EXPLORING BEDSHARING DECISION-MAKING IN LATINX FAMILY CAREGIVERS

by

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ABSTRACT

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An estimated 3,500 infants die of sleep-related causes every year and 11 percent of those infants are of the Latinx population. This grounded theory study was completed to add to the current safe sleep literature, specifically surrounding the Latinx population and how family caregivers make decisions about where the infant sleeps. Forty-five family caregivers were interviewed. Participants were recruited using purposive theoretical sampling and interviews were audio recorded in Spanish or English. Demographic information was obtained, along with the Brief Infant Sleep Questionnaire, Pittsburgh Sleep Quality Index, and Neuro-QoL anxiety/depression screenings. Results included a grounded theory that yielded three major findings about the infant sleep decision-making process, including: 1. The emergence of the basic social process of *Caregiver Vigilance*, 2. The six influencing factors that guide each pathway, and 3. How there are two decisions caregivers can make, but ultimately three different pathways that are each differently impacted by the six influencing factors. This grounded theory explains the complexity of safe infant sleep decisions in the Latinx community. Findings can help nurses create safe infant sleep messaging that better targets the Latinx population and addresses intentional and unintentional bedsharing.

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CHAPTER ONE

INTRODUCTION

The death of a baby for preventable reasons is tragic and every effort should be taken to prevent it. There is little theoretical foundation basis for decision-making around infant sleep safety. We know even less about infant sleep safety in Latinx families in the first six months postpartum. An estimated 3,500 infants die of sleep-related causes and an estimated 11 percent of those infants are of the Latinx population (CDC, 2021). The growth of the Latinx population growth in the United States is necessitating that healthcare providers assure that accessible, quality, and equitable care is available to this population.

According to the Joint Economic Committee of the U.S. Senate (2019), the Latinx population constitutes approximately 60 million or 18 percent of the total population. By 2060, it is estimated that one in four US citizens will be of Latinx heritage (Joint Economic Committee, 2019). This means more Latinx infants are being born in the United States. The infant mortality rate in the United States for a Latinx infant is 4.9 deaths per 1,000 births compared to the Non-Hispanic White infant mortality rate of 4.6 deaths per 1,000 births (CDC, 2021). Sleep-related death and injury are ranked at number four and five respectively as the leading causes of overall infant mortality (CDC, 2021). As the Latinx population grows, it is important to understand how and why infants are put to sleep so that sleep-related death and injury may be avoided.

Fatigue, sleep, and many other factors may influence where infants are put to sleep (Pease et al., 2017). The first year of life can often be an overwhelming period for mothers due to postpartum fatigue (Kline et al., 1998; Mercer, 1986; Troy, 2003) and the experience of poor quality and quantity of sleep (Runquist, 2007). Between 40 and 60 percent of postpartum women experience symptoms of fatigue (Badr & Zauszniewski, 2017). Postpartum fatigue also

contributes to postpartum depression (McGovern et al., 2007; Parks et al., 1999), increased anxiety (Taylor & Johnson, 2013), and decreased sense of parenting ability (Wade et al., 2012). Fatigue also impacts decision-making processes by "disrupting the metacognitive ability to monitor and regulated decision actions" (Aidman et al., 2017, p. 188). Therefore, parents may make decisions about infant sleep location that they would not necessarily make if they were not fatigued.

In addition to fatigue, breastfeeding can also contribute to bedsharing (Huang et al., 2013; Blair et al., 2010; Ball et al., 2016; Ball, 2006; McKenna et al., 1997; Moon & Task Force on Sudden Infant Death Syndrome, 2016). Breastfeeding is encouraged as it is beneficial to both the mother and the infant (CDC, 2020). Breastfeeding is also considered a protective factor for sudden infant death syndrome (SIDS) (Moon & Task Force on Sudden Infant Death Syndrome, 2016). However, there is also evidence that nighttime breastfeeding is a potential hazard for accidental suffocation (Bayard, 2020). This can create a dilemma for mothers who are fatigued but want to breastfeed their infant at night (Pease et al., 2017). While we know about breastfeeding trends in the Latinx population, we do not have the evidence that shows how breastfeeding or other factors influence a Latinx mother's decision on where an infant sleeps during the first six months of life.

Furthermore, immigrant Latinx mothers are more likely to initiate and exclusively breastfeed than Latinx mothers born in the United States (Gibson-Davis & Brooks-Gunn, 2006; Harley et al., 2007; Kimbro et al., 2008; Schmied et al., 2012). Latinx origin also contributes to breastfeeding rates, for example Mexican American mothers are more likely to breastfeed than Puerto Rican mothers (Louis-Jacques, 2017; Barcelona de Mendoza et al., 2016; Washio et al.,

2017). Therefore, there are numerous factors that contribute to breastfeeding rates in the United States.

Definitions

Latinx

The term *Latinx* is derived from the word Latin and refers to a person or persons from Latin America. Historically, the terms Latino and Latina have been used to refer to people from Latin America; however, the gendered endings of the words led to the gender-neutral neologism of Latinx (Merriam-Webster, n.d.).

Bedsharing

The American Academy of Pediatrics defines bedsharing as "parent(s) and infant sleeping together on any surface (bed, couch, chair)" (Moon & AAP Task Force on SIDS, 2016). There are various terms used throughout the literature to define bedsharing, including co-sleeping, couch-sharing, surface-sharing, and room-sharing. Traditionally, co-sleeping has included all of these definitions and was used interchangeably with bedsharing in the 1990s and early 2000s (McKenna et al., 1993; Barry, 2019). More recently, there has been a recognized separation between bedsharing and co-sleeping. Bedsharing has come to describe any situation where a caregiver and an infant share a sleep surface and co-sleeping is associated with room-sharing. However, various studies define bedsharing differently, creating confusion surrounding the correct prevalence and statistics of a caregiver and an infant sharing a bed to sleep. This lack of conceptual clarity in the definitions surrounding bedsharing lead to misrepresented data. Therefore, scholars should report bedsharing as it is literally defined: a caregiver and infant sharing a bed to sleep.

Infant Mortality, SIDS, and SUID

Infant mortality is defined as death of an infant 0 to 12 months of age, per 1,000 live births (CDC, 2020). Sudden Infant Death Syndrome (SIDS) is the sudden and unexplained death of an infant under 12 months of age in which the cause of death remains unexplained even after an investigation, review of the medical record, and autopsy have been performed (CDC, 2007). In addition to SIDS there is also Sudden Unexpected Infant Death (SUID), which the CDC defines as the death of an infant under 12 months of age in which the cause of death is not obvious before investigation (CDC, 2020). SUID is typically associated with sleep-related injury and death.

Caregiver

Caregiver, as defined by Merriam Webster (n.d.), is "a person who provides direct care." This applies to infant care and can include family members or paid helper.

Current Safe Sleep Recommendations

In the United States, the American Academy of Pediatrics' SIDS Task Force is the federally recognized body that sets safe infant sleep policy. Current guidelines state that the caregiver should place an infant to sleep in the supine position, use a firm sleep surface, room-share, but not bedshare, breastfeed (exclusively for the first six months), keep soft bedding and loose objects away from the infant's sleeping environment, offer a pacifier, and avoid smoking, alcohol, and illicit drug use (Moon & AAP, 2016).

Problem Statement

The postpartum period (the first six months after birth) is one of the most chaotic periods (Walker et al., 2019) for the Latinx household of a newborn because it is the critical time period for several significant changes. For example, mother and infant are experiencing physiological

changes, sleep is scarce, breastfeeding can be challenging, and family behaviors on how to live with an infant are being constructed (Tully et al., 2017). During this period of drastic change, a Latinx caregiver's decision-making abilities are critical when it comes to infant sleep safety because it is also the critical risk period (under six months of age) for infant death (National Institute of Child Health and Human Development, 2020) and under four months of age for sleep-related death (National Institute of Child Health and Human Development, 2020).

The decision-making process and the factors that influence that process have implications for the infant's health. Especially within the first four months of life, where a baby sleeps can determine life or death (Carlin & Moon 2017). There are many factors that influence a caregiver's decision on where to place an infant to sleep. For example, factors associated with bedsharing, including parental beliefs about bedsharing (Zoucha et al., 2016; Oden et al., 2010; Ajao et al., 2011), safe sleep knowledge (Matthews et al., 2015; Herman et al., 2015; Stiffler et al., 2020), and distrust of healthcare providers (Oden et al., 2010; Herman et al., 2015) influence where a caregiver places an infant to sleep. Physiological factors, such as infant sleep, and maternal postpartum fatigue also influence how caregivers make decisions on where infants sleep (Doering & Dufor, 2011; Okun, 2016).

There are also national organizations that specialize in the health and wellbeing of infants that provide policies on best practice based on current evidence. For example, the American Academy of Pediatrics (AAP) has a specific task force that focuses on the prevention of SIDS. However, the policies these organizations publish do not reflect diverse racial and ethnic backgrounds. What is known is primarily centered around White and Black infants (Ajao et al., 2011; Chu et al., 2015; Colson et al., 2005; Herman et al., 2015; Matthews et al., 2015; Oden et al., 2010; Zoucha et al., 2016),

Decision-making also has links to values, beliefs, and attitudes (Bakshi et al., 2020; Williams & Kogan, 2019). The Integrated Behavioral Model (IBM) is a non-rational decision-making model that synthesizes a number of health behavior models, including the theory of planned behavior, theory of reasoned action, social cognitive theory, and the health belief model (Montaño & Kasprzyk, 2015; Fishbein, 2008) to explore a caregiver's intention while accounting for the associated factors that influence the ultimate behavior. Although new to nursing, this model has the potential to provide insight into the decision-making process in the context of bedsharing.

Another factor to consider in the Latinx population is the history of migration from Latin America to the United States because the family dynamic (i.e., childrearing roles) may differ from a family without those experiences. Furthermore, the variance between Latin American countries is important to consider because what applies to the people of one Latin American country may not apply to a neighboring country.

As the Latinx population increases in the United States, so does the need for culturally safe (Mkandawire-Valmhu, 2018) healthcare and healthcare professionals. We know very little about the risk factors, contributors, and predictors that contribute to disparities in sleep-related death in the Latinx community due to a lack of targeted research within specific populations.

Purpose of the Study

The purpose of this study is to generate a grounded theory on how caregivers in Latinx families in the first six months postpartum make decisions on where their infant sleeps.

Objectives

1. Identify risk factors that influence how Latinx families make decisions on where to place the infant to sleep.

2. Evaluate the Integrated Behavior Model in the context of Latinx family bedsharing.
3. Describe, from the caregiver's perspective, the events leading up to and following an unintentional bedsharing experience.
4. Determine the levels of sleep quality, depressive symptoms, and anxiety symptoms in a sample of Latinx family members who are primary caregivers of infants less than 12 months of age.

Significance

The Hispanic infant mortality rate is 4.9 per 1,000 live births in the United States; however, it is 5.8 per 1,000 live births in the state of Wisconsin (CDC, 2020). The term *Hispanic* includes anyone with heritage from Spain. With hot spot areas like Milwaukee, the infant mortality rate can reach up to 8.6 per 1,000 live births (Milwaukee Health Department, 2018). There is evidence of inequity in SUID by maternal race and ethnicity (Bartick et al., 2016; Fetal and Infant Mortality Review for the State of Wisconsin 2015-2017, 2017). For example, many breastfeeding interventions target Black mothers, as this population has the lowest breastfeeding initiation rates (CDC, 2016). This does not take into account the Latinx communities that need additional education and support to facilitate sustainable breastfeeding (Louis-Jacques, 2017).

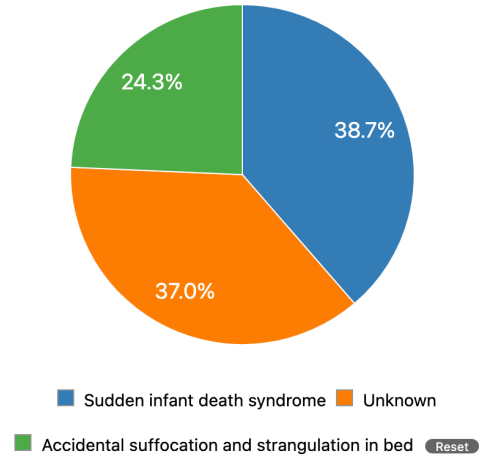

Figure 1. Breakdown of SUID by Cause, 2019 (CDC, 2020)

It is estimated that 3,500 infants of all origins die of SUID annually in the United States and is broken down into three categories (CDC, 2020). Based on data from 2018, 24.3 percent of SUID deaths were from accidental suffocation and strangulation in bed, 38.7 percent were from SIDS, and 37.0

percent were unknown (CDC, 2020). Furthermore, rates of infant deaths reported as accidental suffocation or strangulation per 100,000 live births has increased from six deaths in 1999 to 23 deaths in 2015 (Erck Lambert et al., 2018).

As the Latinx population grows, so will the number of Latinx infants that may be susceptible to SUID. By understanding how the Latinx family makes decisions on how their infant sleeps, healthcare providers, such as nurses, can provide relevant education to the entire Latinx family in order to decrease the tragedy of SUID as related to bedsharing.

Theoretical Framework

This study will use grounded theory methodological design. Grounded theory is a rigorous and systematic approach to generating a theory based on patterns that emerge from the data (Glaser, 2014). Its philosophical underpinning is symbolic interactionism, in which meaning is created and maintained through interactions amongst individuals (Carter & Fuller, 2016). Grounded theory was created in 1967 by Glaser and Strauss with the intent to understand a particular phenomenon as a basic social process that explains a behavioral pattern over time. It is often used to explore and expand on complex phenomena, which makes it an ideal methodology for sensitive topics, like bedsharing, within a certain population.

This study will also use the perspective of the Integrated Behavioral Model (Montaño & Kasprzyk, 2015; Fishbein, 2008), which is an emerging and potentially major contributing advancement to the science and practice of infant sleep safety. It is unknown if it will fully apply to the Latinx family. Therefore, it will be considered, and some questions may be derived from it. Because this model is relatively new to the realm of bedsharing, it may be limited in helping us to understanding the full meaning of bedsharing. However, it could provide a useful

perspective to the decision-making process of Latinx families during the first six months postpartum.

IBM suggests that when thinking about making a decision, intention is the most significant factor in determining the follow-through of the planned behavior. Intention is influenced by outside factors, such as attitudes and perceived norms (Salm Ward & Moon, 2020). However, there are other factors that may influence follow-through of a planned behavior including knowledge, habit, environmental or monetary constraints, and skill (Salm Ward & Moon, 2020). Therefore, the primary theoretical orientation will be symbolic interactionism.

Chapter Summary

This chapter introduced the topic of bedsharing in the Latinx population. It provided the current safe sleep recommendations as published by the AAP and defined the terms closely related to the topic. As the Latinx population grows in the United States, it is important to understand how and why infants are put to sleep so that SUID may be avoided. The IBM may provide a unique perspective of the Latinx caregiver's decision-making process. However, there are numerous factors that may influence a caregiver's decision, such as postpartum fatigue, parental beliefs about infant sleep, and breastfeeding status. Health care is in great need of culturally safe (Mkandawire-Valmhu, 2018) healthcare providers. This study seeks to develop an in-depth, nuanced understanding of caregivers' infant sleep decisions in the Southeastern Wisconsin and Northern Illinois Latinx community so that the findings may inform future policy and practice.

CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter reviews the literature related to what constitutes safe infant sleep in the United States. This review will provide a brief summary of the controversy surrounding bedsharing, accidental bedsharing, arguments against bedsharing, a brief history of the safe sleep campaigns in the United States, a brief historical overview of migration from Latin America to the United States and subsequent gendered migration patterns, policy and practice, review of the literature, critique the notion of *culture*, and decision-making science.

Infant Bedsharing and Safety Concerns

The American Academy of Pediatrics published recommendations for safe infant sleep habits in an effort to reduce SIDS in 1992 (AAP, 2011). These recommendations are still promoted today and encourage parents to place their infants in the supine position in a separate, federally approved as compliant for the testing of optimal safety of infants on a firm sleep surface. According to the Consumer Product Safety Commission (CPSC), federally approved cribs need to be made from more durable hardware; smaller wooden slats, no traditional drop sides, durable mattress support, and pass rigorous safety tests (CPSC, 2011). It also supports room-sharing in which the baby is within arm's length from the parent for increased bonding and easier breastfeeding access. Ultimately, the infant sleeps in a crib or bassinet, free of loose bedding, blankets, and bumper pads (AAP, 2011).

Despite the effort to encourage safe sleep practices, a primary risk factor related to infant sleep injury is bedsharing. This includes sharing a sleep surface with one or more relatives or other adults, sleeping alone on an adult bed, soft mattresses, and excessive bedding in federally approved cribs or bassinets (Chu et al., 2015). These hazards increase the probability of

overlaying, asphyxiation, entrapment, wedging, and falling (Mesich, 2005). For example, according to Mesich (2005), out of the 515 infant deaths in 1999, 394 occurred in adult beds, 92 infants died on waterbeds, and 10 deaths happened on daybeds. Air mattresses also pose a large risk to infant sleep safety as they are more economically friendly and compactable (Doering & Salm Ward, 2017). The studies to follow (Drago & Dannenberg, 1999; Thogmartin et al., 2000; Kemp et al., 2000; Collins, 2001; Person et al., 2002) also revealed similar results. Maternal substance abuse and smoking while bedsharing significantly increases the infant's chances of SIDS and other bed-related deaths. However, a sleeping environment that meets the federal safety regulations can also be hazardous when "modified" with additional blankets, stuffed animals, and wedges (Fu et al., 2008).

In the United States, the prevalence of occasional bedsharing is estimated to be between 42 and 77 percent (Tully et al., 2015) of families, including situations where a parent falls asleep with his or her infant unintentionally. However, for the parents that actively bedshare, the existing policy does not accommodate any bedsharing safety guidelines. This creates major tension between parents and health professionals because there are numerous factors that affect infant care practices.

Review of the Literature on Factors Associated with Bedsharing

Several studies have examined factors related to bedsharing over the last 20 years. Many of which have focused on the Black community, as the infant mortality rate in the United States in 2018 for a Non-Hispanic Black infant was 10.8 per 1,000 live births, compared to its White counterpart at 4.6 per 1,000 live births (CDC, 2020). PubMed, ERIC, CINHAL, and PsychInfo were searched using the terms: "bedshar*," "infant co sleep*," and "safe infant sleep" in the past 20 years. Reference lists were also reviewed to identify additional relevant articles. Based on the

Black safe infant sleep literature, there are three distinct themes that influence how a caregiver decides to sleep an infant: cultural beliefs, safe sleep knowledge, and distrust of the healthcare providers.

Parental Beliefs About Bedsharing

Parent-infant bedsharing has been described as a cultural behavior that promotes comfort, closeness, and protection for both infants and caregivers (Zoucha et al., 2016, *n*=19 African American caregivers of children under two years of age in a focused ethnography). One barrier identified is the inaccurate belief that placing infants in the supine position is not safe because infants could choke on his or her emesis if they spit up (Colson et al., 2005, (*n*=49) and 6% were Hispanic; Oden et al., 2010, (*n*=83) cross-sectional sample of African American parents with infants 0-6 months). Additionally, mothers of infants were found to believe that their modifications to their infant's sleeping environment provided both comfort and safety. Mothers believed blankets provide comfort in terms of warmth, pillows barricade infants from falling or serve to prop the baby on his or her side to prevent aspiration, bumper pads stop infants from hitting his or her head and prevent limbs from getting stuck between the crib bars (Ajao et al., 2011, (*n*=83); Oden et al., 2010).

Further investigation conducted by Chu et al. (2015) determined that parents made sleep-related decisions based on their own preferences. For example, some mothers wanted to be close to their baby to facilitate emotional closeness, reassurance of infant well-being, and convenience for nighttime feedings (Tully et al., 2015). This confirmed findings from an earlier study in 2010 in which physical (need for sleep) and emotional (desire to do best for the baby) needs contribute to the decision-making process (Oden et al., 2010). Some mothers also felt that their motherly instincts would wake them up before the infant could be injured (Herman et al., 2015, *n*=73).

Safe Sleep Knowledge

Another theme identified in reviewing the literature was maternal lack of knowledge regarding SIDS. Although many mothers are aware of AAP's sleep recommendations, their understanding of SIDS and rationale for diverging from the recommendations demonstrate a strong educational gap (Matthews et al., 2015, (*n*=512) where 18% were Hispanic mothers in a cross-sectional multimodal (survey and interview) study). Although dated, Colson and colleagues (2005) discovered that some Black mothers held the false belief that SIDS could only occur in a crib, which was their rationale for bedsharing. Herman and colleagues (2015) found that Black and Native American mothers also held the false belief that SIDS is a "disease" or "syndrome," and therefore, could not happen to their healthy baby. Other Black mothers believed that SIDS/SUID was random and unpreventable, so there was little reason to make their infant sleep in a cold, hard crib, when they could be comfortable and warm with them in bed (Stiffler et al., 2017, a meta-synthesis of Black infant sleep, using the Joanna Briggs Qualitative Assessment and Review Instrument).

Distrust of Healthcare Providers

Distrust of healthcare providers is another theme that is predominate in the Black community, which is a result of a racist healthcare system (Owens & Walker, 2020). Colson and colleagues (2005) emphasized Black mothers trusting sleep-related advice from their own mothers over advice from a physician. Some mothers felt that the AAP recommendations did not adequately address the differences among infant sleep behavior and environmental comfort (Herman et al., 2015). Specifically, Black mothers were skeptical about the plausibility between sleep position and SIDS despite the statistics. They felt that, "If you told me all the babies that died, died on their stomach, ok then ok. I might need to switch up" (Oden et al., 2010, p. 877).

Herman and colleagues (2015) confirmed this finding that mothers felt healthcare providers do not provide a rationale for the sleep recommendations, or do not take the time to develop an individualized sleep plan that will work best for the mom and baby according to guidelines.

Haider and colleagues (2011) conducted a study to assess physician unconscious bias that may be related to medical decision-making. A total of 202 first year medical students completed an online survey that demonstrated a majority of the students had an implicit preference for White, upper class patients (Haider et al., 2011). This relates to safe infant sleep in the Latinx population because Latinx households are 1.7 times as likely to live in poverty as compared to White household (Joint Economic Committee, 2019).

Wagner and colleagues (2019) tested whether emergency contraception prescribing practices varied by the provider's definition of pregnancy and the sociopolitical context in which they practice (the Republican party's recent platform has explicitly endorsed the definition of pregnancy as beginning at fertilization). Data was collected from 14 academic medical centers in the United States (n=1308) and found that providers in counties with a higher Republican vote shares were less likely to provide emergency contraception if they defined pregnancy as beginning with fertilization, indicating an interaction between medical care and sociopolitical context (Wagner et al., 2019). These are the examples of how the health care system discriminates against Latinx and other people of color.

Policy and Practice in the United States

Policy and practice exist to provide the safest recommendations from professional organizations that specialize in the area of safe infant sleep. Although these recommendations may conflict with Latinx families' beliefs and values regarding infant sleep, they are the organizations that provide local health professionals with updated research to properly advise

families with children and infants. A review off the key organizations and their policy focus is important for understanding the infant sleep context in the US.

American Academy of Pediatrics

The American Academy of Pediatrics (AAP) is the professional organization that sets the standards for health, safety, and well-being for infants, children, adolescents, and young adults. The AAP publishes a professional journal that includes guidelines and policy statements on clinical best practice. It was founded in 1930 as a response to the need for an independent pediatric forum to address the public health needs of children (AAP, 2020). There is also a Task Force on Sudden Infant Death Syndrome that pays specific attention to bedsharing and how it relates to infant death. This task force is responsible for thoroughly reviewing current research literature and releasing policy statements on behalf of the AAP.

In 1992, the AAP Task Force on Infant Positioning and SIDS released recommendations to place infants on their back or side but made no recommendation regarding bedsharing. In 1997, the AAP alludes that bedsharing occurs, but makes no statement regarding its relationship to SIDS: "…if mothers choose to sleep in the same bed with their infants, care should be taken to avoid using soft sleep surfaces" (AAP, 1997, p. 272). Further recommendations for reducing risk while bedsharing arrive in 2000:

> bed-sharing may be hazardous under certain conditions…if a mother chooses to bed-share…care should be taken to observe recommendations (non-prone sleep position, avoidance of soft surfaces/loose covers, and avoidance of entrapment by moving bed away from wall/furniture) (AAP, 2000, p. 654)

The 2005 policy statement is the first to explicitly state that bedsharing is dangerous to an infant:

> a separate but proximate sleeping environment is recommended…evidence is growing that bed-sharing…is more hazardous than the infant sleeping on a separate sleep surface …it is very dangerous to sleep with an infant on a couch or armchair (AAP, 2005, p. 1252).

It is not until 2011 that the policy statement includes the relationship between bedsharing and SIDS:

> room-sharing without bed-sharing is recommended…AAP does not recommend any specific bed-sharing situations as safe…specific circumstances…substantially increase the risk of SIDS or suffocation while bed-sharing. In particular:
>
> i. when the infant in younger than 3 months
> ii. with a current smoker…or the mother smoked during pregnancy
> iii. with someone who is excessively tired
> iv. With someone who has used medications…or substances that could impair alertness
> v. with anyone not a parent
> vi. with multiple persons
> vii. on a soft surface
> viii. on a surface with soft bedding (AAP, 2011, p. 1033).

In 2016, the most recent policy statement, the AAP acknowledges that parents often fall asleep while feeding their infant and provide recommendations:

> There is evidence that the risk of bed-sharing is higher with longer duration, if the parent falls asleep…feeding the infant in bed the infant should be placed back on a separate sleep surface as soon as the parent awakens (AAP, 2016, p. e13).

Academy of Breastfeeding Medicine

The Academy of Breastfeeding Medicine (ABM) is another professional organization that promotes, protects, and supports breastfeeding. This includes setting the standards for best breastfeeding practice. Because bedsharing promotes breastfeeding initiation (Ball et al., 2006), duration (Huang et al., 2013; Blair et al., 2010; Ball et al., 2016; Ball, 2006; McKenna et al., 1997; Moon & Task Force on Sudden Infant Death Syndrome, 2016), and exclusivity (Ball, 2003), the ABM supports bedsharing to facilitate breastfeeding (Blair et al., 2020).

World Health Organization

The World Health Organization (WHO) is a specialized agency of the United Nations and is responsible for setting public health guidelines and policy internationally. WHO recommends that all infants should "initiate breastfeeding within the first hour of birth and be

exclusively breastfed for the first 6 months of life" (WHO.int, 2021, p. 1). They do not provide a policy on position in which an infant should sleep.

Association of Women's Health, Obstetric, and Neonatal Nurses

The Association of Women's Health, Obstetric, and Neonatal Nurses' (AWHONN) published a position statement on breastfeeding in 2014. AWHONN,

> supports, protects, and promotes breastfeeding as the ideal and normative method for feeding infants…Women should be encouraged and supported to exclusively breastfeed for the first six months of an infant's life and continue to breastfeed for the first year (2014).

Orientation to Decision-Making Science

How people make decisions has been a popular topic many scientists have sought to understand. From the social sciences (Simon, 1959; Shogren et al., 2017) to politics (Lau & Redlawsk, 2001), the decision-making process has yielded numerous academic theories. While the decision-making process has largely been studied for business and capital gain, also called rational decision-making (Buchanan & O'Connell, 2006), the social sciences have focused on cognitive (non-rational) models to analyze and explain human behavior (Oliveira, 2007). Rational decision-making models assume that an individual has full and perfect knowledge of the topic and has unlimited time and resources to make the decision (Buchanan & O'Connell, 2006). This is not the case in the vast majority of infant sleep situations; therefore, the decision to bedshare falls under the category of non-rational decision-making.

Williams and Kogan (2019) trialed an online instrument to achieve a greater understanding of evidence-based information within the field of factors associated with evidence-based medical decision-making for patients and providers. The sample size was powered at 80 percent to detect a difference of 0.083 at a 0.5 significance level, yielding 600 patients and 553 providers (Williams & Kogan, 2019). They did not capture data regarding race

or ethnicity; however, results demonstrated that evidence-based medical decision-making was associated with self-efficacy, attitudes, and opinions (Williams & Kogan, 2019).

Non-Rational Decision-Making

The ability for an individual to rationalize a situation is limited by the information they have been presented, the cognitive limitations of their minds, and finite amount of time they have to make the decision. Herbert A. Simon, an American psychology and economics researcher, defined two cognitive styles: maximizers and satisficers (Simon, 1959). A maximizer will try to make an optimal decision by carefully examining variables and carefully making trade-offs to maximize the prosperity of their decision (Simon, 1959). Subsequently, it takes a maximizer longer to make a decision. A satisficer recognizes that they may lack the ability and/or resources to achieve an optimal solution and therefore simply seek to find a "good enough" solution (Simon, 1959). Generally applying these ideas to infant sleep safety, a maximizer way of approaching infant sleep safety may be see in parents who prepare an environment, explore options by asking family and friends for advice (Austin et al., 2017). A satisficer approach may be seen more in fatigued and sleep deprived caregivers after the infant is at home and cognitive and emotional resources that support rational decision-making are in limited supply. In this instance, parents may seek a "good enough" solution for placing their infant to sleep.

In the years following Simon, German psychologist Gerd Gigerenzer proposed that decision-making is based on heuristics (an experienced-based technique for problem solving) and not just for the optimal decision (Gigerenzer, 2008). Gigerenzer (2008) argues that heuristics also speeds up the process of finding a satisfactory solution in situations where an individual need to act fast. Emotion also plays a role in the non-rational decision-making process. For example, the fear of a negative outcome might deter an individual from making a certain

decision (Shiv & Fedorkhin, 1999; Moulin & Tatu, 2016). Applying this to infant bedsharing, fear is known to be a driver of behavior of parents of newborns (Doering, Marvin, & Strook, 2017).

Neuroscience and Decision-Making

There are three major functions of the executive cerebral system involved in decision-making: emotional, cognitive, and motivational processes (Moulin & Tatu, 2016). It is the combination of these three processes that are essential for decision-making. However, inherent factors in the individual, such as age and sex may make these affective and cognitive mechanisms more or less involved in different decision-making tasks (Moulin & Tatu, 2016).

The emotional process assigns a subjective value to a behavior or action (Moulin & Tatu, 2016). The cognitive process activates the behavior or action in an individual's past, present or future based on the subjective value (Moulin & Tatu, 2016). This means that given the context of the situation and its assigned emotional value, the individual will evaluate the costs and benefits associated with each option.

The motivational process assesses the individual's intentions of choosing an option based on events that have occurred in the environment (Moulin & Tatu, 2016). This could look like the housing market: comparing what houses in the area have sold for and how motivated an individual is to buy a house. These processes are important to note in the following section.

If we apply these concepts to infant sleep decision-making, parents are also evaluating the costs and benefits associated with each available infant sleep option. Intentions, self-efficacy, and attitudes, among other factors also contribute to the decision-making process. When combined with an environment consistent with a fussy baby and extreme fatigue, the amount of time and attention-span needed to thoroughly weigh the costs and benefits is cut short. This

means that decisions can unintentionally be made rashly that calms the baby and provides the caregiver with sleep, but ultimately puts the baby at preventable risk. Furthermore, this incentivizes caregivers to continue risky behaviors based on this type of fatigued and frustrated decision-making in future situations. While this dissertation will not quantitatively assess the various decision-making factors, knowledge that these factors may be operating in caregivers' lives may help uncover important insights into the complex process of bedsharing when eliciting caregiver narratives of their experiences.

Integrative Behavior Model and Bedsharing

How caregivers make infant sleep decisions has been a question that researchers have sought to answer over many decades in various disciplines. However, the limited number of studies that focus on infant sleep decisions have been small-scale and qualitative (Joyner et al, 2010; Caraballo et al., 2016; Aslam et al., 2009). Only recently has there been a framework applied to infant sleep decision-making (Salm Ward & Doering, 2014; Salm Ward & Moon, 2020). The social ecological model (See Figure 2) proposes a novel way to understand the different levels of influence on infant sleep decisions (Salm Ward & Moon, 2020).

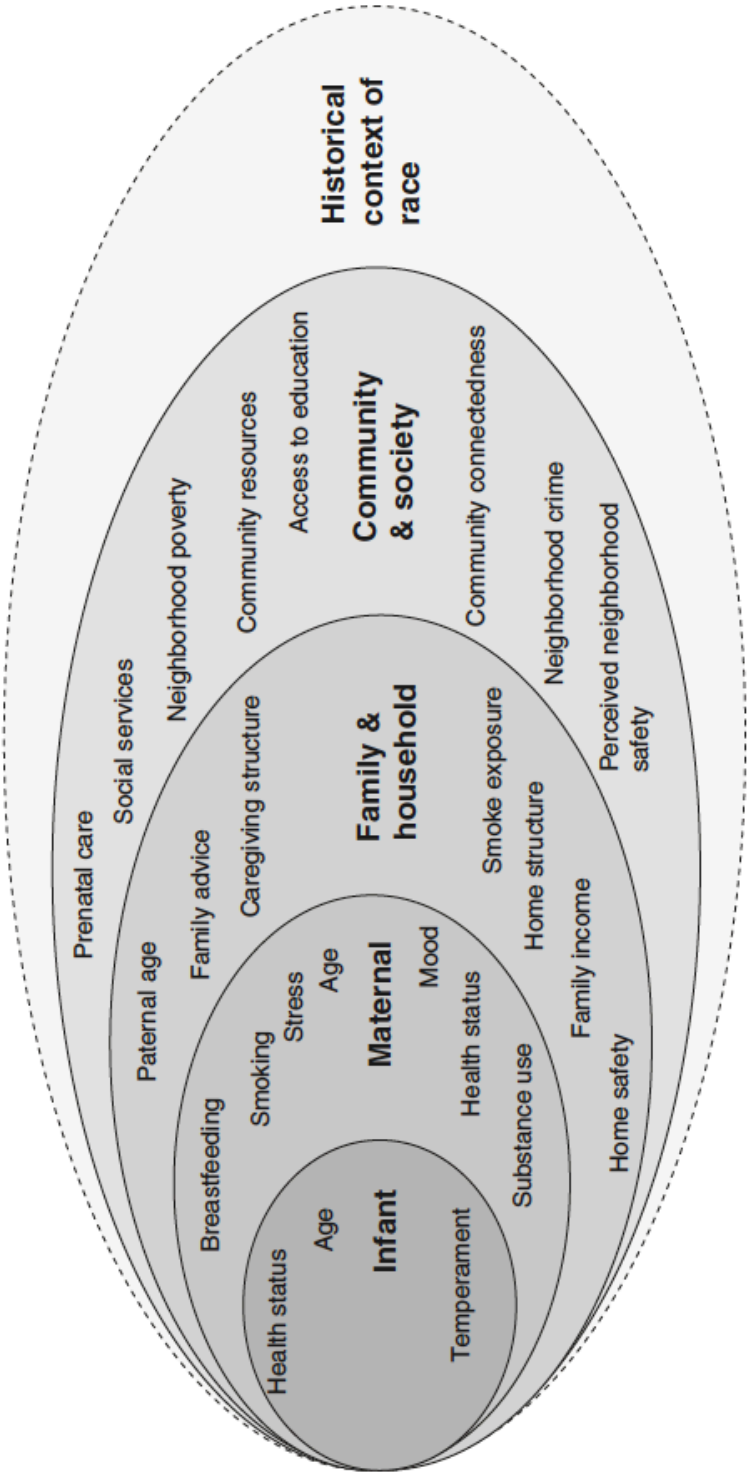

Figure 2. Social Ecological Model applied to infant sleep decision (Salm Ward & Doering, 2014).

Salm Ward and Moon (2020) went on to suggest the Integrated Behavioral Model (IBM) could help understand infant sleep decisions (See Figure 3).

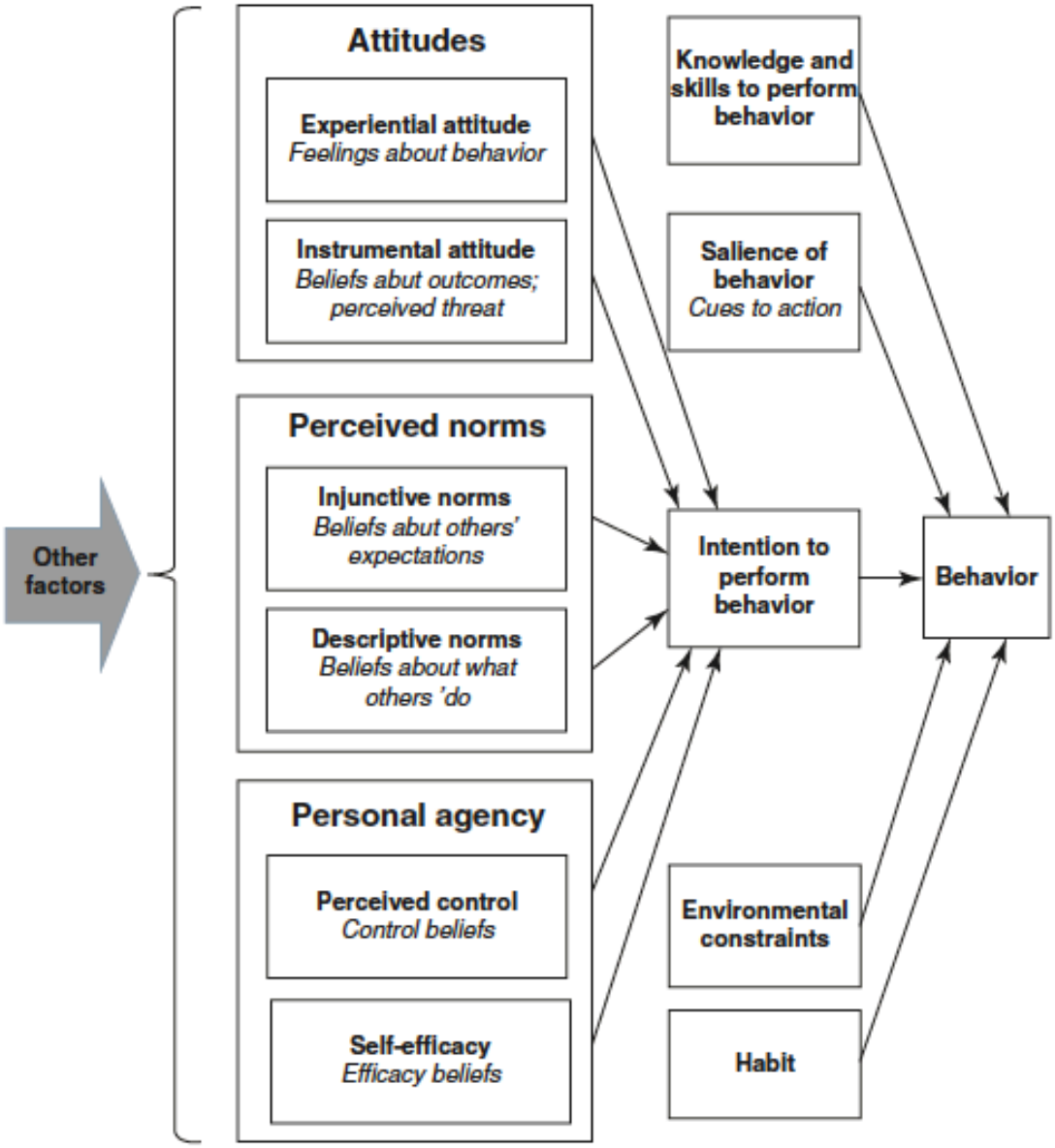

Figure 3. The Integrative Behavior Model schematic (Montaño & Kasprzyk, 2015).

The IBM contains 10 main components. *Intention* indicates an individual's readiness to engage in a behavior and may be viewed as a continuum, such as "a strong intention *not* to perform a behavior to a strong intention *to* perform a behavior" (Salm Ward & Moon, 2020, p. 71). *Attitude* signifies an individual's agreeableness toward completing a behavior and consists of two constructs: experiential attitude and instrumental attitude (Montaño & Kasprzyk, 2015). *Experiential attitude* refers to the individual's feelings about the behavior and *instrumental attitude* refers to an individual's expectations regarding the perceived outcomes of completing the behavior (Montaño & Kasprzyk, 2015; Fishbein et al., 2001). An example of *experiential attitude* would be making a decision based on maternal instinct. An example of *instrumental attitude* would be if the individual believes that the benefits outweigh the costs of completing that behavior, the individual will have a positive attitude toward the behavior.

Perceived norms "refer to the social pressure a person feels to perform (or not perform) a particular behavior" (Salm Ward & Moon, 2020, p. 74). It also has two constructs: injunctive norms and descriptive norms (Montaño & Kaspryzk, 2015). *Injunctive norms* refer to what an individual believes others think he or she should do. For example, "everyone thinks that I should lay my baby on his back," so the individual is motivated to comply with the others' expectations. *Descriptive norms* refer to the individual's beliefs about the behaviors of others. For example, viewing store models of nurseries that have stuffed animals and bumper pads in the crib may suggest that one ought to do that for his or her own infant. By purchasing and replicating the store nursery, the individual is complying with the descriptive norm.

Personal agency refers to an individual's own influence on his or her behavior. It consists of two constructs: perceived behavioral control and self-efficacy (Bandura, 2006). *Perceived behavioral control* refers to the extent the individual feels he or she has control over performing

the behavior (Fishbein & Ajzen, 2010). *Self-efficacy* is the individual's confidence in his/herself to take action and that this action can influence the outcome (Bandura, 1977).

The premise of the IBM is that an individual's intention to perform a specific behavior (i.e. bedsharing) is the most important determinant in decision-making with the understanding that intention is influenced by attitudes, perceived norms, and personal agency (Montaño & Kasprzyk, 2015). Thus, the purpose of the IBM is to evaluate the Latinx family's intention to bedshare when faced with other factors, such as those discussed in this chapter.

Critique of the Integrated Behavioral Model

A critique of the IBM was conducted using Fawcett's (2005) criteria. Although the philosophical claims of the IBM are not explicitly stated in any of the theory papers, it is based in constructivism because parents are making decisions based on information they already know or believe to have control. The conceptual model of the IBM is explicit because it is derived from multiple decision-making theories. Lastly, the development of the IBM does not contain antecedent knowledge from nursing, but from social psychology. This may prove innovative in advancing the bedsharing literature because it will also include a nursing perspective.

The IBM has not been applied in the real world of nursing practice. Therefore, it needs application to research first through testing. Theoretically, it is feasible to implement practice derived from IBM (Salm Ward & Moon, 2020; Hamilton et al., 2017) and practitioners have the legal ability to implement and measure the effectiveness of IBM-based nursing actions. IBM-based nursing actions are compatible with expectations for nursing practice because it seeks to understand decision-making behavior, which is key in predicting how parents will sleep their infant.

It is unknown if IBM-based nursing actions lead to favorable outcomes because it has not been extensively studied in the field of nursing. The application of IBM-based nursing actions would be designed so that comparisons can be made between outcomes of use of the theory and outcomes in the same situation when IBM is not used. For example, it could be used to compare how parents theoretically decide to sleep their infant versus how they actually sleep their infant.

Controversy Surrounding Bedsharing

While medical professionals discourage bedsharing, bedsharing advocates consider it a natural, instinctive behavior (Meisch, 2005; Barry, 2019; McKenna et al., 1997). From an evolutionary standpoint, advocates believe bedsharing is an intrinsic behavior that served to protect the infant before modern medicine existed. McKenna and colleagues (1997) stress the benefit of bedsharing because it promotes nocturnal breastfeeding, which may be related to a natural form of protection against SIDS. In addition to nocturnal breastfeeding, theories emphasized by Mckenna et al. (1997), hypothesize that the physical mother-infant contact increases arousability, infant breathing stimulation, and decreased rebreathing asphyxiation. In contrast to the American Academy of Pediatrics guidelines, advocates believe modifying the sleep environment in the bed can prevent accidental infant deaths (Meisch, 2005). This could include excessive pillows, blankets, and wedges that the AAP identifies as hazardous materials.

Bedsharing supporters have also used an anthropological/evolutionary framework to encourage bedsharing (Barry, 2019; Marinelli et al., 2019). Barry (2019) argues that behaviors necessary for normal infant development, like body contact and body stimulation, are key components of bedsharing. Similarly, bedsharing helps facilitate breastfeeding, which is known to offer benefits for both mom and infant (CDC, 2020). Therefore, by bedsharing, a caregiver is positively contributing to the development of the infant by providing a sensory-rich experience.

Controversy Surrounding Breastfeeding and Bedsharing

As previously discussed, breastfeeding is considered best practice from a myriad of professional organizations that publish policies. However, this creates dissonance between healthcare provider messages on breastfeeding and bedsharing. In a nationally representative sample of 3218 mothers (25.4% identified as Hispanic) who spoke English or Spanish, 20.7 percent of mothers reported bedsharing as a way to facilitate breastfeeding (Smith et al., 2016). Bedsharing better facilitated exclusive breastfeeding (30.5%), but also contributed to partial breastfeeding (29.5%); whereas, 70 percent of non-breastfeeding mothers (n=2252) reported room-sharing without bedsharing (Smith et al., 2016).

Multiple studies have also demonstrated a strong relationship between bedsharing and breastfeeding, suggesting that never bedsharing may prevent breastfeeding practices and impede maternal and health promotion (Ball, 2003; Bartick & Smith, 2014). Because breastfeeding has been associated with such a significantly reduced risk of SIDS, clinicians, researchers, and public health leaders debate whether the message to never bedshare inadvertently interferes with breastfeeding or if the true risk is only among drug or alcohol-impaired caregivers (Bartick & Smith, 2014; Ball, 2003). In Ball's qualitative 2003 study (*n*=253), mothers were interviewed between one and three months postpartum to explore how parents managed their infant's nighttime sleep patterns and feedings. Ball (2003) found a relationship between breastfeeding and bedsharing that was crucial to breastfeeding promotion and enhancing the infant's health.

Accidental Bedsharing

Accidental bedsharing is another significant branch of bedsharing that has been minimally studied. Several terms can be found in the literature to describe unintentionally falling asleep with an infant, including accidental bedsharing, unplanned bedsharing, inadvertently

falling asleep, and accidentally falling asleep (Doering et al., 2019). Most infant sleep studies do not explore the concept of accidental bedsharing with an infant. This behavior is usually an incidental finding of a larger published study (Doering et al., 2019). However, several authors have listed not differentiating between planned/intentional bedsharing and unplanned/unintentional bedsharing as a limitation (Doering et al., 2019; Das et al., 2014). This lack of clarity and consistency in identifying and reporting accidental bedsharing suggests the need for concept development.

Very few studies capture the prevalence or context of accidental bedsharing. Chu and colleagues (2015) performed a retrospective review of infants who died from asphyxia, undetermined injuries, or were last seen alive sleeping (*n*=255) where *n*=32 or 22.2 percent were reported as Hispanic. Limitations of this study included the absence of a comparison group nor do they provide "first-person accounts" of caregivers' knowledge and beliefs due to the nature of retrospective inquiries. Chu and colleagues (2015) discovered that situational infant care, such as fussiness and infant preferences, led to taking an infant out of a safe environment and accidental bedsharing. For example, an infant that typically sleeps in a crib or bassinet is removed because he or she is crying or needs to be fed. Situational infant care can also be described as soothing nighttime infant fussiness (Tully et al., 2015, a qualitative study (*n*=101) where 14.5% were English speaking Hispanic mothers). The parent then falls asleep with the infant on an adult bed or couch while soothing or feeding the infant (Chu et al., 2015; Smith et al., 2016; Blair et al., 2009; Tully et al., 2015).

According to Tully and colleagues' (2015) analysis, significantly more women reported bedsharing with their infant during the first postpartum month (47.7%) than had originally intended to before giving birth (7%). However, some limitations of Tully and colleagues' study

(2015) include excluding mothers with multiple births because care of multiple infants is drastically different than care of a singleton and Latinx mothers who do not speak English because care of multiple infants is drastically different than care of a singleton. Additionally, mothers who only speak Spanish are more likely to follow customs and traditions of their native country. Therefore, unintentionally falling asleep with an infant can compromise the safety of the infant whether the infant is asleep or not.

The largest contributing factor to accidental bedsharing in the literature is sleep deprivation and fatigue in parents and caregivers. The National Sleep Foundation (2007) found that seven percent of middle-class new parents said they planned on bedsharing with their infant, yet 42 percent of parents ended up bedsharing related to interrupted sleep patterns (n=1603). While Tully et al. (2015) named nighttime fussiness as being the primary factor for bedsharing, participant quotes emphasized bedsharing as a means to get more rest.

Latinx Literature

Infant Sleep Safety

To date, there are two published studies that focus on Latinx mothers living in the United States and their differences in infant care practices, which demonstrates differences in infant sleep practices amongst subgroups of mothers of different birth countries (Provini et al., 2017; Matthews et al., 2015). In a stratified, 2-stage, clustered design to obtain a nationally representative sample of mothers from 32 hospitals in the U.S. (*n*=907), surveys were administered two-six months postpartum to mothers who self-identified as Latinx (Provini et al., 2017). The birth countries of the mothers consisted of: Mexico (37.0%), Caribbean (3.6%), Central/South America (10.0%), and the United States (49.3%) (Provini et al., 2017). One particularly interesting finding was that Latinx mothers born in the United States were less likely

to adhere to the infant sleep recommendations, breastfeed, and more likely to smoke than mothers born outside of the United Sates (Provini et al., 2017). This may suggest that more acculturated Latinx mothers have a higher risk of sleep-related infant death or injury compared to immigrant Latinx mothers living in the United States.

Breastfeeding

Breastfeeding can also contribute to bedsharing (Huang et al., 2013; Blair et al., 2010; Ball et al., 2016; Ball, 2006; McKenna et al., 1997; Moon & Task Force on Sudden Infant Death Syndrome, 2016). While the Latinx population may have a high breastfeeding initiation rate, there is evidence for significant variance in breastfeeding practices among subgroups of Latinx women (Jones et al., 2015; Bigman et al., 2018; Garrett et al., 2018). For instance, Mexican-American mothers are more likely to breastfeed than Puerto Rican mothers (Perez-Escamilla & Putnik, 2007; Chapman et al., 2004; Louis-Jacques, 2017; Barcelona de Mendoza et al., 2016; Washio et al., 2017). According to Hohl and colleagues (2016) (n=20) participants of Mexican origin (n=17) hold the perception that the Latinx population is more likely to breastfeed than formula feed an infant because it is deeply rooted in their Hispanic origin.

Acculturation is another major factor that contributes to a Latinx mother's decision to breastfeed. According to Siatkowski (2007), acculturation,

> "is a multidimensional concept involving the interaction between two cultures… process of change that occurs as a result of the interaction…an individual learns to adapt by integrating…beliefs and values of the new culture, while maintaining some of the original culture" (p. 322).

The acculturation of the Latinx population in the United States is measured by,

> "a comprehensive evaluation including language abilities and preferences, place of birth, length of residency in the United States, age at time of entry into the United States, socioeconomic status, educational level, sociocultural context, values, beliefs, and practices" (p. 322).

Several studies demonstrate that Latinx mothers who are the least acculturated have higher rates of exclusive breastfeeding (Rassin et al., 1994; Bigman et al., 2018; Garrett et al., 2018). Several other studies have found evidence that breastfeeding rates in the Latinx population decrease with acculturation (Kimbro et al., 2008; McKinney et al., 2016; Bunik et al., 2006; Schmeid et al., 2012; Waldrop, 2013). Although a significant finding, acculturation is problematic because it has only been defined by White male scholars. It also only compares the Latinx community with the characteristics of the White community, which inadvertently upholds the notion that White culture is superior to that of the Latinx community. It does not take into account the additional characteristics that the Latinx community may take on in order to survive in a dominantly White society, for example the socioeconomic status of the Black community or the infant mortality rate of the Asian community.

Review of the Literature on Sleep

Sleep is a process vital to the physical, mental, and emotional well-being of an individual throughout the lifespan. Disturbances in sleep at different points throughout the lifespan can have lasting consequences on the health of an individual. Sleep is a complex process that includes varying levels of arousal that change as an individual grows and develops (Milano et al, 2009). A lack of appropriate sleep, therefore, can impede growth and development in an infant. In an adult; however, sleep disturbances manifest in fatigue symptoms, such as impaired decision-making (Aidman et al., 2017). This next section will review the literature on Latinx adult sleep parameters, maternal postpartum fatigue, the physiology of infant sleep, and infant sleep location.

Latinx Adult Sleep Parameters

According to Chen and colleagues (2015), there is not a statistically significant difference in total sleep time between Hispanics and Whites. However, Carnethon and colleagues (2016) discovered that Hispanics sleep an average of 35.7 minutes less than non-Hispanic Whites. Other studies that measured self-reported sleep duration show that non-Mexican Hispanics experience 24 to 63 percent higher odds of short sleep duration (<6 hours) compared to non-Hispanic Whites (Hale & Do, 2007; Krueger & Friedman, 2009; Whinnery et al., 2014) and Mexicans reported approximately a 3-fold increase in the odds of very short sleep (<5 hours) compared to non-Hispanic Whites (Whinnery et al., 2014). Therefore, the Latinx population is already experiencing shorter durations of sleep than their White counterparts. When added to the fatigue of caring for a newborn, sleep duration is cut even shorter and becomes an influencing factor of how primary caregivers make infant sleep decisions.

Maternal Postpartum Fatigue

Postpartum maternal sleep has extensive implications for maternal health and overall function of the household. Postpartum fatigue means, "tiredness, sense of suffocation, and decreased physical and mental capacity" (Senol et al., 2019, p. 1662) which also affects maternal and infant health (Doering & Dufor, 2011). Parents of infants 0 to 6 months are especially vulnerable to fatigue. According to a descriptive correlational study (n=190) in 2016, it is estimated that 60% of mothers in the early postpartum experience fatigue (Khayamim et al., 2016).

Fatigue in the first 0 to 6 months postpartum can have negative effects on maternal and infant health. In a cross-correlational study (*n*=120) of mothers in Taiwan (Lai et al., 2015), postpartum fatigue affected mothers' interest in infant care activities, resulting in a weak mother-

infant attachment. Okun (2016) confirmed that sleep disturbance in the postpartum period leads to issues with mother-infant bonding and an increased risk for postpartum depression. Weak mother-infant bonding has implications for the infant's health, for example behavioral or emotional difficulties in the infant (Okun, 2016).

Postpartum fatigue also contributes to postpartum depression (Wilson et al., 2019; Okun, 2016). Wilson and colleagues (2019) conducted a PROSPERO registered systematic review and meta-analysis on the correlation between fatigue and depression within the first two years postpartum. Results showed that there was a strong correlation between fatigue and depressive symptoms among women in the first two years following childbirth. Although 34 peer-reviewed articles were eligible for the review, studies that did not report a correlation between fatigue and depression were not included, which may have omitted some moderators. Therefore, postpartum fatigue could contribute to postpartum depression in more ways than are known.

Infant Sleep

Sleep is vital to the development of an infant. There are two biological processes that dominate the regulation of sleep: the homeostatic sleep factor and the endogenous circadian pacemaker (Markov & Goldman, 2006). The homeostatic sleep factor is what makes an individual feel the need to sleep the longer they stay awake, for example why you feel sleepier when staying up 16 hours than 12 hours (Whittingham & Douglas, 2014). The circadian pacemaker is a "biological clock that regulates the physiological, metabolic, and behavioral states, including the sleep-wake cycle throughout the 24-hr day" (Whittingham & Douglas, 2014, p. 617). However, infants are not born with circadian pattern sleep-wake cycle. It emerges during the first weeks of life (Markov & Goldman, 2006). Therefore, infants must learn a sleep pattern, because a pattern is not inherently etched in their brains.

Infants experience different sleep stages throughout infancy. For example, in the first four weeks of life, an infant primarily demonstrates active sleep, oscillating between quiet and intermediate sleep stages (Frasch et al., 2007; Terrill et al., 2010). As the infant grows and develops, sleep stages change, increasing the time spent in quiet sleep (Fattinger et al., 2014). Although sleeping may be viewed as relaxing, infant brains are diligently working on neural, motor, and behavioral development (Aparicio et al., 2007; Horvath et al., 2017). This vital physiologic process is a period of vast neuroconnectivity in which infants actively adapt to their environment hallmarked by sleep consolidation (Shimko, 2019). Thus, sleep must be protected during infancy because disturbed sleep patterns in an infant will negatively impact the physical and psychological health of the infant (Anuntaseree et al., 2008; Vijakkhana et al., 2015).

Infants are also extremely vulnerable to asphyxiation. This manifests in different ways. One example includes their inability to self-rescue when something obstructs their breathing because their neck muscles are not developed enough to readjust their heavy head like a two-year-old would. The anatomy of the upper airway in early infancy also contributes to an infant's vulnerability to asphyxiation. Tonkin and colleagues (2002), argue that placing infants in certain positions increases their risk of obstructing the upper airway or limiting the size of the airway, leading to sleep hypoxia and asphyxia. With the help of x-ray technology, Tonkin and colleagues (2002) discovered an infant's propensity for micrognathia or the displacement of the tongue that effaces the oropharynx. This means that the infant is vulnerable to asphyxiation for no reason other than the position of their head.

Infant Sleep Location

Based on the literature, we know that there is a population of mothers who bedshare and a population of mothers who room-share without bedsharing. However, this does not account for

all the other places infants fall asleep throughout a 24-hour period. Infants sleep in numerous locations because they spend the majority of the day sleeping. This could include products specifically designed for infant sleep, including cribs, bassinets, and pack-n-plays. It could also include any product marketed to parents as "baby-friendly," such as car seats, strollers, bouncers, swings, etc. even though policy makers and healthcare providers would not consider them "safe." Where an infant sleeps may also depend on the family's country of origin. For example, the Maori women of New Zealand often place their infants to sleep in a Wahakura (woven flax bassinet) (Baddock et al., 2017).

Infant Care in Latin America

Infant care varies widely across countries in Latin America. Latin America consists of Mexico, central America, south America, and the Caribbean (Britannica, 2017). However, each community shares key concepts in infant care. The following section will highlight the birthing process, postpartum care, and infant care in three different Latin American countries. There are only three countries represented in this section, which means it is not a comprehensive review of infant care for all of Latin America. However, the groups were chosen with the intention to represent a diverse array of Latinx communities. For example, Mayan women are presented in this section to provide an indigenous perspective, Puerto Rico provides a Caribbean perspective, and Mexico is closest to the United States.

Infant Care in Puerto Rico

Infant care and the birthing process in Puerto Rico look different than that of the Maya in Guatemala. Rather than using a traditional birth attendant, cesarean sections are very popular in Puerto Rico. According to the Center for Disease Control and Prevention (CDC, 2006), the cesarean delivery rate increased from approximately 31.5 percent in the early 1990s to 45

percent in 2002. The most recent statistics show that 46.4 percent of all live births in Puerto Rico are by cesarean delivery (Elfein, 2019).

Once the baby is born and taken home, he or she is cared for by the family. There are two belief systems regarding infant crying and responsiveness. One group of mothers believe that allowing the infant to cry helps his or her lungs develop and excessive holding of a baby can "spoil" the child (Landy, 1959). Although dated, David Landy's 1950s ethnography is one of the most well-known literary works cited in medical anthropology. The other group is more responsive to crying in fear that excessive crying will rupture the infant's navel or make them sick (Landy, 1959). Therefore, Puerto Rican mothers do not consistently carry their infants throughout the day, but infants receive lots of affection through cuddling, caressing, and carrying by all members of the family.

Puerto Rican infants typically breastfeed on demand as their major source of nutrition (Landy, 1959). A common belief across Latin American countries is that a fat baby is a healthy baby (*niño gordito, niño sanito*) (Gobierno de Mexico, 2018). This is true in Puerto Rico with mothers often choosing to feed their infants when the infant is not necessarily hungry (Landy, 1959). A chunky baby is ideal as it demonstrates the family's ability to provide and care for their infant.

Infant Care in Mexico

There is a postpartum tradition in Mexico called *cuarentena* where the mother and infant stay in the house for 40 days after the birth of the infant. The idea is that both the mother and infant's bodies are open and more susceptible to sickness; therefore, they must remain in the house (Waugh, 2011). The time during *cuarentena* is also used to let the mother rest and heal. She is unable to do anything during these 40 days, except care for the newborn. This means that

an additional person is needed to care for the mother-infant dyad and household responsibilities shift because she is unable to do household chores, for example wash dishes or do laundry (Waugh, 2011). This additional person is typically a female relative, like a mother, mother-in-law, sister, or aunt. For women who do not have a relative to perform this duty, a female attendant can be hired.

Another aspect of *cuarentena* is the diet. She is only allowed to eat bland, soft foods. For example, vegetable soup is eaten almost daily and corn *atole* is prepared nightly as a hot beverage (Waugh, 2011). These foods are thought to nourish the mother to assist in her recovery and help boost milk production. This is contrary to the typical Mexican diet that consists of foods flavored with a variety of chili peppers. However, it is thought that the spiciness of the chili upsets the infant's stomach, as it is passed through the breastmilk. The infant usually exclusively breastfeeds, unless there is a problem, such as slow infant weight gain because the mother is not producing enough milk.

In addition to a special diet, there are also special herbs used during *cuarentena* (Waugh, 2011). For example, *arnica* is used topically to help heal cesarean section incisions or episiotomies. Other herbs are made into teas to help the mother heal the inside of her body so that it may close and return to normal. After birth, the mother's body is thought to have opened in order to birth the baby (Waugh, 2011). In order to close the body, a mother must rest and care for her body through special nutrition and traditional herbs. Typical infant care after the 40 days includes staying close if not attached to the mother. Mothers often use scarfs or blankets to wrap the infant against her body so that they stay warm and connected. They also use a *faja*, which is like an abdominal binder or girdle that is used to help keep organs in place, help reshape the stomach to look normal, and prevent any bad air from entering the body (Waugh, 2011). When

bad air enters the body, it makes a person sick; therefore, openings to the body must be covered, for example the ears.

History of Safe Sleep Campaigns in the United States

Infant mortality has long been a public health concern in the United States. While public policy addressed sanitation, nutrition, and vaccines, safe sleep practices were not comprehensively addressed by public health workers until Congress passed the Sudden Infant Death Syndrome Act of 1974, five years after sudden infant death syndrome (SIDS) became recognized as a distinct condition in 1969 (National Institutes of Health [NIH], 2019). Congress appointed the National Institute of Child Health and Human Development (NICHD) to lead SIDS research (NIH, 2019). In 1989, the NICHD developed the current definition of SIDS as, "the sudden death of an infant younger than one year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history" (NIH, 2019).

Following several studies published in the Netherlands, Australia, New Zealand, and the United Kingdom that showed a significant correlation between stomach sleeping and SIDS, the American Academy of Pediatrics created the Task Force on Infant Sleep Position and SIDS in 1991 to evaluate stomach sleeping as a risk factor for SIDS (NIH, 2019). In 1992, the NICHD started the U.S. National Infant Sleep Position Study, which was an annual telephone survey that assessed the sleep practices of nighttime caregivers in households with infants younger than eight months (NIH, 2019).

In 1994, the U.S. Surgeon General issued a policy statement that "healthy infants be placed on their back or side to sleep to reduce the risk of SIDS" and the Back to Sleep campaign is launched (NIH, 2019). Following additional research results, the AAP Task Force amended

the Back to Sleep campaign to recommend infants sleep on firm sleep surface (NIH, 2019). It is not until 1997 that research findings support bedsharing between adults and infants increases the risk of SIDS (NIH, 2019). The Back to Sleep campaign is again amended to emphasize that infants be placed only on their back to sleep (NIH, 2019). The infant mortality disparity among African American infants sparked interest to identify and develop community-driven strategies to increase SIDS awareness and reduce the number of infant deaths in African American communities. The NICHD leads this initiative by conducting three regional summits in Tuskegee, Alabama; Los Angeles, California; and Detroit, Michigan in 2003 (National Institutes of Health, 2019).

By 2004, statistics show that NICHD community education programs have been effective among many African American infants. However, a new initiative is launched to encourage safe sleep messages throughout Mississippi, who has some of the highest SIDS and infant mortality rates in the United States. Native American infants also had an increased rate of infant mortality, specifically in the five HIS regions of the Northern Tier of the United States (NIH, 2019). In 2005, the NICHD started the Healthy Native Babies Project Workgroup to create culturally appropriate materials with safe sleep messages to use in the Native American population (NIH, 2019). The AAP Task Force also revised its SIDS policy statement in 2005 to exclusively practice putting the baby on his or her back to sleep for, "every sleep, a firm sleep surface with no loose bedding or blankets, and a separate sleep area for the baby" (NIH, 2019, p. 7). At this time, a pacifier was also suggested to reduce the risk of SIDS (NIH, 2019).

A curriculum for nurses regarding safe infant sleep was not introduced in 2006 as a continuing education program (NIH, 2019). In collaboration with the SIDS Network of Ohio and the Ohio Department of Health, the NICHD sponsored a 2-day statewide SIDS summit in

Flushing, Ohio where community leaders, like pastors, used church services as an opportunity to educate community members on how to reduce the risk of SIDS (NIH, 2019). Continuing to involve leaders in the community, a continuing education module is created for pharmacists in 2008 as they are an avenue of educators within the community (NIH, 2019).

The focus of earlier efforts (2005-2009) surrounding culturally appropriateness was in American Indian and Alaska Native communities because they have the largest infant mortality rate. As a result, Latinx populations have not received the focus they should despite having slightly higher sleep-related death than White infants. The NICHD joins the National Healthy Mothers, Healthy Babies Coalition and the White House Office of Science and Technology Policy's text4baby™ program in 2009 that delivers evidence-based health information regarding pregnancy through 12 months directly to mobile devices (NIH, 2019). The AAP Task Force expands its recommendations again to include, "regular prenatal care, breastfeeding, and making sure infants receive all recommended vaccinations" in 2011 (NIH, 2019). In 2012, the Back to Sleep campaign becomes Safe to Sleep (NIH, 2019).

History of Migration from Latin America to the United States

In addition to the history of the safe sleep campaigns, it is also important to take into account the history of migration from Latin America to the United States because different groups of Latinx individuals arrived at different times and under different circumstances, influencing family structure and dynamics. Latinx Americans have resided in parts of the United States before the country formally became the United States of America, occupying parts of Florida, Texas, New Mexico, Arizona, and California since before the year 1500 (Public Broadcasting Station [PBS], 2013). Moving into the 1850s, cigar factories became popular industries in Florida, Louisiana, and New York, creating an influx of working-class Cuban

workers into the United States (PBS, 2013). In 1897, Spain granted Cuba and Puerto Rico sovereignty and home-rule, after which the United States claimed Puerto Rico as a territory in 1898 (PBS, 2013). Puerto Rico would later gain political autonomy in 1947, becoming a commonwealth (PBS, 2013). Under the Platt Amendment in 1901, the United States wrote itself into the Cuban Constitution as the legislature of Cuba, limiting Cuban independence (Paterson, 1996). It is later annulled in 1934 (Paterson, 1996). A year later, Cuba declared its independence from the United States and passed the Reclamation Act, stealing land from many Latinx Americans (Paterson, 1996).

Although the United States claimed Puerto Rico as a territory in 1898, it took until 1917 for Puerto Ricans to be granted U.S. citizenship (PBS, 2013). Around this time, the United States also started limiting the number of immigrants allowed into the U.S. and Congress created the "Border Patrol" (Lytle Hernandez, 2009). This created tension between the United States and Latinx Americans. Seven years after the "Border Patrol" is established by Congress, the United States government began deporting Mexican Americans, ranging between 300,000 and 500,000 people (Lytle Hernandez, 2009).

Despite this rather hostile relationship between the United States and Latinx Americans, many Latinx Americans enlisted in the U.S. military during World War II (PBS, 2013). Race relations in the United States was also positively changing with the Fair Employment Practices Act that eliminated employment discrimination (PBS, 2013).

Due to the labor demand during the war, the U.S. government made an agreement with Mexico in 1943 to import migrant workers (Bracero Program) to help sustain the United States' agricultural economy through 1964 (Hernandez, 2009). Puerto Rico also contributed to the labor demand during the war through a program called Operation Bootstrap that encouraged

industrialization and welcomed large populations of migrant workers into the United States (Hernandez, 2009). Although Latinx Americans provided a large portion of the work force and the largest ethnic group to serve in World War II, this population was still suffering from profound discrimination and inequality (PBS, 2013). In 1954, this dilemma was recognized by the Supreme Court in the case Hernandez v. The State of Texas (PBS, 2013).

In 1958, Fidel Castro gains control of Cuba and more than 200,000 Cubans flee to Miami (PBS, 2013). John F. Kennedy also becomes president and defeats Castro's forces in the Bay of Pigs (PBS, 2013). Moving on to 1964, Congress passed the Civil Rights Act and the Equal Employment Opportunity Commission through Title VII (PBS, 2013). This was established to prevent job discrimination by creating affirmative action programs that prohibit gender, creed, race, or ethnic discrimination (PBS, 2013). In 1970, the first Puerto Rican to serve in Congress, Herman Badillo, was elected to the U.S. House of Representatives (PBS, 2013). The predominant Cuban community in Miami creates a bilingual area over time, which is made official by a referendum in 1973 the same year that the first Puerto Rican mayor, Maurice Ferre, became mayor of Miami (PBS, 2013). Supporting the bilingual referendum in Miami, Congress passed the Equal Educational Opportunity Act in 1974 to offer bilingual public education to Hispanic students in an effort to create equality (PBS, 2013). These actions angered Russian-born immigrant Emmy Shafer, who set forth to make English the official language of Miami (PBS, 2013). Her push to end bilingualism was one of the precipitating factors that encouraged large-scale anti-immigrant sentiment in the late 20th and early 21st century (PBS, 2013).

In the spring of 1980, Fidel Castro allows Cubans to leave the country, but does not provide any resources in which to leave (PBS, 2013). Over the next five months, 125,000 Cubans arrive in South Florida by means of a ramshackle armada (PBS, 2013). With an anti-

immigrant sentiment, the Cuban refugees are quickly labelled as mentally ill or criminal, as supported by the U.S. news and media. This false stereotype fuels the anti-immigrant sentiment and an ordinance to end the official bilingualism of Miami is approved by voters (PBS, 2013). In an effort to control illegal immigration and maintain a stable relationship with migrant workers, Ronald Reagan signed the Immigration Reform and Control Act in 1986 (PBS, 2013). While increasing border security and attention to immigration law, it also granted amnesty to approximately three million illegal immigrants (PBS, 2013).

In 1990, president, George Bush appointed Antonia Novello as the surgeon general of the United States (PBS, 2013). She was the first female and first Hispanic surgeon general. However, in 1994, California passed Proposition 187 that banned undocumented immigrant children from public resources, including public education, welfare, and subsidized health care (PBS, 2013). This was later revoked in 1996 by the federal government for being unconstitutional, as states do not have the authority to regulate immigration (PBS, 2013). However, there was no federal immigration policy in place, and in 2010 states began to enact their own policies (PBS, 2013). The anti-immigrant sentiment in the United States reaches its peak in 2004 with the formation of volunteers to patrol the border in Arizona also known as "The Minutemen" (PBS, 2013). The purpose of this group was to report illegal activity, especially unauthorized border crossings, to the U.S. Border Patrol (PBS, 2013).

Today, Latinx Americans comprise approximately 18 percent of the U.S. population (Unite, 2017). They are also the largest minority population in the United States and are expected to reach 30 percent of the population by the middle of the century (PBS, 2013). This is significant to safe infant sleep because as the Latinx population increases, so does the number of Latinx parents who will make decisions on where their infant sleeps. The Latinx relationship

with the United States over the years could most certainly influence Latinx parents' trust for safe infant sleep guidance.

Gendered Migration Patterns

The history of migration from Latin America to the United States plays a significant role in the Latinx family dynamic because families were not always together. There are many transnational families that originate in Latin America. Transnational families are typically characterized by an absent father (Soto, 2018). While fathers contributed financially to the family, mothers fulfilled all roles in the household. However, large numbers of women from Latin America began migrating at the start of the twenty-first century (Donato et al., 2006). While not necessarily gender-specific, the labor needs of the United States were better suited for men throughout the twentieth century (Massey et al., 1987; Grindle, 1998; Stephens, 1992; Donato, 1994). After IRCA granted citizenship to migrants, they began to sponsor the entry of female relatives (Donato, 2010). This is important to infant safe sleep because as opportunities arose in the United States, families were able to be together, birthing new children in a new country where infant sleeping norms differ.

In addition to sponsored entry, Latin American women started migrating to the United States to fill domestic needs (Ibarra, 2007). While women in the United States had previously performed their own domestic work, industrialization lined the pockets of middle and upper-class white families who then employed domestics from marginalized populations (Ibarra, 2007). The majority of the domestic need was cleaning at first, but then expanded to include duties such as child rearing. As Latinx women started working, the family dynamic also changed. Latinx women were in charge of raising other children for pay in addition to their own, resulting in

different sleep practices between the two sets of children to accommodate the White family's preferences and the Latinx mother's own beliefs and values.

Toresema and colleagues (2020) studied migrant populations across Europe, needing end-of-life care. A mortality follow-back study was conducted for patients ≥ 18 years of age that died a non-sudden death (*n*=5327). Results showed that patients with a non-Western background are more likely than a patient with a Western background to die in the hospital, less likely to receive morphine, and focus more on curative treatment than making end-of-life decisions (Toresema et al., 2020). This is relevant to safe infant sleep in the Latinx population because some Latinx families come from a migrant household. Even though this study focused on end-of-life decisions in the Netherlands, the fact that non-Western populations make different medical decisions is significant.

Critique of *Culture* Related to Bedsharing

The term *culture* has been used in policy as a contributing factor of bedsharing since the 1997 AAP safe sleep guidelines were published. Although culture seems to be one of the most cited reasons for bedsharing, culture is very rarely defined. (See Appendix F for a table of published articles that cite culture as a reason for bedsharing, but no definition of culture). PubMed, CINAHL, and PsychINFO were systematically searched using the terms: "infant," "sleep," "bedshare*," "co sleep*," "sleep location," "sleep practices," and "sleep arrangements." Articles that contained culture in the findings/conclusion were included in the evidence table. Inclusion criterion was that culture was referenced in the abstract. Out of the 22 qualifying articles, only one article explicitly defined culture (Jenni et al., 2005).

Historically, anthropology was the first discipline to explore the concept of *culture*, including the basic values and beliefs of different ethnic groups. Madeleine Leininger was the

first nurse anthropologist who founded the theory of transcultural nursing in the 1950s as a way of promoting culturally relevant healthcare (Ray, 2013). She held the position that an individual's experience of health and behavior were subjective to their cultural background and mental health (Fawcett, 2002). She emphasized the need for healthcare providers to acknowledge and understand people's cultural backgrounds so that care was consistent with each person's beliefs and values (Cohen, 1991).

While healthcare providers still strive to provide culturally safe care, many of the assumptions of scholars like Leininger and those who followed her, including Purnell and Paulanka and Campinha-Bacote are now problematized in today's society because of the emphasis on ethnicity or non-White versus White where White is normal and non-White is ethnic (Mkandawire-Valhmu, 2018). Delineating boundaries around certain groups of people contributes to stereotyping of non-White groups of people, which advertently upholds the idea that Western/White culture is superior to the ethnic other (Mkandawire-Valhmu, 2018; Narayan, 2000).

Although there may be similarities between individuals that share the same ethnic group, there are many other factors to take into account as a healthcare provider. Culture is complex and constantly evolving. This focus on culture neglects the fact that people engage in various behaviors in order to survive, which includes adapting their customs and practices (Mkandawire-Valhmu, 2018).

Synthesis

In total, the literature reviewed above reveals several gaps in our understanding of how Latinx families make decisions about where to place their infant to sleep, what factors influence that decision, and how nursing practice can effectively influence those decisions. There is

evidence that foreign-born Latinx mothers have a higher breastfeeding initiation rate compared to white and Black mothers (Jones et al., 2015; Bigman et al., 2018; Garrett et al., 2018). Conversely, we also know that Latinx mothers born in the United States are less likely to adhere to the infant sleep recommendations, exclusively breastfeed, and are more likely to smoke than Latinx mothers born outside of the United Sates (Provini et al., 2017). While there are published policies and national campaigns that exist in the US to help parents make informed decisions on where to sleep their infant, these policies and campaigns are inclusive of some populations that reflect diverse racial and ethnic backgrounds, but what is known is primarily centered around white and Black infants (Ajao et al., 2011; Chu et al., 2015; Colson et al., 2005; Herman et al., 2015; Matthews et al., 2015; Oden et al., 2010; Zoucha et al., 2016), with some exceptions of studies having small sample sizes (Colson et al., 2005; Zoucha et al., 2016). There have been attempts to tailor safe infant sleep messages to the American Indian and Alaska Native populations (NIH, 2019), but not in the Latinx population.

It is also important to consider that Latin America consists of 20+ countries that have heterogenous populations, and infant care practices vary widely across countries (Landy, 1959; Little et al., 2019; Rogoff, 2011; Summer et al., 2017; Waugh, 2011). This is also true for immigration/migration stories. Each family has their own unique relationship with the US based on historical events that happened in their country of origin. For example, fleeing a communist dictatorship or reuniting a transnational family. Therefore, the factors that influence infant sleep decision-making may vary, considering each Latinx family's unique situation.

The Integrated Behavior Model (Fishbein, 2008; Montaño & Kasprzyk, 2015) provides a novel way to potentially understand how Latinx caregivers make infant sleep decisions by accounting for attitudes, perceived norms, personal agency, knowledge and skills, salience of

behavior, intention to perform behavior, environmental factors, and habit. It is a non-rational decision-making model because it is a cognitive model. The Social Ecological Model framework provides the IBM with a more comprehensive context of how caregivers of a certain racial and ethnic background make decisions. While the SEM illustrates the different levels of influence on infant sleep decisions, the IBM measures intention when faced with those levels of influence.

Breastfeeding is another message that parents receive that competes with the safe infant sleep messages. Breastfeeding supporters have suggested that never bedsharing may inhibit optimal breastfeeding practices and impede maternal and health promotion (Ball, 2003; Bartick & Smith, 2014). Bedsharing supporters have also used breastfeeding to promote bedsharing (Barry, 2019; Marinelli et al., 2019). They argue that bedsharing behaviors are evolutionarily necessary for normal infant development, like body contact and body stimulation (Barry, 2019; Marinelli et al., 2019), yet they do not provide any recommendations as to how to bedshare safely.

Furthermore, Latinx caregivers are inadequately represented in the postpartum fatigue literature even though it is estimated that 60% of mothers experience early postpartum fatigue (Khayamim et al., 2016). This has implications for the decisions that Latinx caregivers make when sleep deprived and fatigued. Postpartum fatigue also plays a role in bedsharing whether intentional or unintentional. The National Sleep Foundation (2007) found that seven percent of middle-class new parents said they planned on bedsharing with their infant, yet 42 percent of parents ended up bedsharing related to interrupted sleep patterns (n=1603). This is often the case with accidental bedsharing. Few studies capture the prevalence or context of accidental bedsharing, but Moon and the American Academy of Pediatrics Task Force Against SIDS

published recommendations for the first time detailing what to do if a parent falls asleep with an infant in 2016.

Due to the limited work published in the Latinx population surrounding decision-making or infant sleep generally, we have an incomplete knowledge base about how Latinx caregivers make infant sleep decisions. This means that nurses and other healthcare providers who counsel parents on safe sleep may be operating with insufficient knowledge for how to best promote safe infant sleep in Latinx families. This study seeks to fill both of those gaps by understanding how Latinx caregivers make decisions on where their infant sleeps.

Chapter Summary

This chapter reviewed the literature relevant to the Latinx population in the context of bedsharing. This included breastfeeding, bedsharing controversy, accidental bedsharing, postpartum fatigue, and infant sleep physiology. It reviewed the public recommendations of professional organizations, introduced decision-making science, and elaborated on the IBM. This chapter also exemplified infant care in three different countries located in Latin America. Lastly, it provided a brief history of immigration/migration from Latin America to the US.

CHAPTER THREE

METHODS

This chapter describes the methods used to create a grounded theory of how Latinx caregivers make decisions about where their infant should sleep. The philosophical underpinnings of grounded theory research methodology will be discussed. A detailed description of this study's sample and setting, measures, protection of human subjects, data collection, data analysis and criteria for establishing trustworthiness will be provided.

Prior studies that have tried to understand how caregivers make decisions on where infants sleep have primarily been conducted in the Black community qualitatively (Joyner et al., 2010; Zoucha et al., 2016; Oden et al., 2010; Herman et al., 2015) and quantitatively (Salm Ward et al., 2016; Broussard et al., 2012). This study seeks to advance those research efforts by contributing a Latinx perspective to the literature.

Philosophical Underpinnings

The most often associated theoretical perspective with grounded theory is symbolic interactionism in which meaning is created and maintained through interactions amongst individuals (Carter & Fuller, 2016). These interactions occur face-to-face and are repeated, making them meaningful to a particular group of people (Carter & Fuller, 2016). These interactions are a symbolic process that occur within the historical, social, and ethnic/racial identities of the individual where subjective meanings are obtained from shared language and actions. Interpretation of these symbols is context dependent and constantly changing. A meaning is consequently developed from what the individual does with the symbol and how it impacts their life (Blumer, 1969).

Human responses are also based on meaningful symbols that are unique to each individual. Responses depend on individual interactions, prompting people to adjust their behavior based on the shared meanings of the symbols (Klunklin & Greenwood, 2006). Because objects or actions have no intrinsic meaning without a social group assigning meaning to them, symbolic interactionism proposes that people create their own meanings, knowledge, and reality through social discourse (Parker & Myrick, 2011).

Infant sleep decision-making presents a need to explore the unique interpretations in the Latinx community. Using the perspective of symbolic interactionism, this study will assume that parents make meaning about the decision-making process based on interactions that they have with friends, family, and healthcare providers. We have evidence that parents report that family, friends, and healthcare providers influence the decision-making process (Wong et al., 2020; Austin et al., 2017). Therefore, this study assumes that it can uncover the more complex process in this particular group of people.

Sample and Setting

Participants for this study were recruited using purposive theoretical sampling (Patton, 1990). Inclusion criteria included familial caregivers who identify as Latinx, 18 years or older, live in Wisconsin or Illinois, speak English or Spanish, and care for an infant that is 12 months or younger. The age limit for the child is 12 months because the older the infant, the more forthcoming caregivers will most likely be as they have survived the first six months of life. Safe sleep recommendations are also targeted toward infancy (0 to 12 months). The caregiver was asked to recall the first six months of life when answering the questions. The full sampling process will be detailed in a subsequent section.

Measures

Demographics

Demographic information was collected at the time of the interview and included age of the caregiver, age of the infant, gender of caregiver, relationship status, educational level, monthly income, zip code, type of feeding, and employment status. (See Appendix B for demographic form). The demographic form also solicited whether the caregiver had a positive COVID-19 diagnosis since the birth of the infant. Follow-up questions were asked in relation to how, if at all, the positive COVID-19 diagnosis affected daily infant care or their sleep.

Interview Guide

A semi-structured interview guide that aligns with techniques appropriate for a grounded theory study as described by Glaser and Strauss (1967) and Glaser (1992) was used. The interview guide (Appendix C) also incorporated questions relative to the IBM (Fishbein, 2008; Montaño & Kasprzyk, 2015). The interview was audio recorded and transcribed verbatim, preceding analysis.

Brief Infant Sleep Questionnaire (BISQ)

The Brief Infant Sleep Questionnaire (BISQ) is a 13-item measure that evaluates an infant's sleep location, position, and method of falling asleep by providing multiple choice answers that specifically pertain to each unique category (Sadeh, 2004). Scores can range from 0 to 100 with a higher score indicating better sleep quality, more positive parental perception of infant sleep, and parent behaviors that promote healthy and independent infant sleep (Sadeh, 2004). The initial study provided sufficient evidence that the BISQ is a reliable and valid tool for assessing infant sleep problems. Since, the questionnaire has been formally translated into many different languages with solid support for validity and reliability. Cassanello and colleagues

(2017) confirmed validity and reliability of a Spanish language BISQ in the Latinx population. (See Appendix D).

Pittsburgh Sleep Quality Index (PSQI)

The Pittsburgh Sleep Quality Index (PSQI) is a self-rated questionnaire and was developed in 1989 by Buysse and colleagues. It was designed to measure sleep quality and disturbances in clinical populations over a one-month time interval (Buysse et al., 1989). This measure lacks much Latinx normative data. However, the PSQI has been used in the Mexican American population related to sleep quality and binge drinking (Ehlers et al., 2018). It has also been validated in Spanish (Hita-Contreras et al., 2014). (Appendix E). The PSQI was included to evaluate the caregiver's quality of sleep related to having to care for an infant at the night. Scoring for the PSQI range from 0 to 21 with higher scores indicating worse sleep quality and a score ≥ 5 indicates poor sleep quality (Buysse et al., 1989). Participants were asked to reflect upon their sleep in the past month when answering the questions.

Neuro-QoL Anxiety/Depression

Quality of Life in Neurological Disorders (Neuro-QoL) is a measurement system that evaluates and monitors the health of adults and children (Katzan et al., 2020). This includes physical, mental, and social health. This questionnaire was included to evaluate the mental health of the caregivers at the time of the interview. Neuro-QoL was also chosen because it is part of the Patient-Reported Outcomes Measurement Information System (PROMIS), which has been validated and is psychometrically sound (Cella et al., 2012). It is also very brief and available in Spanish (Appendix F). Because many of the caregivers interviewed were mothers of infants less than 12 months, many with multiple older children in the home, it was an ethical consideration to assess both anxiety and depression. Scores can range from 8 to 40, with a higher score indicating

"worse or undesirable self-reported health" (National Institute of Neurological Disorders and Stroke (NINDS), 2015, p.14).

Protection of Human Subjects

Qualitative research depends on the researcher's ability to develop rapport with the participant and gather high-quality data. To achieve this effective dynamic, the researcher's goal of the researcher must be clear and trust between both parties must be established. Trust is established through a handful of ethical considerations, including avoiding undue intrusion, informed consent, and confidentiality (Ritchie et al., 2014). Avoiding undue intrusion means that the researcher does not put unnecessary burden on participants to obtain data, for example asking unjustified questions that cause emotional distress (Ritchie et al., 2014).

Informed consent is critical in the initiation of data collection. Participants must be given adequate information about the study so that they can make an independent decision to participate. They must also understand that participation is voluntary and they may choose not to answer every question. Written and verbal consent was collected prior to beginning face-to-face interviews. Verbal consent was obtained prior to beginning phone and Zoom interviews.

Similarly, ensuring confidentiality is paramount to conducting qualitative research. Ritchie et al. (2014), define confidentiality as, "not disclosing who has taken part, and not reporting what they say in ways that could identify them or be attributed to them" (p. 96).

The audio recorder and notebook were kept in a locked box in the researcher's home when not being used. The audio recordings and Microsoft Word documents were kept on a password protected computer that was kept in a locked room when not being used. Names and other identifying information were not recorded in order to maintain confidentiality. Transcripts and documents contained de-identified data.

Data Collection

After informed consent was collected, brief demographic information was collected by the researcher with pen and paper. Data was collected through semi-structured, audio recorded interviews. This method was best to comprehensively answer the research questions because it provided the opportunity to follow up on what the participant deems important and allowed the researcher to actively participate in the interview (Denzin & Lincoln, 2018).

Interviews were conducted at a place of the participant's choosing, typically their home, over the phone, or via Zoom. The researcher audio recorded the interview with a digital recorder that was transferred to a password protected computer and transcribed for data analysis. While conducting the interview, the researcher also jotted down notes that pertain to the tone and other details of the conversation.

Participants (n=6) whose score was higher than 20 on the Neuro-QoL anxiety or depression questionnaires, indicating potentially clinically significant symptoms, were given local resources via email and recommended to follow up with their doctor. Participants who scored greater than 20 on both questionnaires (n=2) were asked if the researcher could help set up an appointment during the interview. The researcher also followed the designated flowsheet to evaluate imminent self-harm or harm to the infant. Follow-up referrals to a qualified mental health professional were provided and follow-through was checked via email within a week of conducting the interview to offer additional assistance.

Field notes

Field notes were used during and immediately following the interview to capture relevant content that could help discover new concepts. Field notes are brief bullet points of situations that occur during the interview or interaction, for example noting body language or certain words

a participant using to describe a scenario. Field notes also helped to elaborate ideas, creating memos (Glaser, 1992).

Theoretical sampling

Theoretical sampling is designed to allow the researcher to select participants based on their ability to inform the study and provide diverse experiences (Glaser, 1998). Purposive sampling (Sandelowski, 1995) was used to enhance the understanding of the phenomenon through their own unique experiences. As the study progressed and gaps were identified, new participants were selected who provided a supplementary understanding of the phenomenon with their perspective.

Participants were recruited in several small groups interspaced by time to conduct data analysis to allow for purposive theoretical sampling, which is one the main methods of grounded theory. This study used theoretical sampling in combination with using purposiveness sampling by asking participants if they knew of individuals who could connect them with additional potentially interested participants. For example, after the first two interviews, I reviewed the demographics of the participants and then tried to recruit caregivers who fit into different categories. Using parity as an example, if three participants were first-time mothers, then for the next round of recruitment, I prioritized seeking multiparous mothers. This was done for several demographic characteristics simultaneously (parity, age, etc.) to obtain a sample that varied as much as possible on those characteristics.

Participant Compensation

To acknowledge the participant's time to participate in the study, the researcher provided each participant with a $25 gift certificate to Walmart or Amazon.

Data Analysis

The researcher completed interview transcriptions in Microsoft Word and began data analysis by hand after each completed interview. Coding, indexing, sorting, and data analysis occurred with the original transcription to maintain authenticity.

I used the interview transcriptions and my notes to perform open coding, selective coding, and theoretical coding to create codes and categories related to the caregivers' responses on infant sleep decisions. Once I created codes from two or more interviews, I cross referenced them to see which codes/categories overlap to make a theme. I continuously reviewed the transcripts and codes of previous interviews while working on new interviews to identify gaps in the data that I needed to fill. I used these gaps to inform my recruitment strategy so that I may understand the whole picture of infant sleep decision-making in Latinx family caregivers. I also practiced reflexivity through memoing to keep track of my feelings and decisions throughout the analysis process. The following sections detail the analysis process.

Constant comparison method

The constant comparison method is the foundation grounded theory data analysis (Glaser, 1978). The collection of data and analysis occur simultaneously through explicit coding and analysis that allowed comparisons between codes, categories, incidents, participants, experiences, and all other remaining data elements to suggest plausible hypotheses and theory. I simultaneously collected and analyzed data, always looking back to previous iterations to develop emerging codes and themes.

Open coding

Open coding is a technique used to break down data into bite-sized pieces of information that can help increase understanding. Open coding was completed line-by-line, identifying meaningful phrase clusters into codes. Each data element was coded into multiple categories and

continuously compared with older codes to achieve newer codes to help begin understanding the phenomenon (Glaser, 1978; Glaser & Strauss, 1967). This allowed for patterns to emerge across the data.

Selective coding

Once the data was broken down into codes in open coding, connections were made between codes and formed categories using selective coding. Using the constant comparison method, codes were examined to identify how categories related to each other. The conceptual strength of each code was assessed by comparing them with other codes and to determine which had greater analytical power (Glaser, 1978; Glaser & Strauss, 1967).

Theoretical coding

The researcher reviewed the coded data again in order to see an overall pattern that verified the relationships among concepts and explained the integration of the individual codes. While open coding and selective coding break down or fracture the data, theoretical coding puts the pieces back together to create a theory (Glaser, 1998). The theoretical codes were emergent from the data.

Memoing

Memos are the thoughts and feelings of the researcher as the data was collected and analyzed (Glaser, 1978, 1998). The purpose of memoing is to provide the researcher with the freedom to record ideas and reflections before codes are modified. It keeps track of the researcher's thought process and may help to later explain why the researcher chose to take a risk and explore a certain direction. Memos are also part of the continuous data comparison process, detailing the conceptual connections between categories as well as other conceptual ideas that

emerge. They were freely written, as coding was done without regard for grammar or syntax (Glaser, 1978, 1992; Glaser & Strauss, 1967).

The Emergence of the Basic Social Process

In grounded theory, accounting for the phenomenon depends on the identification of a core category that emerges from the data (Glaser, 1978). A core category explains wide variations in behavior patterns that surround the phenomenon of interest, repeatedly emerges from the data, and links categories together (Schreiber, 2001). The researcher starts looking for a core category when open coding begins because of its relation to the resolution of the complex phenomenon (Glaser, 1978). After identifying a core category, further coding should include variables that relate to the core category via selective coding and theoretical sampling to saturate the core category. A basic social process (BSP) is a type of core category. All grounded theories have more than one core category, but not all identify a BSP. This is because a BSP demonstrates change over time or two or more stages that discriminate and account for variations of the behavior pattern (Glaser, 1978).

Translation Procedure

Interviews conducted in Spanish (n=11) were transcribed in Spanish and coded in Spanish with an English translation to maintain authenticity. Participant quotations are presented in Spanish and English where necessary in the following chapter. Twenty-four percent of interviews were conducted in Spanish and required translation into English for analysis. The analysis was conducted in English with careful attention paid by the researcher who is bilingual, to maintaining the original or unique Spanish language meaning when important.

Trustworthiness

In order to ensure rigor, the researcher must exemplify credibility, dependability, transferability, and confirmability throughout the study (Denzin & Lincoln, 2018). One of the most important steps for the researcher to take is to maintain a reflexivity journal. This journal included thoughts and reactions during interviews, debriefing after interviews and during transcription, and most importantly a detailed log of decision making. Writing down events that influence decision making is crucial in providing an audit trail for credibility, dependability, transferability, and confirmability (Denzin & Lincoln, 2018). I used my reflective journal entries in my analysis between participants from Mexico and Trinidad. I maintained a log of the different language participants used and how to better communicate with participants from a certain country of origin to elicit desired data regarding infant sleep. For example, participants from Trinidad called a crib a "cart" or "cot."

Credibility

Denzin and Lincoln (2018) point out that prolonged engagement with the population of interest is one strategy for enhancing credibility. I conducted interviews over an extended period (3-6 months). Having demonstrated prolonged engagement in the target population (Denzin & Lincoln, 2018) through an established relationship with the community center, its teachers, and many of the children and parents, I also implemented member checking by asking participants if they were willing to follow up to verify findings. I was able to reconnect with two participants and show them the model, which they confirmed accurately described their experiences in making decisions on where to place their infant to sleep.

Dependability

Dependability is important to qualitative research because it determines if the study's findings are consistent and repeatable. In order to demonstrate dependability, I had an outside

researcher conduct an audit of the study. This entailed having a PhD-prepared nurse researcher who was unfamiliar with the data perform an independent analysis of the study by examining the researcher's data collection process, data analysis, and results.

Transferability

Transferability refers to the degree to which the findings of a qualitative research study can be translated to other populations in other contexts or settings. The researcher enhanced transferability by thoroughly describing the research context and assumptions associated with the research question and specific aims.

Confirmability

Confirmability refers to the degree in which the study's findings can be confirmed by other researchers. A confirmability audit was performed by a PhD-prepared nurse faculty within the College of Nursing. Using Carcary's (2020) audit trail methodology, he was able to thoroughly perform a successful audit trail. He evaluated the evidence collection and evidence management/analysis with questions provided by Carcary (2020), randomly selected two participants to audit forward from transcript to theme and two participants to audit backward from theme to transcript and evaluated the series of grounded theory models as they developed. The confirmability audit report written by the auditor is available upon request. As previously mentioned, I also maintained a reflexivity journal documenting the procedures for checking and rechecking data throughout the study.

Chapter Summary

This chapter outlined the methods of the study. It reviewed the philosophical underpinnings, described the sample and setting, detailed the measures, protection of human

subjects, data collection, and data analysis. It ended with the ways in which the researcher ensured trustworthiness.

CHAPTER FOUR

RESULTS

Chapter 4 includes a detailed description of the results of the study. It begins with a description of the sample characteristics. Next, the results of the grounded theory study and the specific aims are described. Lastly, there is a discussion on the additional findings from the study that contribute to Latinx family bedsharing decisions.

Sample Characteristics

Caregiver Characteristics

The sample population (*n*=45) consisted of 40 total families, including 39 mothers (86%), three fathers (7%), and three maternal grandmothers (7%). Caregiver characteristics can be seen in Table #1. Many participants from Trinidad, proportionally more than participants from other countries, indicated that they had plans to return to part-time or full-time work once the infant had reached one year. Since data collection took place during the COVID-19 pandemic, caregivers were asked and reported if they had had a positive COVID-19 diagnosis between March of 2020 through the end of data collection (October 2022). Most reported that they did not feel that the illness affected their daily infant care or sleep.

Table #1. Caregiver Characteristics

Characteristic	Mean (SD), min-max	% Sample
Age Caregiver: Mother & Father	27.3 (3.18) 23-36	-
Age Caregiver: Grandmother	53 (3.16) 50-57	-
Country of Origin	15	33
Mexico	26	57
Trinidad	1	2.5
Peru	2	5
Guatemala	1	2.5
Spain		
Grew Up		
Within USA	35	78
Outside USA	10	22
Home Language		
English	26	58
Spanish	12	27
English & Spanish	7	15
Employment Status		
Unemployed	30	67
Full-time	9	20
Part-time	6	13
Educational Level		
University	27	60
Three-year Degree	3	7
High School	11	24
No High School	4	9
Marital Status		
Single	2	4
In a relationship	8	18
Married	35	78
COVID-19 Positive		
Yes	6	13
No	39	87

Infant Demographics

The mean age of the infant (n=40) was seven months with a standard deviation of ±2.70 months. To summarize infant demographics, which were self-report from the caregivers, 63% of sampled infants were female, 83% were birthed vaginally, 90% were breastfed, and 60% slept in a crib. Please see Table #2 for full infant demographic information.

Table #2. Infant Characteristics

Characteristic	N	% Sample
Female	25	63
Male	15	37
Vaginal birth	33	83
Cesarean birth	7	17
Preterm	10	25
Term	25	62
Late	5	13
Breastfed	36	90
Formula fed	4	10
Crib	24	60
Parent's bed	13	33
Both crib and parent's bed	3	7

Specific Aim 1: Identify risk factors that influence how Latinx families make decisions on where to place the infant to sleep.

The decision to bedshare in the Latinx family is a multidimensional concept. Using grounded theory methodology, a model [see Figure 4] was generated to illustrate how a sample of Latinx caregivers make decisions on where the infant sleeps. There are a total of seven core categories, with *Caregiver Vigilance* emerging as the Basic Social Process (Glaser, 1992). The remaining core categories include: 1) *Recommendations from the Pediatrician; 2) Infant Characteristics; 3) Mother's Advice; 4) Postpartum Fatigue; 5) Breastfeeding;* and *6) Bonding,* and each will be discussed in this section. The grounded theory is foundational to answering this specific aim and will therefore be explicated in this section.

Caregiver Vigilance

In a sample of forty-give caregivers where the data were fully saturated, *Caregiver Vigilance* was the basic social process that drove the decision pathways that accounted for three different outcomes of the decision-making process (see Figure 4). Because there is such a strong belief in the Latinx population that a caregiver must always be paying attention to the baby, *Caregiver Vigilance* was the major contributing factor to infant sleep decision making. The Basic Social Process for this study was identified as *Caregiver Vigilance.* The term *vigilance* was chosen based on its definition in relation to the participants' description of their experiences. The Dictionary.com (2023) definition of *vigilance* is, "keenly watchful to detect danger and ever awake or alert; sleeplessly watchful." This definition resonated well with the data, because it was more than just surveillance or alertness and the participants used the term "dangerous" to describe different types of infant sleep environments. For example, one participant reported, "So

now once you arrange the bed you clear it of dangerous objects" (P51, L80-81). This sentiment of ridding the sleep space of "dangerous objects" was seen across 15 different participants' descriptions of safe sleep spaces. Participants also reported various types of "difficulties" that could arise while the infant slept, indicating the need for caregiver vigilance. For example, one participant explained, "Pues, duerme tranquila y no escuchemos que esté ahogando o tiene tos. [Well, she sleeps tranquilly, and we don't hear that she is suffocating or have a cough"] (P08, L13).

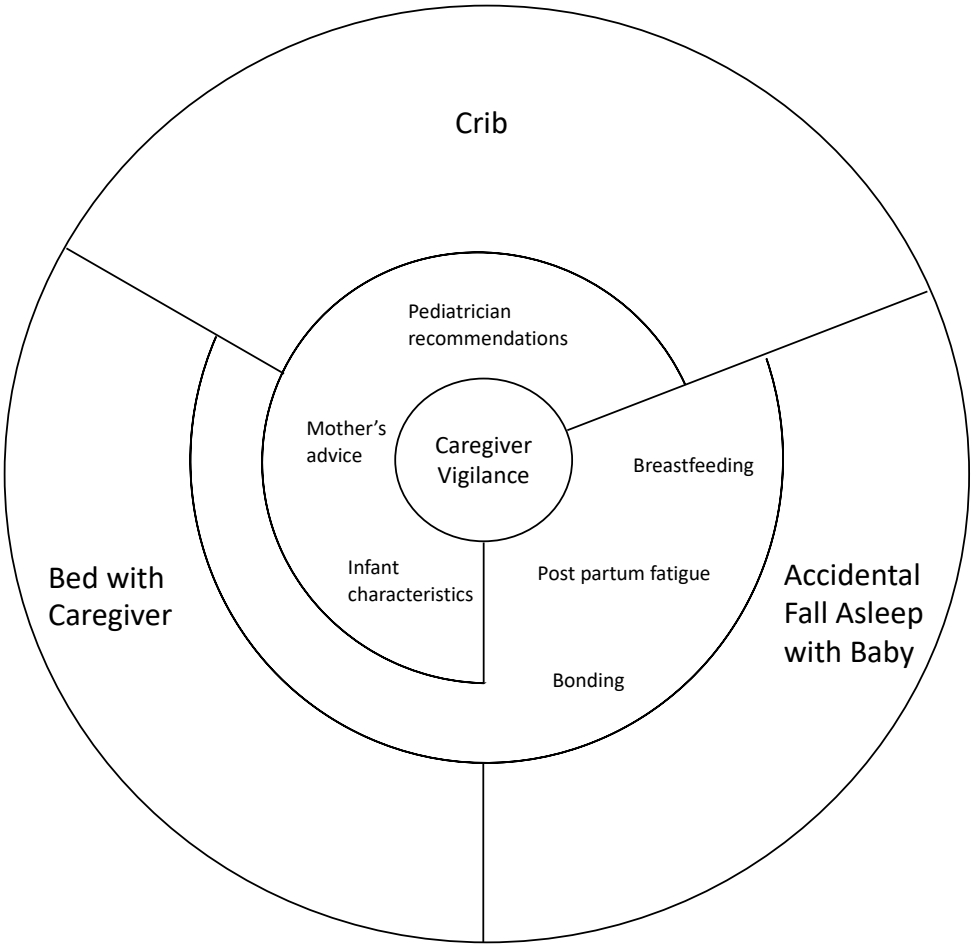

Figure 4. Grounded Theory Model of How Latinx Family Caregivers Make Infant Sleep Decisions

Recommendations from the Pediatrician

Some participants reported using a crib as a recommendation from their pediatrician. "Pues, la pediatra dice que está bien en la cuna porque tiene su propio espacio [Well, the pediatrician said the crib is good because the baby has its own space"] (P03, L47) and "The pediatrician thinks they should sleep in their own crib or bed" (P,13 L,34-35). However, a quarter of participants alluded to their knowledge of the AAP's safe infant sleep guidelines in the interview by describing a safe sleep environment (1, 2, 3, 5, 7, 8, 9, 10, 13, 16, 17, 20). For example, "Sí, a dormir sola sin cositas que se puede taparla [Yes, she sleeps alone without things that can cover her"] (P07, L18), "They say don't put stuff in your crib" (P09, L57), and "Like unsupervised, things around her like you know she can grab on and maybe put over her head. Sleeping on her tummy…things that are around her that are dangerous for her to have around her" (P10, L66-68).

Infant Characteristics

The characteristics of newborn infants influence a caregiver's decision to use a crib or bedshare. Some (*n*=5) caregivers reported examples of infants sleeping better in the bed (2, 4, 5, 8, 15). For example, one caregiver described, "Descansara mejor. Porque a veces con las manitos cuando las tienen libres ellos solo hacen un movimiento así con sus manos y se asustan y se despiertan y no tiene un buen sueño [They rest better. Because sometimes with the little hands when they have them free, they just make a movement like this with their hands and startle themselves and wake up and they don't sleep well"] (P02, L7-8). Caregivers also reported proximity to the infant as an important factor for taking care of the needs of such a small infant, which they were able to address faster while bedsharing versus using a crib. One caregiver shared, "Because she's close to me and at any moment she cries, I'm always there to take care of

her and make sure she's fine and OK" (P35, L33-34). By addressing the infant faster, caregivers reported being able to preserve their own sleep as well as their infant's.

Mother's Advice

Advice from the caregiver's mother was also an influencing factor in the decision to bedshare or use a crib. Because the caregiver's mother is viewed as a trusted figure who has already successfully raised typically more than one infant into an adult, caregivers are more inclined to listen to their advice. One participant noted, "I learned [bedsharing from my parents] and that's what I did…I trust them because they are my parents…It came down generation by generation" (P10, L90-93).

Advice was not exclusively targeted in one direction. For example, caregivers reported mothers giving both advice to bedshare and advice to use a crib. For those whose advice encouraged bedsharing, a relatively strong rationale came from generational tradition and a learned behavior, "Miraba a mi mamá con mis hermanitos. Cuando la cuna no funcionó, por la cama [I would watch my mom with my little siblings. When the crib didn't work, she would take them to bed"] (P06, L43). Other caregivers reported their mothers discouraging bedsharing, "[Bedsharing] wasn't actually encouraged by my mom" (P48, L13).

Postpartum Fatigue

Postpartum fatigue tended to be an influencing factor in a caregiver's decision to bedshare based on participant interviews. For example, one participant shared, "You're so sleep deprived that you're like I don't know what else to do. So then there goes your baby and everyone sleeps" (P09, L31-32). In one situation, the caregiver intended to use a crib, but postpartum fatigue and the need for sleep changed her decision, "Parents try to have them in their own crib and stuff like that but end up having them in bed with them" (P10, L44-45).

However, postpartum fatigue also contributed to a caregiver accidentally falling asleep with the infant. This was a different situation where the caregiver usually had been consistently using a crib and did not want to bedshare for one reason or another. One participant reported that she had accidentally fallen asleep with her infant, “Most times on the bed when I'm really tired” (P44, L100). Another participant shared how she was so tired that she accidentally fell asleep with her infant and when she woke up, she was so exhausted that she could not even return her infant to the crib, “Yes, I was once. Yeah, I fell asleep with her. So when I realized that put some pillows close to her so she wouldn't fall over. Couldn't even take her up inside the cart. So we just slept on the bed together” (P31, L88-90).

Breastfeeding

Likewise, breastfeeding also influenced a caregiver’s decision to bedshare. For example, (*n*=4) participants reported the convenience of breastfeeding as a reason for bedsharing (01, 03, 07, 10). However, breastfeeding was a common reason for many of the Trinidadian caregivers accidentally falling asleep with their infant, “Countless times, I think. OK, I've dozed off. Yeah. while breastfeeding my baby” (P28, L100-101).

Bonding

Almost half of the participants (*n*=19) reported increased caregiver-infant bonding as a reason to bedshare (01, 02, 05, 09, 10, 15, 21, 28, 29, 31, 35, 36, 38, 39, 42, 44, 47, 51, 53). Some rationales included, “help me connect [to the infant]” (P51, L14); “It gives me time to bond with my baby” (P35, L21); and “She needs your warmth that bonding, love, skin-to-skin type of thing” (P01, L39-40). However, the caregiver’s need to spend time close to the infant also contributed to accidentally falling asleep with the infant by trying to maintain caregiver vigilance and achieve an increased bond. Out of twenty-four caregivers who reported

consistently using cribs, 50% (*n*=12) reported accidentally falling asleep with their infant. One participant shared, “On a couch. Actually, I was watching TV with him, so we practically fell asleep” (P53, L72).

Explication of the Grounded Theory Model

Although there are six influencing factors, each individual factor impacts decision pathways in various ways, which will be described. A key pattern identified across participants with varying experiences of bedsharing and crib use, the data revealed that there are three pathways leading to the three different outcomes in the decision-making process. There are two decisions caregivers can make, but ultimately three different pathways that are each differently impacted by the six influencing factors. In pathway 1, there were three influencing factors (Pediatrician Recommendations, Mother’s Advice, and Infant Characteristics) that had the most impact on a caregiver’s decision to use a crib versus bedshare. Similarly, there were also three main influencing factors down pathway 2, accidentally falling asleep with the infant (Postpartum Fatigue, Breastfeeding, and Bonding). However, all six of the influencing factors are a part of pathway 3, bedsharing.

Specific Aim 2: Evaluate the Integrated Behavior Model in the context of Latinx family bedsharing.

The Integrated Behavior Model (IBM) is multidimensional and is comprised of different layers that ultimately results in a behavior (Montaño & Kasprzyk, 2015). This study focused on evaluating the applicability of the 10 main components, which were integrated into the construction of some of the semi-structured interview questions. To answer specific aim 2, this section will evaluate the experience of the use of the 10 different components in the context of

Latinx family bedsharing and offer a conclusion related to its applicability to the Latinx population.

The questions in the semi-structured interview guide reflected the 10 components of the IBM and allowed for the study to elicit data in a consistent and systematic manner. It is the PI's personal assessment that, overall, participants answered the questions openly and honestly. For example, some described having the intention to use a bassinet when they left the hospital, but currently bedshare (*Intention*). This was also seen throughout the interview questions that could perhaps have been deemed as stigmatized questions; for example, questions about accidentally falling asleep with the infant where parents could fear their parenting being judged for such a disclosure. This willingness to share each participant's truth openly and honestly is a change from what the current literature reflects (McKenna & Volpe, 2007; Dodd, 2012; Kendall-Tackett, Cong, & Hale, 2010; Liamputtong, 2002; Tomori, 2011; Tomori et al., 2016).

In addition to openly talking about their experiences with bedsharing and accidentally falling asleep with their infant, participants were also open-minded when asked how they think other caregivers put their infants to sleep (*Perceived Norms*). For example, one participant shared, "Some [caregivers] make use of the crib only. Some make use of only their bed. Some make use of both. I think it's just a matter of choice. What they feel like doing. That's what they do" (P51, L71-73).

Most of the IBM components did not have any challenges. However, one section, (2 components) demonstrated some obstacles to its intent being understood by participants. For example, in the context of infant bedsharing, participants struggled answering the questions associated with *Personal Agency*, which was broken down into two subgroups: *Perceived Control* and *Self Efficacy*. The two questions were, "On a scale of 1 to 5, how much control do

you think you have on how/where your baby sleeps?" and "On a scale of 1 to 5, how confident are you at ensuring your baby sleeps on a separate surface all the time?" There was a common theme among participants for these two questions where participants often needed clarification of what the question was asking in relation to their infant sleep practice. For example, some participants needed clarification on what the question was asking in relation to where the usually placed their infant to sleep because instead of giving a number right away, they would provide a rationale as to why they think where they place the infant to sleep is a good choice. For example:

> Researcher: *"En una escala 1 a 5, ¿qué segura está en que su bebé duerme en una cuna o algo separado de su cama todo el tiempo?"*
>
> Participant: *"Pues ya depende de la persona porque algunas personas dicen que es más seguro, pero para nosotros, como es calor humano a tu bebé. Y lo buscas ese espacio de está con tu bebé a dormir con él."*
>
> Researcher: *"On a scale of 1 to 5, how confident are you at ensuring your baby sleeps on a separate surface all the time?"*
>
> Participant: *"Well it depends on the person because some people say that it is safer, but for us, it is like human warmth to your baby. And you look for that space to be with your baby to sleep with him."*

Whereas other participants would confidently report a "1" or a "5," depending on their infant sleep environment preference. While this study only addressed the 10 main components of the IBM, it offers helpful feedback to researchers who are interested in using this theory and model to frame future research endeavors and is fit to use in the Latinx population.

Specific Aim 3: Describe, from the caregiver's perspective, the events leading up to and following an unintentional bedsharing experience.

The questions related to this specific aim on the semi-structured interview guide was only asked of participants who indicated that they only use a crib (n=24) because they were not consistently making the decision to bedshare or were actively/intentionally bedsharing. However,

exactly half (*n*=12) of the responses alluded to accidentally falling asleep with their infant. In most of the circumstances, the caregiver expressed exhaustion, breastfeeding, and trying to bond with the infant as mentioned in previous sections of the chapter. For example, one participant reported,

> "Mostly at night when she wakes up to eat and you're just there sitting with the baby in your arms. I think on one occasion my mom intervened, she's like, oh wow, you're just gonna fall. Like, what are you doing? You're sleeping while breastfeeding the baby" (P28, L97-99).

This type of bedsharing differs from actively bedsharing because when caregivers who accidentally fall asleep with their infant wake up, they expressed concern for their baby's safety. For example, "To some extent I was scared [when I woke up]. I was like what if my baby had fallen?" (P28, L113). Although this specific aim only included an analysis of 12 participants, it ended up being foundational to the outcomes portion of the grounded theory model. Please see Table #3 for a summary of the 12 participants' experiences of accidentally falling asleep with their infant.

Table #3: Participant Experiences of Accidentally Falling Asleep with Infant

Participant	**Lines Associated with Accidentally Falling Asleep with the Infant**	**Lines Associated with Actions After Caregiver Woke Up**
28	"No. When I when I first gave birth to her, I wasn't used to this whole with the kind of treatment you know times where you be breastfeeding your baby are you dozing off like mostly at night" (92-93). "Mostly at night when she wakes up to eat and you're just there sitting with the baby in your arms. I think on one occasion my mom my mom intervened, she's like, oh wow, you're just gonna fall. Like, what are you doing? You're sleeping while breastfeeding the baby and I'm like. You know, so yeah, countless	"To some extent I was scared. I was like what if my baby had fallen? What would the people say about me? Wasn't that being that I went up into? Won't I've been doing like, you know. Well, I was scared. I was scared" (113-115).

	times, I think. OK, I've dozed off. Yeah. while breastfeeding my baby" (97-101). "Yeah. I was actually in relaxed in a chair though" (105).	
30	"In my bed" (81).	"I took the baby back to his crib" (85).
31	"Yes, I was once. Yeah, I fell asleep with her" (88). "Yes, actually I was breastfeeding, so I kind of dressed up. I was tired and she also she slept in the process… Yeah, we're on a bed" (94-99).	"So when I realized that put some pillows close to her so she wouldn't fall over. Couldn't even take her up inside the cart. So we just slept on the bed together" (88-90).
34	"Of course. It [falling asleep with your infant] happens. Yes" (60).	"The first thing showed me to check in him. Secured. Yes. And then he was still sleeping and then go drop him in his crib" (68-69).
40	"Yes, I have…on the bed" (50-54).	"I panicked a bit 'cause I wasn't certain baby slept properly" (58).
42	"Fell asleep, yeah. During breastfeeding…on a couch" (77, 85).	"When I woke up he was still asleep. I had to take him to his cart" (90).
44	"Most times [I fall asleep] on the bed when I'm really tired" (100).	"Right. Sometimes I don't even believe I do that. That's why most times I project the bed, and I put her to sleep on the bed so that if I fall asleep I will be on the safe side. So I like I don't feel good whenever I fell asleep while my baby is in my arms because I feel like I'm being irresponsible sometimes" (104-107).
45	"Yeah a couple times [I've fallen asleep with my baby]…mostly on the couch" (65, 69).	"I'm like, wow, I slept there" (77).
47	"Yes, I have [fallen asleep with my baby]…on a chair yes" (64, 69).	"At first I just checking the baby was all right, yes. She was still sleeping up to tight in her clothes to make it more comfortable for her.

		Prevents any other mistake" (73-74).
49	"Yes, I have. Well, breastfeeding…anywhere" (69, 73).	"OK, I just take my baby to where she's supposed to sleep" (85).
52	"Yes, I have [fallen asleep with my baby] … [on a] couch and a chair" (70, 74).	"Well, I strictly checked to see if she was comfortable, yes" (78).
53	"Yeah, yeah, I have… On a couch. Actually, I was watching TV with him, so we practically fell asleep" (68, 72).	"When I woke up the first thing I did, I checked what I as properly placed on my arm then I was taking his crib and I couldn't even sleep again" (76-77).

Specific Aim 4: Determine the levels of sleep quality, depressive symptoms, and anxiety symptoms in a sample of Latinx family members who are primary caregivers of infants less than 12 months of age.

Four questionnaires were used in this study: the Brief Infant Sleep Questionnaire (BISQ), the Pittsburgh Sleep Quality Index (PSQI), and the Quality of Life in Neurological Disorders (Neuro-QoL) for both anxiety and depression. The BISQ was not scored, but rather used to collect information about the infant's sleep routine in a consistent manner across all participants to support the accuracy and rigor of the data analysis.

Neuro-QoL raw scores were converted into T-scores with a mean of 50 and standard deviation of 10 (NINDS, 2015). T-scores between 0-55 (raw scores 8-19) indicate normal functioning. T-scores between 55-60 (raw scores 20-25) indicate mild impairment, 60-70 (raw scores 26-3) 6indicates moderate impairment, and 70-80 (raw scores 37-40) indicates severe impairment (Healthmeasures, 2023). Higher T-scores indicate worse self-reported anxiety and depression (NINDS, 2015). Overall, data showed that the majority caregivers of infants under 12 months of age were within normal limits for anxiety and depression scores. Only two

participants scored positively for anxiety and depression. No one scored high enough to signify severe impairment for anxiety or depression.

Table #4: Summary Neuro-QoL Results

	Neuro-QoL Anxiety	**Neuro-QoL Depression**
Average	12.91	9.44
Min-Max	8-31	8-34
N (%) scored negatively or had normal functioning (raw score 8-19)	39 (87)	43 (96)
N (%) scored positively	6 (13)	2 (4)
N (%) mild impairment (raw score 20-25)	4 (9)	1 (2)
N (%) moderate impairment (raw score 26-36)	2 (4)	1 (2)
N (%) Severe impairment (raw score 37-40)	0	0
N (%) both anxiety and depression	2 (4)	-

In relation to the caregiver's sleep quality, a PSQI global score < 5 indicates good sleep and a PSQI score ≥ 5 indicates poor sleep (Zhong et al., 2015). More than half (*n*=35) of the participants scored < 5, indicating good sleepers and ten scored a PSQI ≥ 5, indicating poor sleepers (Table #5). The mean age of the infant sample population was seven months and 78% of the caregiver sample was categorized as good sleepers. Therefore, one can conclude that by

seven months postpartum, most caregivers and infants become accustomed to an individualized sleep routine that works for the dyad to promote good sleep for the caregiver, per PSQI scores.

Table #5: Summary of PSQI Results

	PSQI
Average	4.58
Min-Max	2-11
N (%) score <5	27 (60)
N (%) score ≥ 5	18 (40)

Additional Findings

In addition to answering the study purpose and specific aims, the data conveyed some nuanced themes among and between countries of origin. It came to the researcher's attention during the constant comparative analysis during the selective coding process that there was overlap with some nuanced distinctions across many of the themes derived from the interviews between participants whose country of origin were Mexico and Trinidad. While the grounded theory explicates what is common amongst the entire sample, there were also subtle distinctions that made experiences common to caregivers from Trinidad in comparison to caregivers from Mexico. These observations are noteworthy, perhaps for understanding these countries' more localized contexts in relation to infant sleep. This section will describe the similarities and differences between caregiver behaviors from Trinidad and caregiver behaviors from Mexico at a nuanced level. The sample included individuals from several different countries, but the higher

numbers of individuals from these Trinidad and Mexico offered an added opportunity to dive deeper into the localized context of each country. It is possible that had a larger group of individuals from other countries represented in the sample, a unique localized context may also have been identified.

Overlapping Themes Between Mexico and Trinidad

As explained in the grounded theory, there was a common experience of caregiver vigilance across the sample population. Even though some nuanced language appears to isolate some themes, the participants' descriptions of related experiences within the same context demonstrate clear overlap. For example, Mexican participants relayed an idea that a caregiver must always be paying attention to the infant while sleeping, especially when bedsharing. Similarly, participants from Trinidad share the idea that one cannot bedshare with an infant if the parent *sleeps carelessly.* Upon further investigation of the term *sleep carelessly*, the participants' definition corresponded with the Mexican impression that a caregiver must always be paying attention to the infant while sleeping. For example, one Trinidadian participant defined it as, "sleeping without paying attention to your baby" (P47, L42).

Another commonality between participant groups was the idea that bedsharing is a custom that promotes bonding between caregiver and infant. This positively associated custom is one of the reasons caregivers decide to bedshare. Mexican participants shared the idea that infants require their mother's warmth, "como es calor humano a tu bebé [it's like human warmth for your baby"] (P02, L60-62), which is directly associated with bedsharing because a caregiver can dedicate a night's worth of sleeping hours to nurture the bond between caregiver and infant. Participants from Trinidad expressed similar thoughts, noting that bedsharing, "gives me time to bond with my baby" (P35, L21). One participant noted, "it makes the kind of mother-child

relationship [and] makes me close to my child itself" (P42, L19-20.). It also provided a calming space for mothers to connect with their newborn when both mother and infant were "at peace" (P44, L19).

The third common subject between participant groups was the mother's desire to breastfeed or exclusively breastfeed for the first six months postpartum. More than half of the Mexican participants indicated that their infant was breastfed. Many offered the benefit of breastfeeding as a rationale for bedsharing, "más fácil a dar pecho [it's easier to breastfeed"] (P03, L2). Participants from Trinidad also recognized the benefits of breastfeeding and many shared that they tried to exclusively breastfeed for the first six months postpartum before introducing formula (28, 33, 36, 40, 44, 45). However, exclusive breastfeeding was not used in tandem as a rationale for bedsharing.

Almost Overlapping Theme Between Mexico and Trinidad

A common theme between participants from Mexico and Trinidad was that caregivers modify infant sleep surfaces, including both cribs and beds. However, Mexican participants tended to modify a bed (an unsafe sleep surface) to mimic the AAP guidelines for how the infant should sleep in a crib, for example without loose pillows or blankets, but in the bed. Like the AAP's rationale for removing extraneous objects from an infant's sleep surface, many Mexican participants explained how loose blankets and extra pillows posed an asphyxiation hazard, "Cuando está inseguro, es cuando se puse montón de almohadas, cobijas, es malo para el bebé. Puede pasarle algo [What's unsafe is when one puts a lot of pillows and blankets, it is bad for the baby. Something bad could happen to them"] (P17, L57-58). Therefore, Mexican caregivers reported making an effort to follow the AAP guidelines when bedsharing.

Caregivers from Trinidad also tended to modify infant sleep surfaces. Participants shared examples of modifying both cribs and beds for both perceived comfort and safety. For example, adding objects, such as toys and blankets to the crib was very common, "I make sure there are pillows, blankets, and lots of toys [in the crib]" (P45, L22). However, different measures were taken into consideration when modifying the bed, including placing the infant in the middle of the bed and making sure to place pillows around the edge of the bed to create a barrier (29, 36, 39, 44, 45, 51). Pillows, blankets, and toys were never added to the bed. This suggests an unmet knowledge need regarding safe infant sleep surfaces.

Differences Between Mexico and Trinidad

However, a few select topics emerged from the data specific to each country of origin. Data revealed that some participants of Mexican origin were afraid of bedsharing but chose to actively bedshare nonetheless because it is a generational tradition and thought to be the best for the infant (01, 02, 03, 08, 10, 13, 16). Participants expressed concerns like, "Porque en la cama ella da vuelta por los todos lados y cuando está entre de nosotros, topa con nosotros y no tiene espacio para ella se mueve/Because in the bed, she moves all around and when she is between us, she bumps into us and does not space to move (P03, L34-35). This sense of fear and perseverance to continue family tradition was not a theme amongst the Trinidadian participants.

Participants from Trinidad demonstrated a knowledge deficit on when to use a crib. For example, many Trinidadian participants revealed that they put their infant in a crib to sleep at night; however, later indicated that they would put the infant on unsafe objects, like couches or the caregiver's bed during the day for naps (28, 29, 33, 47, 51, 52). Comparatively, Mexican participants who put their infant to sleep in a crib at night, strictly used the crib for all types of infant sleep during the day and at night.

Participants from Trinidad were also very forthcoming about accidentally falling asleep with their infants. Whether or not their intention was to bedshare with the infant, many mothers shared their experiences of caring for the infant at night while extremely exhausted. This resulted in falling asleep on beds, chairs, and couches with the infant to name a few surfaces. One participant disclosed that she had fallen asleep with her infant, “countless times, I think. OK, I've dozed off. Yeah, while breastfeeding my baby” (P28, L100-101).

Chapter Summary

This chapter presented the results of the study, including an explication of the grounded theory, specific aims, and additional findings. Characteristics of the sample and a synopsis of the quantitative data was provided. A discussion of how the data addressed the specific aims was also provided.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

This grounded theory study was completed to add to the current safe sleep literature, specifically surrounding the Latinx population and how family caregivers make decisions about where the infant sleeps. The model yielded three major findings about the infant sleep decision-making process, including: 1. The emergence of the basic social process of *Caregiver Vigilance*, 2. The six influencing factors that guide each pathway, and 3. How there are two decisions caregivers can make, but ultimately three different pathways that are each differently impacted by the six influencing factors. This chapter will first discuss the findings in relation to the current literature. Next, the study's limitations and strengths will be outlined. Then, implications for nursing practice and policy will be described. Lastly, recommendations for future research will be presented.

Chapter 2 outlined a review of the literature regarding safe infant sleep including, parental beliefs about bedsharing, safe sleep knowledge, and distrust of healthcare providers. While most of the literature focuses data from White and African American infants, results from this study suggest Latinx caregivers share similar struggles; however, there is also evidence to support that some of the literature is changing. This section will outline three major issues related to infant bedsharing and describe how it is perpetuated or changing in the Latinx population, using the data from the study.

Stigma Related to Bedsharing

Stigma associated with bedsharing is well-established in the safe infant sleep literature (McKenna & Volpe, 2007; Dodd, 2012; Kendall-Tackett, Cong, & Hale, 2010; Liamputtong, 2002; Tomori, 2011; Tomori et al., 2016). Specifically, the idea that if a caregiver actively

bedshares, he or she will not disclose that information to the pediatrician, associated healthcare providers, and potentially even friends and family (Hooker, Ball, & Kelly, 2001). However, this sense of stigma that was seen in the early 2000s appears to be decreasing based on the interviews conducted for this study. During informed consent, before conducting the interview, I disclosed to participants that some of the questions may be upsetting or make them uncomfortable, related to the stigma surrounding bedsharing. I assured participants that they had the option to skip such questions, but none of the participants exercised their right to skip questions or stop the interview, despite reminders throughout the interview period.

With the pretext of having a registered nurse conduct the interview, participants were open to having a conversation about what they perceived as safe infant sleep. Because the face-to-face interviews were typically conducted at a participant's home, the space was inherently safe and comfortable for the participant. For caregivers who participated in the study via Zoom or the telephone, I made sure they were in a safe space before starting the interview. I also spent some time before starting each interview to build a rapport with the participant(s). This allowed for participants to openly and honestly talked about intentional bedsharing, unintentional bedsharing, and their mental health during their interviews, which leads me to believe that stigma related to bedsharing, and even mental health struggles is decreasing. Deliberate attention to building rapport, trust, and acknowledging the potential for conversation that could be about disclosing or describing potentially stigmatizing behavior were important parts of adhering to ethical and trustworthiness principles of conducting research, which was a strength of this study.

Additionally, caregivers were overall open-minded and supportive of other caregivers' decisions surrounding infant sleep. As part of the Integrated Behavioral Model (IBM), a couple questions addressed the perceived norms of how participants think that other caregivers make

decisions on where to place their infant to sleep. Many caregivers reported that the decision was based on the caregiver, and that some prefer a crib, while others may prefer to bedshare. This differs from the existing stigma literature that suggests that caregivers do not disclose bedsharing to friends and family (Tomori et al., 2016). Furthermore, caregivers also talked about how friends made decisions on where the friend's infant sleeps, suggesting the topic of bedsharing has become less taboo.

Distrust of Healthcare Providers

While distrust of healthcare providers was mainly cited in the Black community (Owens & Walker, 2020), the Latinx population is comprised of both Black origins from Africa and White origins from Spain. This means that a member of the Latinx community may look Black, but still identify as Latinx, which has negative implications in a racist healthcare system (Owens & Walker, 2020). For example, participants from Trinidad identified as Latinx, but also had origins from Africa. Therefore, some of the literature was consistent with findings from Trinidadian participants, such as the AAP recommendations not adequately addressing the differences among infant sleep behavior and environmental comfort (Herman et al., 2015). Participants who had origins from Trinidad had concerns about the infant's comfort in the crib, often modifying the sleep surface with pillows, blankets, and toys. While they heard the pediatrician's main recommendation to use a crib, they most likely did not hear a detailed explanation that addressed their specific needs or concerns regarding infant comfort. Providing consistency of care with careful attention to each individual's unique context and needs when describing safe sleep recommendations to all individuals, regardless of race, ethnicity, or other identifiers of difference is critical for eliminating health disparities in infant mortality related to bedsharing.

Caregiver Perceptions

As previously described in Chapter 2, parental beliefs about bedsharing also contribute to where and how a caregiver decides to place his or her infant to sleep. However, some of the beliefs that parents have are untrue (like myths) and/or have no basis in science. For example, the belief that placing an infant in the supine position is not safe because the infant could choke on his or her emesis if they spit up (Colson et al., 2005; Oden et al., 2010). Maintaining inaccurate beliefs to protect the infant was also seen in this study.

Caregivers held inaccurate beliefs about SIDS and SUID. For example, one participant reported her decision to bedshare as a protective factor against SIDS, so that she would be close enough to "hear the infant choke/suffocate" (P08, L13). This is a misconception about SIDS/SUID, as one is not able to hear an infant suffocate (Moon et al., 2022). That misconception contributed to a decision, which statistics show increases the risk for SIDS/SUID. Implications for this finding will be discussed in a later section of the chapter.

Safe Sleep Knowledge

In addition to false beliefs, I also identified some gaps in caregivers' safe infant sleep knowledge. Most participants were able to tell me that they had received safe infant sleep messages from their pediatrician and to use a crib. However, for those who indicated that they consistently use a crib, further investigation concluded that some of those caregivers only placed their infant to sleep in a crib at night. They were not using the crib for daytime sleeping (naps), and in fact, using unsafe sleep surfaces, such as couches. This suggests that the safe sleep messages caregivers are hearing from healthcare providers is not complete or explicitly indicating that every time an infant sleeps, the infant should be placed in a crib, supine, alone.

The infant sleep environment was another piece of education that caregivers seemed to misunderstand. For example, some caregivers who heard the safe infant sleep messages to use a crib still disclosed that they modified the crib with blankets, pillows, and toys to make the crib more comfortable for the infant. This is consistent with current literature that caregivers of infants were found to believe that their modifications to their infant's sleeping environment provided both comfort and safety (Ajao et al., 2011; Oden et al., 2010). Many parents may erroneously believe they are making the sleep environment more comfortable for the infant not realizing that those modifications may sacrifice safety for comfort. Parents may reduce using products in ways not recommended by manufacturer guidelines if those manufacturing guidelines are discussed and encouraged by sharing how modifications could unintentionally increase risk for harm to the infant.

Furthermore, caregivers who used other unsafe sleep surfaces indicated that they modified the surface to make it safer. For example, for infants who were placed to sleep on a couch or bed, caregivers placed pillows around the edges to act as barriers to prevent the infant from falling. Although this may seem helpful, pillows and blankets are soft and moldable, increasing the risk for asphyxiation if the infant's face comes into contact with the object (Moon, 2016).

Integrated Behavior Model

The Integrated Behavior Model (IBM) proved to be helpful in eliciting decision-making behavior data from participants. While some of the wording needs clarification, it is a useful tool that should be used in future research contexts involving the Latinx population, especially surrounding infant sleep decisions. Next steps would be to implement IBM-based nursing actions

and record the findings. This would allow for comparisons to be made between how parents theoretically decide to sleep their infant versus actual practice.

Limitations

This study acknowledges several limitations of this study. While this study recruited 45 caregivers, the sample population was not particularly very diverse in terms of country of origin. This proved to be useful when comparing the nuanced language and behaviors of the caregivers of Mexican origin and Trinidadian origin, which has yielded new findings. However, the transferability of the results to different countries of origin is limited. Other countries likely have localized context that should be explored in future research to better understand the unique aspects of parent decision making in relation to infant sleep. Additionally, family caregivers were not largely represented. The majority of participants consisted of mothers. While some of the participants were related (sister-in-law), each participant spoke on behalf of their own infant even if they helped care for more than one infant in the home. Only two nurse scientist-researchers conducted the search, screening, transcriptions, analysis, and writing of this review. There was a confirmability audit, but the review would have benefitted from a more team approach.

Study Strengths

Although this study was qualitative in nature, the sample size was comparable to the previous studies that examined parental perceptions of safe infant sleep in other ethnic groups. It is also the first study that solely focuses on the Latinx community and includes family caregivers, such as grandparents.

Implications for Nursing Practice

This study has implications for nursing practice by providing nurses with a more thorough understanding of how Latinx family caregivers make decisions on where to place their infant to sleep throughout the day. The grounded theory and subsequent model accounts for and helps to explain the complexity of safe infant sleep decisions in the Latinx community than the existing literature. Specifically, nurses should maintain cultural humility by engaging in an open-minded conversation with the caregiver(s) to screen and identify any false beliefs or other knowledge gaps after the caregiver has a safe infant sleep conversation with the pediatrician. This could also identify further intervention opportunities, for example provide some suggestions for those who find themselves accidentally falling asleep with their infant.

This type of conversation should be done more than once over the course of the infant's first year of life. Nurses should engage in maintenance conversations with caregiver(s) to ensure caregiver(s) are not making infant sleep decisions based on false beliefs rather than condemning caregiver(s) for not following the AAP recommendations. Again, this should be an engaging conversation between the healthcare provider and the caregiver(s), not just a blanket command to follow the AAP recommendations. The conversation should also include a discussion about any particular infant sleep beliefs, what caregivers find comfortable, and what they are currently doing at home to preserve their own sleep as well as their infant's sleep.

Another way to enhance the more consistent use of AAP guidelines would be to better understand localized contexts of women's country of origin. By understanding the nuanced language associated with infant sleep and related products, like a crib versus a cot, a healthcare provider can better connect with a caregiver. This would allow for a more consistent delivery of sleep safety principles to all women their families.

Implications for Policy

This study also has implications for policy. Although the AAP sets the standards for safe infant sleep, they lack the nuanced language and cultural context to effectively reach the Latinx population. Historically, the AAP has not really targeted safe infant sleep messages for a specific cultural or ethnic group other than surface level changes, such as providing brochures with Spanish language and photos. The only recorded effort was in 2005 and targeted Native American infants despite the increased infant mortality rates in multiple racial and ethnic minority groups (NIH, 2019). Based on the knowledge gained from this study, it would be valuable to create a safe infant sleep message that targets the Latinx population and addresses intentional and unintentional bedsharing.

Recommendations for Future Research

Grounded theory was an appropriate methodology to study how Latinx family caregivers make decisions on where to place their infant to sleep. Grounded theory and its tenets of theoretical sampling and constant comparative analysis proved to be rather beneficial for elucidating the phenomenon of caregiver vigilance within the Latinx population. Additionally, the Integrated Behavior Model proved to be useful in generating questions and eliciting rich data from participants overall. With some minor rephrasing and clarification, it could continue to be used in the Latinx population.

Additionally, co-caregivers, such as family caregivers, are not targeted for safe infant sleep education; however, they also play a role in providing care for the infant, including placing the infant to sleep. They may or may not receive instruction from the primary caregiver(s). Therefore, further research that includes co-caregivers would be useful in assessing safe infant

sleep knowledge in this population and provide relevant education to everyone who helps care for the infant.

Chapter Summary

This chapter discussed the findings of the grounded theory in relation to the current literature, including stigma related to bedsharing, distrust of healthcare providers, caregiver perceptions, and safe sleep knowledge. It also outlined the study's strengths and limitations, as well as the implications for nursing practice and policy. Lastly, it described recommendations for future research.

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APPENDIX: A

Demographic Form

CAREGIVER

1. Gender: M or F
2. Age:_____
3. Country of Origin:_____
4. Where did you grow up?_____
5. Weeks postpartum:_____
6. Employment status:
   Full-time. Part time. Maternity leave - # of weeks_____ Retired. Unemployed
7. Number of formal educational years completed:_____
8. Relationship status:
   Single. In a relationship. Married. Divorced. Widowed.
9. Caregiver's monthly income:_____
10. Household's monthly income:_____
11. Zip code:_____
12. COVID positive? Y or N

INFANT

13. Age (in months):_____
14. Type of birth:
    Vaginal. Cesarean.
15. Gestational age:
    Preterm. Term. Late.
16. Type of feeding:_____

17. Ethnicity/Country of origin:_____

FORMA DE CARACTERISTICAS DEMOGRAFICAS

CUIDADOR(A)

1. Sexo: M o F
2. Edad:_____
3. País de Origen:_____
4. ¿Dónde crecías?_____
5. Semanas posparto:_____
6. Situación laboral:
   A tiempo completo. A medio tiempo. Licencia por maternidad (semanas): _____

   Jubilada(o). Ama de casa.
7. Formación académica en años (completa):_____
8. Estado civil:
   Soltera(o). En una relación de pareja. Casada(o). Divorciada(o). Viuda(o).
9. Ingresos mensuales del cuidador(a):_____
10. Ingresos mensuales de la casa:_____
11. Código postal:_____
12. ¿Positivo de COVID? S o N

BEBE

13. Edad (en meses):_____
14. Tipo de parto:
    Vaginal. Cesario.
15. Edad gestación:
    Temprano. A tiempo. Tarde.
16. Alimentar:_____

17. Etnicidad/País de Origen:_____

APPENDIX B:

Interview Guide

Objective 1: Evaluate the Integrated Behavior Model in the context of Latinx family bedsharing

1. Intention
    a. How did you intend for your baby to sleep when you left the hospital?
        i. How does your baby sleep today?
    b. How did you intend to feed your baby when you left the hospital?
        i. How do you feed your baby today?
2. Attitudes
    a. Experiential attitude
        i. How do you feel about infant bedsharing?
    b. Instrumental attitude
        i. What do you feel will happen to your baby if you bedshare (either on accident or on purpose)?
        ii. What do you feel safe sleep looks like for your baby?
3. Perceived Norms
    a. Injunctive Norms
        i. What expectations do you think other people have about how your baby sleeps? Ex: pediatrician, mother, grandmother, friends, other relatives
    b. Descriptive Norms
        i. How do you think other mothers/caregivers sleep their babies?
4. Personal Agency
    a. Perceived control

i. On a scale of 1 to 5, how much control do you think you have on how/where your baby sleeps?

ii. Can you tell me what that number means to you?

b. Self-Efficacy

i. On a scale of 1 to 5, how confident are you at ensuring your baby sleeps on a separate surface all the time?

ii. Can you tell me what that number means to you?

Objective 2: Identify risk factors that influence how Latinae caregivers make decisions on where to place the infant to sleep.

1. What does safety mean to you when talking about babies and sleep?
    a. Who did you learn that from?
2. What does unsafe sleep mean to you?
    a. How did you learn about that?
3. Have your thoughts about sleep and safety changed over time?
    a. What or who made them change?
    b. Who could change your opinion about how your baby sleeps today? Why?
4. How do you decide where the baby sleeps?
    a. Who is involved in this decision making?
5. Can you please describe what a typical day looks like while caring for your baby?
    a. Where does your baby sleep during the day?
        i. What do you like about that location?
    b. In what position do you place the baby?
        i. What do you like about that position?

c. Has it been the same for your other children?

d. Who helps you during the day?

i. How is he/she helpful?

ii. Tell me about a time when you didn't have any help.

6. Can you please describe what a typical night looks like while caring for your baby?

a. Where does your baby sleep at night?

i. What do you like about that location?

b. In what position do you place the baby?

i. What do you like about that position?

c. Has it been the same for your other children?

d. Who helps you during the night?

i. How is he/she helpful?

ii. Tell me about a time when you didn't have help.

7. What are some differences between caring for your baby during the week versus on the weekend?

8. Tell me about a time when you were worried about your baby's sleeping arrangement.

a. What about it made you worried?

b. How did you fix the problem?

9. Who has given you advice on how or where your baby should sleep?

a. What was their advice?

b. What made their advice trustworthy?

Objective 3: Describe, from the caregiver's perspective, the events leading up to and following an unintentional bedsharing experience.

1. Have you ever fallen asleep with your baby?
    a. Where?
    b. What were the circumstances leading up to you falling asleep with your baby?
    c. How did you react when you woke up?
2. Have you ever intentionally shared a bed with your baby?
    a. What were the circumstances leading up to this decision?
    b. How did you react when you woke up?
    c. Did that decision to share a bed with your baby influence you to continue sharing a bed with your baby or not? Why?

COIVD Questions

1. How has COVID affected your daily living?
2. Has COVID affected your sleep?
3. Has COVID influenced how you sleep your baby?

Objective 1: Evaluate the Integrated Behavior Model in the context of Latinx family bedsharing

5. Intención
    a. ¿Cómo quería que durmiera su bebé cuando salió del hospital?
        i. ¿Cómo duerme su bebé hoy?
    b. ¿Cómo quería que alimentara a su bebé cuando salió del hospital?
        i. ¿Cómo alimenta a su bebé hoy?
6. Actitudes
    a. Experiential attitude
        i. ¿Cómo se siente del tema de dormir con su bebé?
    b. Instrumental attitude
        i. ¿Qué piensa que va a suceder a su bebé si comparte una cama con su bebé? Por accidente o porque quería
        ii. ¿Cómo parece el sueño seguro para su bebé?
7. Perceived Norms
    a. Injunctive Norms
        i. ¿Cuáles expectativas piensa usted que otra gente tiene sobre como duerme su bebé? Por ejemplo: pediatra, madre, abuela, amigas, parientes
    b. Descriptive Norms
        i. Cómo piensa que otras mamás/cuidadoras duerme a sus bebés?
8. Personal Agency
    a. Perceived control
        i. ¿En una escala 1 a 5, cuánto control piensa usted que tiene en donde duerme su bebé?

ii. ¿Me puede explicar qué significa ese número para usted?

b. Self-Efficacy

i. ¿En una escala 1 a 5, qué segura está en que su bebé duerme en una cuna o algo separado de su cama todo el tiempo?

ii. ¿Me puede explicar qué significa ese número para usted?

Objective 2: Identify risk factors that influence how Latinae caregivers make decisions on where to place the infant to sleep.

10. ¿Qué significa el sueño seguro para usted cuando hablamos de los bebés y el sueño?
    a. ¿Quién se lo enseño?
11. ¿Qué significa sueño inseguro para usted?
    a. ¿Cómo lo aprendió?
12. ¿Ha cambiado sus pensamientos sobre el sueño y lo que es seguro?
    a. ¿Hay algo o alguien que se lo hizo a cambiar?
    b. Hoy, ¿quién puede cambiar su opinión sobre como duerme su bebé? ¿Por qué?
13. ¿Cómo hace usted decisiones en donde duerme el bebé?
    a. ¿Quién más decide donde duerme el bebé?
14. ¿Me puede describir un día normal cuando cuide a su bebé?
    a. ¿Dónde duerme el bebé durante el día?
        i. ¿Qué le gusta de este lugar?
    b. ¿En cuál posición mete el bebé?
        i. ¿Qué le gusta de esta posición?
    c. ¿Ha sido lo mismo para sus otros niños cuando eran bebés?
    d. ¿Quién le ayuda durante el día?

i. ¿Cómo le ayuda?

ii. Dígame de una vez cuando no tuvo ayuda. ¿Qué pasó?

15. ¿Me puede describir como es una noche normal cuando cuide a su bebé?
    a. ¿Dónde duerme su bebé por la noche?
        i. ¿Qué piensa de este lugar?
    b. ¿En cuál posición mete al bebé?
    c. ¿Hay alguien que le ayuda por las noches?
        i. ¿Cómo le ayuda?
        ii. Dígame de una vez cuando no tuvo ayuda por la noche. ¿Qué pasó?
16. ¿Qué son algunas diferencias entre la semana y el fin de semana cuando cuide al bebé?
17. Dígame de una vez cuando estaba preocupada sobre donde dormía su bebé.
    a. ¿Por que se ponía preocupada?
    b. ¿Cómo arregló la situación?
18. ¿Quién se le ha dado consejos en como debe dormir o donde debe dormir su bebé?
    a. ¿Qué fue los consejos?
    b. ¿Por qué confía en eses consejos?

Objective 3: Describe, from the caregiver's perspective, the events leading up to and following an unintentional bedsharing experience.

3. ¿Ha acostado con su bebé?
    a. ¿Dónde?
    b. ¿Qué fue la situación antes de que usted acostó con el bebé?
    c. ¿Cómo reaccionó cuando se despertó?
4. ¿Ha compartido su cama con su bebé intencionalmente?

a. ¿Qué estaba pasando antes de hacer esa decisión?

b. ¿Cómo reaccionó cuando se despertó?

c. ¿Se le ha influido esa decisión a compartir su cama con su bebé para continuar compartiendo su cama? ¿Por qué?

COIVD Questions

4. ¿Cómo le ha afectado su vida diaria COVID?
5. ¿Ha afectado el sueño COVID?
6. ¿Ha influido COVID a dormir con su bebé?

APPENDIX C:

Brief Infant Sleep Questionnaire (BISQ)

Brief Infant Sleep Questionnaire – Revised Short Form

Please answer a few questions about your family.

1. What is your relationship to your child?

☐ Mother ☐ Grandparent

☐ Father ☐ Other

2. What is the highest degree that you completed?

☐ Less than high school/secondary

☐ High school/secondary

☐ College/university

☐ Graduate (e.g., MS, MD, JD, Ph.D.)

☐ Prefer not to answer

3. How old is your child (in months)?

_____months

4. Was your child premature (born before 37 weeks' gestation)?

☐ Yes

☐ No

☐ I don't know

5. My child's biological sex is

☐ Male

☐ Female

☐ Intersex

6. In which country/region do you currently reside?

Country/region: _____

7. How many nights per week are you involved with your child at bedtime and/or overnight?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 nights

Please think about your child's sleep during the past two weeks in answering the following questions.

1. What time do you usually start your child's bedtime routine (start getting your child ready for bed)?

Example: 7:45 PM would be written as _____7_:_45_PM

I start getting my child ready for bed at _____:_____

2. In a typical week, how often does your child have the exact same bedtime routine?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 nights

3. Where does your child usually fall asleep at bedtime?

☐ Crib
☐ Own bed (any size)
☐ Parents' bed
☐ Co-sleeper (attached to parents' bed)
☐ Bassinet/infant seat
☐ Swing/stroller
☐ Parent's/adult's arms
☐ Other

4. How does your child usually fall asleep at bedtime?

☐ While being held or rocked
☐ With an adult in the room, but not being held or rocked
☐ On own (without an adult in the room)

5. At bedtime, does your child usually fall asleep while breastfeeding, bottle feeding, or drinking from a sippy cup?

☐ Yes
☐ No

6. What time do you usually put your child to bed at night (lights out)?

Example: 8:30 PM would be written as ____8__:_30_PM

I put my child to bed at _____:_____

7. Typically, how difficult is bedtime?

☐ Very easy
☐ Somewhat easy
☐ Neither easy nor difficult
☐ Somewhat difficult
☐ Very difficult

8. How long does it usually take your child to fall asleep?

Example: If you put your child to bed at 6:30 pm and your child falls asleep at 8:00 pm, it takes 1 hour and 30 minutes for your child to fall asleep.

_____ hours
_____ minutes

9. In what room does your child sleep for most of the night?

- ☐ In his/her own room
- ☐ In parents' room
- ☐ In sibling's or other bedroom
- ☐ In another room of the house

10. Where does your child sleep for most of the night?

- ☐ Crib
- ☐ Own bed (any size)
- ☐ Parents' bed
- ☐ Co-sleeper (attached to parents' bed)
- ☐ Bassinet/infant seat
- ☐ Swing/stroller
- ☐ Other

11. How many times does your child usually wake during the night?

_____ times per night

12. When your child wakes up during the night, what do you usually do? (check all that apply)

- ☐ Pick up my child and put him/her back down while still awake
- ☐ Bottle feed or give a sippy cup to put my child back to sleep
- ☐ Breastfeed/nurse my child back to sleep
- ☐ Play with my child, watch TV, or use/show smartphone/tablet
- ☐ None of these

13. How much total time during the NIGHT is your child usually awake (between when your child goes to bed and wakes for the day)?

Example: If your child wakes up 2 times and is awake for about 15 minutes each time, your child's total time spent awake is 30 minutes. In that case, write "0 hours, 30 minutes."

_____ hours
_____ minutes

14. What is the longest stretch of time that your child is asleep during the NIGHT without waking up?

_____ hours
_____ minutes

15. What time does your child wake up in the morning?

My child wakes up at _____:_____

16. How much total time does your child spend sleeping during the NIGHT (between when your child goes to bed and wakes for the day)?

Example: If your child sleeps for 3 hours, wakes up, then sleeps for 5 hours and 30 minutes more, your child sleeps for 8 hours and 30 minutes total.

_____ hours
_____ minutes

17. How well does your child usually sleep at night?

☐ Very well
☐ Well
☐ Fairly well
☐ Poorly
☐ Very poorly

18. On a typical DAY, how many naps does your child take (between when your child wakes for the day and goes to bed at night)?

_____ naps

19. How much total time does your child spend sleeping during the DAY (between when your child wakes for the day and goes to bed at night)?

Example: If your child took 2 naps and slept 1 hour each time, your child's total time spent sleeping during the day is 2 hours.

_____ hours
_____ minutes

20. Do you consider your child's sleep a problem?

☐ Not a problem at all
☐ A very small problem
☐ A small problem
☐ A moderate problem
☐ A serious problem

BIENVENIDO AL ESTUDIO SOBRE EL SUEÑO PEDIÁTRICO DE LATINO AMERICA

Si usted tiene más de un hijo, por favor conteste el estudio únicamente con uno de ellos en mente. Por favor piense en los hábitos de sueño de su hijo durante las últimas <u>dos semanas</u> al contestar las siguientes preguntas. Gracias.

1. Cual es la edad de su hijo…

   _____ años _____meses

2. Su hijo es …

   - ❍ Niña
   - ❍ Niño

3. ¿Cuál es el orden de nacimiento de su hijo?

   - ❍ El mayor
   - ❍ El de en medio
   - ❍ El más pequeño
   - ❍ Multiple (Ejemplo. Gemelos, trillizos)
   - ❍ Hijo único

4. ¿Su hijo ronca mientras duerme?

   - ❍ Nunca
   - ❍ Únicamente cuando tiene gripa o alergia
   - ❍ Algunas veces
   - ❍ Casi siempre / siempre

5. Mi hijo ronca _____ noches por semana

6. ¿En dónde duerme su hijo la mayoría de las ocasiones?

   - ❍ En su habitación
   - ❍ En la habitación de los padres
   - ❍ En la habitación de alguien más
   - ❍ En alguna otra parte de la casa (ejemplo. En la sala)
   - ❍ Otro, por favor especifique: _____

7. ¿En cuál de los siguientes duerme su hijo más comúnmente?

- ❍ Cuna
- ❍ Cama propia (de cualquier tamaño)
- ❍ Cama de los padres (de cualquier tamaño)
- ❍ Bambineto
- ❍ Silla infantil
- ❍ Columpio
- ❍ Hamaca
- ❍ Futon propio
- ❍ Futon en la habitación de los padres
- ❍ Otro, por favor especifique: _____

8. ¿En qué posición duerme comúnmente su hijo?

- ❍ Boca abajo
- ❍ De lado
- ❍ Boca arriba

9. ¿Cuál de las siguientes actividades ocurre la mayoría de las veces en la noche antes de dormir?

(Seleccione todas las que apliquen)

- ❑ Baño
- ❑ Masaje
- ❑ Leer ó que le lean un libro
- ❑ Mecer
- ❑ Mirar televisión
- ❑ Cenar o comer algo
- ❑ Tomar el biberón, Lactancia o alguna otra bebida
- ❑ Correr por la casa
- ❑ Cepillarse los dientes
- ❑ Jugar
- ❑ Abrazar
- ❑ Rezar
- ❑ Cantar
- ❑ Escuchar música

- ❑ Otro, por favor especifique:_____

10. ¿En dónde duerme su hijo la mayoría de las ocasiones?

- ❍ En su habitación
- ❍ En la habitación de los padres

- ❍ En la habitación de alguien más
- ❍ En alguna otra parte de la casa (ejemplo. En la sala)
- ❍ Otro, por favor especifique: _____

11. ¿En cuál de los siguientes duerme su hijo más comúnmente?

- ❍ Cuna
- ❍ Cama propia (de cualquier tamaño)
- ❍ Cama de los padres (de cualquier tamaño)
- ❍ Bambineto
- ❍ Silla infantil
- ❍ Columpio
- ❍ Hamaca
- ❍ Otro, por favor especifique: _____

12. ¿En qué posición duerme comúnmente su hijo?

- ❍ Boca abajo
- ❍ De lado
- ❍ Boca arriba

13. ¿Cuál de las siguientes actividades ocurre la mayoría de las veces en la noche antes de dormir? (Seleccione todas las que apliquen)

- ❑ Baño
- ❑ Masaje
- ❑ Leer ó que le lean un libro
- ❑ Mecer
- ❑ Mirar televisión
- ❑ Cenar o comer algo
- ❑ Tomar el biberón, Lactancia o alguna otra bebida
- ❑ Correr por la casa
- ❑ Cepillarse los dientes
- ❑ Jugar
- ❑ Abrazar
- ❑ Rezar
- ❑ Cantar
- ❑ Escuchar música

- ❑ Otro, por favor especifique:_____

14. ¿Cómo se queda dormido su hijo la mayoría de las veces? (Seleccione todas las que apliquen)

- ❑ Cuando trae el biberón
- ❑ Cuando está lactando
- ❑ Cuando se le está meciendo
- ❑ Cuando se le está abrazando
- ❑ Mientras mira la televisión
- ❑ En el columpio
- ❑ En una hamaca
- ❑ En un futon solo en su cuarto
- ❑ En un futon con alguien más en la habitación
- ❑ En su propia cuna / cama, solo en la habitación
- ❑ En la cama de sus padres estando solo en la habitación
- ❑ En su propia cuna / cama con alguno de sus padres en la habitación
- ❑ En la cama de sus padres y con alguno de sus padres en la habitación
- ❑ En algún otro cuarto de la casa (ejemplo. La sala)
- ❑ Otro, por favor especifique:_____

15. ¿En una semana típica de 7 días, qué tan seguido sigue **su** hijo la misma rutina antes de dormir?

- ❍ Nunca
- ❍ 1-2 noches por semana
- ❍ 3-4 noches por semana
- ❍ 5-6 noches por semana
- ❍ Todas las noches

16. ¿A qué hora comienza la rutina del sueño para llevar a su hijo a la cama? Circule su horario preferido.

5:00 PM,	5:15 PM	5:30 PM	5:45 PM	6:00 PM	6:15 AM
6:30 PM,	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:45 AM
8:00 PM,	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 AM
9:30 PM,	9:45 PM	10:00 PM	10:15 PM	10:30 PM	12:45 AM
11:00 PM,	11:15 PM	11:30 PM	11:45 PM	12:00 AM	12:15 AM
12:30 AM	12:45 PM	1:00 AM	1:15 AM	1:30 AM	1:45 AM
2:00 PM	2:15 AM	2:30 AM	2:45 AM	3:00 AM	

17. ¿A qué hora usualmente acuesta a su hijo en la cama? (La hora de apagar las luces)

Circule su horario preferido.

5:00 PM,	5:15 PM	5:30 PM	5:45 PM	6:00 PM	6:15 AM
6:30 PM,	6:45 PM	7:00 PM	7:15 PM	7:30 PM	7:45 AM
8:00 PM,	8:15 PM	8:30 PM	8:45 PM	9:00 PM	9:15 AM
9:30 PM,	9:45 PM	10:00 PM	10:15 PM	10:30 PM	12:45 AM
11:00 PM,	11:15 PM	11:30 PM	11:45 PM	12:00 AM	12:15 AM
12:30 AM	12:45 PM	1:00 AM	1:15 AM	1:30 AM	1:45 AM
2:00 PM	2:15 AM	2:30 AM	2:45 AM	3:00 AM	

18. ¿Comúnmente, qué tan complicado es el momento de ir a la cama para su hijo, por ejemplo, discusiones, llantos, protestas?

❍	❍	❍	❍	❍
Es muy fácil	Es fácil	Ni fácil ni difícil	Algo complicado	Muy complicado

19. ¿Comúnmente, cuánto tiempo le toma a su hijo quedarse dormido?

Ejemplo: si usted pone a su hijo en la cama a las 8:15 PM y su hijo se duerme a las 8:30 PM, eso significa que le toma 15 minutos quedarse dormido.

- ❍ Menos de 5 minutos
- ❍ 5-15 minutos
- ❍ 16-30 minutos

- ❍ 31-60 minutos
- ❍ Más de una hora

20. ¿Qué tan seguido tiene problemas su hijo para dormir, si es que los tiene?

- ❍ Todas las noches
- ❍ 5 – 6 noches por semana
- ❍ 3 – 4 noches por semana
- ❍ 1 – 2 noches por semana
- ❍ 1 – 3 noches por semana
- ❍ Menos de una vez al mes
- ❍ Nunca

21. ¿Comúnmente, cuántas veces se despierta su hijo durante la noche? _____ veces por noche

22. ¿Qué tan seguido se despierta su hijo en las noches, si es que se despierta?

- ❍ Todas las noches
- ❍ 5 – 6 noches por semana
- ❍ 3 – 4 noches por semana
- ❍ 1 – 2 noches por semana
- ❍ 1 – 3 noches por semana
- ❍ Menos de una vez al mes
- ❍ Nunca

23. ¿Cuando su hijo se despierta durante la noche, usted que hace? (Seleccione todas las que apliquen)

- ❑ Levantarlo de la cama y arrullarlo o abrazarlo hasta que se vuelva a dormir
- ❑ Levantarlo y volverlo a poner en la cama aún estando despierto
- ❑ Hacerle caricias pero sin levantarlo de la cama
- ❑ Darle el biberón hasta que se vuelva a quedar dormido
- ❑ Darle pecho hasta que se vuelva a quedar dormido
- ❑ Darle un tranquilizante
- ❑ Cambiarle el pañal
- ❑ Hablarle suavemente sin levantarlo de la cama
- ❑ Llevarlo a la cama con usted
- ❑ Dejar que llore hasta que se vuelva a dormir por sí solo
- ❑ Darle unos minutos para ver si se calma y se vuelve a dormir
- ❑ Jugar con él hasta que esté listo para volverse a dormir
- ❑ Ver la televisión o video con mi hijo hasta que se duerma
- ❑ Cantarle una canción
- ❑ Otro, por favor especifique:_____

24. ¿En una noche típica, cuanto tiempo durante la noche permanece despierto **su** hijo?

_____ horas _____ minutos

Ejemplo: si su hijo se despierta 2 veces durante la noche y permanece despierto durante 15 minutos cada vez, significa que el tiempo que pasa su hijo despierto es de alrededor de 30 minutos.

25. ¿En una noche típica, cuánto es el tiempo máximo que pasa su bebé dormido sin despertarse?

_____ horas _____ minutos

26. ¿A qué hora se despierta normalmente su hijo en la mañana? Circunde por favor el tiempo.

4:00 PM,	4:15 PM	4:30 PM	4:45 PM	5:00 PM	5:15 AM
5:30 PM,	5:45 PM	6:00 PM	6:15 PM	6:30 PM	6:45 AM
7:00 PM,	7:15 PM	7:30 PM	7:45 PM	8:00 PM	8:15 AM
8:30 PM,	8:45 PM	9:00 PM	9:15 PM	9:30 PM	9:45 AM
10:00 PM,	10:15 PM	10:30 PM	10:45 PM	11:00 AM	11:15 AM
11:30 AM	11:45 PM	12:00 AM			

27. ¿Cuánto tiempo pasa su hijo durmiendo durante la NOCHE (entre las 7 de la noche y las 8 de la mañana)

_____ horas _____ minutos

28. ¿Cuántas siestas toma su hijo en un DIA común?? (entre las 8 de la mañana y las 7 de la noche)

_____ siestas

29. ¿Cuánto tiempo en total pasa su hijo durmiendo durante el DIA? (Entre las 8 de la mañana y las 7 de la noche
_____ horas _____ minutos

Ejemplo: Si su hijo toma 2 siestas de 1 hora cada una, significa que el tiempo total que pasa dormido su hijo durante el día es de 2 horas.

30. Por favor califique que tan bien duerme su hijo durante la noche:

❍	❍	❍	❍	❍	❍
Muy bien	Bien	Medio bien	Medio mal	Mal	Muy mal

31. ¿Usted considera que su hijo tiene problemas relacionados al sueño?

- ❍ Un problema muy serio
- ❍ Un pequeño problema
- ❍ Ningún problema

32. Usted es el / la _____ del niño(a)

- ❍ Padre
- ❍ Madre
- ❍ Abuelo(a)
- ❍ Otro, por favor especifique: _____

33. ¿Cuál es su edad?

- ❍ Menos de 21
- ❍ 21 – 24
- ❍ 25 – 29
- ❍ 30 – 34
- ❍ 35 – 39
- ❍ 40 – 44
- ❍ 45 – 49
- ❍ 50 o más

34. ¿Cuál es su ocupación?

- ❍ Empleado de tiempo completo
- ❍ Empleado de medio tiempo

- En maternidad
- Ama de casa
- Estudiante
- Desempleado / trabajos esporádicos
- Otro, por favor especifique: _____

35. 30. ¿Cuál es su etnia o raza?

- Latinoamericano
- Estadounidense
- Europeo
- Asiatico
- Africano

36. 31. A. ¿De qué país es usted?

- Argentina
- Bolivia
- Brasil
- Chile
- Colombia
- Costa Rica
- Cuba
- la República Dominicana
- Ecuador
- El Salvador
- Guatemala
- Haití
- Honduras
- México
- Nicaragua
- Panamá
- Paraguay
- Perú
- Puerto Rico
- Uruguay
- Venezuela

37. ¿Cuál es su nivel de estudios (ultimo finalizado)?

- Primaria
- Secundaria
- Preparatoria
- Universidad
- Post- grado

- ❍ Otro, por favor especifique: _____

38. ¿En qué tipo de casa vive?

- ❍ Departamento rentado
- ❍ Departamento propio
- ❍ Casa o terreno propio
- ❍ Otro, por favor especifique: _____

39. ¿Su hijo está bajo algún tratamiento médico o tiene algún problema médico? (Sin considerar las visitas de rutina al Pediatra)

- ❍ Sí
- ❍ No

40. ¿Su hijo fue prematuroi?

- ❍ No
- ❍ Si la respuesta es afirmativa, cuánto duró el periodo de gestación (número de semanas de embarazo) de su hijo, hasta el momento del nacimiento? _____Semanas

41. ¿Por cuanto tiempo dio lactancia a su hijo?

- ❍ Actualmente
- ❍ Nunca
- ❍ < 1 mes
- ❍ 1-3 meses
- ❍ 4-6 meses
- ❍ 7-12 meses
- ❍ 13-18 meses
- ❍ >18 meses

42. ¿Algún miembro de la familia fuma?

- ❍ Sí
- ❍ No

43. ¿Quién es el principal responsable de su hijo durante el día?

- ❍ Padre o madre
- ❍ Abuelo (a)
- ❍ Otro pariente
- ❍ Otra persona (nana, enfermera)
- ❍ Algún profesional o guardería
- ❍ Otro, por favor especifique: _____

44. ¿Usualmente en dónde pasa su hijo la mayor parte del día?

- ❍ En casa
- ❍ Fuera de casa

45. Por favor introduzca su correo electrónico (Opcional): _____

APPENDIX D:

Pittsburgh Sleep Quality Index (PSQI)

PITTSBURGH SLEEP QUALITY INDEX (PSQI)

INSTRUCTIONS: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

1. During the past month, when have you usually gone to bed at night?

   USUAL BED TIME _____

2. During the past month, how long (in minutes) has it usually take you to fall asleep each night?

   NUMBER OF MINUTES _____

3. During the past month, when have you usually gotten up in the morning?

   USUAL GETTING UP TIME _____

4. During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spend in bed.)

   HOURS OF SLEEP PER NIGHT _____

INSTRUCTIONS: For each of the remaining questions, check the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you...

	Not during the past month	Less than once a week	Once or twice a week	Three or more times a week
(a) ...cannot get to sleep within 30 minutes	☐	☐	☐	☐
(b) ...wake up in the middle of the night or early morning	☐	☐	☐	☐
(c) ...have to get up to use the bathroom	☐	☐	☐	☐
(d ...cannot breathe comfortably	☐	☐	☐	☐
(e) ...cough or snore loudly	☐	☐	☐	☐
(f) ...feel too cold	☐	☐	☐	☐
(g) ...feel too hot	☐	☐	☐	☐
(h) ...had bad dreams	☐	☐	☐	☐
(i) ...have pain	☐	☐	☐	☐
(j) Other reason(s), please describe _____ _____				
How often during the past month have you had trouble sleeping because of this?	☐	☐	☐	☐

	Very good	Fairly good	Fairly bad	very bad
6. During the past month, how would you rate your sleep quality overall?	☐	☐	☐	☐

	Not during the past month	Less than once a week	Once or twice a week	Three or more times a week
7. During the past month, how often have you taken medicine (prescribed or "over the counter") to help you sleep?	☐	☐	☐	☐
8. During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?	☐	☐	☐	☐

	No problem at all	Only a very slight problem	Somewhat of a problem	A very big problem
9. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?	☐	☐	☐	☐

	No bed partner or roommate	Partner/ roommate in other room	Partner in same room, but not same bed	Partner in same bed
10. During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?	☐	☐	☐	☐

If you have a roommate or bed partner, ask him/her how often in the past month you have had...

	Not during the past month	Less than once a week	Once or twice a week	Three or more times a week
(a) ...loud snoring	☐	☐	☐	☐
(b) ...long pauses between breaths while asleep	☐	☐	☐	☐
(c) ...legs twitching or jerking while you sleep	☐	☐	☐	☐
(d) ...episodes of disorientation or confusion during sleep	☐	☐	☐	☐
(e) Other restlessness while you sleep; please describe	☐	☐	☐	☐

INSTRUCCIONES:
Las siguientes preguntas hacen referencia a cómo ha dormido Vd. **normalmente durante el último mes**. Intente ajustarse en sus respuestas de la manera más exacta posible a lo ocurrido durante la **mayor parte** de los días y noches del **último mes.**

¡Muy Importante! CONTESTE A TODAS LAS PREGUNTAS

1. Durante el **último mes**, ¿Cuál ha sido, normalmente, su hora de acostarse?
APUNTE SU HORA HABITUAL DE ACOSTARSE: _____

2. ¿Cuánto tiempo habrá tardado en dormirse, **normalmente**, las noches del **último mes**?
APUNTE EL TIEMPO EN MINUTOS: _____

3. Durante el **último mes**, ¿a qué hora se ha levantado **habitualmente** por la mañana?
APUNTE SU HORA HABITUAL DE LEVANTARSE: _____

4. ¿Cuántas horas calcula que habrá dormido **verdaderamente** cada noche durante el **último mes**? (El tiempo puede ser diferente al que Vd. permanezca en la cama).
APUNTE LAS HORAS QUE CREA HABER DORMIDO: _____

Para cada una de las siguientes preguntas, elija la respuesta que más se ajuste a su caso. Intente contestas a TODAS las preguntas.

5. Durante el **último mes**, cuántas veces ha tenido Vd. problemas para dormir a causa de:

a) No poder conciliar el sueño en la primera media hora:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

b) Despertarse durante la noche o de madrugada:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

c) Tener que levantarse para ir al servicio:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

d) No poder respirar bien:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

e) Toser o roncar ruidosamente:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

f) Sentir frío:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

g) Sentir demasiado calor:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

h) Tener pesadillas o «malos sueños»:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

i) Sufrir dolores:
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

j) Otras razones (por favor, descríbalas a continuación):
_____
_____
_____

- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

6. Durante el **último mes**, ¿cómo valoraría, en conjunto, la calidad de su sueño?
- Bastante buena _____
- Buena _____
- Mala _____
- Bastante mala _____

7. Durante el **último mes,** ¿cuántas veces habrá tomado medicinas (por su cuenta o recetadas por el médico) para dormir?
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

8. Durante el **último mes**, ¿cuántas veces ha sentido somnolencia mientras conducía, comía, o desarrollaba alguna otra actividad?
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

9. Durante el **último mes**, ¿ha representado para Vd. mucho problema el «tener ánimos» para realizar alguna de las actividades detalladas en la pregunta anterior?
- Ningún problema _____
- Sólo un leve problema _____
- Un problema _____
- Un grave problema _____

10. ¿Duerme Vd. solo o acompañado?
- Solo _____
- Con alguien en otra habitación _____
- En la misma habitación, pero en otra cama _____
- En la misma cama _____

POR FAVOR, SÓLO CONTESTE A LAS SIGUIENTES PREGUNTAS EN EL CASO DE QUE DUERMA ACOMPAÑADO.

Si Vd. tiene pareja o compañero de habitación, pregúntele si durante el **último mes** Vd. ha tenido:

a) Ronquidos ruidosos.
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

b) Grandes pausas entre respiraciones mientras duerme.
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

c) Sacudidas o espasmos de piernas mientras duerme.
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

d) Episodios de desorientación o confusión mientras duerme.
- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

e) Otros inconvenientes mientras Vd. duerme (Por favor, descríbalos a continuación):
_____
_____
_____
_____
_____

- Ninguna vez en el último mes _____
- Menos de una vez a la semana _____
- Una o dos veces a la semana _____
- Tres o más veces a la semana _____

APPENDIX E:

Neuro-QoL Anxiety and Depression Screens

Neuro-QOL Item Bank v1.0 –Anxiety – Short Form

Anxiety – Short Form

Please respond to each question or statement by marking one box per row.

	In the past 7 days…	Never	Rarely	Sometimes	Often	Always
EDANX53	I felt uneasy……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX46	I felt nervous……....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX48	Many situations made me worry……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX41	My worries overwhelmed me……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX54	I felt tense…….....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX55	I had difficulty calming down……...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDANX18	I had sudden feelings of panic……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX07	I felt nervous when my normal routine was disturbed……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Ansiedad – Cuestionario abreviado

Responda a cada pregunta o enunciado marcando una casilla por línea.

	En los últimos 7 días…	Nunca	Rara vez	Algunas veces	A menudo	Siempre
NQANX26	Me sentí intranquilo/a……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX22	Me sentí nervioso/a……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX23	Muchas situaciones me preocuparon……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX20	Mis inquietudes fueron demasiado para mí...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX27	Me sentí tenso/a……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX28	Tuve dificultad para tranquilizarme……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX09	Tuve sensaciones de pánico repentinas….	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQANX07	Me sentí nervioso/a cuando se alteraba mi rutina normal……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Depression – Short Form

Please respond to each question or statement by marking one box per row.

	In the past 7 days…	Never	Rarely	Sometimes	Often	Always
EDDEP29	I felt depressed……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP41	I felt hopeless……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP09	I felt that nothing could cheer me up……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP48	I felt that my life was empty……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP04	I felt worthless……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP36	I felt unhappy……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP39	I felt I had no reason for living……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
EDDEP45	I felt that nothing was interesting……..	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Depresión - Cuestionario abreviado

Responda a cada pregunta o enunciado marcando una casilla por línea.

	En los últimos 7 días…	Nunca	Rara vez	Algunas veces	A menudo	Siempre
NQDEP13	Me sentí deprimido/a……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP23	Sentí que no tenía esperanza……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP07	Sentí que nada me podía animar……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP27	Sentí que mi vida estaba vacía……...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP02	Sentí que no valía nada……...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP19	Me sentí descontento/a……...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP21	Sentí que no tenía ninguna razón para vivir……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
NQDEP24	Sentí que nada me interesaba……	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

APPENDIX F:

Critique of Culture Table

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
Abel, S., Park, J., Tipene-Leach, D., Finau, S., & Lennan, M. (2001). Infant care practices in New Zealand: A cross-cultural qualitative study. Social Science and Medicine, 53(9), 1135–1148. New Zealand	*N*=150 caregivers Mixed race/ethnicity	Describe and compare infant care practices between ethnic groups.	Qualitative focus groups	Thematic analysis	Infant sleep messaging must address the cultural meaning of bedsharing	Focus groups do not allow for personal histories or private thoughts, like case studies.	N/A
Aslam, H., Kemp,	*N*=5 mothers	Examine the socio-cultural	Qualitative semi-	Discourse analysis	There are multiple	Small sample size.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
L., Harris, E., & Gilbert, E. (2009). Sociocultural perceptions of Sudden Infant Death Syndrome among migrant Indian mothers. Journal of Paediatrics and Child Health, 45(11), 670–675. Australia	Indian	influences on decisions and beliefs regarding bedsharing as a SIDS risk factor	structured interviews		influences on the family's decision-making and behavior. Infant sleep messaging should be tailored to the family.	Not generalizable to all recent arrival Indian immigrants.	
Babcock, S., Purnell, M., Blair, P., Pease, A.,	Review			PRISMA	Differences in breastfeeding are context-specific and	No control groups in most studies.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
Elder, D., & Galland, B. (2019). The influence of bed-sharing on infant physiology, breastfeeding, breastfeeding and behavior: A systematic review. *Sleep Medicine Reviews, 43*, 106-117. US					depend on parents and their cultural values.		
Bailey, C. (2016). Breastfeeding mothers' experien	*N*=6 mothers Primarily White (83%)	Persuade public policy to be inclusive of bedsharing	Qualitative semi-structured interviews.	Phenomenological analysis	Motives for bedsharing; breastfeeding, maternal	Small sample size	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
ces of bedsharing: A qualitative study. *Breastfeeding Review, 24*(2), 33-40. Australia		to lessen the likelihood of unsafe bedsharing practices.			sleep, and partner sleep.		
Dodd, J. (2012). Evaluation of the Dept of Health Western Australia operational directive statewide co-Sleeping /Bed-sharing policy for WA health hospitals and health services.	*N*=34 mothers Primarily White (71%)	Assess effectiveness of state-wide co-sleeping/bedsharing policy.	Qualitative phone interviews	Grounded theory	Motives for bedsharing: breastfeeding, bonding, natural, attachment parenting. Development of culturally appropriate messages are needed.	Voluntary participation may have only recruited participants who feel strongly about bedsharing.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
Collaboration for Applied Research and Evaluation: Telethon Institute for Child Health Research under contract with the Department of Health, Western Australia. Australia							
Doering, J., & Durfor, S. L. (2011). The process of ‘‘persevering toward normalc	*N*=16 mothers Primarily Black (94%)	Construct theory regarding fatigue and sleep in non-depressed lower-income urban postpartum women.	Qualitative semi-structured interviews	Grounded theory	Motives for bedsharing: better infant sleep, disturbed maternal sleep. Providers must	Is not generalizable to depressed postpartum women.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
y'' after childbirth. MCN; American Journal of Maternal Child Nursing, 36(4), 258–265. US					understand the contexts of individual sleep environment, socioeconomic and cultural contexts.		
Fu 2008 US	*N*= 708 mothers Primarily Black (66%)	Determine the maternal and infant characteristics associated with bedsharing, room-sharing without bedsharing, and solitary sleeping.	Qualitative interviews	Chi square Stata gllamm procedure	A family's cultural practices and expectations are involved in the decision to bed-share.	Study population limited to WIC participants.	N/A
Giannotti, F., & Cortesi, F. (2009). Family and	Review	Provide an overview of cultural variations in sleep-related			Child rearing practices always occur within a cultural		N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
cultural influences on sleep development. Pediatric Sleep Disorders, 18(4), 849–861. US and International		behaviors and practices.			context, and are shaped by parents' cultural beliefs.		
Jenni, O. G., Fuhrer, H. Z., Iglowstein, I., Molinari, L., & Largo, R. H. (2005). A longitudinal study of bed sharing and sleep problems among Swiss	*N*= 493 children Swiss (100%)	Determine age trends, long-term course and secular changes of bed-sharing practices, and sleep problems among Swiss families.	Qualitative interviews	Log-linear models Descriptive statistics	The individual child's needs, the family context, and cultural background need to be taken into account when counseling parents on safe sleep.	This study assessed children, not caregivers. This study followed children over 10 years of sleep, instead of just infants.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
children in the first 10 years of life. Pediatrics, 115(1 Suppl), 233–240. Switzerland							
Jenni, O. G., O'Connor, B. B. (2005). Children's sleep: an interplay between culture and biology. *Pediatrics, 115(*1 pt 2):204 – 216.	Review	To provide cross-cultural aspects of children's sleep behavior in developed countries as a basis for understanding dimensions and mechanisms of cultural differences.			Pediatricians need to recognize the cultural environment in which children live and be knowledgeable about cultural beliefs and values of the family.		"…'culture is the entire nonbiological inheritance of human beings.' Everything that human beings inherit from one generation to the next that is not passed on biologically (ie, 'everything that is socially

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
							constructed and learned') is a part of culture" (p. 205).
Lathen, L. (2009). ABCs for healthy babies: A social marketing campaign for eliminating racial and ethnic disparities in birth outcomes in southeastern and southern Wisconsin, final report. Wisconsin: Division	*N*=130 caregivers Black (100%)	Explore healthy births, including infant sleep position and location	Qualitative focus groups		Motives for bedsharing: nurturing, bonding, protection, convenience, breastfeeding. Positive, clear, culturally relevant messaging is needed that also recognizes social determinants of health.		N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
of Public Health, Wisconsin Department of Health Services. US							
Liamputtong, P. (2002). Childrearing practices and child health among the Hmong in Australia: Implications for health services. International Journal of Health Services, 32(4),	*N*=27 mothers Hmong (100%)	Determine what happens to the childcare practices of Hmong women when they settle into another society.	Qualitative interviews	Thematic analysis	Hmong culture values bedsharing. Providers should acknowledge cultural practices.		"I used a participant observation method to allow me to more fully observe and record Hmong cultural beliefs and practices and their experiences in Australia" (p. 821).

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
817–836. Australia							
Morelli, G., Oppenheim, D., Rogoff, B., & Goldsmith, D. (1992). Cultural variation in infants' sleeping arrangements: Questions of independence. Developmental Psychology, 28(4), 604–613. US, Guatemala	*N*=32 parents Primarily White (56%).	Compare infant care practices of a middle-class US sample to a Mayan sample in Guatemala.	Qualitative interviews	Thematic analysis	Mayan culture values closeness and US culture values independence. There is a need to understand different cultural practices.	US sample was not representative of the whole country. Mayan sample was not representative of the country of Guatemala.	N/A
Owens, J. A.	Review	Examine the culture			Health promotio	Focuses on children	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
(2005). Introduction: Culture and sleep in children. Pediatrics, 115(1 Suppl), 201–203.		values that impact children's sleep.			n must include cultural issues that impact sleeping.	and not infant care practices.	
Owens, J. A. (2008). Socio-cultural considerations and sleep practices in the pediatric population. Sleep Medicine Clinics, 3(1), 97–107.	Review	Examine cultural differences in a number of critical sleep behaviors, including cosleeping/ bed sharing, bedtime practices, napping, sleep needs, and lifestyle factors affecting sleep hygiene.			Healthcare providers need to be mindful and responsive to the family's experience of health and illness (cultural beliefs).		"perceived function and meaning of sleep, the relative value and importance of sleep as a health behavior …norms for sleep practices, and social interactions, networks, and relationships" (p. 100).

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
Resnicow, K., Baranowski, T., Ahluwahalia, J. S., & Braithwite, R. L. (1999). Cultural sensitivity in public health: Defined and demystified. Ethnicity and Disease, 9(1), 10–21.	Review	Define culture and cultural sensitivity in public health.				Public health initiatives can conflict with cultural/religious beliefs.	"ethnic/cultural characteristics, experiences, norms, values, behavioral patterns, and beliefs of a target population as well as relevant historical, environmental, and social forces" (p. 11).
Rice, P. L., & Naksook, C. (1998). Child rearing and cultural beliefs and practices amongst	*N*=30 mothers Thai (100%)	Explore perceptions of SIDS and the role of cultural beliefs/practices among Thai mothers.	Qualitative ethnographic interviews	Thematic analysis	Cultural beliefs/practices reduce the fear of SIDS.	Not generalizable to all Thai women in Victoria, Australia.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
Thai mothers in Victoria, Australia: Implications for the Sudden Infant Death Syndrome. Journal of Paediatrics and Child Health, 34(4), 320–324. Australia							
Tipene-Leach, D., Hutchison, L., Tangiora, A., Rea, C., White, R., Stewart, A., et al.	*N*=299 mothers Maori (100%)	Determine knowledge regarding SIDS prevention and related child care practices	Quantitative survey	Chi square and survival analysis	Mothers had low knowledge of SIDS and high rates of bedsharing. Health promotion should	Mothers who had a previous SIDS experience were excluded.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
(2010). SIDS-related knowledge and infant care practices among Maori mothers. New Zealand Medical Journal, 123(1326), 88–96. New Zealand					be tailored to family.		
Thoman, E. B. (2006). Co-sleeping, an ancient practice: Issues of the past and present, and possibilities for the	Review	Provide context of bedsharing throughout history.			Providers must take cultural and individual factors into account when educating on safe infant sleep.	More than 10 years old.	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
future. Sleep Medicine Reviews, 10(6), 407–417.							
Weimer, S. M., Dise, T. L., Evers, P. B., Ortiz, M. A., Welldaregay, W., & Steinmann, W. C. (2002). Prevalence, predictors, and attitudes toward cosleeping in an urban pediatric center. Clinical Pediatrics, 41(6),	*N*=101 caregivers Primarily Black (93%)	Determine prevalence, predictors, and attitudes/beliefs toward cosleeping	Quantitative survey	Descriptive analysis	Motives for bedsharing: family tradition, illness, no space, breastfeeding. More research is needed on attitudes of cultural groups. Policy is needed.	Oral survey format	N/A

Reference Location	Participants *N* Race/ethnicity	Study Purpose/Aims	Data Collection Strategies	Analyses Used	Findings and conclusions re: culture	Strengths/Limitation	Definition of Culture
433–438. US							
Welles-Nystrom, B. (2005). Co-sleeping as a window into Swedish culture: Considerations of gender and health care. Scandinavian Journal of Caring Sciences, 19(4), 354–360. Sweden	*N*=60 families Race/ethnicity not reported	Assess cosleeping as it relates to the cultural discourse on the gendered family and its health.	Mixed method: semi-structured interviews, diaries	Descriptive and thematic analysis	Motives for bedsharing: cultural, emotional, and physical health of the infant. Infant care practices are embedded in culture and providers must take culture into consideration.	Families were only from Stockholm.	N/A

APPENDIX G:

Confirmability Audit

Confirmability Audit
Researcher: Rachel E. Barbon, BSN, RN
Auditor: Christopher C. Peters, PhD, RN

Date: 3/9/2023 – 3/14/2023

System: Carcary (2020) https://doi.org/10.34190/JBRM.18.2.008

Evidence/raw data collection:

- Are all sources of secondary evidence specified (e.g., contextual descriptions, policy documents, research reports)? Not provided.
- Are all sources of primary data specified (e.g., interview or focus group transcripts, pilot validation feedback)? Yes – interview transcripts.
- Are researcher journals and reflections on the body of evidence recorded? Not provided.

Evidence management and analysis:

- Are all thematic codes and categories documented? Yes.
- Are memos developed to enable emerging thematic categories to be traced to the body of evidence? Yes, in the form of a tool developing themes from the interviews.
- Are reflexive memos attached to thematic categories? Not provided.
- Are relationships across the thematic structure explored (e.g., diagrammatically modelled)? Three models attached.
- Are examples of how the emerging analysis is grounded in the body of evidence maintained (e.g., in an appendix)? Not provided.

Confirmability Audit:

Two participants randomly selected to audit forward from transcript to theme (P#49, P#18).
Two themes randomly selected to audit backward from theme to transcript (P#20, P#52).

Method:

Random number generator used: https://www.calculator.net/random-number-generator.html
Random numbers generated for forward audit: 43, (no transcript) 49, 18 (see above).
Random numbers generated for backward audit: 20, 52 (See above).

Forward audit, transcript to theme, P#49

Read P#49 transcript first and highlighted participant responses. Opened transcript and coding documents side by side. Worked from transcript to open coding document from left to right. Compared transcript to direct quote in selective coding document for accuracy. Then read text selected for open code, and finally categorization.

Upon review of document P#49v, participant made 24 statements which were transcribed.

Five transcribed statements were coded in document "open coding Trinidad" as follows:

- **49.L4:** Participant statement, "In her crib," was quoted accurately in the open coding document. This was open coded as "in her crib" and categorized as "Babies sleep in cots." Statements of other participants used terms "cot", "crib", "bed", and "her own space" were coded as "cot". Coding of this participant is internally consistent *if the concepts crib and cot align*.
- **49.L32:** Participant statement, "Yeah yeah I put pillows and blankets around the baby," was quoted accurately in the open coding document. This was open coded as "pillows and blankets around the baby," and categorized as "Moms modify cots to make more comfortable." This coding is internally consistent.
- **49.L69:** Participant statement, "Yes, I have. Well, breastfeeding," was quoted accurately in the open coding document. This was open coded as "yes, while breastfeeding," and categorized as "Moms fall asleep with their babies." This coding is internally consistent.
- **49.L45:** Participant statement, "I'm likely press my baby. That's why I use the crib instead of," was quoted accurately in the open coding document. This was open coded as "likely to press baby," and categorized as "Sleep carelessly." This coding is internally consistent.
- **49.L101:** Participant statement, "For the love I have for my baby, I'm. I'm comfortable with it, you know. I'm just like. So," was quoted accurately in the open coding document. This was open coded as "for the love I have for my baby," which was not categorized.

Forward audit, transcript to theme, P#18

Upon review of document P#18v, participant made 39 statements which were transcribed. Highlighted participant responses.

No statements from P#18 were reflected in the document “open coding Trinidad”.
No statements from P#18 were reflected in the document “open coding”.

Backward audit, theme to transcript, P#20

Opened transcript and coding documents side by side. Worked from right to left. Compared category to open code to direct quote in coding document and finally to transcript for accuracy. Finally, read P#20 transcript for all participant responses in context.

Category: Babies sleep in the bed with the mom. Open code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Caregivers bedshare even though it scares them. Open code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Caregivers must always be paying attention to the baby while bedsharing. Open code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Caregivers modify the sleep space in the bed to mimic what a crib should look like. NO PILLOWS. Open Code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Caregivers modify the sleep space in the bed to mimic what a crib should look like. NO BLANKETS. Open Code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Caregivers know crib is recommended. Open code: P#20 "sleeps in a crib". Text excerpt: "sleeps in a crib in his own room". Transcript: P#20 L8: "he still wakes up at night and he sleeps in a crib in his own room." The flow from crib is *recommended* to the the participant statement that the infant sleeps in a crib may not be internally consistent. The participant response is a statement of situational fact, what the infant does. This is distinct from an acknowledgement of what others recommend. P#20 lines 51 & 52 may support this categorical interpretation.

Category: Bedsharing is a custom that promotes bonding. Open code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: Bedsharing facilitates breastfeeding. Open code: No supporting comment from P#20. Text excerpt: No supporting comment from P#20.

Category: A safe sleep space means that nothing is around the baby. Open code: "doesn't have anything in his crib" and "stuff that could suffocate the baby like bumpers". Text excerpt: "unsafe sleep would mean like if there's like a bunch of stuff in the crib and you know like stuff that could like potentially like I guess suffocate the baby like the bumpers that like used to be on cribs different things of that nature." Transcript "unsleep unsafe sleep would mean like if there's like a bunch of stuff in the crib and you know like stuff that could like potentially like I guess suffocate the baby like the bumpers that like used to be on cribs different things of that nature." This coding is internally consistent.

Backward audit, theme to transcript, P#52

Opened transcript and coding documents side by side. Worked from right to left. Compared category to open code to direct quote in coding document and finally to transcript for accuracy. Finally, read P#52 transcript for all participant responses in context.

Category: Babies sleep in cots. Open code: in her cot. Text excerpt: 52. L4. In her cot. Transcript: 52. L4. In her cot. This coding is internally consistent.

Category: Babies sleep in the bed. Open code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Bedsharing is safer for the baby. Open code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Bedsharing is more comfortable for the baby. Open code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Bedsharing promotes bonding/closeness. Open code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Mothers must be close to the baby. Open code: No supporting comment from P#52.

Category: Babies should not sleep on their back. Open code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Moms modify cots to make more comfortable. Text excerpt: “Yes I put her pillows, yes, and then there's a blanket.” Transcript: P#52v L23 “Yes I put her pillows, yes, and then there's a blanket.” This coding is internally consistent.

Category: Moms modify bed to make is safer for baby (sic). Open Code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Moms fall asleep with their babies. Open Code: “couch and a chair”. Text excerpt: P52 L74. Couch and a chair. Transcript: P#52v L74. Couch and a chair. This coding is internally consistent when the full context of lines 63-74 are considered.

Category: Sleeping on their back is dangerous for baby. Open Code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Moms exclusively breastfeed for at least 6 months. Open Code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Sleep carelessly. Open code: body parts on the baby. Text excerpt: So we may not just respecting the boundaries. So maybe he's taking. Keeping somebody parts on the baby, yes. Transcript: P#52v L51-52. This coding is internally consistent.

Category: Bedsharing allows moms to attend to babies faster. Open Code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Category: Moms can't sleep carelessly if they share a bed with the baby. Open code: no matter how cautious or carefully we might want to be we never know what will happen when we are asleep. Text excerpt: I don't really think it's safe. yes because. No matter how cautious. Or, carefully we might want to be we never know. What will happen when we are asleep. Transcript: I don't really think it's safe. yes because. No matter how cautious. Or, carefully we might want to be we never know. What will happen when we are asleep [INTANGABLE 0:56]. This coding is NOT internally consistent. The categorization is "**can't** sleep carelessly if they share a bad" (emphasis added) and the participant's statement is that a mom cannot maintain safety. The statement by P#52 may be a contrary example of the category which may be indicated in the researcher's notes by the purple-colored text.

Category: Other moms sleep with babies in the bed and put babies in cots. Open code: use both. Text excerpt: They might use both. Transcript: P#52. L39 Uhh I I think. They might use both. This coding is internally consistent.

Category: Babies nap outside of the crib. Open code: couch. Text excerpt: she's on the couch. Transcript: P#52 L56-57 Sometimes, she stays in her cot, but if I'm working and I know that I might not be able to regularly check on her room she's on the couch. This coding is internally consistent.

Category: Husband/partner helps care for baby at night. Open code: husband gave some time for myself. Text excerpt: And also my husband. That could also give some time for myself. Transcript: P#52 L89 And also my husband. That could also give some time for myself. This coding is internally consistent.

Category: Babies can transfer from bedsharing to a crib around 4-6 months when they are "strong" enough. Open Code: No supporting comment from P#52. Text excerpt: No supporting comment from P#52.

Exploration of thematic structure through diagrammatical modelling

Three models attached. Carcary (2022) suggests an audit should trace the development of the concept relationship model across hierarchical thematic structure. The researcher has attached three models in the file model.pptx. The models are not labeled, and will be referred to as #1, #2, and #3 in order of presentation in the file.

Model #1

Model 1 depicts caregiver vigilance at the center, with the first ring divided into three equal parts. These are labeled (clockwise from top) Crib, Accidental Fall Asleep with Baby, and Bed with Caregiver. The second ring covers 2/3 of the model and is labeled Pediatrician Recommendations, Mother's advice, and Infant Characteristics. The outer ring covers 2/3 of the model and is labled Post partum fatigue, Breastfeeding and Bonding.

This model accurately presents the concepts from the audited documents. The relationship between the concepts is less clear. Caregiver Vigilance, Bed with Caregiver, and Accidental Fall Asleep with Baby are each presented in a separate compartment, while the second ring and third ring contain concepts which are not compartmentalized. It is unclear if this is significant in the model. It is unclear how the rings in the model represent relationships between or across concepts. It is unclear if the size of the pieces of the model or are intended to convey conceptual "weight" or proportion. This may be clarified in accompanying text which was not provided.

Model #2

Model 2 depicts caregiver vigilance at the center, with the same conceptual elements as model 1, however infant sleep location is moved to the outer ring. Size and proximity of compartments are changed as well. It is unclear if this is significant in the model. It is unclear how the rings in the model represent relationships between or across concepts. It is unclear if the size of the pieces of the model or are intended to convey conceptual "weight" or proportion. This may be clarified in accompanying text which was not provided.

Model #3

Model 3 is centered on caregiver vigilance. Three concepts, bed, crib, and accidental sleep, are depicted with reciprocal arrows. Each concept is color coded with what appear to be contributing factors. It is unclear how these contributing factors interact to influence the reciprocal relationships depicted. While "crib" may be a "pediatrician recommendation" it is unclear how that contributes reciprocally to caregiver vigilance. Pediatrician recommendation is similarly depicted in a reciprocal relationship to "bed with caregiver". The researcher may have references supporting pediatrician recommendations for co-sleeping in the text which was not provided. Infant characteristics and mother's advice are also presented in reciprocal relationships with both crib and bed. This model may be the easiest to interpret if the nature of the reciprocal relationships are explained in the text.

Carcary, M., 2020. The Research Audit Trail: Methodological Guidance for Application in Practice. The Electronic Journal of Business Research Methods, 18(2), pp. 166-177, https://doi.org/10.34190/JBRM.18.2.008