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OBSERVATIONAL AND SELF-REPORTED COPARENTING: ASSOCIATIONS WITH  
MATERNAL DEPRESSION, HOUSEHOLD CHAOS, & EMOTIONAL AVAILABILITY AT  
12 MONTHS POST-PARTUM

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## ABSTRACT

Coparenting, “the ways that parents and/or parental figures relate to each other in the role of a parent”, has been shown to be strong predictor of many familial and developmental outcomes (Feinberg 2003, p.27). The study sought to compare the interrelationships between an established self-reported coparenting measure, the Coparenting Relationship Scales (CRS), and a new observational coparenting scale developed by Dr. Douglas Teti’s Project SIESTA II. It additionally sought to compare the relationships between these scales at 12 months post partum and 3 constructs theoretically linked to parenting quality: maternal depression, maternal emotional availability, and household chaos.

The present study examined data collected at 12 months post partum by Project SIESTA II (Study of Infants’ Emergent Sleep Trajectories); an NIH-funded longitudinal study of parenting, infant sleep, and infant development that included a sample of 167 families and their healthy infants recruited from two local rural hospitals in central Pennsylvania.

Significant associations were found between self-reported coparenting and positive observed coparenting. Additionally, self reported coparenting significantly correlated with maternal depression, and household chaos. While observed coparenting significantly correlated with emotional availability.

For future studies, the relationship between observational and self-reported coparenting along with their relationship with other constructs should be examined further. By increasing the sample size, and studying coparenting across multiple age groups instead of just at 12 months, more conclusive results may be obtained.

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## **Chapter 1**

### **Introduction**

Parenting at childhood has been shown to play a vital part in individuals' lifelong development. An integral part of parenting and the family dynamic is the coparenting relationship. Coparenting is defined as the way in which parents work together in rearing their children and is a strong predictor of many familial and developmental outcomes (Feinberg 2003).

Coparenting has been shown to be a mediator of significant aspects of family life such as marital adjustment and marital warmth along with marital love and adolescent risky behaviors (Baril, Crouter &McHale 2007, Bonds and Gondoli 2007). In addition, positive coparenting behaviors have been shown to play a significant role in infant-parent attachment; crucial for outcomes across the lifespan (Brown, Schoope-Sullivan, Magelsdorf &Neff 2009). Coparenting has noteworthy impacts on sleep quality, a biological function that substantially impacts development (McDaniel & Teti. 2012).

The present study seeks to validate and evaluate the efficacy of a new observational coparenting measure developed by Dr. Douglas Teti's Project SIESTA II (Study of Infants' Emergent Sleep Trajectories) in comparison to a traditional self-reported coparenting measure. This study will compare how well the observational versus self-reported measures predict three variables that tap into constructs that are theoretically related to coparenting quality: depression and anxiety symptoms, emotional availability, and household chaos.

## **The Biological Importance of Quality Coparenting at Bedtime**

### **Parenting and Sleep Relationships**

Overall, not a lot of research has examined the relationships between bedtime coparenting and infant sleep quality. However, it is well established that infant sleep quality impacts a parents' ability to function well. In example, mothers have been shown to be more emotionally available for their infant when their infant sleeps more throughout the night (Philbrook & Teti 2016). In addition, infant sleep problems have been shown to have a connection to poor maternal mental health (Bayer et al. 2007). It has even been suggested that maternal depressive symptoms may be the cause of frequent infant night waking as depressed mothers seek out their infants more often throughout the night, even when their baby is not exhibiting any signs of distress (Teti & Crosby 2012).

These findings suggest that poor infant sleep quality can result in lesser quality parenting and that this relationship is bidirectional. Arguably, if parenting itself is inhibited by or causes lesser quality sleep in the infant than poor quality coparenting might be similarly related. These important ties between parenting and sleep quality suggest the reason that this topic is so important to explore, as sleep during the first year has lasting impacts on cognitive development (Ednick et al 2009).

### **The Importance of Sleep During the First Year**

Sleep is a vital part of the human existence. Sleep is essential to human health and sleep during infancy has been shown to have significant impacts on the development of the central nervous system as well as lifetime cognitive functioning, temperament development, and emotional and behavioral issues throughout life (Ednick et al 2009, Sadeh et al 2014, Thoman 1990). Most of the development of the human central nervous system (CNS) occurs during the first two years of life, highlighting why sleep is so important in infancy (Kinney et al. 1988). The CNS plays a very important role in the human body as it consists of the brain and spinal cord. The CNS serves to send important signals between our brain and

body, it is essentially the body's communication center. The CNS is of utmost biological importance to human functioning across the life span.

Additionally, sleep impacts the brain plasticity (or neuroplasticity) as sleep disturbances and deprivation can lead to a loss of plasticity (Frank et al 2001, Graven 2006). Plasticity at infancy refers to the "genetically determined ability of the infant brain to change its structure and function in response to the environment" and is vital throughout the lifespan to allow the brain to form new neural connections in response to various life events (Ednick et al 2009). Without neuroplasticity, the brain would essentially be unable to develop and change across the lifespan highlighting the importance of sleep in connection with brain and body functioning. Finally, sleep during infancy is biologically important in its contribution to infant learning. Sleep in infancy has been shown to facilitate neural maturation, memory formation, and even the ability to process stimuli (Tarullo 2011). This important role of sleep allows infants to grow and develop. Without quality sleep memory consolidation and thus the ability to learn would be inhibited.

Overall, parenting impacts infant sleep quality and infant sleep quality impacts parenting (Bayer et al. 2007, Philbrook & Teti 2016, Teti & Crosby 2012). Therefore, the present study has important influences on human biological functioning as it examines the relationship between certain constructs theoretically linked with parenting and explore their relationship to coparenting quality at bedtime 12 months post-partum.

## **How is Coparenting studied?**

### **Self-reports**

Prior work in studying coparenting quality primarily focuses on self reports, an example of which is the Coparenting Relationship Scale (CRS) (Feinberg, Brown & Kan 2012). The CRS examines the parental perceptions of the quality of their coparenting relationships. The CRS emphasizes inter-parental agreement, closeness, exposure of child to conflict, coparenting support, undermining, endorsement of partner's parenting and division of labor.

Self-reported coparenting is a quick and efficient way to score coparenting quality and is much less labor intensive than observational measures. However self-reports can often lead to biased results. Many past studies in related fields examined the relationships between self-reports and objective observation to show that objective behavior analysis does not always match participants' self assessments of their own behaviors. In studies ranging from hand-washing to physical activity it has been demonstrated that participants were over-reporting quantity of positive behavioral outcomes in comparison with objective observations (Affuso et al. 2011, Contzen, De Pasquale, & Mosler 2015) One of the greatest problems with self-reports is that they are not easily verifiable by other means and there is no direct way to cross-validate people's descriptions of their feelings and intentions. In addition, participants engage in higher-order cognitive processes and go well beyond the specific fact or finite event that is being measured (Podsakoff , & Organ 1986). Data obtained by self-reports tend to be a few steps removed from the level of discrete stimuli and responses that are being measured.

### **Objective measurements**

The present study seeks to extend prior work by using objective assessments of coparenting ratings of parents interacting with each other in bedtime video-recordings, and comparing and contrasting associations of subjective and objective assessments of coparenting with theoretically linked constructs. Objective assessment of coparenting allows for another dimension of measurement that is not as colored by participant bias, as possibly influenced by social desirability and affective predispositions. Studying coparenting observationally is labor intensive but allows for a third-party to view behavior entirely objectively and can potentially allow for a representation alternative representation of the parenting team that is not influenced by participant bias. Although research suggests that there is some correspondence between couple's self reports of constructive communication and observations of that construct, high correspondence between self-reports and observed behavior occurs in few other variables (Hahlweg et al 2000). This is why it is necessary to study behavior using both observational and self-reported measures, because both may provide important information about the construct being examined. Project SIESTA II,

which provides the data for the present study, is the first research team to study coparenting objectively at bedtime.

### **Constructs Theoretically Linked to Coparenting**

#### **Depressive symptoms and coparenting quality.**

Much research has been done showing that depressed people function poorly as parents, especially depressed mothers. They are less responsive than non-depressed mothers to their children's needs as rumination and self-absorption often overshadow their parenting skills (Teti & Gelfand 1990). Mothers with depression sometimes even wake up their children as they seek out comfort from their child, interrupting sleep (Teti & Crosby 2012). Depressed mother tend not to provide needed structure and rule enforcement for their children, leading to negative developmental outcomes across the lifespan (Goodman & Brumley 1990).

Children of depressed mothers have a higher likelihood of having both behavioral and academic problems in school. They have been shown to have problems with scholastic achievement, academic discipline, and problems getting along with their classmates and teachers (Teti & Gelfand 1990; Billings & Moos 1983). These problems in school can leave these children behind for their entire lives, demonstrating how significant it is to study maternal depression and its role in parenting.

Thus, depression not only affects how mothers view their children and family, but also can impact how they function as parents. Depressed parents cannot parent fully, negatively impacting their coparenting abilities and their child's development across the lifespan. Higher depression and anxiety symptoms would be expected to correlate with lower quality coparenting in both self-reports and observational coparenting.

#### **Emotional availability and coparenting quality.**

Emotional Availability refers to parental sensitivity, structuring, and non-intrusiveness and child responsiveness to parent and involvement of parent (Biringen 2000). Parental emotional availability (EA) helps understand the quality of parent-child interactions.

The first parental aspect of EA, parental sensitivity, takes into account prompt responsiveness to child's needs and flexibility to adapt to the child's demands. Next is parental structuring, which refers to the ability of parents to support exploration without overwhelming their child's autonomy. Parental nonintrusiveness refers to being available when needed without being overly involved. The final parental measure involved in EA calculation is nonhostility. Nonhostility refers to behaving with children in generally pleasant ways (Biringen 2000). Higher emotional availability would be expected to correlate with higher quality coparenting in both self-reports and observational coparenting..

### **Household chaos and coparenting quality.**

Household chaos refers to disorganization and instability in family functioning (Mills-Koonce et al 2016). There are strong associations with parental stress and mental health with household chaos (Evans, Lepore, Shejwal, & Palsane 1998; Coldwell, Pike, & Dunn (2006). There have been studies linking high household chaos with negative effects across the child's lifespan, making this an important measure to study (Martin & Books-Gunn (2012); Evans & Wachs 2010).

Overall household chaos can negatively impact parenting which can in turn negatively impact coparenting quality. Highly chaotic households are representations of chaotic families, not allowing parenting to parent to their best ability. Higher household chaos would be expected to correlate with lower quality coparenting in both self-reports and observational coparenting.

## The Present Study

The present study examined the relationship between an observational coparenting scale developed by project SIESTA II in comparison with the more traditionally used self-reported Coparenting Relationship Scale (CRS). The study also sought to discover the links between each of these measures of coparenting quality three variables related to constructs associated with coparenting; depression and anxiety symptoms, emotional availability, and household chaos. Ultimately, the purpose was to suggest which form of measuring coparenting, if either, might be a better predictor of each measure. The following question and hypotheses were tested based on the research.

How well do self-reported coparenting and observational coparenting relate to each other?

Hypotheses:

1. Higher maternal depression will correlate with lower positive coparenting and higher negative coparenting.
2. Higher emotional availability will correlate with with higher positive coparenting and lower negative coparenting
3. Higher household chaos will correlate with lower positive coparenting and higher negative coparenting.

To be explored: Does self-reported of observational coparenting serve as a stronger predictor of any of the above hypotheses?

## Chapter 2

### Methods

#### Participants

167 families and their healthy infants were recruited to participate in Project SIESTA (Study of Infants' Emergent Sleep Trajectories); an NIH-funded longitudinal study of parenting, infant sleep, and infant development. Mothers in two local rural hospitals in central Pennsylvania were approached within 24-48 hours of their infant's birth and were given information regarding Project SIESTA. Mothers who expressed interest were called two weeks after the infant's birth to be recruited into the project.

Families in the study were visited at home when infants were 1,3,6,9,12,18, and 24 months of age. The present study focuses on the 12 month visits. 75.6% of the fathers in the sample and 82.1% of the mothers identifies as white. Median income of the sample was \$70,669.18 (SD= \$49,700.50). 47% of the infants were male while 53% were female. The average age of mothers in the study was 29.6 years old (SD=5.3) while the mean age of fathers was 32.1 (SD=5.9).

#### Video Recording

Project SIESTA staff set up video and audio recording equipment within each family's home on the day of data collection at each infant age. The camera locations were based on locations in the home where the parents reported the infant was taken to prepare for bed, where the infant slept, and where the infant was taken upon awakening throughout the night. 2-4 cameras were required in most homes, and video and audio recordings were made by a Bosch Divar XF 8-Channel Digital Versatile Recorder. Video was captured using infrared security cameras made by ARM electronics (Model No. C420BCVFIR) and audio was collected by Channel Vision microphones (Model No. 5104-MIC).

## **Observational Measures**

### **Observational Coparenting**

**Using CABS- Coparenting Bedtime Scales, Originally developed by Brandon McDaniel**

**October 2013**

The project SIESTA II observational coparenting measure is based off of an interval coding technique beginning immediately after the baby appears on camera. Videos are watched 3 times to ensure accuracy in coding. In project SIESTA II, coparenting is defined as an incident in which one parent explicitly or implicitly cooperated with, supported, undermined, and/or was critical of the other parent's parenting goals, desires, or intentions and, in the first round of watching the video, is marked for presence with a '1', or absence with nothing in each 30 second interval (Coparenting duration  $\alpha=.85$  to  $.99$ ). Some examples of coparenting might include parenting echoing, or repeating, what the other parent says to the child; a parenting complying with another parent's request; or both parents actively engaging to achieve the same task with their child. The coder is asked to pay special attention in distinguishing coparenting from simple involvement. Amount of time that both parents are in the video is NOT equivalent to coparenting. The coder is expected to note details of each interaction to help them in subsequent video reviews.

In the next two video reviews, the coder is expected to double check their recorded intervals of coparenting along with scoring the family on two measures: cooperation/support and hostility/competition. Each of these measures is scored on a four- point scale in which 0 represents none of the measure and 3 represents a high level of this measure. A high level, 3, of cooperation or support is representative of families in which there is active cooperation during coparenting interactions; a 2 represents general team work in which the parenting team is doing well but not always actively supporting each other; a 1, low cooperation and support, represents a pair that lacked connection when

parenting their child; and 0 represent no cooperation during the intervals of coparenting (Coparenting Support  $\alpha=.88$  to 1.00).

This hostility-competitiveness measure is also represented from 0-3. A 3 represents high hostility-competitiveness in which partners one up or outdo one another, are critical, or compete for the child's attention. They can receive a three if they have one clear instance of being very disparaging or intrusive that disrupts the bedtime routine, if their main concern seems to be outdoing one another, or if they have one primary critical encounter in addition to a few smaller disparaging moments during the routine. A 2 represents moderate hostility competitiveness in which parents try to outdo one another about as much as not. A 1 represents low hostility-competitiveness in which once in a while there may be a comment in which one partner suggests that they have a more effective parenting strategy and a 0 represents no hostility-competitiveness (Coparenting Hostility  $\alpha= .84$  to .914).

### **Emotional Availability**

The Emotional Availability Scales (Biringen, Robinson, & Emde 1998) was used to assess emotional availability at bedtime. The internal reliability for the composite on this scale was good ( $\alpha= .81, .77, .78, .88,$  and  $.82$  at 1,3,6,9,12 months). The Emotional Availability Scales (EAS) have proven to be an important concept as it serves as a predictor of several important constructs. EAS has been shown to predict emotional attachment, emotional regulation in children and even adjustment to kindergarten (Biringen et al. 2005, Saunders et al. 2015). The scale scores parents on their sensitivity, structuring, nonintrusiveness and nonhostility. Sensitivity is rated on a 9-point scaled and refers to the parents' ability to respond to their child's needs. Structuring is rated on a 5-point scaled and is a score representing the parents' ability to set limits for their child. Nonintrusiveness is rated on a 5-point scaled and refers to the ability of the parents to respect their child's autonomy. Finally, nonhostility scored on a 5-point scale represents the parents' ability to interact with their child without becoming easily irritated. Because of the different scale ranges, each parent scale was standardized (converted to z-scores), and the

resulting four z-scores were summed to yield a composite maternal EA score, with a mean of zero. Thus, the composite EA score included scores above and below zero.

In addition, the EAS scores the child's emotional availability toward the parents. This scores their responsiveness towards their parents on a 7-point scale and their involvement with their parent on a 7-point scale. However, the child scale scores were not used in these analyses.

### **Household Chaos: the DISCORD**

Household chaos was measured over the course of 3 in-home visits that lasted between 30 minutes to 2 hours. The DISCORD measure, used to determine household chaos, relied on repeated observations of the family environment in which the research team included 6 items to assess home organization and 5 items to assess compliance with the study's protocol (Whitesell et al. 2015). Each of the 11 total items were scored on a 3- point scale with a 3 representing the maximum amount of chaos. Internal reliability was high at all age points ( $\alpha=.79, .71, .75, .80, .83$ ) with an interrater reliability of .97.

The DISCORD measure of household chaos has been shown to have significant associations with socioeconomic risk, negative life events, and poor parenting at bedtime (Whitesell et al. 2015).

## **Parenting Report Measures**

### **Self Reported Coparenting Scales**

The Coparenting Relationship Scale (CRS) (Feinberg, Brown, & Kan 2012) was used to measure how each partner viewed their parenting team. The CRS is used to demonstrate parental perceptions of the quality of their child-rearing team based on 7 different dimensions. The present study grouped together the positive dimensions: agreement, closeness, support, endorsement, and division of labor and the negative dimensions: competition and exposure to conflict to create scores of reports of positive and negative coparenting from both the mother's and father's perspectives.

The original scale has 47 items. Internal consistency of this scale was strong ( $\alpha = .81$  to  $.89$ ) with endorsement of partner parenting ( $\alpha = .83$  to  $.88$  for mothers;  $\alpha = .61$  to  $.71$  for fathers), coparenting agreement ( $\alpha = .66$  to  $.74$ ), and division of labor ( $\alpha = .33$  to  $.59$ ) (Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012)).

### **Maternal Depression**

The depression subscales of SCL-90-R, the Symptom Checklist 90-Revised, (Derogatis 1994) were used in this study to assess the maternal depression. The depression subscale consisted of 13 items that parents rated on a 5-point scale ranging from 0-4; 0, representing a mother that did not experience that specific symptom at all and 4, representing a mother that related extremely to that symptom. The SCL-90-R was completed at both 1 and 3 months to assess overall depression (1 month:  $\alpha = .91$  for mothers,  $\alpha = .86$  for fathers; 3 months  $\alpha = .90$  for mothers and  $\alpha = .88$  for fathers).

### **Statistical Analysis**

All hypotheses were tested using two-tailed Pearson correlation and conducted using SPSS versions 21.2. The significance level was set to  $p \leq .05$ .

## Chapter 3

### Results

To provide a better understanding of the variables that were examined in the study, the following table 1 provides descriptive statistics for each of the variables that were analyzed to test the hypotheses.

**Table 1: Descriptive Statistics by Variable**

	Minimum	Maximum	Mean	Std. Deviation
<b>Positive Observed Coparenting at 12 Months</b>	1.0	3.0	2.436	0.6314
<b>Negative Observed Coparenting at 12 Months</b>	0	3.0	0.436	0.7194
<b>Maternal Positive Self-Reported Coparenting at 12 months</b>	57.00	168.00	143,1639	20.22973
<b>Maternal Negative Self-Reported Coparenting at 12 months</b>	11.00	43.00	17.4032	6.23313
<b>Maternal depression at 12 months</b>	0	69	2.99	7.268
<b>Emotional availability at 12 months</b>	-9.04	4.46	-.0057	3.19542
<b>Household Chaos averages from 1 to 12 months</b>	55.00	135.67	77.8768	19.76311

To test the research question and each hypothesis, Pearson correlations were conducted. To test the question about well self-reported coparenting and observational coparenting relate to each other, a correlation was run between both coparenting measures. See table 2 for the results of this test. There was a significant positive correlation found between self-reported coparenting positive coparenting and

positive observed coparenting. In addition, there was a significant positive correlation found between negative self-reported coparenting and positive observed coparenting.

**Table 2: Observational Coparenting X Self-Reported Coparenting**

	<b>Positive Observed Coparenting at 12 Months</b>	<b>Negative Observed Coparenting at 12 Months</b>
<b>Maternal Positive Self-Reported Coparenting at 12 months</b>	.326** N=53	.118 N=52
<b>Maternal Negative Self-Reported Coparenting at 12 months</b>	-.358** N=53	.045 N=52

\*\*p<.01, \*p<.05

To test the hypotheses, Pearson Correlations were run between the three variables; maternal depression, emotional availability, and household chaos between both the self-reported coparenting scale and the observational coparenting scale. See table 3 for the results of the correlations between each variable and the self-report measure. There was a significant negative correlation between maternal depression and maternal self-reported coparenting. There was a significant positive correlation between maternal depression and negative self-reported coparenting. There was a significant negative correlation between emotional availability and negative self-reported coparenting. There was a significant negative correlation between household chaos and maternal positive self-reported coparenting. There was a significant positive correlation between household chaos and negative self-reported coparenting.

**Table 3:Correlations with Self-Reported Coparenting**

	<b>Maternal Positive Self-Reported Coparenting at 12 months</b>	<b>Maternal Negative Self-Reported Coparenting at 12 months</b>
<b>Maternal depression at 12 months</b>	-.310** N=140	.356** N=40
<b>Emotional availability at 12 months</b>	.155 N=100	-.215* N=100
<b>Household Chaos averages from 1 to 12 months</b>	-.308** N=124	.324** N=124

\*\*p<.01, \*p<.05

See table 4 for the results of the correlations between each variable and the observational coparenting measure. There was a significant positive correlation found between emotional availability and positive observed coparenting. There was a significant negative correlation found between emotional availability and negative observed coparenting. There was also a significant negative correlation found between household chaos and positive observed coparenting.

**Table 4:Correlations with Observational Coparenting**

	<b>Positive Observed Coparenting at 12 months</b>	<b>Negative Observed Coparenting at 12 months</b>
<b>Maternal depression at 12 months</b>	-.230 N=55	.032 N=54
<b>Emotional availability at 12 months</b>	.373** N=49	-.433* N=48
<b>Household Chaos averages from 1 to 12 months</b>	-.286** N=51	-.064 N=50

\*\*p<.01, \*p<.05

## Chapter 4

### Discussion

#### **Question one How well do self-reported coparenting and observational coparenting relate to each other?**

The Pearson correlations performed between SIESTA II's observational coparenting measure and the self-reported measure at 12 months showed that there were only two significant correlations between the measures. There was a positive correlation between positive self-reported coparenting and positive observed coparenting and there was also a negative correlation between negative self-reported coparenting and positive observed coparenting. These findings show that, although the observational coparenting measure and self-reported coparenting measure may be related in some instances, they do not entirely overlap. The results indicate that each measure may be getting at different aspects of the coparenting dynamic as they both are not indicating the same results. However, the results may also be explained by the fact that, in our sample, not a lot of negative coparenting was observed. The lack of many correlations with negative observed coparenting could be accounted for by the lack of variability of scores within the sample.

By examining both observational and self-reported coparenting in conjunction with one another, a more complete view of the coparenting team may be observed. This finding holds true in previous work that has showed that there is rarely a high correspondence between self-reports and observed behavior (Hahlweg et al 2000). This suggests the importance of using both measures to study coparenting at bedtime.

**Hypothesis #1: Higher maternal depression will correlate with lower positive coparenting and higher negative coparenting.**

The correlation analyses performed to test hypothesis #1 demonstrated that maternal depression did correlate with lower positive coparenting and higher negative coparenting but only in the self-report measure. There were no significant correlations found between maternal depression and the observational coparenting measure. The significant correlations between maternal depressive symptoms and self-reported coparenting were to be expected as both measures were self-reported by mothers. As shown in previous research, depressed mothers often struggle to function as high quality parents, thus, high amounts of depression would suggest lower overall coparenting quality (Teti & Gelfand 1990).

However, the lack of significant correlation between the maternal depression measure and observational coparenting measure was not an expected outcome. Perhaps this result suggest that depression negatively colors the mothers own view of her coparenting dynamic, when, in fact, the dynamic is not influenced by her depression. The findings show that perhaps self-reported coparenting serves as a stronger predictor of maternal depression than does observational coparenting.

**Hypothesis #2 Higher emotional availability will correlate with with higher positive coparenting and lower negative coparenting**

Higher emotional availability did correlate with higher positive coparenting and lower negative coparenting in the case of the observational coparenting measure. It only correlated significantly with negative self reported coparenting but did not significantly correlate with positive self-reported coparenting Emotional availability was an observational measure, an interesting correlated most strongly with the observational coparenting measure. This might suggest that observational coparenting could serve as a better predictor of emotional availability at 12 months. However, the significant correlation between maternal negative self-reported coparenting and emotional availability mean that self-reported coparenting as a predictor of emotional availability can not be ruled out.

**Hypothesis #3: Higher household chaos will correlate with lower positive coparenting and higher negative coparenting.**

Finally, correlations were performed to test hypothesis three. Higher household chaos significantly correlated with lower positive self-reported coparenting and higher negative self-reported coparenting. It also correlated with lower positive observed coparenting. Like emotional availability, there was no clear answer as to whether observational or self-reported coparenting might be a better predictor of household chaos. However, unlike hypotheses #1 and #2, household chaos was an observational measure but had more significant correlations with the self-reported measure.

## Chapter 5

### Conclusions and Limitations

The results of this study confirm that need for more than one way of measuring coparenting relationships. It shows that the observational and self-reported measure may each have a use in accurately depicting the coparenting relationship. These findings however do not necessarily indicate clearly whether observational or self-reported coparenting are a better predictor of certain measures associated with coparenting. They do suggest that self-reported coparenting is a better predictor of maternal depression but no conclusions can be made as to the usefulness of each measure in predicting emotional availability and household chaos, as each coparenting scale has some significant correlations with these measures.

This research adds to the literature as it is the first to study coparenting observationally at bedtime and investigate its ties with self-reported coparenting at bed time. This study had several strengths including that it was performed in a naturalistic setting. It gave a 'real-life' look into the bedtime routines of the families and allowed the researchers to collect data on coparenting quality as naturalistically as possible. The study was innovative and allowed for coparenting at bedtime to be observed from a new point of view.

However, there were several limitations with this study. The sample size for the observational coparenting data was fairly small. Expanding the sample size could produce a more accurate measurement of coparenting quality and produce more significant findings. Although Project SIESTA II is a longitudinal study, this particular investigation only looked at coparenting at 12 months. Therefore, it does not accurately reflect how the constructs may have developed across the first year of life. In addition, most of the participants in this study identify as Caucasian, making it challenging to say whether any of these conclusions could be applicable to other ethnicities.

For future studies, the relationship between observational and self-reported coparenting along with their relationship with other constructs should be examined further. By increasing the sample size, and studying coparenting across multiple age groups instead of just as 12 months, more conclusive results may be obtained.

This research could help researchers further discover the influences of positive and negative coparenting at bedtime. In addition, it could show what other constructs might interact with partners' ability to coparent. As shown in previous research, coparenting plays a significant role in attachments, sleep quality, behavior, and much more (Brown, Schoope-Sullivan, Magelsdorf & Neff 2009, McDaniel & Teti, 2012, Baril, Crouter & McHale 2007). Coparenting plays a huge role in child development and, thus, should be studied further.

## BIBLIOGRAPHY

- Affuso, O., Stevens, J., Catellier, D., McMurray R.G., Ward, D.S., Lytle, L., Sothorn, M.S., Young, D.R. (2011). Validity of self-reported leisure-time sedentary behavior in adolescents. *Negative Results in BioMedicine*, 10, 2.
- Baril, Crouter & McHale (2007). Processes linking adolescent well-being, marital love, and coparenting. *Family Psychology* 21(4), 645-54.
- Bayer, J. K., Hiscock, H., Hampton, A., & Wake, M. (2007). Sleep problems in young infants and \ maternal mental and physical health. *Journal of Paediatrics and Child Health*, 43(1-2), 66-73.
- Bonds, D.D., & Gondoli, D.M. (2007). Examining the process by which marital adjustment affects maternal warmth: the role of coparenting support as a mediator. *Family Psychology*, 21(2), 288-96.
- Biringen, Z., Robinson, J., & Emde, R. N. (1998). *Emotional availability scales (3<sup>rd</sup> ed.)*. Fort Collins, CO: Department of Human Development and Family Studies, Colorado State University.
- Biringen, Z. (2000). Emotional availability: Conceptualization and research findings. *Orthopsychiatry*, 70 (1), 104-14.
- Biringen, Z., Damon, J., Grigg, W., Mone, J., Pipp-Siegel, S., Skillern, S., & Stratton, J. (2005). Emotional availability: Differential predictions to infant attachment and kindergarten adjustment based on observation time and context. *Infant Mental Health Journal*, 26(4), 295-308.
- Brown, G. L., Schoppe-Sullivan, S. J., Mangelsdorf, S. C., & Neff, C. (2010). Observed and reported supportive coparenting as predictors of infant-mother and infant-father attachment security. *Early Child Development and Care*, 180(1-2), 121-137.
- Coldwell, J., Pike, A., & Dunn, J. (2006). Household chaos – links with parenting and child behaviour. *Journal of Child Psychology and Psychiatry*, 47(11), 1116-1122.
- Contzen, N., De Pasquale, S., & Mosler, H.-J. (2015). Over-Reporting in Handwashing Self-Reports: Potential Explanatory Factors and Alternative Measurements. *PLoS ONE*, 10(8), e0136445.
- Derogatis, L.R. (1994). *Symptom Checklist-90-R: Administration, scoring & procedure manual for the revised various of the SCL-90*. Minneapolis, MN: National Computer Systems.
- Ednick, M., Cohen, A. P., McPhail, G. L., Beebe, D., Simakajornboon, N., & Amin, R. S. (2009). A review of the effects of sleep during the first year of life on cognitive, psychomotor, and temperament development. *Sleep*, 32(11), 1449. 10.1

- Evans, G., Lepore, S., Shejwal, B., & Palsane, M. (1998). Chronic Residential Crowding and Children's Well-Being: An Ecological Perspective. *Child Development*, 69(6), 1514-1523.
- Evans, G. W., & Wachs, T. D. (2010). *Chaos and its influence on children's development: An ecological perspective* (1st ed.). Washington, DC: American Psychological Association.
- Feinberg, M. E. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting*, 3(2), 95-131.
- Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012). A multi-domain self-report measure of coparenting. *Parenting*, 12, 1-21
- Frank, M. G., Issa, N. P., & Stryker, M. P. (2001). Sleep enhances plasticity in the developing visual cortex. *Neuron*, 30(1), 275-287.
- Gelfand, D. M., & Teti, D. M. (1990). The effects of maternal depression on children. *Clinical Psychology Review*, 10(3), 329-353.
- Goodman, S. H., & Brumley, H. E. (1990). Schizophrenic and depressed mothers: Relational deficits in parenting. *Developmental Psychology*, 26(1), 31-39.
- Graven, S. (2006). Sleep and brain development. *Clinics in Perinatology*, 33(3), 693-706.
- Hahlweg, K., Kaiser, A., Christensen, A., Fehm-Wolfsdorf, G., & Groth, T. (2000). Self-report and observational assessment of couples' conflict: The concordance between the communication patterns questionnaire and the KPI observation system. *Journal of Marriage and the Family*, 62(1), 61-67.
- Kinney HC, Brody BA, Kloman AS, Gilles FH. Sequence of central nervous system myelination in human infancy. II. Patterns of myelination in autopsied infants. *J Neuropathol Exp Neurol* 1988;47:217-34.
- Martin, A., Razza, R. A., & Brooks-Gunn, J. (2012). Specifying the links between household chaos and preschool children's development. *Early Child Development and Care*, 182(10), 1247-1263. 10.1080/03004430.2011.605522
- Mills-Koonce, W., Willoughby, M. T., Garrett-Peters, P., Wagner, N., & Vernon-Feagans, L. (2016). The interplay among socioeconomic status, household chaos, and parenting in the prediction of child conduct problems and callous-unemotional behaviors. *Development and Psychopathology*, 28(3), 757-771.
- McDaniel, & Teti (2012). Coparenting quality during the first three months after birth: the role of infant sleep quality. *Family Psychology* 26(4), 886-95.
- Philbrook, L. E., & Teti, D. M. (2016). Bidirectional associations between bedtime parenting and infant sleep: Parenting quality, parenting practices, and their interaction. *Journal of Family Psychology*, 30(4), 431-441.
- Podsakoff, P.M., & Organ, D.W(1986). Self-reports in Organizational Research: Problems and Prospects.

Mangaement 12 (4), 531-544.

Sadeh, A., Tikotzky, L., & Kahn, M. (2014). Sleep in infancy and childhood: Implications for emotional and behavioral difficulties in adolescence and beyond. *Current Opinion in Psychiatry*, 27(6), 453-459.

Saunders, H., Krause, A., Barone, L. & Biringen, Z. (2015). Emotional availability: Theory, research and intervention. *Frontiers in Psychology*, 6, 1069.

Tarullo, A., Balsam, P., & Fifer, W. (2011). Sleep and infant learning. *Infant and Child Development*, 20(1), 35-46.

Teti, D.M., & Crosby, B. (2012). Maternal depressive symptoms, dysfunctional cognitions, and infant night waking: the role of maternal nighttime behavior. *Child Development*, 83 (3), 939-53.

Thoman EB. Sleeping and waking states in infants: a functional perspective. *Neurosci Biobehav Rev* 1990;14:93-107.

## Academic Vita

### Education

#### **Pennsylvania State University**

#### **University Park**

Schreyer Honors College

Graduation 2018

B.S. in Biobehavioral Health

B.S. in Spanish

Minor in Human Development and Family Studies

Honors in Biobehavioral Health

#### **Universities Study Abroad Consortium**

May 2016-August 2016

Took 12 credits of classes taught in Spanish

### Relevant Experience

#### **Home Instead Senior Care**

Caregiver

May 2017- Present

- Provide home health Care to the Elderly

#### **Penn State LEAP Mentor**

Speech and Writing Mentor

May 2015- August 2015

- Mentored a group of 30 incoming freshmen through their first two college classes
- Coordinated with professors to help students excel in their classes

#### **Project SIESTA II, Douglas Teti**

Undergraduate Research Assistant

January 2015- Present

- Study infant sleep and bedtime 3-24 months postpartum
- Evaluate coparenting behavior at bedtime and its effects on infant sleep patterns

### Leadership and Involvement

#### **Passion with Purpose Penn State**

Student Engagement Director

May 2016-March 2017

- Work to empower, inspire, and encourage students to change the world by doing what they love
- Plan bi-weekly workshops to help students uncover their passions and learn how they can help others

THON Chair

March 2017-Present

- Helped to fundraise for the four diamonds fund

### **Stand for State**

Student Engagement Chair

April 2017- Present

- Lead team of students working to increase involvement in bystander intervention initiatives
- Increase Stand for State ambassador engagement by creating camaraderie among members

### **Discovery Space**

Exhibit floor volunteer

January 2016-May 2016

- Taught children and families about science at a non-profit science museum

### **Awards and Achievements**

John T. and Paige S. Smith Endowment for Undergraduate Research

International Baccalaureate Diploma Recipient