisfaction | 3.81 | 4.12 | 0.75 | 0.77 | 2.00 - 5.00 | 2.60 - 5.00 |
| Perceived Husband Support | 0.91** | 0.98** | 0.21 | 0.06 | 0.00 - 1.00 | 0.83 - 1.00 |
| Sexual Satisfaction | 3.02 | 3.47 | 1.17 | 0.94 | 1.00 - 5.00 | 1.00 - 5.00 |
| Fatigue | 2.69 | 2.35 | 0.73 | 0.65 | 1.09 - 4.27 | 1.27 - 4.00 |
| Infant Temperament | 2.60 | 2.47 | 0.60 | 0.67 | 1.65 - 4.61 | 1.12 - 3.39 |
| Satisfaction with Sleeping Arrangements ^c | 3.41** | 4.53** | 1.37 | 1.33 | 1.00 - 5.00 | 1.00 - 5.00 |
| Perceived Husband Support for Sleeping Arrangements ^c | 4.17 | 5.00 | 1.09 | 0.00 | 1.00 - 5.00 | 5.00 - 5.00 |

Note. ^cSleeping Arrangements signifies Bed-Sharing for Bed-Sharers, and Independent Sleep for Non-Bed-Sharers

* $p < .05$, two-tailed. ** $p < .01$, two-tailed

Intentional and Reactive Bed-Sharers

Means and standard deviations for intentional and reactive bed-sharers' marital satisfaction, perceived husband support, sexual satisfaction, fatigue, infant temperament, and satisfaction with bed-sharing are presented in Table 6. In research question three, it was hypothesized that reactive bed-sharers would have significantly less satisfaction with bed-sharing, less sexual satisfaction, less marital satisfaction, more fatigue, and more difficult infants than intentional bed-sharers.

A series of independent samples t-tests indicated statistically significant differences between intentional and reactive bed-sharers for infant temperament, $t(79) = -2.90, p = .005$, and satisfaction with bed-sharing, $t(79) = 3.47, p = .001$, both corresponding to a large effect size. Intentional bed-sharers reported significantly less difficult infants and greater satisfaction with bed-sharing. No statistically significant differences were found for marital satisfaction, $t(79) = .317, ns$, perceived husband support, $t(79) = -.381, ns$, sexual satisfaction $t(79) = -1.41, ns$, fatigue, $t(79) = -1.13, ns$, time spent bed-sharing, $t(79) = .983, ns$, nor perceived husband support of bed-sharing, $t(79) = .608, ns$. Following Cohen's (1992) criteria, results showed a medium effect size for the mean differences for sexual satisfaction, and a small effect size for fatigue, time spent bed-sharing, and perceived husband support of bed-sharing. The effect sizes for marital satisfaction and for perceived husband support were very small.

Table 6

Means and Standard Deviations of the Psychological Variables for Reactive (N = 21) and Intentional (N = 60) Bed-Sharers

| Variable | Mean | | Standard Deviation | | Range | |
|---|----------|-------------|--------------------|-------------|-----------|-------------|
| | Reactive | Intentional | Reactive | Intentional | Reactive | Intentional |
| Marital Satisfaction | 3.77 | 3.83 | .82 | .73 | 2 - 5 | 2 - 5 |
| Perceived Husband Support | 0.92 | 0.90 | .20 | .22 | .17 - 1 | 0 - 1 |
| Sexual Satisfaction | 3.33 | 2.94 | 1.20 | 1.15 | 2 - 5 | 1 - 5 |
| Fatigue | 2.85 | 2.64 | .89 | .67 | 1.1 - 4.3 | 1.5 - 4.1 |
| Infant Temperament | 2.91** | 2.49** | .70 | .52 | 1.9 - 4.6 | 1.7 - 3.9 |
| Hours/Week Bed-Sharing | 19.04 | 25.23 | 24.73 | 24.86 | .38 - 70 | .25 - 70 |
| Satisfaction with Bed-Sharing | 2.57** | 3.70** | 1.21 | 1.31 | 1 - 5 | 1 - 5 |
| Perceived Husband Support for Bed-Sharing | 4.05 | 4.22 | 1.33 | 1.01 | 1 - 5 | 1 - 5 |

Note. * $p < .05$, two-tailed. ** $p < .01$, two-tailed

Pearson Product-Moment Correlations

A series of Pearson product-moment correlations were computed to examine the bivariate relationships between variables. First, correlations between the demographic variables and the major study variables (time spent bed-sharing and marital satisfaction) are reported for the sample as a whole and for bed-sharers only (see Table 7). The primary purpose of this was to check for any demographic variables that should be used as control variables in the regression analyses. Then, correlations between the major study variables (time spent bed-sharing and marital satisfaction) and other psychological variables (perceived husband support, sexual satisfaction, fatigue, infant temperament, satisfaction with sleeping arrangements, and perceived husband support for sleeping arrangements) are reported for the sample as a whole (see Table 8) bed-sharers and non-bed-sharers (see Table 9), and for intentional and reactive bed-sharers (see Table 10). Effect sizes for the correlations and subsequent results are considered using Cohen's (1992) criteria where (a) $r = 0.1$ signifies a small effect, (b) $r = 0.3$ signifies a medium effect, and (c) $r = 0.5$ signifies a large effect.

Intercorrelations between Demographic and Major Study Variables

Whole Sample

Several demographic variables (mother's age, relationship length, culture, education, and income) were examined in relation to time spent bed-sharing and marital satisfaction, in order to determine any variables that would need to be used as control variables in the regression analysis between time spent bed-sharing and marital satisfaction. Intercorrelations between the two major study variables and the demographic variables were statistically significant only for income and relationship length (see column 2 and column 3 of Table 7). Mothers who had a larger income reported higher marital satisfaction ($r = .238, p = .018$) and less time spent bed-

sharing ($r = -.246, p = .015$). Mothers who had been in their relationship for longer reported higher marital satisfaction ($r = .228, p = .024$) and less time spent bed-sharing ($r = -.247, p = .014$). There was also a significant positive relationship between marital satisfaction and mother's age ($r = .21, p = .039$). Mothers who were older had higher marital satisfaction.

Bed-Sharers Only

Intercorrelations between the two major study variables and the demographic variables were also analyzed for the sub-group of bed-sharers only, in order to determine any variables that would need to be used as control variables in the moderation analysis. Correlations were statistically significant only for income and relationship length (see column 2 and column 3 of table 7). Mothers who had a larger income reported higher marital satisfaction ($r = .282, p = .011$) and less time spent bed-sharing ($r = -.258, p = .020$). Mothers who had been in their relationship for longer reported higher marital satisfaction ($r = .242, p = .030$) and less time spent bed-sharing ($r = -.230, p = .039$).

Table 7

Correlations for the Major Study Variables and Demographic Variables for the Whole Sample (N = 98) and for Bed-Sharers Only (N = 81)

| N=98 (N=81) | Time Spent Bed-Sharing | Marital Satisfaction | Mother's Age | Relationship Length | Education |
|-------------------------|---------------------------|-------------------------|-----------------|------------------------|-----------------|
| Marital Satisfaction | -.279** (-.266*) | -- | | | |
| Mother's Age | -.191 (-.165) | .209* (.143) | -- | | |
| Relationship Length | -.247* (-.230*) | .228* (.242*) | .118 (.093) | -- | |
| Education | -.121 (-.135) | .191 (.186) | .320** (.359**) | .173 (.166) | -- |
| Income | -.246* (-.258*) | .238* (.282*) | .236* (.302**) | .176 (.200) | .266** (.332**) |

Note. Correlations for "Bed-Sharers Only" appear in parentheses.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Correlations for Major Study Variables and Psychological Variables

Bivariate correlation analyses for the major study variables and the psychological variables were explored for the sample as a whole, by group classification as bed-sharer or non-bed-sharer, and by group classification as intentional or reactive bed-sharer (see Table 8, 9, and 10 respectively).

Whole Sample

Correlations between the psychological variables for the sample as a whole can be seen in Table 8. The major variables of interest were marital satisfaction and time spent bed-sharing. As seen in column 2 of Table 8, there was a statistically significant and negative correlation between time spent bed-sharing and marital satisfaction ($r = -.279, p = .005$), corresponding to a small to medium effect size. Mothers who reported spending more time bed-sharing indicated lower marital satisfaction. There was also a statistically significant and negative correlation between time spent bed-sharing and perceived husband support ($r = -.202, p = .046$), corresponding to a small to medium effect size. Mother who reported spending more time bed-sharing indicated lower perceived husband support.

As seen in column 3 of Table 8, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support ($r = .695, p < .001$), corresponding to a large effect size. Mothers with higher marital satisfaction also indicated higher perceived husband support. Also seen in column 3, there was a statistically significant and positive correlation between marital satisfaction and sexual satisfaction ($r = .460, p < .001$), corresponding to a medium to large effect size. Mothers with higher marital satisfaction also indicated higher sexual satisfaction. There was a statistically significant and negative correlation between marital satisfaction and fatigue ($r = -.314, p = .002$), corresponding to a medium effect

size. Mothers who indicated higher levels of fatigue reported lower marital satisfaction. Finally, there were also statistically significant and positive correlations between marital satisfaction and perceived husband support for both bed-sharing ($r = .340, p = .002$), and sleeping arrangements ($r = .276, p = .006$), corresponding to medium effect sizes. Mothers who reported higher marital satisfaction also indicated higher perceived husband support for bed-sharing or other sleeping arrangements.

Table 8

Correlations for Major Study Variables and Psychological Variables for the Whole Sample

| N = 98 | Hours/Week Bed-Sharing | Marital Satisfaction | PHS | Sexual Satisfaction | Fatigue | Infant Temperament | Satisfaction with Bed-Sharing | PHS for Bed- Sharing | Satisfaction with SA |
|----------------------------------|---------------------------|-------------------------|---------|------------------------|---------|-----------------------|-------------------------------------|-------------------------|-------------------------|
| Marital Satisfaction | -.279** | -- | | | | | | | |
| PHS | -.202* | .695*** | -- | | | | | | |
| Sexual Satisfaction | -.090 | .460*** | .412*** | -- | | | | | |
| Fatigue | .068 | -.314** | -.181 | -.412*** | -- | | | | |
| Infant Temperament | -.062 | -.185 | -.200 | -.274** | .399*** | -- | | | |
| Satisfaction with Bed-Sharing | .166 | -.056 | -.045 | .017 | -.343** | -.370** | -- | | |
| PHS for Bed- Sharing | .023 | .340** | .287** | .377** | -.267* | -.300** | .178 | -- | |
| Satisfaction with SA | -.163 | .231* | .126 | .420*** | -.280** | -.156 | .098 | .491*** | -- |
| PHS for SA | -.210* | .276** | .166 | .392*** | -.223* | -.205* | .072 | .559*** | .650*** |

Note: PHS = perceived husband support, SA = Sleeping Arrangements

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Bed-sharers and Non-Bed-Sharers

Bivariate correlation analyses for the psychological variables were explored within groups for bed-sharers ($n = 81$) and non-bed-sharers ($n = 17$) (see Table 9). Statistically significant correlations are reported for the major study variables of interest, time spent bed-sharing and marital satisfaction.

Bed-sharers. As seen in column 2 of Table 9, there was a statistically significant and negative correlation between time spent bed-sharing and marital satisfaction ($r = -.226, p = .016$), corresponding to a small to medium effect size. Bed-sharing mothers who indicated more time spent bed-sharing reported lower marital satisfaction.

As seen in column 3 of Table 9, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support ($r = .727, p < .001$), corresponding to a large effect size. Bed-sharing mothers who reported higher marital satisfaction also reported higher perceived husband support. There was a statistically significant and positive correlation between marital satisfaction and sexual satisfaction ($r = .425, p < .001$), corresponding to a medium to large effect size. Bed-sharing mothers who indicated higher marital satisfaction also indicated higher sexual satisfaction. There was a statistically significant and negative correlation between marital satisfaction and fatigue ($r = -.239, p = .032$), corresponding to a small to medium effect size. Bed-sharing mothers who reported higher marital satisfaction indicated lower levels of fatigue. Finally, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support of bed-sharing ($r = .340, p = .002$), corresponding to a medium effect size. Bed-sharing mothers with higher reported marital satisfaction perceived more support from their husbands for bed-sharing.

Non-bed-sharers. As indicated in column 3 of Table 9, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support ($r = .648, p = .005$), corresponding to a large effect size. Non-bed-sharing mothers who reported higher marital satisfaction also reported higher perceived husband support. There was a statistically significant and negative correlation between marital satisfaction and fatigue ($r = -.601, p = .011$), corresponding to a large effect size. Non-bed-sharing mothers who reported higher marital satisfaction indicated lower levels of fatigue. There was also a statistically significant and negative correlation between marital satisfaction and infant temperament ($r = -.525, p = .030$), corresponding to a large effect size. Non-bed-sharing mothers who reported higher marital satisfaction indicated they had less difficult infants. Fisher's Z-test (Lowry, 2009) was used to analyze whether there were any significant differences in the correlations by group. No significant differences for correlations between psychological variables based on group membership as a bed-sharer or non-bed-sharer were found.

Table 9

Correlations for the Psychological Variables for Bed-Sharers (N = 81) and Non-Bed-Sharers (N = 17)

| N=81 (N=17) | Hours/Week Bed-Sharing | Marital Satisfaction | PHS | Sexual Satisfaction | Fatigue | Infant Temperament | Satisfaction with SA |
|----------------------------|---------------------------|-------------------------|-----------------|------------------------|-----------------|-----------------------|-------------------------|
| Marital Satisfaction | -.266* (a) | -- | | | | | |
| PHS | -.162 (a) | .727*** (.648**) | -- | | | | |
| Sexual Satisfaction | -.041 (a) | .465*** (.340) | .403*** (.587*) | -- | | | |
| Fatigue | .001 (a) | -.239* (-.601*) | -.165 (-.166) | -.427*** (-.180) | -- | | |
| Infant Temperament | -.112 (a) | -.096 (-.525*) | -.195 (-.332) | -.244* (-.403) | .330** (.709**) | -- | |
| Satisfaction with SA | .166 (a) | -.056 (.157) | -.045 (-.133) | .017 (.188) | -.343** (.174) | -.370** (.086) | -- |
| PHS for SA | .023 (a) | .340** (a) | .287** (a) | .377** (a) | -.267* (a) | -.300** (a) | .178 (a) |

Notes. SA = Sleeping Arrangements: For Bed-Sharers SA = Bed-Sharing; for Non-Bed-Sharers SA = Independent Sleeping.

The correlations for Non-Bed-Sharers appear in parentheses.

(a) indicates that the correlation cannot be computed because at least one of the variables is a constant.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Intentional and Reactive Bed-Sharers

Bivariate correlation analyses for the psychological variables were explored within groups for intentional ($n = 60$) and reactive ($n = 21$) bed-sharers (see Table 10). Statistically significant correlations are reported for the major study variables of interest: time spent bed-sharing and marital satisfaction.

Intentional bed-sharers. As seen in column 3 of Table 10, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support ($r = .774, p < .001$), corresponding to a large effect size. Intentionally bed-sharing mothers with higher marital satisfaction also reported higher perceived husband support. There was a statistically significant and positive correlation between marital satisfaction and sexual satisfaction ($r = .435, p = .001$), corresponding to a medium to large effect size. Intentionally bed-sharing mothers with higher marital satisfaction reported higher sexual satisfaction. There was also a statistically significant and positive correlation between marital satisfaction and perceived husband support for bed-sharing ($r = .290, p = .025$), corresponding to a small to medium effect size. Intentionally bed-sharing mothers with higher marital satisfaction reported higher perceived husband support for bed-sharing. As seen in column 2, for intentional bed-sharers, time spent bed-sharing was not significantly correlated with any of the psychological variables.

Reactive bed-sharers. As seen in column 2 of Table 10, there was a statistically significant and negative correlation between time spent bed-sharing and marital satisfaction ($r = -.685, p = .001$), corresponding to a large effect size. Reactively bed-sharing mothers who reported more time spent bed-sharing indicated lower marital satisfaction. There was also a statistically significant and negative correlation between time spent bed-sharing and perceived

husband support ($r = -.685, p = .001$), corresponding to a large effect size. Reactively bed-sharing mothers who spent more time bed-sharing indicated lower perceived husband support.

As seen in column 3 of Table 10, there was a statistically significant and positive correlation between marital satisfaction and perceived husband support ($r = .699, p < .001$), corresponding to a large effect size. Reactively bed-sharing mothers who reported higher marital satisfaction also reported higher perceived husband support. There was also a statistically significant and positive correlation between marital satisfaction and sexual satisfaction ($r = .582, p = .006$), corresponding to a large effect size. Reactively bed-sharing mothers who reported higher marital satisfaction also reported higher sexual satisfaction. There was a statistically significant and positive correlation between marital satisfaction and perceived husband support for bed-sharing ($r = .439, p = .047$), corresponding to a medium to large effect size. Reactively bed-sharing mothers with higher marital satisfaction perceived greater support for bed-sharing from their husbands.

Group differences for intentional and reactive bed-sharers. Analyses using Fisher's Z-test (Lowry, 2009) were conducted to determine if there were correlations between psychological variables that were significantly different for intentional versus reactive bed-sharers. Four correlations were determined to be significantly different for reactive bed-sharers and intentional bed-sharers.

First, as shown in column 2 of Table 10, for reactive bed-sharers, time spent bed-sharing was statistically significantly correlated with marital satisfaction ($r = -.685, p = .001$), while for intentional bed-sharers, time spent bed-sharing was not statistically significantly correlated with marital satisfaction ($r = -.116, ns$). Analysis indicated that the correlation between time spent bed-sharing and marital satisfaction was statistically significantly different for intentional and

reactive bed-sharers ($p = .008$). Reactively bed-sharing mothers who spent more time bed-sharing reported lower marital satisfaction, while results for intentionally bed-sharing mothers showed no significant correlation between time spent bed-sharing and marital satisfaction.

Second, as shown in column 2 of Table 10, for reactive bed-sharers, time spent bed-sharing was statistically significantly correlated with perceived husband support ($r = -.685, p = .001$). For intentional bed-sharers, time spent bed-sharing was not statistically significantly correlated with perceived husband support ($r = .006, ns$). Results indicated that the correlation between time spent bed-sharing and perceived husband support was statistically significantly different for intentional and reactive bed-sharers ($p = .002$). Reactively bed-sharing mothers who spent more time bed-sharing perceived less husband support, while results for intentionally bed-sharing mothers showed no significant correlation between these variables.

Third, as shown in column 6 of Table 10, for reactive bed-sharers, satisfaction with bed-sharing was statistically significantly correlated with fatigue ($r = -.694, p < .001$). This correlation was statistically significantly different ($p = .012$) from the correlation between satisfaction with bed-sharing and fatigue for intentional bed-sharers ($r = -.173, ns$). Reactively bed-sharing mothers with greater satisfaction with bed-sharing were less fatigued. There was no significant correlation between these variables for intentionally bed-sharing mothers.

Finally, as shown in column 7 of Table 10, for reactive bed-sharers, perceived husband support of bed-sharing was statistically significantly correlated with infant temperament ($r = -.657, p = .001$). This correlation was statistically significantly different ($p = .009$) from the correlation between perceived husband support of bed-sharing and infant temperament for intentional bed-sharers ($r = -.079, ns$). Reactively bed-sharing mothers who reported more

difficult infants perceived less husband support for bed-sharing. There was no statistically significant correlation between these variables for intentionally bed-sharing mothers.

Table 10

Correlations between Psychological Variables for Intentional (N = 60) and Reactive (N = 21) Bed-Sharers

| N=60 (N=21) | Hours/Week Bed-Sharing | Marital Satisfaction | PHS | Sexual Satisfaction | Fatigue | Infant Temperament | Satisfaction with Bed-Sharing |
|-------------------------------------|------------------------------|-------------------------|----------------|------------------------|-------------------------------|------------------------------|-------------------------------------|
| Marital Satisfaction | -.116 (-.685**) ^a | -- | | | | | |
| PHS | .006 (-.685**) ^a | .744*** (.699***) | -- | | | | |
| Sexual Satisfaction | .053 (-.245) | .435** (.582**) | .383** (.461*) | -- | | | |
| Fatigue | .001 (.047) | -.183 (-.343) | -.070 (-.424) | -.426** (-.530*) | -- | | |
| Infant Temperament | -.194 (.163) | -.014 (-.239) | -.091 (-.536*) | -.321* (-.298) | .191 (.507*) | -- | |
| Satisfaction with Bed-Sharing | .097 (.260) | -.101 (.000) | -.088 (.162) | .062 (.138) | -.173 (-.694***) ^a | -.268* (-.359*) | -- |
| PHS for Bed- Sharing | .091 (-.155) | .290* (.439*) | .229 (.453*) | .321* (.558*) | -.156 (-.441*) | -.079 (-.657**) ^a | .102 (.327) |

Note. The correlations for Reactive Bed-Sharers appear in parentheses.

PHS = perceived husband support.

In addition, r_{xy}^a indicates a statistically significant difference between correlations for Intentional and Reactive Bed-Sharers at $p < .05$, two-tailed. * $p < .05$, two-tailed. ** $p < .01$, two-tailed. *** $p < .001$, two-tailed.

Regression Analyses

Regression Analysis: Time Spent Bed-sharing Predicts Marital Satisfaction

Research question 1: Does time spent bed-sharing help predict variance in wives' marital satisfaction during the transition to parenthood?

Hypothesis 1: Time spent bed-sharing will contribute significantly to the prediction of marital satisfaction. More time spent bed-sharing will predict lower marital satisfaction.

Hierarchical multiple linear regression was computed using the whole sample to investigate whether time spent bed-sharing predicted marital satisfaction while controlling for income and relationship length (since they were significantly correlated with both time spent bed-sharing and marital satisfaction). Income and relationship length were entered as the predictor variables in step 1, and time spent bed-sharing was entered in step 2. As seen in Table 11, when income and relationship length were entered, they predicted marital satisfaction, $F(2, 95) = 4.82, p = .010$, adjusted $R^2 = .073$. As indicated by the R^2 , approximately 7% of the variance in marital satisfaction could be predicted by income and relationship length. When time spent bed-sharing was entered, it significantly improved the prediction, R^2 change = .037, $F(1,94) = 3.98, p = .049$. As indicated by the R^2 in step 2, when time spent bed-sharing was entered, 10% of the variance in marital satisfaction could be predicted. The entire group of variables significantly predicted marital satisfaction, $F(3,94) = 4.64, p = .005$, adjusted $R^2 = .10$. This is a small effect according to Cohen (1992). For the sample as a whole, time spent bed-sharing predicted a small amount of variance in marital satisfaction. Greater time spent bed-sharing predicted lower marital satisfaction.

As indicated by the significance of the beta values in Table 11, only time spent bed-sharing significantly contributed to the model. As indicated by the standardized beta value for

time spent bed-sharing, as time spent bed-sharing is increased by one standard deviation ($SD = 24.82$ hours/week), marital satisfaction is decreased by .203 standard deviations ($SD = .75$), so for every 24.82 more hours/week spent bed-sharing, marital satisfaction decreased by .15 points when income and relationship length were held constant.

Table 11

Hierarchical Regression Analysis – The impact of Time Spent Bed-Sharing on Marital Satisfaction while controlling for Income and Relationship Length

| | B | SE B | β |
|------------------------|----------|-------------|----------|
| Step 1 | | | |
| Constant | 2.815 | .349 | |
| Income | .069 | .034 | .20* |
| Relationship Length | .126 | .065 | .19 |
| Step 2 | | | |
| Constant | 3.163 | .386 | |
| Income | .055 | .034 | .16 |
| Relationship Length | .098 | .066 | .15 |
| Time Spent Bed-Sharing | -.006 | .003 | -.20* |

Note. adjusted $R^2 = .073$ for Step 1; R^2 change = .037 for Step 2 ($p < .05$).

* $p < .05$.

Moderation Analysis: Classification as Intentional or Reactive Bed-sharer Moderates Relationship between Time Spent Bed-sharing and Marital Satisfaction

Research question 2: Does the variance in wives' marital satisfaction predicted by time spent bed-sharing depend on classification as an intentional or reactive bed-sharer?

Hypothesis 2: Classification as a reactive or intentional bed-sharer will moderate the relationship between time spent bed-sharing and marital satisfaction, such that the marital satisfaction of mothers who reactively bed-share will decrease as time spent bed-sharing increases, and the marital satisfaction of mothers who intentionally bed-share will remain at the same level as time spent bed-sharing increases.

Moderation analyses were conducted to determine whether classification as an intentional or reactive bed-sharer moderates the relationship between time spent bed-sharing and marital satisfaction. To conduct the moderation analysis, first intentional and reactive bed-sharers were coded as 0 and 1, respectively. Next, time spent bed-sharing was centered to eliminate any multicollinearity effects between the predictor and the moderator (Aiken & West, 1991). To centre the variable, the mean time spent bed-sharing for the bed-sharing sample ($M = 23.63$) was subtracted from each of the individuals' scores on time spent bed-sharing. This created a new mean of zero for time spent bed-sharing. Then, the interaction term was created by multiplying the moderator (group classification as intentional or reactive bed-sharer) with the centred predictor (time spent bed-sharing).

These terms were entered into a hierarchical linear regression, with marital satisfaction as the dependent variable, in the following steps: income and relationship length were entered in step one as the control variables, centered time spent bed-sharing and group classification (intentional or reactive) were entered at step two, and the interaction term (centered time spent

bed-sharing * group classification) was entered at step three. If there is a significant change in R^2 when the interaction term is entered in step 3, this indicates that the moderation effect is significant (Baron & Kenny, 1986). As seen in Table 12, at step 2 of the regression analysis, neither time spent bed-sharing nor group classification as an intentional or reactive bed-sharer were significant predictors in the model on their own. However, in the third step, the interaction term between time spent bed-sharing and group classification as an intentional or reactive bed-sharer explained a significant increase in variance in marital satisfaction, $\Delta R^2 = .075$, $F(1,75) = 7.31$, $p = .008$. Thus, group classification as an intentional or reactive bed-sharer was a significant moderator of the relationship between time spent bed-sharing and marital satisfaction. As seen in Figure 1, for reactive bed-sharers, there is a significant decrease in the slope (simple slope = -0.02, $p = 0.002$), indicating that marital satisfaction significantly decreases as hours spent bed-sharing increases. For intentional bed-sharers, the slope of the line does not vary significantly from zero (simple slope = -0.0007, *ns*), indicating that marital satisfaction does not significantly change for intentional bed-sharers as hours spent bed-sharing increases.

Figure 1

Moderation Graph – Group Classification as Intentional or Reactive Bed-Sharer Moderates the Relationship between Time Spent Bed-Sharing and Marital Satisfaction

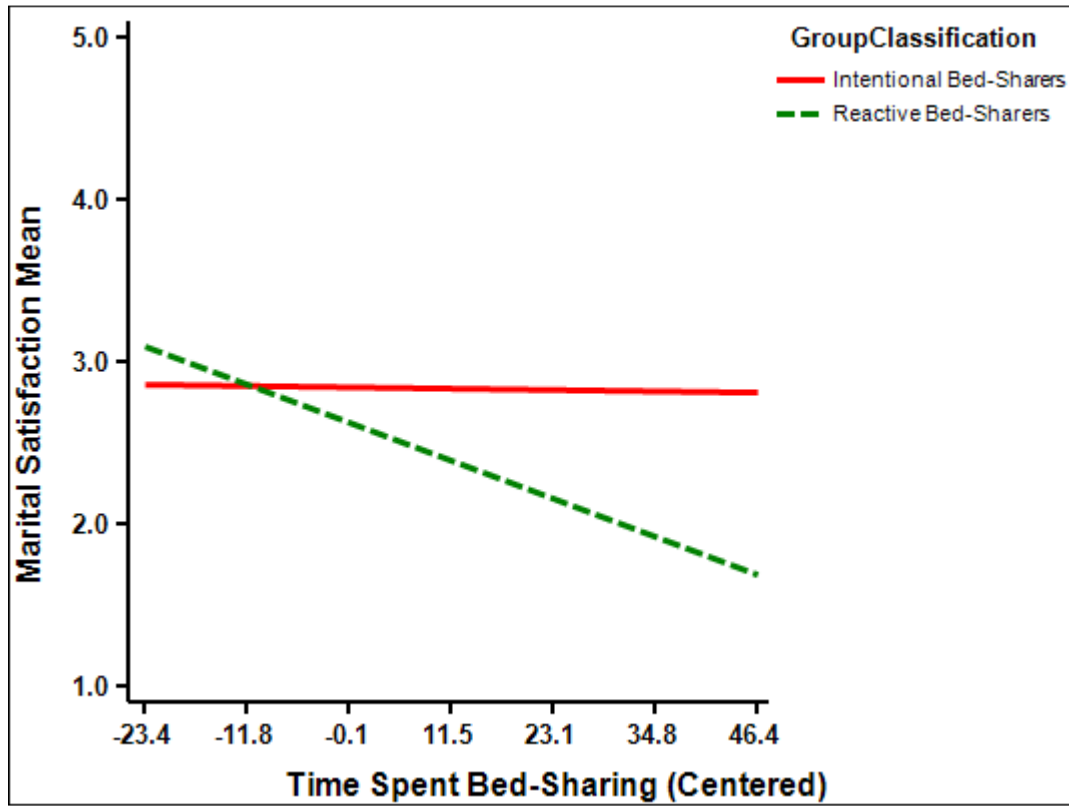


Table 12

Hierarchical Regression Analysis – The Moderation effect of Group Classification on the Relationship between Time Spent Bed-Sharing and Marital Satisfaction while controlling for Income and Relationship Length

| | <i>B</i> | <i>SE B</i> | β |
|------------------------|----------|-------------|---------|
| Step 1 | | | |
| Constant | 2.673 | .336 | |
| Income | .125 | .071 | .19 |
| Relationship Length | .081 | .036 | .24* |
| Step 2 | | | |
| Constant | 2.861 | .382 | |
| Income | .110 | .072 | .17 |
| Relationship Length | .071 | .037 | .21 |
| Time Spent Bed-Sharing | -.006 | .003 | -.18 |
| Group Classification | -.170 | .182 | -.10 |
| Step 3 | | | |
| Constant | 2.852 | .367 | |
| Income | .095 | .069 | .15 |
| Relationship Length | .076 | .035 | .23* |
| Time Spent Bed-Sharing | .000 | .004 | -.02 |
| Group Classification | -.227 | .177 | -.13 |
| Interaction Term | -.019 | .007 | -.32** |

Note. adjusted $R^2 = .093$ for Step 1; R^2 change = .038 for Step 2 (*ns*). R^2 change = .075 for Step 3 ($p < .01$).

* $p < .05$, ** $p < .01$.

*Mediation Analysis: Variables Mediating the Relationship between
Time Spent Bed-sharing and Marital Satisfaction*

Research question 4:

a) Is the path between time spent bed-sharing and marital satisfaction mediated by satisfaction with bed-sharing, sexual satisfaction, and/or fatigue?

b) Does satisfaction with bed-sharing, degree of wives' sexual satisfaction, and/or degree of wives' fatigue mediate the relationship between time spent bed-sharing and marital satisfaction *for both intentional and reactive bed-sharers*?

Hypothesis 4: Satisfaction with bed-sharing, sexual satisfaction, and fatigue will partially mediate the relationship between time spent bed-sharing and marital satisfaction for the sample of bed-sharers and non-bed-sharers as a whole. Narrowing the focus to bed-sharers only, these variables will mediate the relationship between time spent bed-sharing and marital satisfaction for reactive bed-sharers only. As previously hypothesized, it is expected that there will be no relationship between time spent bed-sharing and marital satisfaction for intentional bed-sharers.

Mediation regression analyses were planned if correlations were found between time spent bed-sharing and satisfaction with bed-sharing, sexual satisfaction, and/or fatigue. Since time spent bed-sharing was not found to be significantly correlated with any of these variables, for neither the sample as a whole (see Table 9), the group of intentional bed-sharers nor the group of reactive bed-sharers (see Table 10), mediation analyses were not warranted.

Chapter Summary

This chapter described the results obtained in the current study. The most significant findings are summarized here. Overall, an increase in time spent bed-sharing was found to

predict a decrease in marital satisfaction for the group as a whole. Narrowing the focus to the group of bed-sharers only, support was found for the moderating role of classification as an intentional or reactive bed-sharer. Time spent bed-sharing interacted with group classification such that an increase in time spent bed-sharing predicted a decrease in marital satisfaction for reactive bed-sharers only. Some additional distinguishing characteristics were identified for intentional and reactive bed-sharers. Reactive bed-sharers were found to be less satisfied with bed-sharing and to perceive their infants as more difficult than intentional bed-sharers. For reactive bed-sharers, but not for intentional bed-sharers, increased time spent bed-sharing was associated with decreased perceived husband support, increased satisfaction with bed-sharing was associated with decreased fatigue, and increased perceived infant difficulty was associated with decreased perceived husband support for bed-sharing. Efforts to find a variable that mediated the relationship between time spent bed-sharing and marital satisfaction were unsuccessful, as none of the hypothesized mediating variables (satisfaction with bed-sharing, sexual satisfaction, and fatigue) were significantly correlated with time spent bed-sharing.

CHAPTER V: DISCUSSION

The results of the current research are discussed in this chapter. First, an overview of the study is presented, including a brief outline of the purpose, procedures, measures, hypotheses, and results. Next, the results are discussed in depth, including their consistency with the study's hypotheses and previous research literature, as well as possible explanations, implications, and limitations of specific findings. Then, the strengths and limitations of the current research are considered. Finally, implications for future research and implications for clinical practice are reviewed.

Brief Overview of Study

This study examined the relationship between time spent bed-sharing and marital satisfaction for mothers at a point during the transition to parenthood. The central purpose of the study was to determine whether time spent bed-sharing predicted any variance in marital satisfaction, and whether or not this depended on classification as an intentional or reactive bed-sharer. A secondary purpose was to determine whether satisfaction with bed-sharing, level of fatigue, or sexual satisfaction mediated the relationship between time spent bed-sharing and marital satisfaction. Data were obtained from surveys completed by mothers ($N = 98$) in committed relationships with a first-born child between the ages of 6 – 12 months. Time spent bed-sharing was measured by multiplying the number of hours mothers indicated they typically bed-shared in a night by the number of days they typically bed-shared in a week. Marital satisfaction was measured using the Satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976). Participants were classified as reactive bed-sharers if they indicated that they bed-shared due to infant night-time problems, such as infant would not fall asleep independently,

and were classified as intentional bed-sharers if they indicated that their reason for bed-sharing was not in reaction to an infant night-time problem (Ramos, 2003).

The study's first hypothesis predicted that as time spent bed-sharing increased, marital satisfaction would decrease, for the sample as a whole (comprised of both bed-sharers and non-bed-sharers). The second hypothesis narrowed the focus of the relationship to bed-sharers only, and predicted that the relationship between time spent bed-sharing and marital satisfaction would differ depending on classification as an intentional or reactive bed-sharer. This hypothesis further predicted that the relationship between time spent bed-sharing and marital satisfaction would hold true only for reactive bed-sharers, such that marital satisfaction would decrease as time spent bed-sharing increased for reactive bed-sharers, but would remain constant as time spent bed-sharing increased for intentional bed-sharers. The third hypothesis predicted that there would be significant group differences between intentional and reactive bed-sharers on key psychological variables. Widening the lens to look at the sample as a whole again, the final hypothesis predicted that satisfaction with bed-sharing, degree of wives' sexual satisfaction, and/or degree of wives' fatigue would mediate the path between time spent bed-sharing and marital satisfaction. It was expected that this would hold true for the sample as a whole, as well as the sub-group of reactive bed-sharers.

The results of this study provide support for the two main hypotheses that time spent bed-sharing can predict variance in marital satisfaction during the transition to parenthood and that this relationship differs depending on identification as an intentional or reactive bed-sharer. Overall, an increase in time spent bed-sharing was found to predict a decrease in marital satisfaction. Support was found for the moderating role of classification as an intentional or reactive bed-sharer. Time spent bed-sharing interacted with group classification such that an

increase in time spent bed-sharing predicted a decrease in marital satisfaction for reactive bed-sharers only. Some additional distinguishing characteristics were identified for intentional and reactive bed-sharers (although not all hypothesized differences were supported). Efforts to confirm a hypothesized variable that mediated the relationship between time spent bed-sharing and marital satisfaction were unsuccessful.

Discussion of Findings

The results of the study are discussed in this section. The findings are summarized and considered in terms of their fit with the hypotheses of the study and with past research literature. Possible explanations of the findings are posited, and some limitations related to specific findings are discussed.

Time Spent Bed-sharing and Marital Satisfaction

The hypothesis that increased time spent bed-sharing would significantly predict decreased marital satisfaction was supported when analyzing the sample of bed-sharers and non-bed-sharers as a whole; in the current study, as more hours were spent bed-sharing, the level of marital satisfaction decreased. The findings contribute to our understanding about whether bed-sharing is related to a decrease in marital satisfaction. The results of the current study are in contrast to findings from previous studies examining the relationship between marital satisfaction and bed-sharing, which found no differences in mean level of marital satisfaction between groups classified based on type of sleeping arrangement (see Geramo et al., 2007; Rothrauff et al., 2004).

The difference between the findings of the current study (that there was a decrease in marital satisfaction as more hours were spent bed-sharing), and the findings of previous studies (that there was no difference in marital satisfaction across bed-sharers and non-bed-sharers),

could be explained by the fact that the relationship between marital satisfaction and bed-sharing were analyzed in different ways. Previous researchers analyzed differences in marital satisfaction between dichotomous groups of participants who practiced different types of sleeping arrangements; the current study analyzed bed-sharing as a continuous variable based on time spent bed-sharing. As seen in the current sample, there can be wide variation in amount of time spent bed-sharing within bed-sharers (ranging from .25 hours a week to 70 hours a week in this sample). By grouping bed-sharers together, without attending to the number of hours the infant typically spends sharing the marital bed, the effect of more hours spent bed-sharing predicting decreased marital satisfaction cannot be seen. By analyzing bed-sharing as a continuous variable based on time spent bed-sharing, rather than comparing dichotomous groups as previous researchers have done, the current study illuminated a more subtle way in which bed-sharing may impact marital satisfaction. The finding of the current study, that increased time spent bed-sharing significantly predicted decreased marital satisfaction, is in agreement with authors who have argued that for a link between bed-sharing and marital quality (Fraiberg, 1959; Spock, 1976; Stein, Colarusso, McKenna, & Powers, 2001; Weissbluth, 1999); however, time spent bed-sharing only predicted a very small amount of variance in marital satisfaction for the sample of bed-sharers and non-bed-sharers as a whole.

The Moderating Role of Classification as an Intentional or Reactive Bed-Sharer

The second hypothesis involved narrowing the focus to consider only bed-sharers, and suggested that the amount of variance that time spent bed-sharing predicted in marital satisfaction would depend on classification as an intentional or reactive bed-sharer. Intentional bed-sharers have been defined as those who endorse the ideology of bed-sharing, and reactive bed-sharers have been defined as those who do not plan to bed-share but find themselves bed-

sharing as a reaction to an infant night-time problem such as the infant crying or not falling asleep on their own (Madansky & Edelbrock, 1990; Ramos, 2003). When considering the bed-sharers only, time spent bed-sharing did not significantly predict variance in marital satisfaction. No significant differences were found in level of marital satisfaction between intentional and reactive bed-sharers, which is consistent with the findings of Geramo et al. (2007). However, when classification as an intentional or reactive bed-sharer was entered as a moderator in the regression between time spent bed-sharing and marital satisfaction, the interaction between time spent bed-sharing and group classification was significant. The relationship between time spent bed-sharing and marital satisfaction was found to differ depending on identification as an intentional or reactive bed-sharer. The results supported the hypothesis; reactive bed-sharers showed a significant decrease in marital satisfaction as time spent bed-sharing increased, and intentional bed-sharers showed no significant change in marital satisfaction as time spent bed-sharing increased.

These findings expand the existing literature on intentional and reactive bed-sharers. No known previous research has examined the effect of group classification as intentional or reactive on the relationship between time spent bed-sharing and marital satisfaction. The current findings are congruent with theory that considers intentional and reactive bed-sharers to be two different types of bed-sharers.

Differences between Intentional and Reactive Bed-Sharers

The current study hypothesized that intentional and reactive bed-sharers would differ on the psychological variables of satisfaction with bed-sharing, marital satisfaction, sexual satisfaction, fatigue, and infant temperament. Because reactive bed-sharers are those who bed-share not as part of their ideology of parenting, but as a reaction and possibly “last resort”

method to a night-time problem with their infant, they were expected to have less satisfaction with bed-sharing, lower marital satisfaction, lower sexual satisfaction, greater fatigue, and infants reported to have more difficult temperaments. Partial support was found for this hypothesis. As predicted, reactive bed-sharers indicated significantly less satisfaction with bed-sharing, and reported having infants with significantly more difficult temperaments than intentional bed-sharers. However, contrary to expectations, no significant differences were found for marital satisfaction, sexual satisfaction, or fatigue.

The finding that reactive bed-sharers indicate less satisfaction with bed-sharing than intentional bed-sharers is consistent with previous research. Ramos (2003) found that 55% of reactive co-sleepers reported dissatisfaction with their sleeping arrangements, while only 29% of intentional co-sleepers reported anything other than “very satisfied” with their sleeping arrangements. She also found that reactive co-sleepers were more likely than both intentional co-sleepers and solitary sleepers to perceive night-time waking as a problem, although both intentional and reactive co-sleepers indicated similar levels of night-time waking (Ramos, 2001). Germon et al. (2007) found a steady decline in sleeping arrangement satisfaction for reactive co-sleepers over time, but no significant change for other sleeping arrangement groups. The authors suggest that those parents who practice their preferred sleeping arrangements are more likely to remain satisfied, and that changes or instability (which characterized the reactive group) may contribute to dissatisfaction, especially if the switch to co-sleeping was not the preferred sleeping arrangement of the parent.

Reactive bed-sharers were also found to perceive their infants as significantly more difficult than the infants of intentional bed-sharers. Although no previous known research has examined this directly, it is consistent with research that has found that reactive bed-sharers

experienced their infant as having more sleep problems (Ramos 2003), and that infants with more sleep disturbances have been found to be more difficult (France & Blampied, 1999). This finding is also consistent with theory; reactive bed-sharers are, by definition, those who have infants with night-time problems, and it stands to reason that infants with this characteristic would be perceived as more difficult.

The results of the current study showed that reactive and intentional bed-sharers did not differ in their levels of marital satisfaction, sexual satisfaction, or fatigue. This finding of no difference in mean level of marital satisfaction between groups based on type of bed-sharing is consistent with previous research. As previously mentioned, Germon et al. (2007) classified mothers as early bed-sharers (similar to the current study's classification as intentional bed-sharer), solitary sleepers, reactive co-sleepers, and early co-sleepers. These researchers found no differences in mean level of marital satisfaction between groups. As already discussed, the results of the current study showed that, although there was no difference found in mean marital satisfaction between intentional and reactive bed-sharers, there was an interaction between classification as an intentional or reactive bed-sharer and time spent bed-sharing, such that as time spent bed-sharing increased a decline in marital satisfaction was found for reactive bed-sharers but not for intentional bed-sharers.

In similar style to the findings with marital satisfaction, it was deemed possible that rather than simply being different by group, it could be that increased time spent bed-sharing would be associated with decreased satisfaction with bed-sharing, decreased sexual satisfaction, increased fatigue, and more difficult infant temperaments. Correlational analyses were run between the variables of time spent bed-sharing, satisfaction with bed-sharing, sexual satisfaction, fatigue, and infant temperament, for the bed-sharing group as a whole and for

intentional and reactive bed-sharers separately. No significant correlations with time spent bed-sharing were found for any of these variables, for any group.

It seems that, for the current sample, sexual satisfaction and fatigue were not related to bed-sharing, either through group membership or through relationship to time spent bed-sharing; however, these variables should not be completely dismissed. There were a few limitations directly related to these particular findings. First, it is possible that the current sample size was not large enough to allow significant differences to be detected between the groups of intentional and reactive bed-sharers. There were only 21 mothers who were classified as reactive bed-sharers, and according to Cohen (1992) this would not provide quite enough power to detect even a large effect size between groups. For sexual satisfaction, results indicated that although no statistically significant differences were found between intentional and reactive bed-sharers, the effect size was medium. It is possible that with a larger number of reactive bed-sharers a statistically significant difference would be found for sexual satisfaction.

Some other limitations surround the question of sexual satisfaction. The current study only asked one question around sexual satisfaction, and it may be that this was not enough information to assess a relationship to bed-sharing. The question measuring sexual satisfaction assessed only the perceived quality of the sexual relationship for the mother, and did not assess the frequency of sexual activity. There may be differences between frequency of sexual activity for intentional and reactive bed-sharers that were not measured in the current study. It may also be that participants did not answer this question honestly, as it is a sensitive subject, and one which they may have felt compelled to give a socially desirable response.

A few notable findings stood out from the correlation analyses for reactive and intentional bed-sharers. Focusing on the major study variables of time spent bed-sharing and

marital satisfaction, the study found both similarities and differences for intentional and reactive bed-sharing groups. First, for both reactive and intentional bed-sharers, mothers with higher marital satisfaction also reported higher perceived husband support, and higher perceived husband support for bed-sharing. For both reactive and intentional bed-sharers, mothers with higher marital satisfaction reported higher sexual satisfaction. These findings are consistent with the marital satisfaction literature, which has found perceived husband support to be one of the strongest predictors of marital satisfaction (Rothman, 2004), and has found lack of sexual satisfaction to be associated with decreased marital satisfaction (Ahlborg & Standmark, 2001).

There were also a few significant differences between intentional and reactive bed-sharers in terms of correlations among the psychological variables. For reactive bed-sharers, satisfaction with bed-sharing was significantly correlated with fatigue. Reactively bed-sharing mothers with greater satisfaction with bed-sharing were less fatigued. There was no significant correlation between these variables for intentionally bed-sharing mothers. Finally, for reactive bed-sharers, perceived husband support of bed-sharing was significantly correlated with infant temperament. Reactively bed-sharing mothers who perceive their infants as more difficult also perceived less husband support for bed-sharing. There was no significant correlation between these variables for intentionally bed-sharing mothers.

For intentional bed-sharers, time spent bed-sharing was not significantly correlated with any of the psychological variables. In contrast, for reactive bed-sharers, there was a statistically significant and negative correlation between time spent bed-sharing and marital satisfaction, and between time spent bed-sharing and perceived husband support. Reactively bed-sharing mothers who reported more time spent bed-sharing indicated lower marital satisfaction and lower perceived husband support.

It is of interest that, for reactive bed-sharers only, an increase in time spent bed-sharing was significantly associated with a decrease in perceived husband support. This is a somewhat similar finding to Geramo et al.'s (2007) parents who perceived sleep issues as problematic and reported less perceived spousal support from their partner. Ramos (2003) found that reactive bed-sharers experienced their infant as having more sleep problems. According to a model of perceived husband support, wives' perceptions of support from their husbands may protect their sense of cohesiveness and intimacy as a couple, helping to prevent emotional distancing during stressful times (Cutrona, 1996). Also according to Cutrona's (1996) model, perceived husband support may moderate wives' stress and prevent the development of negative affect that could impact marital interactions in a harmful way. Thus, the decreased perception of husband support as time spent bed-sharing increases for reactive bed-sharers may be associated with further stress and negative marital interactions, creating distance and a lack of relational intimacy felt by the mother.

These differences between intentional and reactive bed-sharers emphasize distinct patterns of characteristics for these groups. These findings provide additional support for the proposal that bed-sharing should not be considered as a unitary concept. For intentional bed-sharers, who bed-share in accordance to their preference and beliefs around bed-sharing, no associations were found between time spent bed-sharing and any of the psychological variables. It seems that, for intentional bed-sharers, time spent bed-sharing is not a significant factor influencing the mother's wellbeing in the areas of marital satisfaction, sexual satisfaction, fatigue, or perceived husband support. For reactive bed-sharers, on the other hand, bed-sharing seems to be an experience fraught with difficulties, especially as the amount of time they spend bed-sharing increases. This is consistent with the implication behind what it means to be a

reactive bed-sharer. Reactive bed-sharers are defined as those who did not choose to bed-share based on their preferences, but do so only as a way to deal with perceived night-time difficulties with their infant.

It is important to acknowledge some specific limitations in the manner in which participants were classified as intentional or reactive bed-sharers. Consistent with Ramos (2001), the reason for bed-sharing was classified as either reactive or intentional by asking if the bed-sharing happened “because the child has sleep problems when sleeping alone (such as won’t go to sleep, won’t stay in bed, waking up crying or afraid, nightmares)?” If the response to this question was “yes, this is the main reason,” then the bed-sharing was considered reactive. If the response was “that’s not the main reason” or “that’s not the reason at all,” then the bed-sharing was considered intentional. Asking the question in this way may not accurately capture the theoretical underpinnings of what it means to be an intentional bed-sharer. Intentional bed-sharers are defined as those who bed-share in accordance with their ideological beliefs in the benefits of bed-sharing. Based on this definition, it would be logical to expect that intentional bed-sharers would spend significantly more time bed-sharing than reactive bed-sharers; however, in the current study, although there was a trend towards intentional bed-sharers spending more hours per week bed-sharing, this difference was not significant. It may be that by classifying bed-sharers as intentional simply because they indicated they do not bed-share in reaction to perceived infant sleep problems, respondents who did not necessarily believe in the ideological concept of the “family bed,” but bed-shared for other reasons such as for ease of breastfeeding or when their infant is sick, became inappropriately classified as intentional. It is possible that there are some similarities among bed-sharers who sleep with their infant “intentionally,” whether based on an ideological preference or a pragmatic preference; however, it is also possible that

there are differences between these types of “intentional” bed-sharers, and including them in the same group may mask differences when comparing to reactive bed-sharers.

More recently, Ramos et al. (2007) has modified her classification system for intentional and reactive bed-sharers to more adequately capture the beliefs of the parents behind their choice of sleeping arrangements. These researchers classified reactive bed-sharers based on the choice of the statement “I prefer to sleep separately from my child, but I do sleep with him/her because *my child can’t or won’t sleep well apart from me,*” and classified intentional bed-sharers based on the choice of the statement “I intentionally *sleep with* my child because I believe that is the best arrangement” (Ramos et al., 2007, p 421). However, this classification system still does not allow for elucidation of the possible differences between intentional bed-sharers who “believe it is the best arrangement” due to pragmatic compared to ideological beliefs.

Search for a Mediator

The final hypothesis predicted that the relationship between time spent bed-sharing and marital satisfaction would be mediated by satisfaction with bed-sharing, sexual satisfaction, and/or fatigue. This was expected to hold true for the sample of bed-sharers and non-bed-sharers as a whole, and also when looking exclusively at reactive bed-sharers. In order for this model to be possible, satisfaction with bed-sharing, sexual satisfaction, and/or fatigue would first have to be found to significantly correlate with both marital satisfaction and time spent bed-sharing (Baron & Kenny, 1986). For the sample as a whole, marital satisfaction was significantly correlated with sexual satisfaction and fatigue, but it was not significantly correlated with satisfaction with bed-sharing. Time spent bed-sharing was not significantly correlated with satisfaction with bed-sharing, sexual satisfaction, nor fatigue. Thus, the prediction that one or all

of these variables would mediate the relationship between time spent bed-sharing and marital satisfaction was not supported for the sample as a whole.

It was predicted that this mediation model would also be confirmed for the reactive bed-sharers as a subgroup. However, none of the predicted variables (satisfaction with bed-sharing, sexual satisfaction, and fatigue) were significantly correlated with both time spent bed-sharing and marital satisfaction for the reactive bed-sharers. Marital satisfaction was significantly correlated with sexual satisfaction only, and time spent bed-sharing was not significantly correlated with any of the predicted variables. It has been found in this current study that time spent bed-sharing predicts marital satisfaction most strongly for the group of reactive bed-sharers (and in fact did not predict any variance in marital satisfaction for intentional bed-sharers), so mediating models would be of most interest for the reactive bed-sharers. There were quite a small number of participants who were identified as reactive bed-sharers ($n = 17$). Although none of the predicted variables in the mediation model were significantly correlated with time spent bed-sharing, the correlation between time spent bed-sharing and sexual satisfaction ($r = -.245$) for reactive bed-sharers was in the expected direction and approached a medium effect size, according to Cohen (1992). It may be that with a larger sample of reactive bed-sharers, more significant findings would emerge, and sexual satisfaction might still be considered as a possible mediator.

Strengths of the Study

This investigation is one of the few studies to examine the relationship between parent-infant bed-sharing and marital satisfaction. Although there have been many studies assessing the impact of bed-sharing on the infant, the importance of understanding the implications of bed-sharing for the mother is beginning to gain recognition. This study contributes to the literature

on bed-sharing by explicating the circumstances where time spent bed-sharing does and does not predict variance in mothers' marital satisfaction.

Additionally, although asking parents to report on their sleeping arrangement practices retrospectively and measuring marital satisfaction at the time of the study (as other researchers have done) offers important information about the more long-term effect of bed-sharing on marital satisfaction, the recruitment of participants for this study who are still going through the transition to parenthood and who, for the most part, were still bed-sharing had the potential to offer a more immediate picture of this time in the participants lives. Exploring the effects on marital satisfaction closer to the time when mothers are bed-sharing increases confidence in the validity of the findings.

Finally, an additional strength is that the association between bed-sharing and marital satisfaction was examined from an alternate theoretical standpoint, using time-spent bed-sharing to predict marital satisfaction, rather than examining differences across groups. This manner of measurement allowed interactions between time spent bed-sharing and group membership to emerge that would not have been illuminated by continuing to examine group differences.

Limitations of the Study

As interesting as the findings of the current study may be, they are limited in some significant ways. One limitation of the study is the fact that although the sample size of close to 100 participants is a satisfactory sample size, relatively few respondents identified themselves as reactive bed-sharers. The small number of reactive bed-sharers may have limited the ability of the study to find significant associations between variables in some cases, and also limits the generalizability of the results when there are so few respondents in the group.

Another limitation is that, although the importance of assessing bed-sharing practices and marital satisfaction during the time that bed-sharing is actually taking place has been highlighted, this study is still limited by the fact that it looks at a relatively small period of time in the participants lives, and cannot provide the richness of data that could be collected were the study to follow the participants longitudinally.

Using a short form of the Satisfaction subscale of the Dyadic Adjustment Scale (DAS; Spanier, 1976) was a pragmatic decision that guaranteed that some information around the quality of the marital relationship would be missing. The DAS has four subscales, allowing information to be gathered on relationship Consensus, Satisfaction, Affectional Expression, and Cohesion when the entire scale is used. Although the current study was specifically focused on assessing marital satisfaction, gathering additional information around other aspects of the quality of the relationship would have possibly enriched the results and conclusions obtained around the impact of bed-sharing on the mothers' relationship quality.

Other limitations include all the difficulties inherent in self-report measures administered to a self-selected convenience sample. The majority of the members of the sample in this study were Caucasian, had obtained a high level of education, and had a high income. The ethnic distribution of participants in this study is representative of British Columbia; according to Statistics Canada's 2001 Census (Statistics Canada, 2005), 84% of British Columbians identified as Caucasian, 7% identified as Asian, and 9% identified as other minorities (compared to 85%, 9%, and 6%, respectively, in the current sample). The large number of highly educated participants reporting a median income of \$80,000 or more may have resulted from the fact that the majority of recruitment was done over the internet (including targeting a graduate student

population and trendy mom's groups online), and the fact that participation in the study required access to a computer. This limits the generalizability of the results.

Another consequence of a convenience sample is a potential selection bias, such that perhaps only those mothers with a strong interest in the focus of the study were motivated to participate. Additionally, self-report measures, although offering insights into the personal perspectives of the participants, also always introduce potential errors into the data. Respondents may not have an accurate memory of the experience being asked about, or may misinterpret the questions. They may also misrepresent the truth in an attempt to provide a more socially desirable response.

Implications for Future Research

This study examined the relationship between time spent bed-sharing and marital satisfaction of mothers during the transition to parenthood. It included the distinction between intentional and reactive bed-sharers, and examined the effects of membership in each group on time spent bed-sharing and marital satisfaction. This research suggests a number of different areas for future research.

First, future research can explore the path through which marital satisfaction is predicted by time spent bed-sharing for reactive bed-sharers. The current study hypothesized that satisfaction with bed-sharing, sexual satisfaction, and/or fatigue would be possible mediators of the path between time spent bed-sharing and marital satisfaction, but none of these variables were supported. Studies may be designed to explore other possibilities such as conflicts with spouse over decisions around sleeping arrangements, or the tendency for reactive bed-sharers to perceive potentially problematic infant night-time behaviours, such as frequency of night-

waking, as more problematic than either intentional bed-sharers or solitary sleepers (Ramos, Youngclarke, & Anderson, 2007).

Second, the distinction between intentional and reactive bed-sharers warrants further exploration. The current definition of an intentional bed-sharer involves a choice based on an ideological preference for the “family bed,” which would suggest a pattern of habitual bed-sharing for most of the night most of the time. However, in the current sample, there was a large range of time spent bed-sharing for participants classified as intentional bed-sharers. It may be that there are different types of intentional bed-sharers, such as those who choose to bed-share intentionally under certain circumstances (for example, when the infant is ill), those who decide to bed-share as a pragmatic decision (for example, for ease of breastfeeding), as well as those who bed-share because they endorse the idea of a family bed.

Third, including the fathers of the infant would provide more information around their perceptions of the sleeping arrangement situations, and would allow for comparisons with data from the mothers to explore whether fathers are impacted in the same ways.

Implications for Clinical Practice

There are three main points for parents, health care workers, and counsellors to take away from the study results. First, the findings of this study suggest that bed-sharing is a common practice for Canadian mothers, with approximately 83% of respondents in this sample acknowledging that they have bed-shared at some point. It is important to recognize that bed-sharing is not an all-or-nothing behaviour. Most participants in this study used bed-sharing in combination with room-sharing or independent sleep.

Second, the study highlights the importance of distinguishing between intentional and reactive bed-sharers when considering the impact of time spent bed-sharing on the mother’s

marital satisfaction. The current study clearly found that variance in marital satisfaction was not predicted by time spent bed-sharing for intentional bed-sharers, who are those mothers who bed-share as a positive choice in accordance with their parenting beliefs. For reactive bed-sharers, however, marital satisfaction was found to decline significantly as they spent more time bed-sharing. Reactive bed-sharers are those who bed-share not as a positive choice but as a reaction to dealing with infant night-time problems. This stresses the value in assessing the reason parents are bed-sharing and in being able to provide helpful interventions (such as the one outlined by Hall, Saunders, Clauson, Carty, & Janssen, 2006) for those reactively bed-sharing mothers dealing with infants with night-time problems, so as to prevent the predicted decline in marital satisfaction. Although the direction of causality between infant temperament and marital quality is unclear, in either case addressing the issue for those mothers in distress through behavioural interventions for the infant with sleep difficulties and/or marital counselling for the couple would seem prudent.

Third, the impact of perceived husband support on wives' marital satisfaction has been previously established in the marital relationship literature, and it was also found to also be an important variable around time spent bed-sharing in the current study. Wives' perception of husbands' support may help the couple maintain a positive sense of cohesiveness and intimacy, which can work to prevent emotional distancing during times of stress. This is particularly important over the transition to parenthood, especially when couples find themselves dealing with an infant with night-time sleep difficulties. It would be important for the husband to be involved in any interventions implemented to address infant sleep problems. The husband could also be encouraged to recognize that one of his primary tasks during this period is to be aware of

his wife's need to support and to make the effort to provide her with that support (Belsky & Kelly, 1994).

Conclusion

In conclusion, it is important to recognize that bed-sharing represents diverse behaviours, is practiced for varying lengths of time and for varying reasons, and has different outcomes depending on the form of bed-sharing. It is important to note that bed-sharing is associated with decreased marital satisfaction for some types of bed-sharers (i.e., reactive bed-sharers), but not to generalize this finding and promote the belief that bed-sharing is associated with decreased marital satisfaction for all types of bed-sharers. In this study, increased hours spent bed-sharing did not predict any change in marital satisfaction for intentional bed-sharers. For reactive bed-sharers, steps can be taken to alleviate their distress associated with unwanted bed-sharing. For intentional bed-sharers, they can be supported in choosing the form of sleeping arrangements they feel are best for their family, and should be provided with information on precautions needed to ensure safety around bed-sharing (e.g., Community Paediatrics Committee, 2004).

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University of British Columbia, Faculty of Education
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Mom and Baby!

Moms of babies aged 6-12 months are needed for a short research survey!



Participants will be asked to fill out a **survey** that takes about **30-40 minutes**.

It can be done at any computer at any time.

Your participation will be completely confidential.

The study is exploring how various sleeping arrangements between the parents and baby might impact the mother.

This study is a UBC Masters thesis research project.

You will be invited to enter a draw for a gift certificate from the mom and baby fitness group Fit 4 Two!

This research would not be possible without the participation of generous moms.

Thank you for your time and consideration!

For more information and to access the survey, go to

www.freewebs.com/familysleep

Appendix B

Internet Posting to Recruit Participants

Subject/Title: UBC RESEARCH STUDY! Moms of babies 6-12 mos. needed for online survey!

Hi! I am a graduate student in psychology at the University of British Columbia. I am looking for first-time moms in committed relationships with babies between the ages of 6-12 months to participate in my online survey!

A detailed description of the study and the actual survey is available at the following link:

https://www.surveymonkey.com/s.aspx?sm=uEVZ9D1CqNTLbHUoQgdEBA_3d_3d

The survey should take approximately 30-40 minutes to complete, and you may begin it and come back to finish it later if needed.

At the end of the study you will be given the opportunity to be entered into a lottery draw for a gift certificate for 5 classes from Fit 4 Two, valued at approximately \$65.

I understand that your time is very precious, but without your generous contribution this study would not be possible. Your answers will help us better understand the experiences of first-time moms in relation to their satisfaction with their sleeping arrangements with their infant and their satisfaction with their relationship with their partner.

Please feel free to forward this information along to any women who you think may be interested in participating in this survey!

Should you have any questions, you can get in touch with Rosemary Messmer at xxxxxxxxxxxx@yahoo.ca.

Thank you!

Ver. June 2008

Appendix C

Informed Consent Sleeping Arrangements during the Transition to Parenthood

Thank you for choosing to learn more about this survey. My name is Rosemary Messmer and this survey is being administered in partial completion of my Master's thesis in Counselling Psychology at the University of British Columbia, under the supervision of Dr. Lynn Miller. Dr. Anita Hubley from the UBC Department of Education & Counselling Psychology and Special Education, and Dr. Wendy Hall from the UBC School of Nursing are both co-investigators on this study. This survey has received ethical approval from the University of British Columbia's Research Ethics Board for research involving human participants.

To thank you for your participation in the survey, you will be invited to enter a lottery draw for a gift certificate for five classes from the fitness organization Fit 4 Two (www.fit4two.ca), valued at approximately \$65. When you reach the end of the survey you will be provided with an email address where you can enter the lottery draw. A winner will be chosen at random after all data has been collected. The gift certificate will be emailed to the winner. While your chances of winning the lottery are difficult to estimate precisely since they depend on the number of entries received, they have been estimated at roughly 1 in 150. Your entry in the lottery draw cannot be linked in any way with your survey and the list of names and email addresses will be destroyed once a winner is chosen.

Purpose:

The purpose of this survey is to explore the relationship between sleeping arrangements in your family and your satisfaction with your relationship with your partner. As a mother of a child between the ages of 6 months and a year, who is in a committed relationship with your child's father, you are invited to participate in this research study.

Study Procedures:

As a participant in this study you will be asked to answer questions on a survey. The survey can be completed from any computer with secure access to the internet. The survey should take approximately 40 minutes to complete. Once you begin the survey, explicit instructions will guide you through completion of the survey.

You may only complete this survey once. However, you can go back to earlier parts of the survey by clicking the "Back" button at the bottom of the page. You may also save your progress and return to the survey at a later time to complete it by clicking the "Exit this survey" link in the top right-hand corner. Please note that in order to do this you must have cookies enabled on your computer.

Potential Risks and Benefits:

There are no anticipated physical, social, or legal risks associated with participating in this study. As with any study involving personal questions, there is the potential for questions to trigger some emotional discomfort. You are encouraged to participate only to your level of comfort and to contact Rosemary Messmer if you have any concerns. If you would like a list of resources for counselling or support, one is available at www.freewebs.com/familysleep. You will be reminded of this again at the end of the study.

Your participation in this study will ideally contribute to a greater understanding of how women experience the impact of their choice of sleeping arrangements during the transition to parenthood. At the end of the survey, you will be given information on how to request to receive a copy of the results once the study has been completed. If you choose to receive feedback on the results of the study, you may learn information that improves your understanding of the impact of sleeping arrangements on mothers such as yourself.

Confidentiality:

Your identity will remain anonymous; the questionnaires will not have any identifying data. The survey company is a U.S. company and as such is subject to U.S. laws, in particular the Patriot Act which allows authorities access to the records of internet service providers. This survey does not ask for any information that may be used to identify you. The survey company servers record incoming IP addresses of the computer that you use to access the survey but no connection is made between your data and your computer's IP address.

Contact for information about the study:

If you have any questions or desire further information with respect to this study, please feel free to contact:

Rosemary Messmer, MA Candidate
Department of Education & Counselling Psychology and Special Education
University of British Columbia
xxxxxxxxxxxxx@yahoo.ca

Dr. Lynn Miller
Department of Education & Counselling Psychology and Special Education
University of British Columbia
604-822-8539
lynn.miller@ubc.ca

Contact for concerns about the rights of research subjects:

If you have any concerns about your treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services at 604-822-8598 or RSIL@ors.ubc.ca.

Consent:

Your participation in this study is entirely voluntary and you may refuse to participate or withdraw from the study at any time without jeopardy.

If you agree to the above conditions and wish to participate in this survey, then please check the box marked "Yes, I understand the conditions and wish to participate in this survey." Selecting this box signifies that you have read and understood the above information, and have consented to participate in the survey.

- Yes, I understand the conditions and wish to participate in this survey.
- No, I do not wish to participate in this survey.

Appendix D

Demographic Questionnaire

1. What is your age?
 - 19 or younger
 - 20-24
 - 25-29
 - 30-34
 - 35-39
 - 40-44
 - 45-49
 - 50 or older

2. How old is your child?
Age in months: _____

3. Is this your first child?
 - Yes
 - No – please specify the ages, in months, of your other children? _____

4. What is your child's gender:
 - Female
 - Male

5. Do you currently breastfeed your child?
 - Yes, it's my predominant method of feeding.
 - Yes, it's one of my methods
 - No, I never have
 - No, but I used to – please specify your child's age, in months, when you stopped breastfeeding: _____

6. How long have you been married or cohabiting with your spouse/partner?
 - 6 months or less
 - 1-2 years
 - 3-4 years
 - 5-6 years
 - 7 years or more

7. How many people live in your household (including your child)? _____

8. How many rooms are suitable for sleeping in your home: _____

9. What is your approximate annual household income? (All amounts are in Canadian dollars)

- Less than \$10,000
- \$10,000-\$19,000
- \$20,000-\$29,000
- \$30,000-\$39,000
- \$40,000-\$49,000
- \$50,000-\$59,000
- \$60,000-\$69,000
- \$70,000-\$79,000
- \$80,000-\$89,000
- \$90,000-\$99,000
- \$100,000 or more
- Other: please specify _____

10. What is the highest level of education you have achieved?

- Some High School
- High School diploma
- Some College
- College degree
- Some University
- Undergraduate (Bachelor's) degree
- Masters degree
- Professional degree (e.g. PhD, MD, JD)
- Other (please specify) _____

11. What is your ethnic/cultural background? (Please note: if more than one is relevant, please indicate the one you identify with the most.)

- Asian
- Black / African descent
- First Nations / Native American
- East Indian
- Latino / Hispanic
- Middle Eastern
- White / European descent
- Other (please specify) _____

12. What city or town do you live in? (Please indicate your province as well.) _____

13. What is your current work status?

- Employed Full-time
- Employed Part-time
- Not employed outside the home
- Other (please specify) _____

Appendix E

Sleeping Arrangement Questionnaire

1. There are many different sleeping arrangements parents can use with their children. Which of the following sleeping arrangements do you currently use most often?

Room-sharing (the child sleeps in the same room as you but on a different sleeping surface from you)

Bed-sharing (the child sleeps in your bed with you)

Independent Sleep (the child sleeps in his/her own room by him/herself)

Other (please specify) _____

2. How satisfied are you with your current sleeping situation?

Very Unsatisfied

Somewhat Unsatisfied

Neutral

Somewhat Satisfied

Very Satisfied

3. How supportive is your partner of the type of sleeping arrangements you currently use most often?

Very Unsupportive

Somewhat Unsupportive

Neutral

Somewhat Supportive

Very Supportive

4. There are many variations of sleeping arrangements. Many parents share their bed with their baby for varying lengths of time for various reasons, while others don't. Do you ever, or did you ever in the past, share your bed with you baby, either for the whole night or part of the night?

Yes

No

5. When you have brought your baby to sleep with you in your bed, did this happen because the child has sleep problems when sleeping alone (such as won't go to sleep, won't stay in bed, waking up crying or afraid, nightmares)?

no, that is not the reason at all

yes, that's one of the reasons

yes, that's the main reason we have slept together

6. At what age did you first bring your baby to sleep in your bed with you? (Please note: enter zero if you and your baby have shared your bed since birth.) Child's age in months: _____

7. Do you currently ever share your bed with your baby?

Yes

No – please indicate how old your child was when you stopped.

Child's age in months: _____

For the following questions, please think of your behaviours and feelings during the last month during which you shared your bed with your baby for any portion of the night. (If you no longer ever share your bed with your baby, please think of the last month during which you **did** share your bed.)

8. On average, approximately how many nights per week do you spend any portion of the night sleeping in your bed with your baby?

1 2 3 4 5 6 7

If it happens occasionally, but it doesn't happen every week – How often does it happen?

9. On those nights when you sleep in your bed together with your baby, on average, approximately how many hours of the night does this occur?

.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10 or more

10. On those nights when you share your bed with your baby, would you say you spend the entire night sharing your bed with your baby?

Yes

No

11. How satisfied are you with your child sharing your bed with you?

Very Unsatisfied

Somewhat Unsatisfied

Neutral

Somewhat Satisfied

Very Satisfied

12. How supportive is your partner of your bed-sharing arrangements?

Very Unsupportive

Somewhat Unsupportive

Neutral

Somewhat Supportive

Very Supportive

Appendix F

Iowa Fatigue Scale

From Hartz, Bentler, and Watson, 2003

Please circle the number of the response that best indicates how you have felt in the *past month*.

| | Not at all | A little | Moderately | Quite a bit | Extremely |
|-----------------------------------|------------|----------|------------|-------------|-----------|
| I feel worn out | 1 | 2 | 3 | 4 | 5 |
| I feel energetic | 1 | 2 | 3 | 4 | 5 |
| I feel slowed down in my thinking | 1 | 2 | 3 | 4 | 5 |
| I do quite a lot in one day | 1 | 2 | 3 | 4 | 5 |
| I have trouble concentrating | 1 | 2 | 3 | 4 | 5 |
| I feel drowsy | 1 | 2 | 3 | 4 | 5 |
| Physically I feel in good shape | 1 | 2 | 3 | 4 | 5 |
| I have low output | 1 | 2 | 3 | 4 | 5 |
| I have trouble with my memory | 1 | 2 | 3 | 4 | 5 |
| I feel rested | 1 | 2 | 3 | 4 | 5 |
| I can concentrate well | 1 | 2 | 3 | 4 | 5 |

Appendix G

Sexual Satisfaction

1. In general, how satisfied are you with your sexual relationship with your partner? **(circle one)**
 1. Very dissatisfied
 2. Somewhat dissatisfied
 3. Neutral
 4. Somewhat satisfied
 5. Very satisfied

Appendix H

Perceived Husband Support

From Wright and Aquilino, 1998

Please answer **Yes** or **No** to the following questions:

1. Do you feel able to confide in your partner? _____
2. Is your partner a source of reassurance to you? _____
3. Do you consider your partner someone you can talk to when you're upset? _____
4. Do you feel your partner respects you? _____
5. When ill, do you feel your partner cares for you? _____
6. Is your partner someone you talk to about parenting concerns? _____

Appendix I

Dyadic Adjustment Scale – Short form of Satisfaction Subscale

From Spanier, 1976

Please rate the following statements by circling the appropriate descriptor.

1. How often do you discuss or have you considered divorce, separation, or termination of your relationship?

All the Time Most of the Time More Often than Not Occasionally Rarely Never

2. In general, how often do you think that things between you and your partner are going well?

All the Time Most of the Time More Often than Not Occasionally Rarely Never

3. Do you ever regret that you married (or lived together)?

All the Time Most of the Time More Often than Not Occasionally Rarely Never

4. How often do you and your mate get on each others' nerves?

All the Time Most of the Time More Often than Not Occasionally Rarely Never

5. The following line represents different degrees of happiness in your relationship. The middle point, 'happy,' represents the degree of happiness of most relationships. Circle the phrase which best describes the degree of happiness, all things considered, of your relationship.

Extremely Unhappy Fairly Unhappy A Little Unhappy Happy Very Happy Extremely Happy Perfect

Appendix J

Infant Characteristics Questionnaire

From Bates, Freeland, and Lounsbury, 1979

On the following questionnaire please circle the number that is most typical of your baby. "About average" means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

| | | | | | | |
|-----------|---|---------------|---|---|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Easy | | About Average | | | | Difficult |

2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?

| | | | | | | |
|-----------|---|---------------|---|---|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Easy | | About Average | | | | Difficult |

3. How easy or difficult is it to predict when your baby will become hungry?

| | | | | | | |
|-----------|---|---------------|---|---|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Easy | | About Average | | | | Difficult |

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

| | | | | | | |
|-----------|---|---------------|---|---|---|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Easy | | About Average | | | | Difficult |

5. How many times per day, on average, does your baby get fussy or irritable – for either short or long periods of time?

| | | | | | | |
|-------|-------------------|-------------------|-------------------|-------------------|---------------------|--------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Never | 1-2 times per day | 3-4 times per day | 5-6 times per day | 7-9 times per day | 10-14 times per day | More than 15 times |

6. How much does your baby cry and fuss in general?

| | | | | | | |
|--|---|---|---|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Little; Much Less Than The Average Baby | | Average Amount; About As Much As The Average Baby | | | A Lot; Much More Than The Average Baby | |

7. How did your baby respond to his/her first bath?

| | | | | | | |
|-------------------------------|---|----------------------------------|---|---|--------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Well -- Baby Loved It | | Neither Liked Nor Disliked It | | | Terribly -- Did Not Like It | |

8. How did your baby respond to his/her first solid food?

| | | | | | | |
|---|---|----------------------------------|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Favorably -- Baby Liked It Immediately | | Neither Liked Nor Disliked It | | | Very Negatively -- Did Not Like It At All | |

9. How does your baby typically respond to a new person?

| | | | | | | |
|--|---|---|---|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Almost Always Responds Favorably | | Responds Favorably About Half The Time | | | Almost Always Responds Negatively At First | |

10. How does your baby typically respond to being in a new place?

| | | | | | | |
|--|---|---|---|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Almost Always Responds Favorably | | Responds Favorably About Half The Time | | | Almost Always Responds Negatively At First | |

11. How well does your baby adapt to new things (such as in items 7-10) eventually?

| | | | | | | |
|---|---|---|---|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Well -- Always Likes it Eventually | | Ends Up Liking It About Half The Time | | | Almost Always Dislikes It In The End | |

12. How easily does your infant get upset?

| | | | | | | |
|--|---|---|---------------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Hard To Upset Even By Things That Upset Most Babies | | | About Average | | Very Easily Upset By Things That Would Not Bother Most Babies | |

13. When your baby gets upset (e.g., before feeding, during diapering, etc.), how vigorously or loudly does he/she cry or fuss?

| | | | | | | |
|---------------------------------------|---|---|-----------------------------------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Mild Intensity Or Loudness | | | Moderate Intensity Or Loudness | | Very Loud Intense – Really Cuts Loose | |

14. How does your baby react when you are dressing him/her?

| | | | | | | |
|--------------------------|---|---|----------------------------------|---|----------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Well -- Loves It | | | About Average Doesn't Mind It | | Does Not Like It At All | |

15. How active is your baby in general?

| | | | | | | |
|------------------------|---|---|---------|---|-----------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Calm And Quite | | | Average | | Very Active And Vigorous | |

16. How much does your baby smile and make happy faces?

| | | | | | | |
|---|---|---|-------------------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A Great Deal, Much More Than Most Infants | | | An Average Amount | | Very Little, Much Less Than Most Infants | |

17. What kind of mood is your baby generally in?

| | | | | | | |
|----------------------------|---|---|---------------------------------|---|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Happy And Cheerful | | | Neither Serious Nor Cheerful | | Serious | |

18. How much does your baby enjoy playing little games with you?

| | | | | | | |
|-------------------------------------|---|---------------|---|---|----------------------------------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A Great Deal, Really Loves It | | About Average | | | Very Little, Does Not Like It | Very Much |

19. How much does your baby want to be held?

| | | | | | | |
|---|---|--|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Wants to Be Free Most Of The Time | | Sometimes Wants To Be Held Sometimes Not | | | A Great Deal, Wants To Be Held Most Of The Time | |

20. How does your baby respond to disruptions and change in everyday routine, such as when you go to church or a meeting , on trips, etc.?

| | | | | | | |
|----------------------------------|---|---------------|---|---|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Well, Does Not Get Upset | | About Average | | | Very Unfavorably, Gets Quite Upset | |

21. How easy is it for you to predict when you baby will need a diaper change?

| | | | | | | |
|-----------|---|---------------|---|---|----------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Easy | | About Average | | | Very Difficult | |

22. How changeable is your baby's mood?

| | | | | | | |
|---|---|---------------|---|---|---------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seldom Changes, And Changes Slowly When It Does | | About Average | | | Changes Often And Rapidly | |

23. How excited does your baby become when people play with or talk to him/her?

| | | | | | | |
|--------------|---|---------------|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Excited | | About Average | | | Not At All | |

24. Please rate the overall degree of difficulty your baby would present for the average mother?

| | | | | | | |
|------------|---|----------------------------|---|---|----------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Super Easy | | Ordinary, Some Problems | | | Highly Difficult To Deal With | |

25. On the average, how much attention does your baby require, other than for caregiving (feeding, diaper changes, etc.)?

| | | | | | | |
|---|---|----------------|---|---|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Very Little -- Much Less Than Average | | Average Amount | | | A Lot -- Much More Than Average | |

26. When left alone, how often does your baby play well by him/herself?

| | | | | | | |
|---------------|---|---------------------|---|---|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Almost Always | | About Half The Time | | | Almost Never -- Won't Play By Self | |

Appendix K

UBC Research Ethics Board Certificate of Approval

CERTIFICATE OF APPROVAL - FULL BOARD

| | | |
|---|---|---|
| PRINCIPAL INVESTIGATOR: Lynn Miller | INSTITUTION / DEPARTMENT: UBC/Education/Educational & Counselling Psychology, and Special Education | UBC BREB NUMBER: H07-03141 |
| INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT: | | |
| Institution | | Site |
| UBC | | Vancouver (excludes UBC Hospital) |
| Other locations where the research will be conducted: participants' homes | | |
| CO-INVESTIGATOR(S): Rosemary L. Messmer | | |
| SPONSORING AGENCIES: N/A | | |
| PROJECT TITLE: The Relationship between Parent-Infant Bed-Sharing and Marital Satisfaction for First-Time Parents | | |
| REB MEETING DATE: February 28, 2008 | CERTIFICATE EXPIRY DATE: February 28, 2009 | |
| DOCUMENTS INCLUDED IN THIS APPROVAL: | | DATE APPROVED: April 10, 2008 |
| Document Name | Version | Date |
| Protocol: | | |
| Thesis Proposal | N/A | February 5, 2008 |
| Consent Forms: | | |
| Consent Form | Version 2 | March 22, 2008 |
| Advertisements: | | |
| Advertisement Poster | N/A | February 5, 2008 |
| Advertisement for Newspaper | Version 2 | March 22, 2008 |
| Questionnaire, Questionnaire Cover Letter, Tests: | | |
| Questionnaires | N/A | February 5, 2008 |
| Questionnaire Cover Letter | Version 2 | March 22, 2008 |
| Other Documents: | | |
| List of Counselling and Support Resources | N/A | March 22, 2008 |
| Other: | | |
| The URL to the website is https://www.freewebs.com/familysleep The website contains a few paragraphs (virtually identical to the questionnaire cover letter) welcoming participants to the study. It will also contain a link to the survey on SurveyMonkey, once the account on SurveyMonkey has been created. It also contains the List of Counselling and Support Resources. | | |
| The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects. | | |
| <p>Approval is issued on behalf of the Behavioural Research Ethics Board and signed electronically by one of the following:</p> <hr/> <p>Dr. M. Judith Lynam, Chair Dr. Ken Craig, Chair Dr. Jim Rupert, Associate Chair Dr. Laurie Ford, Associate Chair Dr. Daniel Salhani, Associate Chair Dr. Anita Ho, Associate Chair</p> | | |