

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

PATERNAL ANXIETY AND DEPRESSIVE SYMPTOMS: LINKAGES WITH
PATERNAL BEDTIME EMOTIONAL AVAILABILITY AND MATERNAL AND
PATERNAL COPARENTING QUALITY

MEREDITH GRACE ATANASIO
SPRING 2017

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Human Development and Family Studies
with honors in Human Development and Family Studies

Reviewed and approved* by the following:

Douglas Teti, PhD
Professor of Human Development and Family Studies, Department Head
Thesis Supervisor

Lesley Ross, PhD
Assistant Professor of Human Development and Family Studies
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

The following is a study on the relationships between paternal depressive symptoms and anxiety and paternal emotional availability and parental perceptions of coparenting. These variables were assessed in 167 families with infants at 5 time points: 1, 3, 6, 9 and 12 months. It was hypothesized that paternal depressive symptoms and anxiety would relate to negative perceptions of coparenting quality for both the maternal and paternal figures, as well as relate negatively to paternal emotional availability (EA). Correlation analyses were run to test all hypotheses. Results: Paternal anxiety and depressive symptoms were related to more negative perceptions of coparenting overall at most time points for both maternal and paternal figures. Additionally, paternal depressive symptoms and anxiety were, at some time points, predictive of more negative maternal and paternal perceptions of coparenting at later time points. Paternal anxiety and depressive symptoms were significantly correlated with paternal EA at 6 months, both reflecting a relatively strong and negative correlation. This means that at 6 months, poor paternal mental health relates to poorer quality of being able to interact with emotional authenticity and presence with their infant. This indicates the need for more research examining these relationships at 6 months post-partum in the family and how it may impact these relationships.

TABLE OF CONTENTS

LIST OF TABLES	iv
ACKNOWLEDGEMENTS	v
Chapter 1 Introduction	1
PARENTAL DISTRESS AND PARENTING AND COPARENTING QUALITY	2
MATERNAL DISTRESS AND PARENTING AND COPARENTING	4
PATERNAL DISTRESS AND MATERNAL COPARENTING PERCEPTIONS	6
THE PRESENT STUDY (QUESTIONS/HYPOTHESES)	7
Chapter 2 Methods	9
PARTICIPANTS	9
MEASURES	9
Paternal Depressive Symptoms and Anxiety	9
Parental Emotional Availability	10
Perceptions of Coparenting	11
Chapter 3 Analyses and Results	13
HYPOTHESIS #1: Paternal anxiety and depressive symptoms will be negatively correlated with worse paternal perceptions of coparenting	13
Table 1: Paternal Depressive Symptoms X Paternal Positive Coparenting	14
Table 2: Paternal Depressive Symptoms X Paternal Negative Coparenting	15
Table 3: Paternal Anxiety X Paternal Positive Coparenting	16
Table 4: Paternal Anxiety X Paternal Negative Coparenting	17
HYPOTHESIS #2: Paternal anxiety and depressive symptoms will be negatively correlated with worse maternal perceptions of coparenting	17
Table 5: Paternal Depressive Symptoms X Maternal Positive Coparenting	19
Table 6: Paternal Depressive Symptoms X Maternal Negative Coparenting	20
Table 7: Paternal Anxiety X Maternal Positive Coparenting	21
Table 8: Paternal Anxiety X Maternal Negative Coparenting	22
HYPOTHESIS #3: Paternal anxiety and depressive symptoms will be negatively correlated with paternal emotional availability at bedtime.	22
Chapter 3 Discussion	24
HYPOTHESIS #1: Paternal anxiety and depressive symptoms will be negatively correlated with worse paternal perceptions of coparenting	24
HYPOTHESIS #2: Paternal anxiety and depressive symptoms will negatively correlated with worse maternal perceptions of coparenting	25

HYPOTHESIS #3: Paternal anxiety and depressive symptoms will be negatively correlated with paternal emotional availability at bedtime.26

Chapter 4 Conclusion.....27

Chapter 5 Limitations29

BIBLIOGRAPHY.....30

LIST OF TABLES

Table 1: Paternal Depressive Symptoms X Paternal Positive Coparenting	14
Table 2: Paternal Depressive Symptoms X Paternal Negative Coparenting	15
Table 3: Paternal Anxiety X Paternal Positive Coparenting	16
Table 4: Paternal Anxiety X Paternal Negative Coparenting	17
Table 5: Paternal Depressive Symptoms X Maternal Positive Coparenting.....	19
Table 6: Paternal Depressive Symptoms X Maternal Negative Coparenting	20
Table 7: Paternal Anxiety X Maternal Positive Coparenting.....	21
Table 8: Paternal Anxiety X Maternal Negative Coparenting	22

ACKNOWLEDGEMENTS

Thank you to Dr. Douglas Teti for supporting, advising, and assisting me on my honors thesis journey. To Dr. Lesley Ross, thank you for offering support and advice along the way and supporting the entirety of the HDFS honors program student body. Special thanks to Sabrina Voltaire for assisting me with analyses and sharing my excitement about my work.

Chapter 1

Introduction

Parenting is a long-standing, universal, and integral part of family functioning. Some may argue that at the very heart of parenting is the coparental relationship. According to McHale, Kuersten-Hogan, & Row (2004), coparenting refers to the relationship between individuals participating in collectively rearing and caring for a child/children. Two individuals need not be married in order to coparent, and a consistent family structure has little influence on development regardless of marital status (Gosselin, et al., 2014). This means that the caregivers need not be spouses or biologically related to the child. It could be two sisters, a mother and her friend, and so on. For the purposes of this study, however, only heterosexual, married partners are examined.

The marital relationship and the coparenting relationship exist within the same family subunit for this study. These relationships are at the same time independent and highly interlinked (Merrifield & Gamble, 2013). The marital relationship exists with or without children, but with children the overall quality of the marital relationship significantly impacts the perception of coparenting quality within the unit. In their study of this relationship in heterosexual parents, Christopher, Umemura, Mann, Jacobvitz, and Hazen (2015) found that when fathers reported a decline in quality of the marital relationship, they also reported a decline in the quality of the coparenting relationship. This was not the case for the mothers, however.

Many factors other than the marital relationship may influence the perception of coparenting. Other determinants include individual parental functioning and well-being. The

present study focuses on psychiatric symptomatology in fathers and its relationship to coparenting quality and bedtime parenting quality in both mothers and fathers. In a comprehensive literature review by Majdandžić, de Vente, Feinberg, Aktar, & Bögels, (2012), paternal anxiety was found to be negatively associated with the overall quality of the coparenting relationship. They found that when fathers were more anxious, the balance of the coparental relationship was more asymmetrical, leading to the father being more controlling of the parenting experience. In turn, mothers were then found to be less sensitive towards an anxious child. The same was not true when the mother was the anxious partner and roles were reversed. This was an important finding, because not only does it suggest that paternal psychiatric symptoms can impact coparenting quality, it also impacts mothers' quality of parenting (e.g. sensitivity) toward the child. Additionally, Bernier, Bélanger, Tarabulsy, Simard, and Carrier, (2014) found that sensitive mothers formed healthier attachments with their infants when they have infants who slept well, but this was not the case for mothers who do not sleep well. This highlights the importance of maternal sensitivity and the importance of understanding risk factors that may lead to decreased sensitivity, such as anxious partners.

PARENTAL DISTRESS AND PARENTING AND COPARENTING QUALITY

Anxiety and depressive symptoms often affect many facets of daily functioning, including parental functioning and coparenting. Depressive symptoms and anxiety take their toll no matter the setting. They not only affect the individual, they can impact those around them and their relationships. The literature indicates that anxiety and depressive symptoms to be inherently negative. The mental health of both parents is related to the state of the coparenting relationship

(Feinberg, 2003). In their study on African American parents, Sutton, Simons, Simons, and Cutrona, (2016) found that distress negatively impacts the functioning of the couple relationship, which in turn negatively impacts parenting. In their study on parents of preschoolers, Shelton and Harold, (2008) discovered a positive association between depressive symptoms and interparental conflict, as well as between depressive symptoms and conflict within the marital relationship. They also found that interparental conflict is related to increasing depressive symptoms. All of these findings related to parent distress, coparenting, and parenting appear to be compounding negative factors that merge into a coercive cycle leading to more parenting distress and conflict.

It is clear that this is an important area to continue to examine, as it is not only affecting the lives and mental health of parents but also the quality of their relationship and conjunctive parenting functioning. Children may suffer as a result of these processes, and it is important to better understand them. There has been little research in this field regarding fathers specifically and parenting/coparenting, with much more focus on mothers. Perhaps this is due to an assumption in our culture that mothers are the primary caregivers and therefore their psychological symptoms may have greater influence on the family subsystems. In an article reflecting Family Systems Theory, Minuchin (1985) discussed the importance of the components of the family (each person and relationship within the family) and how their own characteristics influence each other and the developmental course of themselves and all other members. This is an important point when examining parental distress, as it has the potential to not only impact those who are experiencing the distress, but other members of the family and the relationship within the family unit.

MATERNAL DISTRESS AND PARENTING AND COPARENTING

As mentioned, much more extensive research has been done on maternal anxiety and depressive symptoms, as opposed to research on fathers, who are the focus of this study. In their study on coparenting in early infancy, McDaniel & Teti, (2012), found that for both mothers and fathers there was a negative correlation for depressive symptoms and coparenting. However, due to another found association between infant night wakings and worse sleep quality in mothers, which leads to greater expression of depressive symptoms, literature may indicate this relationship is more pronounced for mothers.

Much more is known about mothers as far as the linkages between depressive symptoms, anxiety, and parenting quality. In a study on mothers during the first year of their infant's life, Seymour, Giallo, Cooklin, and Dunning (2015), found that mothers experiencing anxiety have a hard time forming an emotional, sensitive, and involved relationship with their infant. They feel less able to connect emotionally and during playtime. This clearly reflects some of the characteristics that may be relevant in establishing insecure attachment. Caregivers are an infant's first relationship, and this relationship sets the stage for all future relationships. If a mother lacks sensitivity toward her infant, then there could be serious repercussions for the child (Bouvette-Turcot, Bernier, & Leblanc, 2016). According to Ainsworth, Blehar, Waters, & Wall, (1978), caregiver/infant attachment is a crucial feature of human development that begins to develop in infancy and impacts the child throughout their life. It is important to reduce risk factors for insecure attachment and this evidence suggests this may be done by examining paternal distress. Additionally, mothers with higher scores of anxiety were found to be more likely to expect less from their children and project poorer outcomes onto their children (Creswell, Apetroaia, Murray, & Cooper, 2013). This is a clear conflict of interest that

researchers have focused on, and this study proposes examining such conflicts based on the father's psychological state.

The concepts of emotional connectedness, sensitivity, and ability to engage can be generalized into the term of 'emotional availability,' which is an important part of parenting and will be further examined in this study. Prior research makes it clear that emotional availability is of grave importance to parenting and infant development (Philbrook & Teti, 2016), and so examining it from both the maternal and paternal perspective is key.

PATERNAL DISTRESS AND PARENTING AND COPARENTING

This study will expand the small existing literature on fathers. Fathers with higher scores of depressive symptoms in the prenatal and postnatal periods were more likely to experience greater parenting stress overall (Prino et al., 2016). In their study on paternal distress and parenting, Giallo et al. (2015) found that fathers with higher scores of distress experienced a decline in warmth toward their children at a higher rate than fathers with low distress scores. Fathers with high distress scores also displayed higher levels of hostility. Another study by Rominov, Giallo, & Whelan, (2016) also found that fathers who experienced distress and poor parenting self-efficacy tended to be more hostile parents, and their distress and poor-parenting self-efficacy influenced more negative parenting and poorer child outcomes.

Fathers have been measured as having very similar rates of separation anxiety to mothers (Deater-Deckard, Scarr, McCartney, & Eisenberg, 1994), and paternal anxiety and maternal anxiety are positively correlated to some degree (Möller, Majdandzic, & Bögels, 2015), which

may have implications for overall parenting and coparenting perceptions. According to Isacco, Garfield, and Rogers (2010), paternal anxiety and depressive symptoms have a direct and negative correlation to coparenting perceptions. This means that the greater the father's anxiety and depressive symptoms, the more negatively they will perceive the coparenting of their partner. In a previously mentioned study, Majdandžić, de Vente, Feinberg, Aktar, and Bögels (2012), also found this same negative correlation between paternal anxiety and coparenting. The same study found that paternal psychological symptoms were associated negatively with feeling supported by the mother as a coparent. It is clear that the research indicates that fathers' mental health status does play some significant role in coparenting, and paternal stress is correlated with poorer paternal perceptions of coparenting (Fagan & Lee, 2014). This research is relatively unique and is one of few studies of paternal distress and parenting. There is even less work on paternal distress and coparenting, highlighting the need for the present study.

PATERNAL DISTRESS AND MATERNAL COPARENTING PERCEPTIONS

Very little research has examined the link between paternal distress and maternal coparenting perceptions and mother-child relations. One study by Majdandžić, de Vente, Feinberg, Aktar, & Bögels, (2012) found that paternal anxiety was linked to mothers showing less sensitivity to an anxious child. This may have severe implications for the functioning of the family subsystems, particularly the suffering of the mother-child bond. It may be important to further understand these links so that appropriate measures may be developed to intervene and

facilitate sensitivity, an essential element to the attachment relationship and the mental health of children.

It is clear that fathers' have an influence on coparenting and parenting, and there is need to delve further into this field. Fathers have become more and more involved in parenting and coparenting in recent history, and research needs to reflect their growing importance to human development. Research indicated that men who are fathers generally have better mental health than their child-free counterparts (Leach, Mackinnon, Poyser, & Fairweather-Schmidt, 2015). This finding may imply that fathers who are significantly distressed may need even more targeted attention and are an even greater cause for concern, as they should have more resilience to distress. As fathers may even take over the primary parenting role, it seems imperative to examine their role and influence more thoroughly and collect data not only from them, but from their spouses. Answering all of the same questions regarding fathers that have been examined in mothers would be ideal, but the present study will focus on a few particular issues.

THE PRESENT STUDY (QUESTIONS/HYPOTHESES)

The present study will examine the impacts that paternal anxiety and depressive symptoms may have on coparenting perceptions of both mothers and fathers. It will also look at the link between paternal anxiety and depressive symptoms and paternal emotional availability at nighttime. Based on the aforementioned research, three hypotheses will be tested.

1. Paternal depressive symptoms and anxiety will be negatively correlated with worse paternal perceptions of coparenting.

2. Paternal anxiety and depressive symptoms will be negatively correlated with worse maternal perceptions of coparenting.
3. Paternal anxiety and depressive symptoms will be negatively correlated with paternal emotional availability at bedtime.

Chapter 2

Methods

PARTICIPANTS

The original sample stems from a larger study funded by the NIH (Grant number R01-HD052809), consisting of 167 families with infants that were aged 1 month at the outset of the study. Data was collected at seven time points across the first 2 years: 1, 3, 6, 9, 12, 18, and 24 months. For the purposes of this smaller study, analyses were run examining only 1, 3, 6, 9, and 12-month data. For the study, 167 infants and their families are included for analysis, with $n = 89$ (53%) being female. 75.6% of fathers and 82.1% of mothers self-identified as White. Income, as reported by the father, ranged from \$8,000 to \$350,000, with a mean of \$70,669.18 (SD = \$49,700.50). At the outset of the study, the mothers' ages ranged from 18 to 43 years, with a mean age of 29.43 (SD = 5.268). Fathers ranged from 21 to 49 years, with a mean age of 32.1 (SD = 5.865).

MEASURES

Paternal Depressive Symptoms and Anxiety

Paternal depressive symptoms and anxiety were assessed using the self-report scale the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1994), a highly valid and reliable scale. The report indicates the severity and pervasiveness of depressive symptoms in individuals. 13 items were responded to on a scale of 0 to 4, 0 denoting *not at all* and 4 denoting *extremely*.

Items for the depression scale include, on a scale of 0 to 4 in the past 7 days, has the participant has experienced “*crying easily*” and “*feeling lonely*”. On the same scale of 0 to 4, anxiety items include “*How much has each problem distresses or bothered you within the past 7 days, including today?; Nervousness or shakiness; Spells of terror or panic.*” Items were averaged for a composite score for each anxiety and depressive symptoms. Higher scores indicate a higher level of anxiety or depressive symptoms. For paternal depression, ($\alpha = .87$ to $.92$), and paternal anxiety ($\alpha = .72$ to $.89$). Paternal (and maternal) scores were stable across time ($r = .36$ to $.83$).

Parental Emotional Availability

Parental Emotional Availability (EA) was assessed and coding based off of video recordings of bedtime activities in the family’s home. Cameras were set up in the home based on parents’ instruction of where the infant would most likely be during bedtime and nighttime, such as in their crib, the changing table, in the parents bed, etc. The video was fully equipped with audio to hear exchanges between the parents and infant. Upon assessing the videos, the Emotional Availability Scale (Biringen, Robinson, & Emde, 1998) was used to assess parental EA. To compute the scores, sensitivity, non-hostility, and non-intrusiveness were added, and then divided to find the mean. A higher score reflected greater emotional availability. EA subscales were less stable across time compared to other measure used. For example, paternal sensitivity was not stable across time ($r = .02$ to $.6$) For all subscales coder reliability was very high across all time points, ($\alpha > .94$)

Perceptions of Coparenting

Coparenting was assessed based on self-reports by mothers and fathers about how they felt that they worked with their spouse as a parents. The assessment used was the Coparenting Relationship Scale (CRS) (Feinberg, Brown, & Kan, 2012). This assessment contains 47 questions reflecting Agreement with Partner ($\alpha = .69$ to $.8$), Increased Closeness ($\alpha = .74$ to $.78$), Support-Cooperation ($\alpha = .82$ to $.89$), Endorses Partner's Parenting ($\alpha = .81$ to $.83$), Exposure to Conflict ($\alpha = .75$ to $.84$), and Competition-Undermining ($\alpha = .57$ to $.72$). These statistics reflect the composite of data at 1, 3, and 6 months. Responses to the first 39 items were answered on a scale of one to seven, one denoting *not true of us* and seven denoting *very true of us*. The remaining items were responded to with one denoting *never* and seven denoting *very often*. Sample items include “*My partner and I have different ideas about how to raise our child*”, “*My partner asks my opinions about issues related to parenting*”, and “*My partner tries to show that he or she is better than me at caring for our child*”. Additionally, Division of Labor was used to assess how fairly each partner felt their share of the workload. On the same scale of 0 to 7, items included “*My partner likes to play with our child and then leave the dirty work to me*” and “*My partner does not carry his or her fair share of the parenting work*”.

For the purpose of this study, responses related to Agreement with Partner, Increased Closeness, Support-Cooperation, and Endorses Partner's Parenting (intercorrelations $r = .49$ to $.77$; $\alpha = .82$ to $.86$) along with Division of Labor were added to reflect positive coparenting perceptions (for mothers, $\alpha = .91$ to $.94$, for fathers, $\alpha = .87$ to $.93$). To reflect negative coparenting perceptions, Competition-Undermining and Exposure to Conflict were added ($r = .36$ to $.53$; $\alpha = .52$ to $.69$). For mother's negative coparenting, $\alpha = .71$ to $.80$, and for fathers, $\alpha =$

.78 to .85). Across the first three time points (1, 3, and 6 months), the mean for positive coparenting was ($\alpha = .93$) and the stability of the variable was high across time, ($r = .80$ to $.83$). For negative coparenting the mean was ($\alpha = .85$) and the variable was relatively stable across time ($r = .56$ to $.74$).

Chapter 3

Analyses and Results

HYPOTHESIS #1: Paternal anxiety and depressive symptoms will be negatively correlated with worse paternal perceptions of coparenting.

To test hypothesis one, Pearson correlation analyses were run between total paternal anxiety score and positive/negative coparenting perceptions, as well as between total paternal depressive symptom score and positive/negative coparenting perceptions, at each time point. See Table 1 for the paternal depressive symptoms and paternal positive coparenting results. At all time points, paternal depressive symptoms at the time point were negatively associated with paternal positive coparenting at respective time points (for example, at paternal depressive symptoms at 6 months were negatively associated with paternal positive coparenting at 6 months). As the paternal depressive symptom score increased, paternal positive coparenting decreased. Additionally, in many cases the table showed that paternal depressive symptom score at certain time points predicted a significant and negative relationship with future paternal positive coparenting perceptions. For example, paternal depressive symptoms at 1 month significantly and negatively related to paternal positive coparenting scores at time 1 month and 3 months. Paternal depressive symptoms at 3, 6, and 9 months significantly and negatively correlated with paternal positive coparenting at the same and all later time points.

Table 1: Paternal Depressive Symptoms X Paternal Positive Coparenting

Variables	Paternal Positive Coparenting 1 Month	Paternal Positive Coparenting 3 Months	Paternal Positive Coparenting 6 Months	Paternal Positive Coparenting 9 Months	Paternal Positive Coparenting 12 Months
Paternal Depressive Symptoms 1 Month	-.165* n = 147	-.231** n = 134	-.133 n = 129	-.118 n = 123	-.115 n = 120
Paternal Depressive Symptoms 3 Months		-.423*** n = 135	-.247** n = 127	-.291** n = 121	-.264** n = 118
Paternal Depressive Symptoms 6 Months			-.258** n = 128	-.338*** n = 120	-.247** n = 116
Paternal Depressive Symptoms 9 Months				-.344*** n = 125	-.207* n = 118
Paternal Depressive Symptoms 12 Months					-.202* n = 122

*** $p < .001$, ** $p < .01$, * $p < .05$

See Table 2 for the paternal depressive symptoms and paternal negative coparenting results. Paternal depressive symptoms were not related to paternal negative coparenting at 1 month. They were significantly positively related at 3, 9, and 12 months. Paternal depressive symptoms at 3, 6, and 9 months were related to paternal negative coparenting at all later time points.

Table 2: Paternal Depressive Symptoms X Paternal Negative Coparenting

Variables	Paternal Negative Coparenting 1 Month	Paternal Negative Coparenting 3 Months	Paternal Negative Coparenting 6 Months	Paternal Negative Coparenting 9 Months	Paternal Negative Coparenting 12 Months
Paternal Depressive Symptoms 1 Month	.101 n = 148	.102 n = 138	.077 n = 131	.102 n = 125	.086 n = 120
Paternal Depressive Symptoms 3 Months		.351*** n = 140	.237** n = 129	.305** n = 122	.285** n = 118
Paternal Depressive Symptoms 6 Months			.163 n = 130	.229* n = 126	.248** n = 116
Paternal Depressive Symptoms 9 Months				.290** n = 126	.186* n = 118
Paternal Depressive Symptoms 12 Months					.250** n = 122

*** $p < .001$, ** $p < .01$, * $p < .05$

See Table 3 for the paternal anxiety and paternal positive coparenting results. Paternal anxiety at 1 month did not correlate with paternal positive coparenting scores across time. Paternal anxiety was significantly negatively correlated with paternal positive coparenting at 3, 6, 9, and 12 months. Anxiety at 3 and 6 months also significantly negatively related to paternal

positive coparenting at all later time points.

Table 3: Paternal Anxiety X Paternal Positive Coparenting

Variables	Paternal Positive Coparenting 1 Month	Paternal Positive Coparenting 3 Months	Paternal Positive Coparenting 6 Months	Paternal Positive Coparenting 9 Months	Paternal Positive Coparenting 12 Months
Paternal Anxiety 1 Month	-.108 n = 147	-.145 n = 134	-.162 n = 129	-.065 n = 123	-.052 n = 120
Paternal Anxiety 3 Months		-.350*** n = 134	-.271** n = 126	-.288** n = 120	-.280** n = 120
Paternal Anxiety 6 Months			-.267** n = 132	-.303** n = 124	-.248 n = 120
Paternal Anxiety 9 Months				-.239** n = 125	-.171 n = 118
Paternal Anxiety 12 Months					-.347*** n = 120

*** $p < .001$, ** $p < .01$, * $p < .05$

See Table 4 for the paternal anxiety and paternal negative coparenting results. Paternal anxiety and paternal negative coparenting scores were not correlated at 1 month. Paternal anxiety and paternal negative coparenting were significantly positively correlated at 3, 6, 9, and 12 months. Additionally, paternal anxiety at 3 and 6 months were related to paternal negative coparenting perceptions at all later time points.

Table 4: Paternal Anxiety X Paternal Negative Coparenting

Variables	Paternal Negative Coparenting 1 Month	Paternal Negative Coparenting 3 Months	Paternal Negative Coparenting 6 Months	Paternal Negative Coparenting 9 Months	Paternal Negative Coparenting 12 Months
Paternal Anxiety 1 Month	.092 n = 148	.017 n = 138	.112 n = 131	.039 n = 124	.064 n = 120
Paternal Anxiety 3 Months		.386*** n = 139	.210* n = 128	.319*** n = 121	.322*** n = 117
Paternal Anxiety 6 Months			.216* n = 134	.275** n = 125	.338*** n = 120
Paternal Anxiety 9 Months				.230** n = 126	.145 n = 118
Paternal Anxiety 12 Months					.382*** n = 123

*** $p < .001$, ** $p < .01$, * $p < .05$

HYPOTHESIS #2: Paternal anxiety and depressive symptoms will be negatively correlated with worse maternal perceptions of coparenting.

See Table 5 for the paternal depressive symptoms and maternal positive coparenting results. Paternal depressive symptoms were significantly negatively correlated with maternal positive coparenting at 3, 6, and 9 months. Additionally, paternal depressive symptoms at 3, 6,

and 9 months were significantly negatively related to maternal positive coparenting at all later time points.

Table 5: Paternal Depressive Symptoms X Maternal Positive Coparenting

Variables	Maternal Positive Coparenting 1 Month	Maternal Positive Coparenting 3 Months	Maternal Positive Coparenting 6 Months	Maternal Positive Coparenting 9 Months	Maternal Positive Coparenting 12 Months
Paternal Depressive Symptoms 1 Month	-0.037 n = 151	-.124 n = 143	-.129 n = 138	-.129 n = 135	-.018 n = 133
Paternal Depressive Symptoms 3 Months		-.325*** n = 140	-.264** n = 133	-.298** n = 131	-.215* n = 129
Paternal Depressive Symptoms 6 Month			-.196* n = 130	-.293** n = 128	-.271** n = 126
Paternal Depressive Symptoms 9 Months				-.291** n = 126	-.181* n = 122
Paternal Depressive Symptoms 12 Months					-.124 n = 124

*** $p < .001$, ** $p < .01$, * $p < .05$

See Table 6 for the paternal depressive symptom and maternal negative coparenting results. Paternal depressive symptoms were significantly positively related to maternal negative coparenting perceptions at 3, 9, and 12 months. Additionally, paternal depressive symptoms at 3, 6, and 9 months were significantly positively related to maternal negative coparenting at all later time points.

Table 6: Paternal Depressive Symptoms X Maternal Negative Coparenting

Variables	Maternal Negative Coparenting 1 Month	Maternal Negative Coparenting 3 Months	Maternal Negative Coparenting 6 Months	Maternal Negative Coparenting 9 Months	Maternal Negative Coparenting 12 Months
Paternal Depressive Symptoms 1 Month	.066 n = 151	.094 n = 143	.159 n = 138	.083 n = 136	.054 n = 133
Paternal Depressive Symptoms 3 Months		.252** n = 140	.343*** n = 133	.339*** n = 132	.287** n = 129
Paternal Depressive Symptoms 6 Months			.164 n = 130	.260** n = 128	.287** n = 125
Paternal Depressive Symptoms 9 Months				.267** n = 126	.202* n = 122
Paternal Depressive Symptoms 12 Months					.211* n = 124

*** $p < .001$, ** $p < .01$, * $p < .05$

See table 7 for the paternal anxiety and maternal positive coparenting results. Paternal anxiety was significantly and negatively correlated with maternal positive coparenting at 3, 6, and 9 months. Paternal anxiety at 3 and 6 months was significantly and negatively correlated

with maternal positive coparenting at all later time points.

Table 7: Paternal Anxiety X Maternal Positive Coparenting

Variables	Maternal Positive Coparenting 1 Month	Maternal Positive Coparenting 3 Months	Maternal Positive Coparenting 6 Months	Maternal Positive Coparenting 9 Months	Maternal Positive Coparenting 12 Months
Paternal Anxiety 1 Month	.013 n = 151	-.054 n = 143	-.040 n = 138	-.069 n = 135	.012 n = 133
Paternal Anxiety 3 Months		-.256** n = 139	-.299*** n = 132	-.340*** n = 130	-.246** n = 128
Paternal Anxiety 6 Months			-.190* n = 134	-.268** n = 132	-.186* n = 129
Paternal Anxiety 9 Months				-.236** n = 126	-.139 n = 122
Paternal Anxiety 12 Months					-.147 n = 125

*** $p < .001$, ** $p < .01$, * $p < .05$

See Table 8 for the paternal anxiety and maternal negative coparenting results. Paternal anxiety was significantly and positively correlated with maternal negative coparenting at 3, 6, 9, and 12 months. Paternal anxiety at 3 and 6 months was significantly positively related to maternal negative coparenting at all later time points.

Table 8: Paternal Anxiety X Maternal Negative Coparenting

Variables	Maternal Negative Coparenting 1 Month	Maternal Negative Coparenting 3 Months	Maternal Negative Coparenting 6 Months	Maternal Negative Coparenting 9 Months	Maternal Negative Coparenting 12 Months
Paternal Anxiety 1 Month	-.015 n = 151	.064 n = 143	.108 n = 138	.069 n = 136	.009 n = 133
Paternal Anxiety 3 Months		.193* n = 139	.377*** n = 132	.360*** n = 131	.255** n = 128
Paternal Anxiety 6 Months			.275** n = 134	.325*** n = 132	.313*** n = 129
Paternal Anxiety 9 Months				.240** n = 126	.097 n = 122
Paternal Anxiety 12 Months					.234** n = 125

*** $p < .001$, ** $p < .01$, * $p < .05$

HYPOTHESIS #3: Paternal anxiety and depressive symptoms will be negatively correlated with paternal emotional availability at bedtime.

A Pearson correlation analysis was performed to examine the relationship between mean paternal anxiety score and mean EA at each time point, as well as between paternal depressive score and mean EA at each time point. For paternal anxiety and paternal depression at 1 month, 3

months, 9 months, and 12 months, there was no significant correlation with EA. At 6 months, comparing paternal anxiety and EA, $r = -.708$ ($p < .001$), and comparing paternal depression and EA, $r = -.707$ ($p < .001$). This indicates that at 6 months, paternal depressive symptoms and paternal anxiety are significantly and positively correlated with paternal EA.

Chapter 3

Discussion

HYPOTHESIS #1: Paternal anxiety and depressive symptoms will be negatively correlated with worse paternal perceptions of coparenting.

The correlation analyses that were performed to test hypothesis #1 revealed that paternal depressive symptoms and anxiety were negatively correlated with paternal positive coparenting at most time points from 1-12 months, and positively correlated with paternal negative coparenting at most time points 1-12 months. This indicates that greater paternal depressive symptoms and greater paternal anxiety are associated with an overall more negative perception of coparenting for the paternal figure at most time points. This finding confirms the original hypothesis that this would be the case. Additionally, analyses revealed that at some time points, paternal depressive symptoms and anxiety could predict paternal positive and negative coparenting scores at future time points. For example, paternal depressive symptoms at 3 months were negatively correlated with paternal positive coparenting at 3 months (see Table 1). Additionally, paternal depressive symptoms at 3 months were negatively predictive of paternal positive coparenting at all later time points assessed. This can be seen at other time points in all analyses run for hypothesis #1 regarding paternal depressive symptoms, paternal anxiety, paternal positive coparenting, and paternal negative coparenting.

The latter outcome was not something that was considered in the original hypothesis, but it contributes to the literature and has implications for future research. These findings align with previous research which found that overall parental and paternal distress were associated with negative outcomes such as negative coparenting scores (McDaniel & Teti, 2012, Majdandžić, et

al. 2012), and significantly linking mental health and coparenting overall (Feinberg, 2003).

HYPOTHESIS #2: Paternal anxiety and depressive symptoms will negatively correlated with worse maternal perceptions of coparenting.

Hypothesis #2 was also examined using a series of Pearson correlation analyses. Results showed that paternal depressive symptoms and paternal anxiety were significantly and negatively correlated with maternal positive perceptions of coparenting at most time points. Paternal depressive symptoms and paternal anxiety were also significantly and positively related to maternal negative perceptions of coparenting at most time points. This indicates that paternal depressive symptoms and anxiety relate to an overall negative perception of coparenting quality for the maternal figure as well. This confirms the predictions made for hypothesis #2.

As in the analyses between paternal distress and paternal coparenting, analyses revealed that paternal depressive symptoms and anxiety are negatively predictive of overall negative maternal coparenting perceptions. For example, if we examine Table 7 we see at 3 months that paternal anxiety and maternal positive coparenting are negatively related. Looking at the other time points in this table we see that paternal anxiety at 3 months is negatively related to maternal positive coparenting at all later time points that were assessed. These findings are once again in line with prior research done on the topic of paternal distress and coparenting. For example, it has been found that paternal distress is related to negative maternal perceptions of coparenting (Majdandžić et al. 2012),

HYPOTHESIS #3: Paternal anxiety and depressive symptoms will be negatively correlated with paternal emotional availability at bedtime.

In the final correlation analyses to test hypothesis #3, results showed that the only time point in which paternal anxiety and depressive symptoms were related to paternal EA is at 6 months, in which both factors were negatively related to EA. It is difficult to determine if this can truly confirm the initial hypothesis, in which it was predicted that paternal anxiety and depressive symptoms would be significantly and negatively associated with paternal EA. These findings are also somewhat contrary to existing literature, in which it is found that paternal distress is related to lower facets of EA (Giallo et al. 2015).

The significance at 6 months appears to be an outlier that is difficult to explain. The other time points were not close to significance. In order to try to begin to understand this, one could examine what is happening in the family at 6 months postpartum. Is there something going on in the course of development in infancy at 6 months that may prompt a lower and significant for EA in distressed fathers? Or perhaps there is something going on in the adjustment of parents of infants that could explain this phenomenon at 6 months. It is difficult to determine this outcome, and this area could use more research in the future.

Chapter 4 Conclusion

The results from this study confirm that paternal variables matter in the course of parental and coparental development, potentially just as much as maternal variables matter. These findings indicate that not only do paternal distress variables matter at the time point they are experienced, but they can have a relationship with future coparenting variables. It is important for the coparenting team to experience harmony, because as previous work has shown, poorer coparental relationships are related to poorer couple relationships, and in turn lead to more inefficient parenting practices (Sutton et al. 2016). It is clear that the relationship between paternal mental health is important to parenting and coparenting, and the ideal is better mental health, leading to better parenting and coparenting.

This research can be used to inform intervention techniques and future research studies. As far as intervention and prevention, this study may inform healthcare providers of the risks that paternal distress can pose to the family unit, functioning, and well-being. Intervention techniques could include counseling for fathers-to-be and new fathers in order to help them cope with and reduce anxiety and depressive symptoms. This would in turn hopefully reduce the negative effects we see on paternal and maternal coparenting perception scores and increase coparental harmony. For future studies, the relationship between paternal distress and EA should be examined further. Perhaps with a larger sample and more consistent feedback from participants the results would be different or at least easier to assess why they came out as they did. Also, it may be beneficial to examine parenting beliefs about infants across time as well as individual

infant developmental milestones across time to see if parental expectations may be moderating the relationship between paternal distress and EA.

This research adds significantly to the small literature that is available on fathers, parenting, and coparenting. The significant correlations confirm that paternal figures do carry some weight when it comes to familial development and well-being. This is important because it will hopefully open the door to more studies of paternal variables in ways that studies have mainly focused on maternal variables and characteristics in the past. It is important to pave the way for more research to be done on fathers and to encourage fathers to participate in research so the scientific field can learn more about their importance.

Chapter 5

Limitations

There were several limitations that were apparent from the outset of the study. The primary limitation is that paternal participation in the study was much more limited than maternal participation. While a good portion of paternal survey data was collected, there are many gaps where fathers failed to complete the surveys. Additionally, paternal participation for the measures of emotional availability was very low. That being said, it is hard to say if the results are truly representative of the population of fathers. Additionally, it is found that men have the tendency to report better scores of mental health than women (Frandsen et al., 2016). It is difficult to say whether men actually experience better mental health than women, or they underreport depressive symptoms and anxiety due to expectations of masculinity in Western culture. If the latter is the case, the results of this study could be skewed by inaccurate reporting of mental health symptoms.

As vast majority of the participants identified as Caucasian, it is difficult to say if the results can be applied to populations of other races. There is also the possibility, as with any study involving self-report surveys, that mothers and fathers could have misrepresented the truth on any of the surveys for a multitude of reasons. Finally, there is always a potential for self-selection bias with studies in which participation is voluntary. Perhaps there is something characteristically different about those involved in the study than those who declined participation.

BIBLIOGRAPHY

- Ainsworth, M., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Bernier, A., Bélanger, M., Tarabulsky, G. M., Simard, V., & Carrier, J. (2014). My mother is sensitive, but I am too tired to know: Infant sleep as a moderator of prospective relations between maternal sensitivity and infant outcomes. *Infant Behavior & Development*, 37(4), 682-694. Doi: <http://dx.doi.org/10.1016/j.infbeh.2014.08.011>
- Biringen, Z., Robinson, J., & Emde, R. N. (1998). *Emotional availability scales* (3rd ed.). Unpublished manual, Department of Human Development and Family Studies, Colorado State University, Fort Collins, CO.
- Bouvette-Turcot, A., Bernier, A., & Leblanc, É. (2016). Maternal psychosocial maladjustment and child internalizing symptoms: Investigating the modulating role of maternal sensitivity. *Journal of Abnormal Child Psychology*, doi:<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1007/s10802-016-0154-8>
- Christopher, C., Umemura, T., Mann, T., Jacobvitz, D., & Hazen, N. (2015). Marital quality over the transition to parenthood as a predictor of coparenting. *Journal of Child and Family Studies*, 24(12), 3636-3651. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1007/s10826-015-0172-0>
- Creswell, C., Apetroaia, A., Murray, L., & Cooper, P. (2013). Cognitive, affective, and behavioral characteristics of mothers with anxiety disorders in the context of child anxiety disorder. *Journal of Abnormal Psychology*, 122(1), 26-38. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/a0029516>
- Deater-Deckard, K., Scarr, S., McCartney, K., & Eisenberg, M. (1994). Paternal separation anxiety: Relationships with parenting stress, child-rearing attitudes, and maternal anxieties. *Psychological Science*, 5(6), 341-346. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1111/j.1467-9280.1994.tb00283.x>
- Derogatis, L. R. (1994). *SCL-90-R Symptom Checklist-90-R: Administration, scoring, and procedures manual*. Minneapolis, MN: National Computer Systems.
- Fagan, J., & Lee, Y. (2014). Longitudinal associations among fathers' perception of coparenting, partner relationship quality, and paternal stress during early childhood. *Family Process*, 53(1), 80-96. doi:

<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1111/famp.12055>

- Feinberg, M. E. (2003). The internal structure and ecological context of coparenting: A framework for research and intervention. *Parenting: Science and Practice, 3*(2), 95-131. doi:http://dx.doi.org.ezaccess.libraries.psu.edu/10.1207/S15327922PAR0302_01
- Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012). A multi-domain self-report measure of coparenting. *Parenting: Science and Practice, 12*, 1–21. doi:10.1080/15295192.2012.638870
- Frandsen, L. S., Villumsen, L. B., Hjorth, C. F., Nielsen, B. J., Ullits, L. R., Torp-Pedersen, C., . . . Overgaard, C. (2016). The relationship between self-reported mental health and redeemed prescriptions of antidepressants: A register-based cohort study. *BMC Psychiatry, 16*, 11.
- Giallo, R., Cooklin, A., Brown, S., Christensen, D., Kingston, D., Liu, C. H., . . . Nicholson, J. M. (2015). Trajectories of fathers' psychological distress across the early parenting period: Implications for parenting. *Journal of Family Psychology, 29*(5), 766-776. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/fam0000109>
- Gosselin, J., Romano, E., Bell, T., Babchishin, L., Buhs, I. H. d., Gagné, A., & Gosselin, N. (2014). Canadian portrait of changes in family structure and preschool children's behavioral outcomes. *International Journal of Behavioral Development, 38*(6), 518-528. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1177/0165025414535121>
- Isacco, A., Garfield, C. F., & Rogers, T. E. (2010). Correlates of coparental support among married and nonmarried fathers. *Psychology of Men & Masculinity, 11*(4), 262-278. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/a0020686>
- Leach, L. S., Mackinnon, A., Poyser, C., & Fairweather-Schmidt, A. (2015). Depression and anxiety in expectant and new fathers: Longitudinal findings in Australian men. *The British Journal of Psychiatry, 206*(6), 471-478. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1192/bjp.bp.114.148775>
- Majdandžić, M., de Vente, W., Feinberg, M. E., Aktar, E., & Bögels, S. M. (2012). Bidirectional associations between coparenting relations and family member anxiety: A review and conceptual model. *Clinical Child and Family Psychology Review, 15*(1), 28-42. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1007/s10567-011-0103-6>
- McDaniel, B. T., & Teti, D. M. (2012). Coparenting quality during the first three months after birth: The role of infant sleep quality. *Journal of Family Psychology, 26*(6), 886-895. doi:<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/a0030707>

- McHale, J. P., Kuersten-Hogan, R., & Rao, N. (2004). Growing points for coparenting theory and research. *Journal of Adult Development, 11*(3), 221-234. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1023/B:JADE.0000035629.29960.ed>
- Merrifield, K. A., & Gamble, W. C. (2013). Associations among marital qualities, supportive and undermining coparenting, and parenting self-efficacy: Testing spillover and stress-buffering processes. *Journal of Family Issues, 34*(4), 510-533. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1177/0192513X12445561>
- Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development, 56*(2), 289-302. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.2307/1129720>
- Möller, E.,L., Majdandzic, M., & Bögels, S.,M. (2015). Parental anxiety, parenting behavior, and infant anxiety: Differential associations for fathers and mothers. *Journal of Child and Family Studies, 24*(9), 2626-2637. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1007/s10826-014-0065-7>
- 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. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/fam0000198>
- Prino, L. E., Rollè, L., Sechi, C., Patteri, L., Ambrosoli, A., Caldarera, A. M., . . . Brustia, P. (2016). Parental relationship with twins from pregnancy to 3 months: The relation among parenting stress, infant temperament, and well-being. *Frontiers in Psychology, 7*, 10.
- Rominov, H., Giallo, R., & Whelan, T. A. (2016). Fathers' postnatal distress, parenting self-efficacy, later parenting behavior, and children's emotional-behavioral functioning: A longitudinal study. *Journal of Family Psychology, 30*(8), 907-917. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/t32059-000>
- Seymour, M., Giallo, R., Cooklin, A., & Dunning, M. (2015). Maternal anxiety, risk factors and parenting in the first post-natal year. *Child: Care, Health and Development, 41*(2), 314-323. doi:<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1111/cch.12178>
- Shelton, K. H., & Harold, G. T. (2008). Interparental conflict, negative parenting, and children's adjustment: Bridging links between parents' depression and children's psychological distress. *Journal of Family Psychology, 22*(5), 712-724. doi:
<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/a0013515>
- Sutton, T. E., Simons, L. G., Simons, R. L., & Cutrona, C. (2016). Psychological distress, couple interactions, and parenting: A dyadic analysis of african american couples. *Journal of Marriage and Family*,
doi:<http://dx.doi.org.ezaccess.libraries.psu.edu/10.1111/jomf.12352>

Teti, D. M., Shimizu, M., Crosby, B., & Kim, B. (2016). Sleep arrangements, parent–infant sleep during the first year, and family functioning. *Developmental Psychology*, *52*(8), 1169–1181. doi: <http://dx.doi.org.ezaccess.libraries.psu.edu/10.1037/dev0000148>

ACADEMIC VITA

Academic Vita of Meredith Atanasio
mga5085@psu.edu

Education

Major: Human Development and Family Studies

Honors: Human Development and Family Studies

Thesis Title: PATERNAL ANXIETY AND DEPRESSIVE SYMPTOMS: LINKAGES WITH PATERNAL BEDTIME EMOTIONAL AVAILABILITY AND MATERNAL AND PATERNAL COPARENTING QUALITY

Thesis Supervisor: Douglas Teti, PhD

Work Experience: Undergraduate Research Assistant on Project SIESTA

Date: Fall 2015 – Spring 2017

Title: Undergraduate Research Assistant

Description: Spent time coding video data alongside other undergraduate and graduate students using Excel.

Institution/Company: The Pennsylvania State University

Supervisor's Name: Douglas Teti, PhD