

# WHY DO WOMEN CHOOSE TO BED-SHARE WITH THEIR INFANTS?

By

Victoria A. Miller

PROJECT

Approved: Project Committee

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Naomi Torrance, DNP, MSN, FNP-BC  
Chairperson

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Date

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Ammie Tremblay, MSN, CNS, RN  
Committee Member

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Date

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Bethany Buchanan, DNP, FNP  
Committee Member

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Date

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Angelia Trujillo, DNP, SANE-A, RN  
External Reviewer

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Date

Accepted:

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Barbara Berner, EdD, APRN, FNP-BC, FAANP  
Director, School of Nursing

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Date

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Susan Kaplan, PhD, MBA, OT  
Administrative Dean, College of Health

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Date

Why Do Women Choose to Bed-share with their Infants?

Victoria Miller

University of Alaska, Anchorage

### Abstract

In the early 1990s, the American Academy of Pediatrics (AAP) initiated *Back to Sleep* to decrease infant mortality from Sudden Infant Death Syndrome (SIDS). A decline in SIDS followed; however, accidental deaths from asphyxiation, overlaying, falls, and suffocation increased. Classified as Sudden Unexplained Infant Deaths (SUID), these deaths occurred more frequently in infants who bed-shared. To minimize the risk of SUID, the AAP released guidelines in 2011 advising against bed-sharing. However, despite the new guidelines, bed-sharing rates remain near 50%. The purpose of this systematic literature review is to examine why women bed-share. The author found better sleep, breastfeeding, closeness, convenience, and safety as frequent reasons for bed-sharing. Less commonly found were culture and financial limitations. A greater understanding of the reasons women bed-share can help providers discuss this issue with parents, guide interventions to reduce bed-sharing, and improve compliance with AAP guidelines.

*Keywords:* co-sleeping, bed-sharing, newborn, infant, sleep, Sudden Infant Death Syndrome (SIDS), Sudden Unexpected Infant Death (SUID), Back to Sleep, Pregnancy Risk Assessment Monitoring System (PRAMS).

## Introduction

Safe sleep, like many issues relating to newborn care, is complex, with choices that parents make sometimes at odds with expert recommendations. The American Academy of Pediatrics (AAP) produces guidelines for safe sleep which have evolved over the last twenty years, from *Back to Sleep* in 1993 to the most recent recommendations released in 2011. When the Back to Sleep guidelines were published, the AAP did not warn against bed-sharing but recommended that infants be placed in a supine position in an effort to reduce deaths from Sudden Infant Death Syndrome (SIDS). In 2011 however, these guidelines changed due to concerns that parents could not bed-share safely and evidence that bed-sharing, in and of itself, could be harmful (AAP, 2011).

While there was a significant decline in SIDS since the *Back to Sleep* guidelines advised parents to place infants in a supine position for sleep, in recent years the rate of decline has slowed (AAP, 2011; Johnson, Borkowski & Hunter, 1999; Pollack & Frohna, 2002; Smith, Colson, Rybin, Margolis, Colton, Lister & Corwin, 2010). Further, deaths by other means such as suffocation, entrapment or asphyxia due to a family member lying on a child were reported in greater numbers, spurring the AAP to re-evaluate their guidelines. In its position statement released in 2011, the AAP Task Force on SIDS recommended that infants sleep in a supine position in a safety approved crib, portable crib, play yard or bassinet (AAP, 2011), preferably in the same room as a parent, but not in the same bed.

Despite the recommendations against bed-sharing, nearly 50% of parents still report sleeping with their infants (Colson, Willinger, Rybin, Heeren, Smith, Lister & Corwin, 2013). The results of the national infant sleep position study (Willinger, Ko, Hoffman, Kessler & Corwin, 2003), published after Back to Sleep and prior to AAPs new guidelines reported that

45% of parents slept with their infants at some time during the night. Recent results by the same research group showed that despite the new guidelines, bed-sharing continues to rise, now at over 45%, with teen mothers and minorities reporting the highest rates. According to Colson et al. (2013), there has been a concurrent rise in the rate of infant asphyxiation. These continued high rates of bed-sharing, along with the increased rate of infant asphyxiation are concerning.

The literature suggests that bed-sharing is dangerous for infants in a variety of ways. A rise in body temperature and re-breathing of expired gases, thought to be a result of bed-sharing, are both risk factors for SIDS. Additionally, greater exposure to cigarette smoke increases the risk of SIDS, and mothers who smoke place their infants at greater risk by sleeping with them. Moreover, in addition to increasing the risk of SIDS, the practice of bed-sharing is, in and of itself, potentially dangerous to infants. Accidental overlaying, asphyxiation, strangulation, suffocation and falls may lead to accidental injury or death in infants who bed-share with other family members (AAP, 2012).

### **Significance to Nursing**

Despite the new AAP guidelines against bed-sharing, women continue to sleep with their infants in high numbers. A recent survey of new parents by Colson et al. (2013) after implementation of the new AAP guidelines placed the prevalence of bed-sharing at over 45%. In 2011, there were 3,953,590 births recorded (National Vital Statistics Reports, 2013). If approximately 50% of women are bed-sharing, which the data supports, then nearly two million infants are at higher risk of dying from preventable causes.

One role that nurses and nurse practitioners who care for new families perform is providing anticipatory guidance to parents. This includes teaching parents about feeding and routine infant care as well as safety issues such as car seat use, child proofing and sleep safety.

Often parents receive conflicting information being provided from friends and family members; sometimes this information is at odds with published guidelines. Because nurses and nurse practitioners play a significant role in educating parents, they are in a unique position to inform parents about safe sleep, and how best to meet their infant's sleep needs in a way that works for their family's needs. However, in order for nurses and nurse practitioners to better educate parents regarding bed-sharing, they must be aware of the new AAP guidelines themselves and understand reasons why parents choose to bed-share with their infants.

### **Purpose**

The purpose of this project is to identify the reasons women bed-share with their infants. In order to examine why this practice occurs in such high numbers, a systematic review of the literature was performed. There are no published studies since the AAP's bed-sharing guidelines were released which specifically evaluate why women bed-share. However, the reasons women choose to bed-share have been investigated in the literature since the *Back to Sleep* guidelines were published in the 1990s. Evaluating this research and reporting it in a format which is intended for health care providers may help them share current bed-sharing guidelines with parents while taking into account why they bed-share. It can also guide interventions to help keep infants safe.

### **Literature Review**

#### **Prevalence**

In the United States, bed-sharing is a choice that many parents make. Willinger et al. (2003) reported the results of a national telephone survey from the late 1990's showing that 45% of caregivers reported sleeping with their infants at least some of the time. Recent results reported in 2013 show that bed-sharing is on the rise, from 6.5% in 1993 to 13.5% in 2010

reporting that they usually kept their infants in bed with them. (Colson et al., 2013). The Centers for Disease Control (CDC) maintains a surveillance project in cooperation with state health departments called the Pregnancy Risk Assessment Monitoring System (PRAMS). Data is collected from forty states that participate in the program. Oregon's PRAMS data showed that over half slept with their infants sometimes, with 20.5% reported always, 14.7% almost always, and 41.4% sometimes bed-sharing. Greater numbers of bed-sharing were found in non-white, single, breastfeeding and low income women (Lahr, Rosenberg & Lapidus, 2007). Alaska had the highest rate of bed-sharing, compared to the other states which collect this data (State of Alaska PRAMS, 2011). Bed-sharing rates in Alaska increased from 39.9% in 2000 to 47.8% in 2008. Higher rates were found among teens (50%), and those mothers without a high school education (60%). Geographically, northern and southwest areas of Alaska show higher rates of bed-sharing (64.7% and 58.9% respectively) than in the interior. Only 28.6% of interior Alaskan mothers reported sleeping with their infants (Schoellhorn, Perham-Hester, & Goldsmith, 2008).

Bed-sharing is a common practice in other cultures world-wide. One survey of non-industrialized ethnic populations found that 24 of 27 of the ethnic groups studied reported high rates of bed-sharing as a cultural norm (McKenna, 1986). Another study reported that nearly half of the 114 cultures evaluated worldwide included bed-sharing as a common family practice (Barry & Paxon, 1971). Similar results were found in a more recent study of both rural and urban Egyptian families. Study participants in both locales reported that 63.1% of urban, and 75.2% of rural dwellers reported sleeping in a bed shared with family members. There appears to be a cultural component, since all the respondents surveyed reported sleeping with their own parents during childhood (Worthman & Brown, 2007). Infants shared sleep not only with their parents, but often with other family members as well.

Japanese families share similar customs. Traditional Japanese sleep patterns include sleeping on a futon or mat on the floor. Fukumizu, Kaga, Kohyama and Hayes (2005) found that 47% of infants slept on futons or mattresses, with 80% of these infants sleeping with their parents. Of the 37.3% who reported having a dedicated child bed, a mattress or futon on the floor next to parents, 52.4% report bed-sharing during at least part of the night

### **Diagnosis of Infant Death**

Sudden Infant Death Syndrome (SIDS) is defined by the AAP as “the sudden death of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of death scene, and review of the clinical history” (AAP, 2005, p. 188). Questioning of parents or caregivers, evaluation of the infant’s medical history, autopsy results and investigation of the environment help determine the cause of death when an otherwise healthy infant is found unresponsive. If a cause of death is found such as asphyxiation, trauma, infection, suffocation or disease, then the death is classified as a Sudden Unexpected Infant Death (SUID), a classification adopted through the Centers for Disease Control to clarify causes of deaths in infants. The guidelines for investigating infant deaths, while exhaustive, have not been consistently adopted across the United States, making the determination of actual numbers of deaths of SIDS versus SUID difficult to assess (AAP, 2011). The Centers for Disease Control, however, are providing training across the country for medical examiners and others who investigate the circumstances surrounding infant deaths in order to provide more consistency across all 50 states. So while SIDS rates appear to have declined from 1992 to 2001 by 29%, those numbers may reflect a change in how infant death is classified, with increasing numbers determined as SUID, rather than SIDS. Since 2001, SIDS rates have continued to decline, on average, by three percent per year. So while SIDS rates are



on the decline, the rates of SUID are rising. Whether from more careful diagnosis, improved investigation or actual increase it is difficult to ascertain, particularly since prior to the early 1990s most infant deaths were classified as SIDS without further investigation as to the circumstances surrounding the event (Shapiro-Mendoza, Kimball, Tomashek, Anderson, & Blanding, 2009).

### **Risks of Bed-sharing**

While bed-sharing provides convenience and closeness, it is a practice which poses a real danger to infants. Overlaying by parents, asphyxiation from an infant being wedged between a mattress and wall, or being covered with blankets or pillows are some of the reasons why it is unsafe for infants to sleep with their parents. The AAP recommends against bed-sharing due to the risks of airway obstruction, accidental head covering, overheating, re-breathing trapped expired gasses, all of which increase the risk of SIDS. There is also an increased risk for accidental injury or death from falling, strangulation in bedclothes, suffocation from bedding or pillows, or if a parent or sibling accidentally rolls over the infant (AAP, 2012).

In a review of autopsy results over a ten year period of infants reportedly dying due to SIDS in Auckland New Zealand, Hutchison, Rea, Stewart, Koelmeyer, Tipene-Leach, and Mitchell (2011) found that only 28% were found at time of death in a crib, and 36% of parents interviewed denied sharing a bed with their infant. The remaining infants were found in an adult bed, couch or chair or on the floor; 15% had been sharing a bed with three or more people. Maori infants comprised the greatest proportion of the infants found dead (83%), with 65% of these infants being placed prone for sleep, another risk factor for SIDS.

In Maryland, of the 102 cases of infant death cited in their study, Li, Zhang, Zielke, Ping and Fowler (2009) found that “only 24% of infants were found sleeping alone in a crib or

bassinet” (p. 318). The remaining infants were on a bed or couch, with 45% having been sleeping with at least one other individual. When the data was further divided into cases of SUID versus SIDS, 80% of the infants dying of asphyxia (SUID) were found bed-sharing. Of the 21 cases of SIDS evaluated, 11 were in a crib or bassinet, three were alone in adult bed, and four were bed-sharing (Li, et al., 2009).

### **Additional Risk Factors**

The AAP found that bed-sharing is particularly dangerous when other risk factors are present. These include tobacco abuse by one or both parents, if the infant is less than three months of age, if the sleep surface is particularly soft (such as a waterbed, soft mattress, chair or couch) or if pillows or blankets are used. Other sleepers in the bed, such as siblings, further increase the risk of accidental death (Mitchell & Thompson, 2008). Alcohol use by an adult also increases the risk of SIDS. Higher maternal body weight was found, in a retrospective SIDS case review, to be a risk factor for SIDS death, although a case-control study evaluating the link between SIDS and maternal body weight found no increased risk (Mitchell & Thompson, 2006).

In the United Kingdom, a comparative study of white versus Pakistani families in Bradford by Ball, Moya, Fairley, Westman, Oddie and Wright (2011) generated compelling results. Curious about lower rates of SIDS among Pakistani families, the researchers studied sleep patterns between these two different ethnic groups. They found that while a greater percentage of Pakistani infants slept in an adult bed than white infants (60% versus 4%), the other risk factors for SIDS (smoking and alcohol use) were significantly lower. The white families reported much higher rates of both smoking and alcohol use. This may explain the lower SIDS rates among this population, despite higher rates of bed sharing.

### **Protection of Human Subjects**

Submission to the University of Alaska Institutional Review Board was undertaken immediately following proposal defense. Due to the lack of involvement of human subjects, this project received exempt status.

### **Methods**

#### **Research question:**

Why do women choose to bed-share with their infants?

#### **Study Design**

A systematic literature review was performed in order to answer the question of why women bed-share with their infants. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was used to organize and prepare this literature review. This process is recognized among health care researchers and allows clear guidelines for creating a research question, performing the literature search, evaluation of the studies chosen, and writing up the findings in a clear and concise manner (Liberati, et al., 2009). MEDLINE, CINAHL, ProQuest, and PubMed were accessed through the University of Alaska's consortium library website and with the collaboration of the medical librarian. Peer-reviewed journal articles from 1993 to the present were evaluated based on their appropriateness to the research topic of why women choose to bed-share. The year 1993 was chosen for the earliest date of publication due to the American Academy of Pediatrics *Back to Sleep* campaign being initiated that year. Search terms included co-sleeping, bed-sharing, newborn, infant, sleep, Sudden Infant Death Syndrome (SIDS), Sudden Unexpected Infant Death (SUID), *Back to Sleep* and Pregnancy Risk Assessment Monitoring System (PRAMS). Further, a search of Google and Google scholar was

undertaken in order to find relevant studies not found in the previously mentioned search engines. Reference lists of culled articles were scrutinized to find other pertinent articles.

Studies were eligible for inclusion if they addressed both infant sleep and the reasons women bed-share. Study design was limited to qualitative studies only, due their ability to examine the deeper meaning of a phenomenon, such as bed-sharing. While quantitative studies excel at determining prevalence, such as the rates of bed-sharing, they are unable to study the deeper meaning, which is what qualitative studies do quite well. The qualitative studies included in this systematic literature review used focus groups and interviews to explore the deeper meaning of bed-sharing for mothers, fathers and care-givers. Qualitative studies allow the participants to describe, in their own words, their experiences with a particular issue. Because the purpose of this review is to examine bed-sharing as a phenomenon for parents and caregivers, looking closely at the reasons bed-sharing occurs, qualitative studies are more appropriate and were, therefore, exclusively chosen for this review.

Studies from other countries were included if they were relevant to the topic and published, or translated, into English. Studies were excluded if not published in English, were published prior to 1993, were quantitative, or were not relevant to the topic. The studies chosen for this systematic literature review are listed in Table 1 (see Appendix A).

## **Results**

After performing the initial literature search, eight studies were identified that addressed why women choose to bed-share with their infants. However, two studies were removed from consideration because they used solely quantitative methods, and therefore did not meet the criteria for this systematic review. Of the six remaining studies, only three reported exclusively reasons why mothers chose to bed-share, as opposed to fathers or other caretakers. The other

three studies reported reasons why family members or caretakers chose to bed-share, and results for mothers only could not consistently be discerned from the data reported. These articles were included in this review because the responses included women and were therefore relevant to the topic. The six studies included in this systematic review are listed in Table 1 (see Appendix A). The smallest and largest studies in this review had samples of 28 and 253, respectively. The number of mothers, caregivers and parent couples studied within the six studies chosen for this review total 598.

To examine the bed-sharing experiences of mothers in England, Ball (2002) used both sleep logs and interviews to explore their experiences with bed-sharing. A total of 253 mothers completed the study, of which 97.3% were white, 1.2% were Asian, and 1.6% were described as other. Sixty percent were married, 31% were cohabitating, 3% were single with a partner, and 6% were single. The semi-structured interviews were performed when the infant was one month and three months of age, at which time the sleep logs were collected. Themes found to explain why women chose to bed-share include ease of breastfeeding, convenience, including caring for an ill infant, and better sleep for mom and baby. Other reasons mentioned less frequently were fear of the infant dying and parental enjoyment of a family bed.

Ball, Hooker and Kelly (1999) utilized a prospective study design in northern England to investigate prenatal expectations about infant sleep and how they differ from their experiences after birth. Twenty three new and 17 experienced parents were interviewed during pregnancy and again at one month after delivery. Ethnicity was not reported; however, 16 of the 23 new parents, and all 17 of the experienced parents, were married. Of the unmarried new parents, three lived with their partner, three were single, and one was separated from her partner.

During the interviews they were asked about their expectations for feeding and where their infant would sleep; they were then re-interviewed after delivery and asked how their experiences differed from their expectations. Prenatally, parents anticipated that they might bring their baby into bed for feeding or settling, but planned to return the infant to a crib or bassinet. However at the follow up interviews, the majority of parents reported that their infants stayed in bed with them. The reasons cited by the parents included ease of breastfeeding, better sleep, convenience for infant care, and relieving postpartum discomfort.

Chianese, Ploof, Trovato and Chang (2009) led focus groups of 28 caregivers in Pittsburgh, PA to explore their motivation for bed-sharing. The majority of participants were African American (86%) and female (93%); a minority (11%) breastfed their infants who were between one and six months of age. Reasons cited for bed-sharing included better sleep, convenience, family tradition of bed-sharing, safety, and meeting the emotional needs of caregiver and infant.

Joyner, Oden, Ajao and Moon (2010) studied 83 African American mothers in Washington, DC to investigate the factors influencing their decisions about where their infants slept. They utilized focus groups and interviews to query mothers about where their infants slept and why. Mothers chose to bed-share because it was more convenient for feeding and to help them and their infants sleep better. They also expressed enjoying the closeness of being with their baby in bed and that they could check on their infant without getting out of bed.

In a study of 60 Swedish families, Welles-Nystrom (2005) used questionnaires and interviews to investigate the experience of the family bed. The Swedish parents interviewed saw the family bed as normal and expected, and felt that it fostered emotional development in their

children. They enjoyed the closeness of having their infants and children near them at night. They also said that their infants slept better when with them, and they slept better as well.

Rice and Naksook (1998) studied 30 Thai mothers in Victoria, Australia to examine the role that Thai cultural beliefs and practices had on their child-rearing decisions. They utilized interviews and participant observation to explore, among other things, bed-sharing. All of the mothers kept their infants close, with 80% keeping them in bed with them and the remaining 20% keeping them in a cot next to their bed. When asked why, mothers stated it was out of concern for infant safety, believing that if the infant's face became covered with a blanket, they would be unaware and unable to help. They also mentioned convenience for breastfeeding and concern that their infants would get cold if sleeping in a different room. The mothers described hearing about the risks of SIDS, but felt that bed-sharing would both keep their infants warm, and prevent them from dying of SIDS.

### **Systematic Review Findings**

This systematic literature review examined six qualitative studies from multiple cultures and found seven themes that answer the question of why women choose to bed-share with their infants. These themes, from most to least commonly found, are: better sleep, breastfeeding, convenience, need for closeness, safety, culture and financial limitations.

#### **Better Sleep**

Lack of sleep is a common complaint among new parents and in an attempt to get their infants to sleep better, bed-sharing was often used by the mothers and caregivers in these studies to achieve this end. Better sleep was universally cited and found in all studies included in this review. Ease of getting an infant to sleep and fewer wakeful periods were mentioned in all studies as well. Chianese, et al. (2009) found that mothers reported bed-sharing allowed for

longer sleep with fewer wakeful periods. This was also reported among African American mothers in Washington, DC. Joyner, et al. (2010) note that mothers reported improved sleep when the infant shared a bed with them. Ball (2002) found that over half of mothers used bed-sharing as a way to settle an infant for sleep, stating that infants fell asleep faster and stayed asleep longer. Ball et al. (1999) found similar results. Despite expressing in prenatal interviews that they did not plan to sleep with their newborns, new parents found bed-sharing to be an effective way of getting better sleep and therefore the majority kept their infants in bed with them. Experienced parents also slept with their infants, though unlike new parents, they anticipated bed-sharing. Having kept their other children in bed with them and having experienced better sleep, the experienced parents planned to utilize bed-sharing as a means to achieve better sleep. In Sweden, parents also verbalized bed-sharing as a means to obtain better sleep (Welles-Nystrom, 2005). They found their infants and young children slept better when in bed with them, and as a result they also slept better. Rice and Naksook (1998) also found among Thai women living in Australia that better sleep was a reason this population chose to bed-share. Despite the cultural and socioeconomic diversity of the populations included in this review, lack of sleep was universally found as a reason for bed-sharing. From the upper middle class Caucasian population in Sweden to the economically disadvantaged mothers in Washington, DC, lack of sleep was frequently expressed as a concern by those who care for infants, and bed-sharing was found to allow better sleep for both parents and infants.

### **Breastfeeding**

Ease of breastfeeding was found to be a reason for bed-sharing in five studies in this review. Ball (2002) found breastfeeding as a reason for bed-sharing, particularly when breastfeeding at night. Bed-sharing was much more common among breastfeed babies than



bottle fed babies. Another study of parents in the United Kingdom by Ball et al. (1999) found that the majority of new parents reported sleeping with their infants at least sometimes, largely due to ease of breastfeeding. Further, the author found that the only infants who never slept in bed with their mothers were bottle-fed. Thus all breastfed babies were engaged in some amount of bed-sharing. Mothers explained that it was much easier to breastfeed in bed, and some had been shown this position in the hospital, particularly after cesarean delivery, which relieved their postpartum discomfort.

In the United States, breastfeeding was also a key reason mothers chose to bed-share. Chianese et al. (2009) found that ease of breastfeeding at night was a frequent reason new parents chose to bed-share. Joyner et al. (2010) found similar results among African American mothers in Washington, DC. While the mothers of both formula-fed and breastfed babies noted convenience as a reason for bed-sharing, it was particularly true for breastfeeding mothers. They preferred keeping their infant in bed with them and valued not having to leave the room to feed them. Thai mothers in Victoria, Australia (Rice and Naksook, 1998) also expressed ease of breastfeeding as one of the reasons they chose bed-sharing.

As noted above, breastfeeding and bed-sharing appear to be closely linked. Only in Nystrom-Welles' study of Swedish families (2005) was breastfeeding not listed by parents as a reason for bed-sharing, perhaps because the study included older children and there was less emphasis on newborns.

### **Need for Closeness**

Meeting the need for closeness was mentioned in five of the six studies in this systematic review. Mothers, fathers and other caregivers described that bed-sharing allowed them to meet the need for closeness that they and their infants desired. Ball (2002) found this to be particularly

true for working mothers. Nearly half of the women interviewed reported bed-sharing, explaining that it allowed them to have extended periods of closeness with their infants. This was also found to be true among Swedish families, where parents describe having their “love tank” filled by sleeping with their children at night (Welles-Nystrom, 2005). American mothers, fathers and caregivers also mentioned the need for closeness as a reason for bed-sharing. Chianese et al. (2009) found that parents described bed-sharing as a way to meet their own and their infant’s needs for closeness. They believed that bed-sharing was a bonding experience. They interpreted their infants’ crying as a way of saying that they wanted to be in bed with them, and not left alone. They also described enjoying the feeling of closeness that bed-sharing provided. African American mothers in Washington, DC also described wanting the feeling of emotional closeness with their infants, and kept them in bed with them because they enjoyed it (Joyner et al., 2010).

Meeting the needs of both caregivers and infants for closeness was frequently mentioned as a motivating factor for bed-sharing. Parents enjoyed having their infants in bed with them, and in cases where mothers worked outside the home, this period of close physical proximity was particularly important. The only study where the desire for closeness was not specifically mentioned was among Thai women; it is possible that the desire for closeness was included under a different theme such as breastfeeding or culture and not specifically reported as a reason for bed-sharing. However, without interview transcripts, it is impossible to know for certain. Further research about bed-sharing among this group of mothers would help clarify the relationship between bed-sharing and the emotional needs of mother and infant.

### **Convenience**

Whether breastfeeding or bottle feeding, ease of caring for their infant was frequently mentioned by caregivers as a reason for bed-sharing and was specifically mentioned in four of the six studies in this systematic review. Ball (2002) found that bed-sharing was found to be more convenient, whether caring for an ill child, changing diapers, comforting during periods of colic, or if the infant was sick. Parents preferred to keep their infant with them in bed during periods of illness because it allowed them to monitor symptoms and intervene more quickly. Ball et al. (1999) also found that parents mentioned convenience as a reason for bed-sharing especially when relating to infant care and feeding. Chianese et al. (2009) found similar results among Pennsylvania caregivers; having their infants in bed with them allowed mothers to feed their infants more easily, change diapers without leaving the room, or comfort the child back to sleep without getting up. This was also found among African American mothers in Washington, DC. Joyner, et al. (2010) found that bed-sharing was described as easier by bottle feeding mothers, who reported that keeping the bed with them allowed for easier feeding, establishing a link between bottle feeding and bed-sharing, even though in other populations, bed-sharing was largely associated with breastfeeding.

Convenience was not specifically mentioned in two of the studies included in this systematic review. In these studies, for Swedish families and Thai mothers bed-sharing is a cultural phenomenon, and both are cultures with high rates of breastfeeding. Without access to the specific interview questions, it is difficult to ascertain whether convenience was implicitly linked to breastfeeding, or whether they were asked specifically about whether bed-sharing was more convenient. This illustrates the challenge inherent in separating the issue of convenience as a reason for bed-sharing from those of breastfeeding or better sleep. Mothers described bed-

sharing as more convenient for breastfeeding and other infant care, and therefore it is difficult to separate convenience from breastfeeding.

### **Safety**

Bed-sharing is considered a risk factor for SIDS and accidental death; however, infant safety was named as a motivating factor for bed-sharing among Thai mothers in Australia and mothers in the United Kingdom. Mothers interviewed by Ball (2002) believed that sleeping in the same bed with their infant would allow them to know, even if asleep, that their infant was having trouble breathing and be able to intervene. Thai mothers in Australia kept their infants in bed with them because they feared for their infant's safety if left alone for sleep (Rice and Naksook, 1998). They also believed it was too cold for infants to sleep alone, that the warmth from their bodies would keep their infant warm and prevent illness or death. Both groups believed they would know if something happened to their infants and act quickly to save them.

Mothers in Philadelphia, PA expressed the fear of external threats to their infant's safety as one reason for bed-sharing (Chianese et al., 2009). They identified threats such as house fires, insects and violent siblings as possible threats to their infants, and felt the need to keep their infant close to protect them from threats of harm. They also believed that bed-sharing would prevent their infant from dying from SIDS, because they would know if their infant stopped breathing and be able to intervene. In Washington, DC, African American mothers expressed similar reasons for bed-sharing and safety (Joyner, et al, 2010). These mothers believed that bed-sharing would prevent death from SIDS. They felt that not only could they monitor their infant's breathing but also sleep position; one mother reported that her infant wouldn't sleep on his back and, recognizing that the prone sleep position was a contributing factor for SIDS, kept him in bed with her so she could watch his breathing. They also feared that their infants might be kidnapped

or hit by stray gunfire. One mother stated, “Breaking people’s windows, kidnappings, shooting lately... I guess I just a little overprotective” (p. 887).

Keeping their infants safe from harm can mean different things to different mothers as demonstrated in the studies included in this review. Some mothers worry about their infant becoming ill from cool ambient air temperatures (Rice and Naksook, 1998). Others feared the dangers in their community of drive-by shootings and kidnappings (Chianese, et al., 2009). Mothers from different backgrounds who had heard of SIDS believed that they could prevent it from occurring to their infant by keeping them close. Regardless of the nature of the perceived threat, parents, it seems, feel that physical closeness to their infants ensures physical safety.

### **Culture**

Culture was found to be a reason for bed-sharing in four of the six studies included in this systematic review. Ball (2002) found that some mothers had decided ahead of time to bed-share with not only infants but older siblings and even, in some cases, family pets. They felt that a family bed reflected a style of parenting that resonated for them, allowing for a close, relaxed, and intimate family relationship. Thai women in Victoria, Australia as reported by Rice and Naksook (1998) described a cultural norm whereby infants slept with their parents, whether in bed with them or in the same room.

Swedish culture views the family bed as the expected norm, with beliefs that children have rights which include the closeness that comes about from a family bed (Welles-Nystrom, 2005). Parents believe that by following children’s cues expressing a need for closeness, and by meeting those needs, children will develop their individuality in their own time. As a result, it is common for entire families to share a bed. This larger cultural belief sets the stage for an infant sleeping with their parent as soon as coming home from the hospital.

Chianese et al. (2009) found similar views about traditional bed-sharing in their study of Philadelphia, PA women. One woman mentioned that she still sleeps with her grandmother, and another described a family tradition for infants to sleep with their mothers. These women were given advice about infant care from the women in their families, and that advice included the benefits of bed-sharing, which many heeded.

Because of its role in providing guidance for child rearing, culture appears to be a consistent motivating factor for bed-sharing. Despite moving from their home country, Thai women continued to bed-share, despite education by providers that it was unsafe. Their long-held beliefs regarding the safety of bed-sharing superseded the advice given by experts in their new country. This is similar with African American women in the United States, for whom the advice given by the women in their families also held more sway than the advice given by health care providers (Chianese et al., 2009).

### **Financial Limitations**

Financial limitations as a reason for bed-sharing was mentioned in two of the studies included in this review. Joyner et al. (2010) found that some African American mothers in Washington, DC kept their infants in bed with them because they couldn't afford a crib. Ball (2002) found one occurrence of lack of financial means as a potential motivation for bed-sharing. A teen couple living with relatives slept in a single bed with their infant between them while they were waiting for government-provided housing assistance. However, it wasn't clear from the reported data whether it was lack of money or a lack of space that led to their bed-sharing. Living with relatives did not necessarily mean that the couple lacked the resources to purchase a crib for their baby; it may be they lacked the space. This was not ascertainable in the article.

The issue of cost of a crib was not found in the other studies included in this review. Somewhat surprisingly, cost was not mentioned as a motivation for bed-sharing by inner-city caregivers in Pittsburgh, PA (Chianese et al., 2009). No income data were reported, so it is difficult to say whether cost might have been an issue. The Thai mothers in Rice and Naksook's study (1998) did not endorse cost as a motivating factor. No family income was reported, so the financial limitations as a motivating factor cannot be extrapolated. Further research that examines whether financial limitations are a reason for bed-sharing that include income level would be useful to determine whether financial limitations are a more pervasive motivating factor for bed-sharing than it appears in the literature.

### **Strengths and Limitations**

While quantitative methodologies excel at enumerating the prevalence of an issue, where they fall short is in achieving a deeper understanding of those experiencing the phenomenon. As a result, while studies which look at the prevalence of bed-sharing can shed light on how often it occurs, they cannot tell the reader why it occurs. Because the studies chosen for this review are descriptive qualitative studies, they are appropriate for examining the reasons for bed-sharing. The researchers used interviews, focus groups and observation to determine why bed-sharing occurs. Where interview questions were provided they were open ended, appropriate to the topic, and allowed the researchers the ability to reach data saturation. The authors treated their interview data carefully, using independent transcribers, double checking themes with other researchers, and reviewing final transcripts with the participants to be sure they were valid.

One limitation of the studies included in this review is the lack of racially heterogeneous groups. Joyner et al. (2010) specifically studied the experience of African American women who bed-share. Rice and Naksook (1999) examined the role of bed-sharing among Thai women.

These results, while compelling, may not be relevant to the general population. The Swedish study (Welles-Nystrom, 2005) while useful in describing why bed-sharing is an important part of their culture, may not be relevant to American families. Choosing a more racially diverse study sample may allow for results which could be better generalized to the larger population.

One challenge in evaluating the research for this review was that of separating out the experiences of mothers from those of fathers and caregivers. In the majority of studies included in this review, the role of the mother was not specifically examined. Welles-Nystrom's exploration of bed-sharing (2005) was intended to describe the experiences of families and as a result the data was reported from the family's perspective. This was true of the Ball (1999) study, which did not exclude men, but rather looked at parents as a whole. This study included single parents as well as unmarried and married couples, and examined their experiences with bed-sharing. Both studies had relevant data concerning bed-sharing, but in some cases it was difficult to recognize from the reported data which issues that were specific to mothers. Certain issues, like better sleep, are likely to affect the partner; however, others, like managing postpartum pain and breastfeeding, relate specifically to mothers. Without the quotes included in the article, identifying the reasons that mothers bed-share would be difficult. However, given that infants are raised today by other family members besides mothers, having a better understanding of why bed-sharing exists as a phenomenon, regardless of who is bed-sharing, is more relevant to the ways in which infants are cared for today.

### **Recommendations for Practice**

Several themes presented themselves in the studies chosen for this systematic review. Better sleep, breastfeeding, need for closeness, convenience, culture and safety were frequently mentioned as reasons for bed-sharing. Both mothers and fathers preferred bed-sharing because it



allowed them to get more sleep, since lack of sleep is a common lament among new parents. Ease of breastfeeding, managing postpartum pain, especially after cesarean, and settling an ill child were also frequently mentioned. Both new and experienced parents used bed-sharing to ameliorate common issues that parents face in the weeks and months following the birth of a child. By understanding the very real significance to parents in the weeks and months following the birth, health care providers have an opportunity to help parents address them more safely and be instrumental in saving infants from preventable death.

Some possibilities may include encouraging the parents to have the father bring the infant to mom for feeding and return the infant to a crib or bassinet. Another possibility are side sleepers, which attach to the parents' bed and place the infant next to the parents in its own sleep space, at the same level. This would allow the mother or father to reach over and comfort the infant without getting out of bed. Unfortunately, side sleepers have not yet been approved by the American Academy of Pediatrics as an appropriate sleep space. Encouraging a new mother to discuss adequate pain control with her health care provider may also be appropriate, if postpartum pain is a reason for bed-sharing.

The issue of meeting the emotional needs of parents and infants was mentioned nearly universally. Parents felt that their infants were happier when in bed with them, and they also enjoyed sleeping with their infants. This may be an appropriate use for side sleepers or a bassinet next to the bed, allowing a parent to reach over and reassure their infant that they're close. Discussing ways for parents to enjoy cuddling, such as during feedings or when waking in the morning, before getting out of bed may also be appropriate. This may be especially helpful for working mothers who miss having their infants near them while at work.

Infant safety was a theme found in the literature. Lower-income, inner-city American women and caregivers were concerned about external dangers such as stray gunfire and kidnappings. The Thai mothers in Australia felt their infant was unsafe alone because he/she would get too cold. Fear of SIDS was expressed by parents, but they believed that they could intervene if their infant stopped breathing, even if they themselves were sleeping. To address the issue of safety with new parents, health care providers should educate parents about the bed-sharing guidelines, explaining how they can lower the risk of SIDS. They should also educate parents about the other ways in which infants are in danger when in bed with them. Health care providers can recommend a bassinet next to the bed to keep the infant close, but not in bed.

One potential intervention that addresses affordability are “baby boxes”, which are sturdy boxes with a shallow mattress placed next to the bed on the floor. These boxes have been provided to new parents in Finland for the past several decades. Since their initial use in Finland in the 1930’s, these boxes have appeared to coincide with lower rates of infant deaths during the first year of life. However, because they were implemented with improved prenatal care it is difficult to say whether they are solely responsible for the decrease in the rate of infant mortality. These could prove to be an appropriate intervention for families who cannot afford a crib. However, if financial limitations prove not to be a reason for bed-sharing, this resource would be inappropriate. Having a better understanding of the role of financial limitations and the perceived importance of having a separate sleep space for an infant would help determine the appropriateness of such an intervention.

### **Directions for Future Research**

Despite the guidelines published in 2011, nearly 50% of infants bed-share, placing them at risk for SIDS and SUID. While bed-sharing rates continue to be examined, research regarding

the reasons bed-sharing occurs may provide a clearer understanding of this phenomenon. Specifically, the role of affordability of a crib, whether the reasons for bed-sharing differ after publication of the 2011 guidelines, and the role of health care providers in educating parents about safe sleep are areas in which more research is needed.

The inability to afford a crib as a reason for bed-sharing was found in only two studies included in this systematic review; further, family income was inconsistently reported in the studies among the demographic data provided. Having income data is essential to examine the role of affordability in bed-sharing. Yet it may also be relevant to have a greater understanding of the perceived value of a crib. Examination of the importance parents place on having a crib, and whether they would use one if provided, may help determine whether interventions that would supply one for those in need would be appropriate.

It is also important to recognize that all of the studies included in this review were published prior to the 2011 bed-sharing guidelines. The research suggests that the recommendation to place a newborn in a supine position for sleep has largely been followed, which has resulted in fewer deaths from SIDS. Yet no research has been published since 2011 that examines the reasons why bed-sharing continues to occur. Some of the research included in this review suggests that mothers felt bed-sharing was safer for infants; this may reflect lack of knowledge of the new bed-sharing guidelines. Current research which examines the reasons for bed-sharing would help guide more relevant interventions.

Another area of future research is the parental perception of education provided by health care providers regarding infant sleep. Research that specifically asks what parents are told about bed-sharing by their health care providers could be instrumental in understanding what is known about bed-sharing. Having an understanding of how they are educated by health care providers,

and whether the education had an impact on their choice to bed-share could help guide interventions that would be more relevant to the needs of parents. It could also help guide public health officials to create public service campaigns that can educate parents in a meaningful way about the dangers of bed-sharing.

### **Conclusion**

Bed-sharing has been shown to increase the rates of death from SIDS and SUID in young infants. Despite the 2011 guidelines advising against bed-sharing, rates remain near 50%. Given that one of the Healthy People 2020 goals is to reduce the risk of SIDS and SUID by 10%, from .93 to .83 of 1000 deaths, this is a relevant issue for health care providers who care for families. Mothers endorse many reasons for bed-sharing, including breastfeeding, better sleep, closeness, and adhering to cultural norms. Some mothers reported they felt bed-sharing was safer for their infants and protected their infants from SIDS. What remains unclear is exactly what parents are being told about bed-sharing by health care providers, and what the role of cost as a reason for bed-sharing might be. Health care providers have the opportunity to collaborate with parents to address their reasons for bed-sharing in safer ways, as well as guide public health interventions that could reach large numbers of infants and their caregivers. While this systematic review has begun the process of uncovering the reasons women bed-share, further research would continue to examine this common phenomenon. In the meantime, having a better understanding of the reasons women bed-share gives a voice to providers who aren't comfortable discussing bed-sharing with their patients.

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## Appendix A

## Reasons Women Bed-share

Author(s), Date, Title	Design, Sample and Setting	Findings
Joyner, Oden, Ajao, Moon, (2010) Where Should My Baby Sleep: A Qualitative Study of African American Infant Sleep Location Decisions	Qualitative: focus groups and interviews N=83 African American mothers Washington, DC	Prevalence of bed-sharing: 30.1% Themes: Financial limitations, better sleep, closeness, safety, convenience
Chianese, Ploof, Trovato, Chang (2009) Inner-City Caregivers' Perspectives on Bed Sharing With Their Infants	Qualitative, focus groups N = 28 caregivers (26 female, 2 male) Philadelphia, PA, USA	Prevalence of bed-sharing: 75% Themes: Better sleep, convenience, culture, safety, closeness
Welles-Nystrom, (2005) Co-sleeping as a window into Swedish culture: considerations of gender and health care	Mixed methodology: Quantitative (tools) Qualitative: interviews N = 60 Stockholm families	Prevalence of bed-sharing: 72% Themes: Culture, emotional closeness, better sleep
Ball (2002) Reasons to bed-share: Why parents sleep with their infants	Triangulated – quantitative and qualitative. N=253 (Mothers) United Kingdom	Prevalence of bed-sharing 47.4% Themes: Breastfeeding, convenience, better sleep, safety, closeness, Financial limitations, culture (family)
Ball, Hooker, Kelly (1998) Where Will the Baby Sleep? Attitudes and Practices of New and Experienced Parents Regarding Cosleeping with Their Newborn Infants	Prospective qualitative N=40, of which 23 were new parent couples, 15 married, 3 living with partner, 3 single, 1 living separately and 17 experienced parent couples (all married) United Kingdom	Prevalence of bed-sharing 70% of new parents, 60% of experienced parents Themes: Safety, breastfeeding, convenience

Rice and Naksook (1998)  
Child rearing and cultural  
beliefs and practices amongst  
Thai mothers in Victoria,  
Australia: Implications for the  
sudden infant death syndrome

Ethnographic, interviews  
and observation  
N = 30 Thai mothers

Prevalence of bed-sharing: 80%  
Themes: Safety, culture