THE MENTAL HEALTH IMPLICATIONS OF UNMET PARENTING EFFICACY EXPECTATIONS

A thesis submitted to Kent State University in partial fulfillment of the requirements for the degree of Master of Arts

by

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INTRODUCTION

Research demonstrates that parenting efficacy is linked to numerous positive outcomes for both new parents and their children. A common finding in the literature also indicates that parenting inefficacy is associated with negative mental health outcomes for new parents, particularly postpartum depressive symptomatology and anxiety. Because prenatal mood and behavior are important determinants of postpartum outcomes, this thesis examines the impact of unmet parenting efficacy expectations on the mental health statuses of new parents as measured during the prenatal and postpartum periods. Specifically, I focus on the mental health consequences for new mothers and fathers when prenatal expectations of parenting efficacy are unmet at 1-month postpartum. Consistent with the stress process model, I examine the role of parenting efficacy in the relationship between parental transition and postpartum distress. Two waves of data from the Baby Transitions in Marital Exchanges (Baby T.I.M.E.) study will be used in this thesis: time 1/Baseline (third trimester of pregnancy) and time 2 (1 month following the birth of the child). Results indicate that mothers whose parenting efficacy experiences were more negative than their prenatal expectations of parenting efficacy reported higher levels of postpartum depressive symptomatology. Fathers with parenting efficacy experiences that were more negative than expected reported higher levels of both postpartum depressive symptomatology and postpartum anxiety. In addition to the implications of these findings, directions for future research are discussed.
THEORETICAL BACKGROUND

From the sociological perspective, major life events and role transitions have traditionally been considered sources of stress, necessitating adjustment on the part of the individual (Turner, Wheaton, and Lloyd 1995; Wheaton 1990; Thoits 1983; Aneshensel 1992; Kessler 1979). Research also indicates that experiencing a major life event or a significant role transition can affect individuals differentially, resulting in much variation in the mental health consequences of major life events (Wheaton 1990).

In accordance with this finding, previous empirical investigations examining the mental health consequences of parenthood throughout the life course have been largely inconsistent, as researchers have found evidence to support both positive and negative relationships between parenthood and psychological well-being (see Nomaguchi and Milkie 2003; Evenson and Simon 2005 for a review of these findings). For example, some research has indicated that not only is there no association between parenthood and enhanced well-being (Evenson and Simon 2005), but that parents actually report lower levels of life satisfaction and higher levels of distress than their nonparent peers (Hughes 1989; Glenn and McLanahan 1981, 1982). However, other investigators have suggested a positive correlation between the parental role and psychological well-being (Kandel, Davies, and Raveis 1985). Additionally, research indicates that there are both costs and rewards associated with parenthood, with these costs (such as depression) and rewards...
(such as social integration) being conditional on an individual’s social positioning with respect to marital status and gender (Nomaguchi and Milkie 2003).

Despite the inconsistency in the existing literature concerning the mental health implications of parenthood throughout the life course, researchers typically agree that the transition to parenthood can be a challenging, stressful period for most individuals (e.g., Harwood, McLean, and Durkin 2007). To illustrate, Cowan and Cowan (1995) conceptualize this transitional period as one in which “new challenges can outstrip existing resources, trigger new problems, or amplify pre-existing vulnerabilities and inadequacies” (1995: 412). Thus, recent examinations in this area have focused on the context and timing of the parenthood transition in an effort to understand how this transition can serve as either a source of well-being or a source of long-term strain for different individuals (Umberson, Pudrovska, and Reczek 2010). With respect to the parenthood transition serving as a source of psychological distress, postpartum depression symptomatology is among the mental health outcomes currently generating significant research interest in the social sciences.

**Postpartum Depression Prevalence, Symptoms, and Consequences**

According to the Diagnostic and Statistical Manual IV, a diagnosis of Postpartum Depression (PPD) is characterized by symptoms consistent with Major Depressive Disorder, Bipolar Disorder, or Brief Psychotic Disorder that onset within 4 weeks postpartum (American Psychiatric Association 1994). Symptoms associated with PPD include feelings of hopelessness, worthlessness, guilt, a loss of satisfaction in one’s
activities, difficulty sleeping, and problems with concentration and decision making (Page and Wilhelm 2007:238). As noted by the American Psychiatric Association (2010), “PPD is a serious and disabling condition that affects anywhere from 10 to 20 percent of new mothers; in the United States, there may be as many as 800,000 new cases of postpartum conditions each year.” Other researchers estimate that PPD impacts between 13-16% of new mothers in the U.S. (Abrams and Curran 2009; Robertson, Wallington, and Stewart 2004). Due to the pervasiveness of this condition, it is common for a mother experiencing PPD to feel disconnected from her social support network, to feel a sense of debilitating sadness, and to even experience harmful ideations toward herself or her children (PPD Research and Awareness 2010).

In addition to these mental health consequences for new mothers, investigators in the field of pediatrics research have also highlighted the detrimental short-term and long-term consequences that maternal depression can have on the children of women experiencing this disorder. In terms of short-term consequences, researchers have demonstrated that maternal depression can negatively influence maternal-infant interaction patterns, resulting in numerous adverse child development outcomes (Beck 1998). Infants of depressed mothers have also been found to exhibit lower social engagement, more negative emotionality, and higher stress reactivity than infants of non-depressed mothers (Feldman, Granat, Pariente, Kanety, Kuint, and Gilboa-Schechtman 2009). With respect to long-term consequences, maternal depression has been linked with delayed child growth (Surkan, Kawachi, Ryan, Berkman, Carvalho Vieira, and Peterson 2008), and such developmental issues as child behavioral problems, and lower
child cognitive functioning (Beck 1998). Thus, as a result of the numerous adverse consequences associated with maternal depression for both mothers and their children, mental health professionals have recently called on increased research efforts aimed at identifying the causal factors that contribute to postpartum depression (APA 2010).

Though traditionally understudied, paternal postpartum depression is also beginning to generate empirical attention from social scientists (Bradley, Mackenzie, and Boath 2004). Based on a meta-analysis review of relevant studies conducted from 1980 to 2002, Goodman (2004) found that new cases of paternal postpartum depression ranged from approximately 12-26%, with rates of postpartum depression twice as high among men whose partners also reported symptoms consistent with PPD. As maternal depression was found to be the most significant predictor of paternal postpartum depression in this meta-analysis, Goodman’s (2004) review highlights the need for continued investigation focusing on the processes by which new mothers and new fathers experience the transition to parenthood.

Postpartum depression is clearly an important outcome in research examining the impact of parenthood on psychological well-being. However, numerous researchers in the sociology of mental health have argued that using only single outcome measurements can obscure important differences among individuals as groups may respond differently due to their location in particular social arrangements, resulting in misleading conclusions regarding the social distribution of stress and disorder (see e.g., Horwitz 2002, and Aneshensel, Rutter, and Lachenbruch 1991).
For example, Aneshensel and colleagues (1991) have demonstrated that distress can manifest differently by gender, with women more likely to report affective and anxiety disorders than men, and men being at a substantially greater risk of alcohol abuse/dependence disorders than women. Researchers who have examined new parents have also shown gender differences with respect to anxiety and depression (Biehle and Mickelson 2011). Specifically, previous research suggests a significant negative association between parenting efficacy and anxiety for new fathers (Biehle and Mickelson 2011). Thus, this thesis will focus on the mental health outcomes of both postpartum depressive symptomatology and anxiety in an effort to present a more inclusive view of potential manifestations of stress that could emerge during the transition to parenthood.

The Stress Process and the Role of Efficacy in the Transition to Parenthood

The stress process model is a dominant sociological paradigm utilized in mental health research, and offers a framework within which to account for the differential psychological impacts of major life transitions. As advanced by Pearlin, Lieberman, Menaghan, and Mullan (1981), this model consists of three conceptual areas: (1) the sources of stress; (2) the mediators of stress; and (3) the manifestations of stress. Sources of stress can include such experiences as life events (e.g., transitions into and out of major social roles), chronic strains (e.g., long term or recurrent stressors within social roles) and daily hassles. Mediators and moderators of the stress process typically include personal resources such as coping resources (e.g., self-esteem) and social support. The
degree to which one possesses these resources is thought to condition the effect of stressors on one’s mental health. And finally, the manifestation of stress can present as a number of different mental health outcomes, including depression, anxiety, and substance abuse disorders (Pearlin et al. 1981; Pearlin 1989).

Of particular interest to this research is the role of the stress mediator, which serves to govern (both directly and indirectly) the impact of the stressor on the stress outcome (Pearlin 1989). In addition to the potential mediators noted above, research demonstrates that efficacy frequently mediates the link between stress and depression (Gecas 1989). Because all respondents in this current study have transitioned to parenthood, I am not able to examine the mediating effects of efficacy between this life event and distress. I do, however, examine the role of efficacy in explaining postpartum depressive symptomatology and anxiety among these first time parents.

Self-efficacy is typically defined as one’s “assessment of his/her effectiveness, competence and causal agency” and has been linked to numerous mental health outcomes, such as depression, anxiety, eating disorders, and schizophrenia (Gecas 1989:292). In general, high self-efficacy is typically associated with positive psychological well-being, and low self-efficacy is typically associated with maladaptive psychological adjustment (Gecas 1989). In terms of social psychological considerations, efficacy has also been framed as one’s feeling of his/her effectiveness in accomplishing required tasks and activities (Bandura 1977). In this framework, Bandura (1977) proposes that one’s perceptions of efficacy can impact one’s level of performance through the altering of one’s degree of intensity and effort. Additionally, Stryker and
Burke (2000) suggest that self-efficacy is reflective of both the ability to perform effectively in a role and the successful confirmation of one’s identities across a variety of contexts. In sum, research indicates that self-efficacy encompasses many domains important for mental health, via the perception of one’s effectiveness, competency, agency, and capacity to successfully perform in salient tasks and roles.

Similar to the findings suggesting that self-efficacy is a protective psychological resource with respect to depression, parenting efficacy, defined as “parents’ beliefs in their competence and effectiveness in the parental role” (Teti, O’Connell, and Reiner 1996: 237), has also been linked to numerous positive psychological and developmental outcomes for both parents and their children (Leerkes and Burney 2007). For example, Biehle and Mickelson (2011) found that higher levels of expected parenting efficacy were predictive of better mental health during pregnancy for both mothers and fathers.

Correspondingly, parenting inefficacy has been found to be associated with depressive symptomatology in parents (e.g., Gross, Conrad, Fogg, and Wothke 1994). Research also indicates that both anxiety and depression are strongly correlated with and predictive of parenting efficacy across the transition to parenthood (Biehle and Mickelson 2011). Further, results from the longitudinal investigation of Williams et al. (1987) show that prenatal “parenting confidence” is a statistically significant predictor of mothers’ adaptation to parenthood. In sum, research suggests that parenting efficacy is associated with parental depression in the prenatal, transitional, and postpartum periods (Biehle and Mickelson 2011).
Despite the wealth of evidence demonstrating the existence of a significant link between parenting efficacy and postpartum distress, the casual order among these variables is not clear (Jones and Prinz 2005). In other words, do lower levels of parenting efficacy contribute to elevated levels of postpartum distress, or do elevated levels of postpartum distress influence the assessment of one’s parental competence? In an attempt to clarify aspects of this nuanced relationship, in this thesis I examine the impact of unmet parenting efficacy expectations on the mental health statuses of new parents. Specifically, I ask the following questions: What are the mental health consequences for both mothers and fathers when prenatal expectations of parenting efficacy are unmet in the postpartum period? And, do the differences between expected and realized parenting efficacy relate significantly to postpartum psychological distress? This is the issue to which I turn to next.

**Parenting Efficacy Expectations**

There have been numerous frameworks employed in sociological research to explain the mental health implications of confirmed or disconfirmed expectations. Among these frameworks is identity theory, which focuses primarily on the process by which psychological distress is produced as a result of an individual’s occupation in a constellation of social roles, with consideration to the meanings ascribed to these particular roles (Burke 1991; Marcussen and Large 2003). Within this framework, it is proposed that individuals maintain standards (or self-meanings) for each identity held (e.g., mother, father, friend, parent). These identity standards are relatively stable, and are
either reaffirmed or disconfirmed through interactions with others (Burke 1991). When events occur that disrupt or interrupt one’s identity processes, these events can lead to distress (Burke 1991). Simply put, when personal expectations within an identity are unmet, the result is psychological distress.

Conversely, meeting expectations has been found to result in favorable outcomes. For example, in a qualitative study, Murray (2008) explored how the meeting of expectations contributes to an individual’s degree of job satisfaction in a new work role. In a survey examination, Braxton, Vesper, and Hossler (1995) found that meeting academic and career development expectations positively influenced social and academic integration for new college freshmen. Thus, previous research suggests that the meeting of expectations when transitioning to a new life role is an important predictor of one’s experiences within the role.

Although parenthood in the prenatal period is more of an “anticipated” identity than a stable identity as proposed in many versions of identity theory, researchers have established numerous links between prenatal mood and behavior and postpartum mental health outcomes. For example, O’Hara and Swain (1996) found that prenatal anxiety was a statistically significant predictor of postpartum depressive symptomatology in the postpartum period. In an additional investigation, Wylie (1979) found that for a sample of new parents, prenatal expectations concerning the transition to parenthood were associated with respondents’ self-reported ease of transition during the postpartum period. In other words, new parents’ expectations of the ease of transition to parenthood influenced one’s experiences during this transition (Wylie 1979). Similarly, Kach and
McGhee (1982) found that the accuracy of parents’ prenatal expectations of parenthood in relation to postpartum experiences was a significant predictor of adjustment to parenthood. It stands to reason then, that failing to meet one’s prenatal expectations once enacting the parent role could potentially produce feelings of distress similar to those predicted by identity discrepancy theories.

There have been several investigations specifically exploring how differences between prenatal expectations and postnatal experiences impact mental health outcomes. In one notable example, Bielawska-Batorowicz and Kossakowska-Petrycka (2006) examined the relationship between postpartum depression and new fathers’ prenatal expectations concerning changes in family and social life (e.g., satisfaction derived from contact with their baby, marital relationship changes). Although the measurement of respondents’ prenatal expectations was collected during the postnatal period, results indicate that large differences between prenatal expectations and postpartum experiences (i.e., experiences that failed to meet expectations), is associated with depressed mood for the new fathers in this sample (Bielawska-Batorowicz and Kossakowska-Petrycka 2006). Thus, this study highlights the mental health implications of meeting expectations during the transition to parenthood.

As such, it is surprising that relatively few examinations have focused specifically on the relationship between postpartum distress and unmet parenting efficacy expectations. In one relevant investigation, Harwood et al. (2007) found that in a sample of 71 predominantly lower-middle class women in a major Australian city, the majority of respondents’ prenatal parent efficacy expectations were matched or exceeded by their
experiences in the postpartum period. However, respondents whose parenting experiences at 4 months postpartum were negative in comparison to their prenatal parenting efficacy expectations reported higher levels of depressive symptomatology than respondents with matched or exceeded expectations (Harwood et al. 2007). Though results from this study contribute to the existing literature concerning the mental health consequences of disconfirmed parenting efficacy expectations, this study focuses solely on the experiences of new mothers in an Australian sample. In addition, these authors suggest that further research should explore the influence of disconfirmed parenting expectations at different (and earlier) points throughout the postpartum period (Harwood et al. 2007).

In this project, I build on previous literature by examining the impact of unmet prenatal expectations at 1-month postpartum for both new mothers and new fathers residing in the United States. The inclusion of new fathers as respondents in this sample is particularly noteworthy, as generally, the efficacy beliefs of new fathers have been under-studied (Jones and Prinz 2005). Thus, I examine the relationship between expectations and distress separately by gender in an attempt to examine the unique processes by which new mothers and fathers experience the transition to parenthood. Change in parenting efficacy (assessed with two waves of data) is utilized as the primary independent variable in this study in an effort to clarify the relationship between postpartum mental health outcomes and parenting efficacy. In particular, I ask the following questions: What is the relationship between prenatal expectations of parenting efficacy and postpartum distress? And, what are the mental health consequences for
primiparous (i.e., first time) mothers and fathers when prenatal expectations of parenting
efficacy are unmet following the birth of the child?

Hypotheses

Based on the previously noted research suggesting a link between prenatal mood
and behavior and postpartum mental health outcomes (e.g., Wylie 1979; Kach and
McGhee 1982), I propose the following set of hypotheses with respect to the relationship
between prenatal expectations of parenting efficacy and postpartum distress:

H1a: Time 1 parenting efficacy will be negatively associated with depressive
symptomatology in the postpartum periods for both mothers and fathers.

H1b: Time 1 parenting efficacy will be negatively associated with anxiety in the
postpartum periods for both mothers and fathers.

In terms of the mental health consequences for first time mothers and fathers
when prenatal expectations of parenting efficacy are unmet (as opposed to met or
exceeded) following the birth of the child, drawing again from previous literature, I
propose an additional set of hypotheses:

H2a: For both mothers and fathers, the greater the degree of unmet expectations
between the prenatal and postpartum period, the higher the levels of depressive
symptomatology.

H2b: For both mothers and fathers, the greater the degree of unmet expectations
between the prenatal and postpartum period, the higher the levels of anxiety.
METHODS

Data/Sample

The data for this study are observations from the Baby Transitions in Marital Exchanges study (Baby T.I.M.E.)¹. Participants in the Baby T.I.M.E. study were recruited from online pregnancy message boards and birthing classes in a suburban, Midwestern community. In order to be considered eligible to participate in this study, participants were required to be heterosexual, primiparous couples who were married or cohabitating with their partner, experiencing a low-risk pregnancy, employed at the time of the baseline interview period, and fluent in English. Eligible couples completed a series of 4 interviews during the third trimester of pregnancy (between 24-32 weeks of pregnancy), 1-month postpartum, 4-months postpartum, and 9-months postpartum. Interviews were conducted with online questionnaires, with a second portion of the survey completed within 24 hours of the online survey via telephone with trained interviewers. Interviews were completed independent of the participant’s co-parent (i.e., one’s spouse or partner), and efforts were made for both parents to complete their respective interviews during the same day (Biehle and Mickelson 2011).

¹ Principal Investigator-Kristin Mickelson, Co-investigators- Amy Kroska and Kristen Marcussen, 2008-2010
One hundred and four couples (208 individuals) completed the time 1 interviews. This study focuses on two waves of the Baby T.I.M.E. data: time 1/Baseline (third trimester of pregnancy) and time 2 (1 month following the birth of the child). Only cases with valid time 2 responses (i.e., respondents who remained in the study for both the time 1 and time 2 waves of data collection) were considered in this thesis, resulting in a final sample size of 187 individuals (94 mothers, 93 fathers). Logistic regression analyses (not shown) indicate that neither distress (i.e., depressive symptomatology or anxiety at time 1) nor demographic background significantly predict sample attrition between wave 1 and wave 2 of the study.

**Measures**

**Demographic Variables**

Several demographic variables were explored as potential statistical controls for this study. These control variables included *age* (in years), *education* (coded as some high school, high school, some college, college education, and advanced degree), *household income* (ranging from less than $20,000 per year to more than $120,001 per year), *relationship status* (categorized as married or cohabitating), and *relationship length* (coded as years living with one’s co-parent). Because previous research has demonstrated that an individual’s parenting efficacy is a significant predictor of the parenting efficacy of the co-parent (Biehle and Mickelson 2011), *co-parent parenting efficacy* will also be employed as a control variable in this examination.
Independent Variable

The main independent variable of interest for this study is *change in parenting efficacy* as measured between time 1 and time 2. This measure consists of a 14 item adaptation of the Self-Efficacy for Parenting Tasks (SEPTI-TS) (Coleman and Karraker 2003). At time 1, expected parenting efficacy is assessed during the online surveys. The scale includes such items as “I will find it very distressing when my baby isn’t in a good mood”, “I will feel like I have no control over my baby’s sleep habits”, “I will be very good about never leaving my baby unattended”, and “My baby will feel very loved by me.” Responses are coded on an agree-disagree scale (1= disagree strongly, 2= disagree somewhat, 3= disagree a little, 4= agree a little, 5= agree somewhat, 6= agree strongly). Appropriate items were reverse coded and a sum score was created for each participant. Possible sum scores on this scale range from 14.0 - 84.0, with higher scores indicating higher levels of parenting efficacy (α = .66). Please refer to Appendix B for the complete scale.

At time 2, parenting efficacy is assessed during the telephone interviews with the time 1 questions modified to reflect experiences within the parental role at one month following the birth of the child. Appropriate items were reverse coded and a parenting efficacy time 2 sum score was created for each participant. Possible sum scores on this scale range from 14.0 - 84.0, with higher scores indicating higher levels of parenting efficacy (α = .74).

To reflect the difference between parenting efficacy experiences in the parental role versus one’s parenting efficacy expectations during the prenatal period, the
independent variable was constructed by subtracting time 1 parenting efficacy sum scores from time 2 parenting efficacy sum scores (change in parenting efficacy). Therefore, a positive score on this variable indicates that a respondent’s parenting efficacy experiences were more positive than expected, a score of zero indicates that a respondent’s parenting efficacy experiences matched his/her expectations, and a negative score on this variable indicates that a respondent’s postpartum parenting efficacy experiences were more negative than expected.

Dependent Variables

Depressive symptomatology and anxiety in the postpartum period are the primary dependent variables in this study.

Depressive Symptomatology - At time 2, depressive symptomatology is assessed with the 11 item Postpartum Depression Screening Scale (PDSS) (Beck and Gable 2000), which focuses on how respondents felt during the last 7 days. The PDSS includes such questions as “I felt like my emotions were on a roller coaster” and “I was afraid I would never be my normal self again.” Items on this scale are coded 1= strongly disagree to 5= strongly agree. A sum score was created from the 11 responses. Possible sum scores on this scale range from 11.0-55.0, with higher scores indicating higher levels of postpartum depressive symptomatology (α = .85). Please refer to Appendix B for the complete scale.

Time 1 depressive symptomatology scores, assessed with items from the Center for Epidemiologic Studies - Depression Scale (CES-D) (Radloff 1977), are employed as a control variable in the regression analyses focusing on depressive symptomatology (α = .86).
Anxiety- At time 2, anxiety is assessed with the 10-item anxiety subscale from the SCL-90-R (Derogatis 1994). Sample questions on the SCL-90-R include: “Over the past 7 days, how often have you…. felt tense or keyed up, been bothered by things that usually don’t bother you…” Responses in this scale are coded 0 = none/rarely (<1 day), 1 = a little (1-2 days), 2 = moderate (3-4 days), and 3 = most (5-7 days). A sum score was created from the 10 responses; possible sum scores on this scale range from 0-33.00 with higher scores indicating higher levels of anxiety (α = .82). This scale is also included in Appendix B. Time 1 anxiety scores, also assessed with the SCL-90-R anxiety subscale, are employed as a control variable for the regression analyses focusing on postpartum anxiety (α = .82).

Analytic Strategy

The relationship between postpartum depressive symptomatology, anxiety, and parenting efficacy was tested in two phases. I first examined the bivariate relationships between the key study variables. In the second phase of data analysis, I examined two sets of Ordinary Least Squares (OLS) linear regression analyses to test proposed relationships. Preliminary analysis indicated that of the potential control variables, only education (p = .071) and relationship length (p = .025) predict the relationships between anxiety and parenting efficacy differences between time 1 and time 2 for mothers and fathers, respectively. Therefore, these demographic variables are included in each model. And as noted above, each set of regression analyses were estimated separately for mothers and fathers to examine the unique processes by which new mothers and fathers experience the transition to parenthood.
The first set of regression analyses focused on postpartum depressive symptomatology (PDSS) as the outcome variable. These analyses were estimated in two models: Model 1 included demographic controls as well as time 1 parenting efficacy and time 1 levels of depressive symptomatology as measured by the CES-D. To examine the relationship between unmet expectations and depressive symptomatology, model 2 included the addition of the change in parenting efficacy variable.

The second set of analyses examined the relationship between parenting efficacy and anxiety. As with the previous analysis, the first model included the demographic controls, time 1 parenting efficacy, and time 1 levels of anxiety. In model 2, the change in parenting efficacy variable was added to the model to estimate the relationship between unmet expectations and anxiety.
RESULTS

Descriptive Statistics

Descriptive statistics were computed for all variables of interest in this study. With respect to the full sample, the ages of respondents ranged from 18-46 years, with a mean age of 28.99 years. Over 70% of respondents reported attaining a college or an advanced degree; similarly, over 70% of respondents reported a household income of at least $60,000. Over 90% of the sample reported being married at the time of the first observation. For the participants in this sample, the average length spent living with one’s co-parent is 3.4 years. Nearly 89% of the sample reported a race category of white, Non-Hispanic.

Table 1 provides additional details concerning the demographic characteristics of the full sample, as well as the demographic characteristics of the sample by gender. A t-test was conducted in order to compare means for these variables; results from this test indicate that significant differences exist among mothers and fathers in terms of age only. Specifically, the mean age for mothers is 28.12 (range: 18-37); for fathers, the mean age in this sample is 29.88 (range: 19-46).

Descriptive statistics were also calculated for the independent and dependent variables utilized in this study. Significant differences exist between mothers and fathers with respect to PDSS and CES-D time 1 scores, with mothers reporting higher scores on both measures.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Full Sample (n=187)</th>
<th>Mothers (n=94)</th>
<th>Fathers (n=93)</th>
</tr>
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<td></td>
<td>Valid Percent/Mean</td>
<td>Range</td>
<td>Valid Percent/Mean</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td></td>
<td>(SD)</td>
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<td>Age [In years]</td>
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<td>$80,000 - $100,000</td>
<td>16.2%</td>
<td>21.7%</td>
<td>10.8%</td>
</tr>
<tr>
<td>$100,000 - $120,000</td>
<td>13.0%</td>
<td>13.0%</td>
<td>12.9%</td>
</tr>
<tr>
<td>More than $120,000</td>
<td>13.5%</td>
<td>10.9%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Relationship Status</td>
<td></td>
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<tr>
<td>Married</td>
<td>91.4%</td>
<td>91.5%</td>
<td>91.4%</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>8.6%</td>
<td>8.5%</td>
<td>8.6%</td>
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<tr>
<td>Relationship Length</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>[In years]</td>
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<td>3.46 (2.24)</td>
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<tr>
<td>Parenting Efficacy Time 1</td>
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<td>54.0 - 83.0</td>
<td>71.61 (5.96)</td>
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<td>Parenting Efficacy Time 2</td>
<td>70.10 (7.07)</td>
<td>47.0 - 84.0</td>
<td>71.01 (6.36)</td>
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<tr>
<td>PDSS Time 2 ***</td>
<td>22.99 (7.57)</td>
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<td>3.78 (3.76)</td>
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<td>11.84 (7.64)</td>
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<td>-20.00 to 20.00</td>
<td>-.7033 (6.34)</td>
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</tbody>
</table>

* Range values reflect participants’ minimum and maximum responses. Please refer to the Methodology section for a description of the range of possible values for each scale.

* Asterisks denote significant differences between scores for mothers and fathers: *** p ≤ .000; ** p ≤ .001; * p ≤ .05

Table 1. Descriptive Statistics for the Study Variables in the Baby TIME Sample
In terms of a comparison of parenting efficacy across waves, the difference between time 1 parenting efficacy scores and time 2 parenting efficacy scores for mothers is not significant (mean time 1= 71.61, mean time 2= 71.01, p = .332). However, there is a significant difference between time 1 parenting efficacy scores and time 2 parenting efficacy scores for the fathers in this sample (mean time 1= 70.93, mean time 2= 69.17, p = .003). With respect to the change in parenting efficacy variable, the mean for the full sample is -1.2011(SD= 6.65). This indicates that as a whole, the prenatal parenting efficacy expectations for the respondents in this sample were unmet at the time of the 1-month postpartum interview. For fathers, the mean is -1.7159 (SD= 6.95); the mean for mothers on this measures is -.7033 (SD= 6.34). T-test results reveal that mean values for mothers and fathers on the change in parenting efficacy variable do not significantly differ from one another (p = .310). Please refer to Table 1 for additional information concerning the descriptive statistics for the independent and dependent variables employed in this examination.

The Relationship between Parenting Efficacy Expectations and Postpartum Depressive Symptomatology

OLS regressions were estimated for the mothers and fathers in this sample to test the proposed relationship between unmet parenting efficacy expectations and postpartum depressive symptomatology. The results from these estimations are presented in Table 2.

\[ \text{Equation} \]

---

2 A check for kurtosis and skewness indicates that relationship length, CES-D time 1, PDSS, and anxiety at time 1 and time 2, are positively skewed variables. In an analysis not shown, estimating relevant OLS regression models following the log transformation of the dependent variables does not significantly alter the results as presented in this section.
Table 2. Results of OLS Regression of the Difference between Expected and Experienced Parenting Efficacy on Postpartum Depressive Symptomatology

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<thead>
<tr>
<th></th>
<th>Mothers (n = 94)</th>
<th></th>
<th>Fathers (n = 93)</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td></td>
<td>b (SE)</td>
<td>b (SE)</td>
<td>b (SE)</td>
<td>b (SE)</td>
</tr>
<tr>
<td>Constant</td>
<td>34.639 (.13899)</td>
<td>49.589 (.14235)</td>
<td>44.086 (10.693)</td>
<td>50.044 (10.516)</td>
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<td>Education</td>
<td>1.368 (.1022)</td>
<td>1.038 (.984)</td>
<td>-.093 (.634)</td>
<td>-.398 (.620)</td>
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<td>Relationship Length</td>
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<td>.073 (.367)</td>
<td>.097 (.299)</td>
<td>.083 (.287)</td>
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<td>Co-parent Parenting Efficacy</td>
<td>-.058 (.113)</td>
<td>-.015 (.109)</td>
<td>-.076 (.095)</td>
<td>-.050 (.092)</td>
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<tr>
<td>CES-D Time 1</td>
<td>.353** (.106)</td>
<td>.310** (.103)</td>
<td>.466*** (.101)</td>
<td>.420*** (.099)</td>
</tr>
<tr>
<td>Parenting Efficacy Time 1</td>
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<td>-.442** (.159)</td>
<td>-.305* (.118)</td>
<td>-.399** (.119)</td>
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<td>Change in Parenting Efficacy</td>
<td>-.424** (.145)</td>
<td>-.247** (.145)</td>
<td>-.058 (.095)</td>
<td>-.015 (.092)</td>
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<td>R²</td>
<td>.202</td>
<td>.279</td>
<td>.336</td>
<td>.394</td>
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Note: *** p ≤ .000; ** p ≤ .01; * p ≤ .05
With respect to mothers, I regressed postpartum depressive symptomatology (PDSS) on relevant control variables in model 1. As would be expected, results from this estimation indicate that depressive symptomatology at time 1 is a significant predictor of postpartum depressive symptomatology \( (b = .353, p \leq .01) \). In terms of Hypothesis 1a, parenting efficacy time 1 is significant in model 2, indicating that there is a negative association between expectations of parenting efficacy and postpartum depressive symptomatology \( (b = -.442, p \leq .01) \).

In Hypothesis 2a, I predicted that the greater the degree of unmet expectations between the prenatal and postpartum period, the higher the levels of depressive symptomatology. My results provide support for this hypothesis for the mothers in this sample. Specifically, the coefficient for the change in parenting efficacy variable indicates that as scores for this variable increase (i.e., postpartum experiences exceed prenatal expectations), scores for postpartum depressive symptomatology decrease \( (b = -.424, p \leq .01) \). Following the addition of change in parenting efficacy, the \( R^2 \) value in model 2 significantly increased to .279 from the model 1 \( R^2 \) value of .202 \( (p \leq .000) \).

Regression estimations focused on the fathers in the sample yielded similar findings. In model 1, depressive symptomatology at time 1 is significantly and positively related to postpartum depressive symptomatology, though at a higher level of significance than that for the mothers in the sample \( (b = .466, p \leq .001) \). Providing additional support for Hypothesis 1a, parenting efficacy time 1 is a significant predictor of postpartum depressive symptomatology in both model 1 \( (b = -.305, p \leq .05) \) and
model 2 ($b = -.399$, $p \leq .01$), suggesting a negative relationship between prenatal parenting efficacy expectations and postpartum depressive symptomatology.

Similar to the finding for mothers, the negative association between the change in parenting efficacy variable and postpartum depressive symptomatology indicates that as scores for the change in parenting efficacy variable increase, scores for postpartum depressive symptomatology decrease for the fathers in this sample ($b = -.247; p \leq .01$). This finding provides additional support for Hypothesis 2a, which predicted that the greater the degree of unmet expectations between the prenatal and postpartum period, the higher the levels of depressive symptomatology.

The $R^2$ value for model 2 increased to .394 compared to the $R^2$ value of .336 in model 1 ($p \leq .000$). In terms of a comparison of $R^2$ values by gender, results indicate the models under review explain a greater percentage of the variance in postpartum depressive symptomatology for the fathers in this sample than for the mothers in this sample.

*The Relationship between Parenting Efficacy Expectations and Postpartum Anxiety*

In order to examine the proposed relationship between unmet parenting efficacy expectations and postpartum anxiety, OLS regressions were estimated for the mothers and fathers in this sample. Please refer to Table 3 for a summary of these results.
Table 3. Results of the OLS Regression of the Difference between Expected and Experienced Parenting Efficacy on Postpartum Anxiety

<table>
<thead>
<tr>
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<th>Mothers (n = 94)</th>
<th>Fathers (n = 93)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td></td>
<td>$b$ (SE)</td>
<td>$b$ (SE)</td>
</tr>
<tr>
<td>Constant</td>
<td>4.661 (.553)</td>
<td>8.536 (.5899)</td>
</tr>
<tr>
<td>Education</td>
<td>.759 (.415)</td>
<td>.682 (.412)</td>
</tr>
<tr>
<td>Relationship Length</td>
<td>.092 (.157)</td>
<td>.056 (.156)</td>
</tr>
<tr>
<td>Co-parent Parenting Efficacy</td>
<td>.018 (.047)</td>
<td>.029 (.046)</td>
</tr>
<tr>
<td>Anxiety Time 1</td>
<td>.536*** (.083)</td>
<td>.508*** (.084)</td>
</tr>
<tr>
<td>Parenting Efficacy Time 1</td>
<td>-.115 (.059)</td>
<td>-.172* (.067)</td>
</tr>
<tr>
<td>Change in Parenting Efficacy</td>
<td>-.111 (.062)</td>
<td>-.102* (.046)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.407</td>
<td>.429</td>
</tr>
</tbody>
</table>

Note: *** p ≤ .000; ** p ≤ .01; * p ≤ .05
For mothers, the results for model 1 indicate that anxiety scores at time 1 significantly predict postpartum anxiety ($b = .536, p \leq .001$). In terms of Hypothesis 1b, parenting efficacy at time 1 predicts postpartum anxiety in model 2 ($b = -.172, p \leq .05$), indicating a significant negative relationship between parenting efficacy expectations and postpartum anxiety.

Contrary to expectations, the change in parenting efficacy variable is not significant in model 2 ($b = -.111, p = .08$). Therefore, Hypothesis 2b, which predicts that the greater the degree of unmet expectations between the prenatal and postpartum period, the higher the levels of anxiety, is not supported for the mothers in this sample. The $R^2$ value for model 2 increased to .429 from the $R^2$ value of .407 in model 1, which is a significant difference ($p \leq .000$).

With respect to fathers, both relationship length ($b = -.341, p \leq .05$) and anxiety time 1 ($b = .607, p \leq .001$) are significant predictors of postpartum anxiety in model 1. Relationship length ($b = -.339, p \leq .05$) and anxiety time 1 ($b = .589, p \leq .001$) remain significant in model 2. Providing additional support for Hypothesis 1b, parenting efficacy time 1 is a significant predictor of postpartum anxiety in model 2 for fathers ($b = -.133, p \leq .05$).

Unlike the mothers in this sample, the change in parenting efficacy variable significantly predicts postpartum anxiety for fathers ($b = -.102, p \leq .05$). This finding indicates that fathers whose postpartum parenting efficacy experiences were more negative than expected reported higher levels of anxiety than respondents whose
expectations were matched or exceeded by their postpartum experiences. This finding provides support for Hypothesis 2b.

The R² value for model 2 increased to .547 from the model 1 R² value of .518, signifying that 55% of the variance in anxiety is being explained by the variables included in model 2. ANOVA results testing the change in R² values indicate that the difference between model 1 and model 2 is significant (p ≤ .000). Similar to the finding yielded from the regressions focused on the outcome variable of postpartum depressive symptomatology, a comparison of R² values by gender indicates that the explanatory power of the anxiety models is greater for the fathers in the sample than it is for the mothers in this sample.

Supplemental exploratory analyses (results not shown) were also conducted to discern any effects of exceeded parenting efficacy expectations between the prenatal and postpartum periods. Utilizing one half of one standard deviation from the sample mean of the change in parenting efficacy variable as the criterion, participants with change in parenting efficacy scores below one half of one standard deviation were coded as -1.0 (unmet expectations), participants reporting scores above one half of one standard deviation were coded as 1.0 (exceeded expectations), and the remaining participants with scores within ± one half of one standard deviation from the sample mean were coded as 0 (met expectations). Dummy variables were then created for these three categories. Results from this exploratory analysis indicate that in relation to those respondents who matched expectations, neither exceeding one’s prenatal expectations nor failing to meet one’s prenatal expectations were significantly related to postpartum distress.
DISCUSSION

This thesis examines the impact of unmet parenting efficacy expectations on the mental health statuses of new parents as measured during the prenatal and postpartum periods. Specifically, in this thesis I focus on the postpartum depressive symptomatology and anxiety of new mothers and fathers when prenatal expectations of parenting efficacy are unmet one month following the birth of the child. Two waves of data from the Baby Transitions in Marital Exchanges (Baby T.I.M.E.) study were used to examine the relationships between parenting efficacy and postpartum distress.

My findings indicate that for both the new mothers and new fathers in this sample, respondents whose postpartum parenting efficacy experiences were more negative than their prenatal expectations reported higher levels of depressive symptomatology relative to those respondents whose prenatal expectations were matched or exceeded by their postpartum experiences. The relationship between more negative than expected experiences and increased postpartum distress also holds with respect to fathers and anxiety.

In terms of postpartum depressive symptomatology and anxiety, time 1 parenting efficacy scores increased in significance for both mothers and fathers following the addition of the change in parenting efficacy variable. Additionally, my results indicate that greater variance in postpartum depressive symptomatology and anxiety is explained
by the key study variables for the fathers in the sample than for the mothers in the sample.

I advanced two hypotheses concerning my expected results. First, I hypothesized that parenting efficacy at time 1 would be negatively associated with depressive symptomatology (Hypothesis 1a) and anxiety (Hypothesis 1b) in the postpartum periods for both mothers and fathers. Based on the results yielded from my models, prenatal parenting efficacy is negatively associated with postpartum depressive symptomatology and anxiety for the mothers and fathers in this sample. In other words, respondents with high levels of parenting efficacy during pregnancy reported lower levels of distress during the postpartum period than their less efficacious peers.

Second, I advanced the prediction that for mothers and fathers, the greater the degree of unmet expectations between the prenatal and postpartum period, the higher the levels of depressive symptomatology and anxiety. My findings provide partial support for this predicted relationship with respect to maternal postpartum depressive symptomatology, paternal postpartum depressive symptomatology, and paternal postpartum anxiety. Contrary to my expected results, the relationship between unmet expectations and maternal postpartum anxiety was not significant.

There could be numerous explanations to account for the finding that meeting parenting efficacy expectations predicts postpartum anxiety for fathers but does not predict postpartum anxiety for mothers. First, although the means of the change in
parenting efficacy variable did not differ significantly for mothers and fathers, the mothers reported a mean value closer to zero than fathers on this variable, signifying that mothers were more accurate in their predicted parenting efficacy. In other words, the prenatal expectations of mothers more closely matched their postpartum parenting efficacy experiences in comparison to fathers. Additionally, there is a significant difference between time 1 parenting efficacy scores and time 2 parenting efficacy scores for the fathers in this sample, but this difference was not significant for the mothers in this sample.

In terms of why the mothers in this sample were more accurate in their predictions of postpartum parenting efficacy than their co-parents, it is possible that the mothers have received a greater degree of anticipatory socialization than the fathers in this sample. For example, the mothers may have previously engaged in child care and babysitting activities for family members and friends during adolescence and adulthood. These types of activities may have provided mothers with the opportunity to develop and maintain more reasonable expectations of how efficacious they will be as parents in comparison to the fathers, who may have had limited experience with child care.

Additionally, because responses in this study were collected at 1-month postpartum, it is likely that these mothers have not yet returned to employment and were engaged in care-taking tasks for their child on a full-time basis. However, it is also likely that the fathers in this sample had returned to their place of employment by the time 2 interviews, and were thus engaging in the role of worker in addition to the roles of new parent and spouse. As such, balancing the additional role of employment during this
period may potentially explain why the fathers reported greater anxiety than mothers at 1-month postpartum as a result of not meeting prenatal parenting efficacy expectations.

Broadly speaking, the results presented in this thesis are consistent with existing literature on postpartum distress. Specifically, previous research (e.g., Wylie 1979; Kach and McGhee 1982) has demonstrated that prenatal mood and behavior can impact postnatal parenthood adjustment. This finding is supported by my results, as prenatal experiences (such as predicted parenting efficacy and levels of prenatal depressive symptomatology and anxiety) were related to postpartum distress.

My findings are also consistent with prior research examining the impact of disconfirmed expectations on the mental health of new parents. For example, Bielawska-Batorowicz and Kossakowska-Petrycka (2006) found that postpartum experiences that were disappointing in comparison to one’s expectations were associated with increased depressive symptomatology for new fathers. Additionally, Harwood et al. (2007) demonstrated that respondents whose parenting experiences were negative in relation to prenatal parenting efficacy expectations reported higher levels of depressive symptomatology than respondents with matched or exceeded expectations.

**Strengths and Limitations**

This thesis contributes to the existing literature in several important ways. Previous researchers have noted that future investigative efforts should be aimed at exploring the influence of disconfirmed parenting efficacy expectations at different (and earlier) points throughout the postpartum period (Harwood et al. 2007). Researchers
have also highlighted the need for clarification regarding the causal relationships between parenting efficacy beliefs and postpartum distress (Jones and Prinz 2005). By employing a longitudinal study design to examine the impact of unmet parenting efficacy expectations as assessed during the prenatal period and at 1-month postpartum, this thesis extends previous research concerning the association between disconfirmed parenting efficacy and distress at an earlier point in the postpartum period.

Additionally, in this thesis I utilize multiple postpartum distress outcomes in order to present a more inclusive view of the potential manifestations of stress that can emerge during the transition to parenthood. Furthermore, this thesis contributes to the existing literature concerning paternal postpartum distress, a typically understudied area. Specifically, my findings suggest that unmet parenting efficacy expectations can be detrimental to the mental health of new mothers and new fathers, highlighting the need for the continued examination of the experiences of both parents during this transitional period.

Although the study adds to the literature on parenting efficacy and well-being, the study also has limitations. First, the sample utilized in this thesis is homogenous. Most respondents in this sample were white, upper middle class, college educated individuals. In addition, criteria to be included in the Baby T.I.M.E. study stipulated that respondents be heterosexual couples who were married or cohabitating with their partner, experiencing a low-risk pregnancy, employed at the time of the baseline interview period, and fluent in English. Therefore, although the results presented in this thesis are
consistent with previous research, there are limits to how broadly these findings can be generalized.

Secondly, because the aim of this thesis is to focus primarily on the relationship between unmet parenting efficacy expectations and postpartum distress, it is possible that other factors not examined here, such as respondents’ levels of perceived social support and self-esteem, may be influencing adjustment during the postpartum period. And although I was somewhat limited in terms of how many predictor variables could be examined in each model, consideration should also be given to the role that transitional stressors play in the relationships under review. Traditionally, stress process events (e.g., losing one’s employment) are unexpected; transitional stressors (e.g., a planned pregnancy) are expected. Thus, the exploration of whether the pregnancy is planned or unplanned may prove fruitful to future examinations in this area. Furthermore, there are numerous physiological and hormonal changes typically experienced during the prenatal and postpartum periods that may also be influencing one’s adjustment to parenthood.

Directions for Future Research

There are numerous lines of future research suggested by these results. In this thesis I estimated all regressions separately by gender in order to examine the unique processes by which mothers and fathers experience the transition to parenthood. Because prior investigations have shown that maternal mental health significantly influences paternal mental health (e.g., Goodman 2004), future research in this area could explore the relational dynamics that operate within couples as they experience this transition.
Moreover, my findings indicate a significant association between unmet parenting efficacy expectations and postpartum depressive symptomatology and anxiety for the new fathers in this sample. Examining additional outcome variables that are more closely linked to men’s mental health, such as substance use, may serve to yield additional information concerning the social distribution of stress during the transition to parenthood.

Perceived support and feedback received from significant others during the prenatal and postpartum periods may impact not only one’s adjustment to parenthood, but also a new or expectant parent’s sense of parenting efficacy. Parenting efficacy and self-esteem are also likely to highly correlated, with parenting efficacy contributing to a new parent’s level of self-esteem, and vice versa. Additionally, whether a pregnancy is planned or unplanned may be consequential to a new or expectant parent’s perceptions during the pregnancy period and subsequent adjustment to the parental role. Therefore, future research focusing on the relationships between parenting efficacy, perceived social support, self-esteem, and whether the pregnancy is planned or unplanned, would contribute to our understanding of the factors influencing the mental health of new parents.

Finally, future lines of investigation could explore this process at other points during the first year following the birth of the child. Previous research indicates that there are significant differences between parenting efficacy when measured at 1-month postpartum, 4-months postpartum etc. (Biehle and Mickelson 2011). Future research should examine these changes more closely in an effort to determine whether unmet
parenting efficacy expectations continue to impact distress throughout the first year postpartum.

Conclusions

To conclude, results from this thesis indicate that new parents’ degrees of parenting efficacy are important predictors of distress in the postpartum period. Specifically, my findings indicate that mothers whose parenting efficacy experiences were more negative than their prenatal expectations of parenting efficacy reported higher levels of postpartum depressive symptomatology. Fathers with parenting efficacy experiences that were more negative than expected reported higher levels of both postpartum depressive symptomatology and postpartum anxiety. Given the pervasive and debilitating nature of postpartum depression and related disorders, and the long-term and short-term consequences for parents and their children, continued investigation aimed at identifying the correlates of these disorders is warranted. This thesis provides clarification concerning how a key social psychological factor, the correspondence between parenting efficacy expectations and parenting efficacy experiences, relates to the mental health adjustment of new mothers and new fathers during the transition to parenthood.
REFERENCES


APPENDICES
### Correlation Coefficients for Relevant Variables in the Baby TIME Sample (n=187)

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<td>Parenting Efficacy Time 2</td>
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*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
1 Gender (1=female)
2 Relationship Status (1 = married, 2 = cohabitating)
APPENDIX B
Adapted Self-Efficacy for Parenting Tasks Scale (SEPTI-TS)  
(Coleman and Karraker 2003), Time 1

Please indicate how strongly you agree or disagree with each of the following statements:

1= disagree strongly  
2= disagree somewhat  
3= disagree a little  
4= agree a little  
5= agree somewhat  
6= agree strongly

1. I will have difficulty determining what is and is not safe for my baby to do.
2. Even when I have an unusually distressing day, I know that I will be able to meet my baby’s emotional needs.
3. I will find it very distressing when my baby isn’t in a good mood.
4. I will feel like I have no control over my baby’s sleep habits.
5. I will be very good about never leaving my baby unattended.
6. My baby will feel very loved by me.
7. Providing physical comfort for my baby will be easy for me.
8. I will find it hard to loosen up and just play with my baby.
9. I will be able to sense when my baby is starting to become distressed.
10. I will be successful in getting my baby to eat on a fairly regular schedule.
11. I feel confident in my ability to find good, safe, quality child care.
12. I will feel comfortable with my ability to react appropriately should an emergency arise with my baby.
13. Sitting down regularly with my baby to read or do some other one-on-one activity will not be difficult for me.
14. When my baby needs me, I will be able to easily put aside whatever else I may be doing.
Postpartum Depression Screening Scale (PDSS)
(Beck and Gable 2000)

Below is a list of statements describing how a parent may feel after the birth of their baby. Please indicate how much you agree or disagree with each statement thinking about how you have felt in the PAST 7 DAYS.

1= Strongly disagree  2= Disagree  3= Neither agree nor disagree  
4= Agree  5= Strongly agree

1. I had trouble sleeping even when my baby was asleep.
2. I got anxious over even the littlest things that concerned my baby.
3. I felt like my emotions were on a roller coaster.
4. I felt like I was losing my mind.
5. I was afraid that I would never be my normal self again.
6. I felt like I was not the parent I wanted to be.
7. I felt like so many other parents were better than me.
8. I felt all alone.
9. I find myself eating even when I am not hungry.
10. I felt full of anger and ready to explode.
11. I did not feel real.
SCL-90-R Anxiety Subscale  
(Derogatis 1994)

Please indicate how often you have felt each of these ways in the PAST 7 DAYS.

none/rarely  a little  moderate  most  
(<1 day)  (1-2 days)  (3-4 days)  (5-7 days)

In the past week, how often have you….

1. felt nervous or shaky
2. been suddenly scared for no reason
3. felt tense or keyed up
4. felt so restless you couldn’t sit still
5. thought something bad was going to happen to you
6. had spells of terror or panic
7. had thoughts and images of a frightening nature
8. felt yourself trembling
9. felt your heart pounding or racing
10. felt fearful