

## ABSTRACT

Title of Document: FIRST BABY, FIRST YEAR:  
GRATITUDE AND EMOTIONAL  
APPROACH COPING AS  
PREDICTORS OF ADJUSTMENT  
AND LIFE SATISFACTION DURING  
THE TRANSITION TO  
MOTHERHOOD

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Becoming a mother is one of the most common major life transitions, with approximately 82% of the population of women in the United States having given birth by the age of 45. Although becoming a mother is generally thought of as a positive experience, the transition to parenthood can also present many challenges. This study examined the postpartum transition of 152 first-time mothers. Utilizing the stress and coping model, this study explored the role of gratitude and emotional approach coping on postpartum distress, postpartum adjustment, and life satisfaction. Data were collected using an online survey, and correlations, regression analyses, and mediation analyses were run. The findings revealed that women who reported higher levels of both gratitude and emotional approach coping also reported better postpartum adjustment, greater life satisfaction, and less postpartum distress. The health of both the mother and the baby also predicted better postpartum outcomes for mothers.

FIRST BABY, FIRST YEAR: GRATITUDE AND EMOTIONAL APPROACH  
COPING AS PREDICTORS OF ADJUSTMENT AND LIFE SATISFACTION  
DURING THE TRANSITION TO MOTHERHOOD

By

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## Chapter One

### Introduction

Becoming a mother is one of the most common major life transitions, with approximately 82% of the population of women in the United States having given birth by the age of 45 (United States Census Bureau, 2005). The transition to motherhood involves several of the same adjustment processes as other major life transitions, such as going through puberty, getting married, or changing career directions (Cowan & Hetherington, 1991; Deave, Johnson, & Ingram, 2008; Mercer, 2004). For instance, processes of adjustment common across transitions include changes in identity and self-definition, shifts in relationships with others, and modifications to how one sees the world and his or her place within it (Deutsch, Ruble, Fleming, Brooks-Gunn, & Stangor, 1988; Mercer, 2004).

Researchers and scholars have documented that changes in intrapersonal and interpersonal adjustment are especially salient during the transition to motherhood (de Marneffe, 2004; Kumar, Robson, & Smith, 1984). For instance, a woman must take on the identity of a mother, which often involves defining the meaning of motherhood for her, thinking about who her maternal role models are, and deciding what type of mother she will be (Cast, 2004; Koniak-Griffin, 1993). A first-time mother also often experiences changes in her relationship with her partner (Belsky, Spanier, & Rovine, 1983), along with a marked increase in her household and baby care responsibilities (Huston & Holmes, 2004). Many new mothers report feeling overwhelmed and surprised by the overall time and energy for interaction that a new baby demands, along with the

soaring number of demands on their time such as diapers to be changed, and the astonishing frequency with which most infants need to be fed (McIntosh, 1993).

Although becoming a mother may, no doubt, be filled with joy and bliss, many women also report experiencing a fair amount of distress and tumult as a result of the myriad significant changes in their identities, roles, and relationships (Deutsch et al., 1988, Nicolson, 1999). In fact, research suggests that approximately 50 to 75 % of all new mothers experience mood changes that are consistent with what has been referred to as the “baby blues” (O’Hara, 1987; Seyfried & Marcus, 2003). Typically, women with the baby blues experience mild levels of affective symptoms like distress, depression, anxiety, irritability, crying, and frequent and abrupt changes in mood during the first two weeks postpartum (Cowan et al., 1985; Freeman et al., 2005; Grigoriadis & Romans, 2006; O’Hara, 1987). Beyond the baby blues, about one in eight new mothers experiences postpartum depression (Freeman et al., 2005; O’Hara & Swain, 1996). Symptoms of postpartum depression include dysphoric mood, fatigue, excessive guilt, crying spells, irritability, and significant disturbance in sleep, appetite, or concentration (American Psychiatric Association; 1994). Postpartum depression often begins within the first few weeks postpartum, and can last through the first year after the baby’s birth, causing a significant disruption in the quality of life and well-being of a new mother (O’Hara & Swain, 1996).

Aside from or along with the baby blues and postpartum depression, the most common feeling that women describe having is a heightened level of distress during the transition to motherhood, as a result of the variety of stressors associated with changes in their roles, relationships, and identity during the postpartum period (Horowitz & Damato,

1999; Hung, 2005). In other words, distress can range on a continuum from the baby blues (which occur for up to two weeks after birth), to mild to moderate distress or depression, on up to the less common and clinically defined, severe postpartum depression. The expectation was that most women who participated in this study would be experiencing distress in the mild to moderate range due to the need to cope with a major life transition. What is more, the newness of the transition to parenthood for first-time mothers means that the postpartum period involves the actual *development* of novel coping resources and strategies for motherhood, as these understandably may not have been established.

Historically, many researchers have focused on understanding the factors that increase the likelihood of postpartum distress and depression, but fewer have explored the variables that mediate the path between postpartum distress and healthy adjustment. This exploration is necessary as Cowan and Cowan (1988) remind us that, as a major life transition, becoming a mother also presents women with an opportunity for significant personal growth. One mediating factor between distress and growth that a limited number of researchers have investigated is the coping process. Lazarus and Folkman (1984) posit that in general, the coping process is composed of three stages: primary appraisal, secondary appraisal, and coping. During this process, the individual appraises whether a situation is, indeed, stressful, and evaluates the merit of various coping strategies to alleviate distress.

Traditionally, researchers have conceptualized two specific types of coping, problem-focused coping, which involves defining the problem and developing strategies to deal with it, and emotion-focused coping, which consists of using one's cognitions and

emotions to deal with or avoid stress (Lazarus & Folkman, 1984). Emotion-focused coping, because it involves both adaptive strategies (e.g. positive reappraisal) and maladaptive strategies (e.g. denying the issue) has often been associated with increased distress, and consequently, is not always considered an effective coping strategy (Austenfeld & Stanton, 2004). Problem-focused coping, although frequently considered to be more adaptive, may not be as effective in the context of transitions such as motherhood. For example, if the cause of stress for a new mother is that her newborn does not yet sleep through the night, a whole host of problem-solving strategies are likely to be rendered ineffective as newborn babies do not sleep through the night. As a result, one relevant study suggests that women may use the traditionally maladaptive coping strategies of wishful thinking and denial to cope with the transition to motherhood, and as a result, research on novel and adaptive coping strategies is needed with postpartum women (Cavanaugh, 2006).

In the past decade, researchers have introduced a third possible way of coping called emotional approach coping (Stanton, Danoff-Burg, Cameron, & Ellis, 1994; Stanton, Parsa, & Austenfeld, 2005). Emotional approach coping is different from emotion-focused coping in that it does not involve maladaptive coping strategies that focus on emotionally avoiding or dismissing the stressor (Stanton et al., 2005). Instead, emotional approach coping involves the two components of emotional processing and emotional expression (Stanton et al., 1994). This form of coping has been shown to relate positively to adjustment outcomes in women who are coping with health-related stressors (Stanton et al., 2005) and infertility (Terry & Hynes, 1998). Consequently, a reasonable next step is to explore the effectiveness of emotional approach coping with

women adjusting to first-time motherhood. Since neither emotion-focused nor problem-focused coping strategies may be as effective for postpartum women as for people going through other life transitions, it was meaningful to explore whether emotional approach coping was effective. For example, many first-time mothers report feeling distressed at not being able to comfort their baby when he or she is crying or does not seem to want to eat or sleep (McIntosh, 1993). Despite using problem-focused strategies like making an action plan of what to do when the baby cries, or trying to understand the problem of why the baby is crying, there will no doubt be moments when, no matter how hard she tries, a new mom will not be able to soothe her baby or help her baby to sleep. Thus, the contextual factors that are present when adjusting to caring for a new baby contour this major life transition and suggested that a novel look into adaptive coping strategies was important.

Research has gone beyond looking at the role that various coping strategies have on outcomes to identifying various positive traits and emotions, such as gratitude, that might directly predict distress and well-being (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Fredrickson & Joiner, 2002; Fredrickson & Losada, 2005). The study of positive emotions and traits is central to understanding how individuals can flourish, or experience an optimal level of functioning characterized by growth and generativity (Keyes, 2002). It fits in seamlessly with Martin Seligman's decree that positive psychology should "catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life" (Seligman, 2005, p. 3). Seligman's recent evocation fits well with the long-standing philosophy of counseling psychologists to focus on the strengths of individuals across the lifespan

(Gelso & Fretz, 2001). Indeed, many counseling and positive psychologists have recently directed significant attention to constructs such as gratitude and its relationship with two outcome variables often associated with optimal functioning – well-being and life satisfaction (Emmons & Shelton, 2005; Fredrickson, 2000, 2004).

For instance, Barbara Fredrickson, a pioneer scholar in the area positive emotions, has contributed greatly to our understanding of gratitude as a key variable in optimal functioning (Fredrickson, 2000, 2004). Gratitude is one of the emotions that fits within her “broaden and build theory” (Fredrickson, 1998). This theory posits that positive emotions broaden people’s momentary thought-action repertoires and build their enduring personal resources, such as social networks and coping strategies, over time (Fredrickson 1998, 2001, 2004). Fittingly, Fredrickson refers to the broadening and building effect of positive affect as “durable” because it not only implies health and well-being in the present, but helps to promote and produce optimal functioning in the future (Fredrickson & Losada, 2005).

In relation to optimal functioning, researchers have found evidence that gratitude is related to positive psychological outcomes. Specifically, studies suggest that a positive relationship exists between gratitude and social support (Wood, Maltby, Gillett, Linley, & Joseph, 2008b), life satisfaction, vitality, and happiness (Park, Petersen, & Seligman, 2004). Research has also found that gratitude is negatively correlated with stress and depression (Wood et al., 2008b). Other studies suggest that gratitude has a pro-social nature (Bartlett & DeSteno, 2006; McCullough et al., 2002; Tsang, 2006), and is correlated with interpersonal qualities like extraversion, agreeableness, forgiveness, and empathy (McCullough et al., 2002). As a result of its relational characteristics, it seemed

plausible that gratitude would be an especially salient construct during the transition to motherhood since a mother is establishing a new relationship with her baby (Belsky et al., 1983; Cowan et al., 1985). In fact, Waugh and Fredrickson (2006) found that the presence of positive emotions, above and beyond the mere absence of negative emotions, predicted individuals' feelings of oneness and connectedness with new acquaintances after one month of getting to know one another.

In the context of the positive emotion of gratitude and the proactive coping strategy of emotional approach, it made sense to include an outcome measure that tapped into more general optimal functioning. Aside from measuring the more domain-specific outcome of postpartum adjustment, the present study also measured new mother's satisfaction with life. As the cognitive component of well-being, life satisfaction is based upon an individual's global judgment of the quality of his or her life (Pavot & Diener, 2008). It is a broad concept that includes the experience of such things as pleasant emotions, low amounts of negative moods, and high amounts of life satisfaction (Diener, Lucas, & Oishi, 2005). This construct can take on a more global and distal quality as opposed to the more transition-focused and proximal nature of postpartum adjustment (Diener et al., 2005). Research suggests that global life satisfaction is positively related to domain-specific satisfaction (in this case, postpartum adjustment), but that the global and domain-specific ultimately measure different things (Diener, Suh, Lucas, & Smith, 1999). Thus, since the process of mothering exists far beyond the first year of a baby's life, it was meaningful to assess how these two outcome variables, with different temporal qualities, functioned during the postpartum period.



Researchers have begun to explore the relationship between life satisfaction and other key variables in the proposed study. For instance, studies have found a positive relationship between emotional approach coping, adjustment, and life satisfaction (Stanton et al., 1994), as well as gratitude and life satisfaction (Park et al., 2004). Individuals with high life satisfaction are also likely to report goal self-efficacy and goal progress (Lent et al., 2005), dispositional optimism (Scheier & Carver, 1993), and meaning in life (Steger, Frazier, Oishi, & Kaler, 2006). In the context of investigating what helps new mothers to flourish during the first year postpartum, the study of life satisfaction was fitting, especially since most research has focused on postpartum distress and depression (Freeman et al., 2005; Keyes, 2002; O'Hara & Swain, 1996).

The stress and coping model (Lazarus & Folkman, 1984) served as a framework for the current study. In this model, coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). The current study was interested in the ways in which both emotional approach coping and gratitude serves as important coping mechanisms for women amidst the transition to new motherhood which presents new demands that may challenge the resources of mothers. For instance, gratitude, conceptualized as a psychological trait, can be considered as a resource for coping as psychological traits are our “front line” response system to stress. From the individual differences framework, our basic psychological characteristics make up the lens through which we view our stressors, and influence how we choose to cope with them (Lazarus, 1993). Moreover, emotional

approach coping, as a positive and proactive coping strategy, also fits nicely within the stress and coping model.

Ultimately, the current study looked at stress and coping from a strengths-based perspective – a point of view that aligns well with the goals of operating within the context of counseling psychology and positive psychology. The current study makes a meaningful contribution to the stress and coping model as a framework for understanding the processes involved in the adjustment to motherhood during the postpartum period. Previous studies have primarily focused on the role of maladaptive traits, or a mix of adaptive and maladaptive traits, in predicting unconstructive coping strategies and negative postpartum outcomes (e.g., depression). As noted above, our basic psychological characteristics can be conceptualized as a lens through which we view our stressors, and influence how we choose to cope with them (Lazarus, 1993). Thus, they can be thought of as influencing the first stages of the stress and coping model – primary and secondary appraisal. In comparison, the current study explores the role of a *positive* trait, gratitude, as a psychological characteristic that has received significant attention in the literature for its strong, positive relationship with optimism, and with enhanced outcomes such as healthy adjustment to transition, and higher life satisfaction.

Similarly, looking at the coping phase of the stress and coping model, previous studies have examined the role of adaptive and maladaptive coping strategies and their influence on both positive and negative psychological outcomes. In contrast, the current study focuses on exploring the ways in which a novel and positive coping strategy, emotional approach coping, is related to healthy outcomes (e.g., higher levels of postpartum adjustment and life satisfaction) during the postpartum period. Thus, this

study sought to contribute a unique perspective to the stress and coping model by parsing out the valuable contribution of more positive and adaptive appraisals and coping strategies to healthy psychological outcomes.

In summary, the present study was designed to add to the literature on the adjustment to first-time motherhood by exploring the relationship between gratitude, emotional approach coping, distress, postpartum adjustment, and life satisfaction. Most previous research on the postpartum period has focused on negative predictor and outcome variables, such as exploring the risk factors that contribute to postpartum depression. Above and beyond examining only postpartum distress and depression, the present study included the positive variables of gratitude and emotional approach coping to examine whether they predict better and more positive outcomes. This inclusion of positive predictor and outcome variables did, in and of itself, add to our current knowledge about the transition to motherhood. Furthermore, there is a dearth of literature on what factors may mediate the relationship between the stress experienced during the first year after a baby's birth and the healthy outcomes of postpartum adjustment and, more generally, overall satisfaction with life. Thus, the current study explored whether emotional approach coping mediates the relationship between distress and the two positive outcomes of adjustment and life satisfaction during the postpartum period. Based on support from the literature, the present study also explored whether emotional approach coping mediates the relationships between gratitude and the outcomes of adjustment, distress, and life satisfaction. Overall, the aim of the study was to help us understand a piece of the puzzle about why some women seem to experience a healthier and more seamless adjustment during this major life transition.

## Chapter Two

### Review of the Literature

#### *Postpartum Adjustment*

*Parenthood as a major life transition.* Twenty-five years ago the transition to parenthood was considered by researchers to be a time of crisis (Osofsky, 1982). Since then, the adjustment to becoming a parent has more commonly been recast as a major life transition, and as the normative process of postpartum adaptation which occurs during first year after the birth of a baby (Cowan & Cowan, 1988; Kalmuss, Davidson, & Cushman, 1992; Mercer, 2004). In fact, more recently, the transition has been described by some as one of the most significant developmental tasks of adulthood (Dion, 1995). Researchers have suggested that, like many major life transitions and developmental epochs, becoming a parent is filled with both adjustment-related stressors along with promising opportunities for personal growth (Cowan & Cowan, 1988).

As is apparent from the ways in which researchers' conceptualizations of this transition have shifted and evolved over the past few decades, becoming a parent is likely to be a mixed experience for most women, filled at times with joy and excitement, no doubt, but also with distress and tumult. As such, a promising direction for research was to explore the variables that may directly influence adjustment to motherhood or mediate the path between distress and adjustment, in order to learn more about how new parents successfully adapt to, and even thrive during, this period of significant change (Cowan & Cowan, 1988). Specifically, the present study explored the direct relationships between distress, gratitude, emotional approach coping, and the outcomes of postpartum adjustment and life satisfaction. Furthermore, this study sought to examine whether

emotional approach coping and gratitude mediated the relationship between distress and healthy adjustment.

This review first examines literature on the transition to motherhood, followed by literature on postpartum adjustment, postpartum distress and depression, and the specific stressors associated with having a baby. Next, the literature on coping is presented, with a special focus on the strategy of emotional approach coping. An overview of the literature on gratitude is discussed, and finally, a review of life satisfaction is presented.

*Transition to motherhood.* The adjustment to motherhood is a major life transition, and as such, is characterized by a normative process of adaptation which occurs during first year after the birth of a baby (Cowan & Cowan, 1988; Kalmuss, Davidson, & Cushman, 1992; Mercer, 2004). Like many major life transitions, becoming a mother is filled with stress and challenges along with excitement and the opportunity for growth – resulting in a pattern of highs and lows for many new parents (Cowan & Cowan, 1988; Mercer, 2004). Research suggests that the transition to parenthood is different for women and men in that mothers struggle with this transition more than fathers do (Belsky, Spanier, & Rovine, 1983; Cowan et al., 1985; Deave et al., 2008). For instance, for many women, the transition to motherhood involves the adjustment to breastfeeding and to post-pregnancy body changes, along with the day-to-day involvement in baby care in the early stages of the newborn's life that mothers usually assume responsibility for (Cavanaugh, 2006; McIntosh, 1993). Furthermore, in a study about new mothers' and fathers' adjustment to parenthood Levy-Shiff (1999) found that fathers, as compared to mothers, appraised parenting as significantly less stressful and

more controllable, were less involved with their infants, and also reported less burnout at the end of the first year.

As a result of the unique consequences of parenthood for women, the current study focused on the postpartum adjustment of new mothers. What is more, the transition is most salient for first-time mothers who have not yet had the opportunity to develop their parenting skills or learn to cope with the stressors of a new baby, although more subtle transitions are often relevant with the birth of subsequent children (Deutch et al., 1988; Tarkka, Paunonen, & Laippala, 1999). Consequently, this study focused on the adjustment experiences of *first-time mothers* for whom the adjustment to parenthood is most salient. In order to introduce the variables that may promote the successful adaptation to parenthood for first-time mothers, it is important to more deeply understand the nature of the unique distress that many must first overcome.

*Postpartum adjustment and mood.* The feminist literature notes that because most women have the biological capability to conceive and give birth, it is assumed that they will intrinsically want to become mothers and adapt to the role without emotional disturbance or disruption in their lives or in the lives of their partners (Nicolson, 1998). However, an impressive number of women, somewhere between 30% and 90%, experience mild to severe levels of anxiety and distress after the birth of a baby, particularly during the first few months postpartum (Nicolson, 1998). Commonly, studies on the mental health and well-being of new mothers have categorized the intensity of emotional disturbance on a continuum; some women experience the “baby blues,” a term which refers to temporary and mild sadness, other experience mild to moderate levels of distress and depression, and a small number encounter the most

extreme diagnoses of severe postpartum depression or psychosis (Cox, Paley, Burchinal, & Payne, 1999).

*Baby blues.* The experience of the “baby blues,” while distressing for many women, is clinically understood as the least severe and most common form of postpartum mood disruption (Cox et al., 1999; Grigoriadis & Romans, 2006; O’Hara, 1987). Experts in the postpartum period suggest that approximately 50 to 75 % of all new birth mothers will experience mood changes that are consistent with this diagnosis (O’Hara, 1987; Seyfried and Marcus, 2003). Typically, women with the baby blues experience mild levels of affective symptoms like distress, depression, anxiety, irritability, crying, and frequent and abrupt changes in mood (Cowan et al., 1985). Particularly characteristic of the baby blues is their abrupt onset and transitory nature. Most women report experiencing these symptoms within the few days after delivery, with the worst of the baby blues occurring between days four and six postpartum, and relief from them taking place within about two weeks (Grigoriadis & Romans, 2006; O’Hara, 1987).

While the cause of baby blues has been investigated for decades, the results remain fairly inconclusive. Many researchers have explored the role of hormones in the onset and duration of baby blues, citing that a variety of hormones, like estrogen and progesterone among others, decline rapidly after delivery, and then return to normal ranges within the first few weeks postpartum (Feksi, Harris, Walker, Riad-Fahmy, & Newcombe, 1984; Harris et al., 1994; Nappi et al., 2001; Nott, Franklin, Armitage, & Gelder, 1976). However, many other researchers have argued that although hormones may indeed exert an influence on the baby blues, as well as on the more lengthy experience of postpartum distress and depression, they do not fully account for

postpartum mood changes (Boath & Henshaw, 2001; Chalmers & Chalmers, 1986). In particular, studies have shown that new fathers along with adoptive mothers exhibit symptoms that are consistent with the baby blues and postpartum depression during the first few weeks to a year of caring for a baby (Chalmers & Chalmers, 1986; Goodman, 2004; Pinheiro et al., 2005). What is more, the experience of the baby blues is a documented risk factor for the more prolonged experience of postpartum distress and depression (Paykel, Emms, Fletcher, & Rassaby, 1980). Since hormone fluctuations are hypothesized to be the most marked during the first few weeks postpartum, and the experience of postpartum distress and depression can occur for as long as one year after birth, myriad researchers argue that a complex constellation of biological and psychosocial factors are likely at play in both the experiences of the baby blues and postpartum distress and depression (O'Hara, 1987).

*Postpartum distress and depression.* Postpartum distress and depression are less common than the baby blues, but still affect about 13%, or approximately one in eight, new mothers (Freeman et al., 2005; O'Hara & Swain, 1996). The duration of these symptoms is longer than that of the baby blues, as they can begin within the first few weeks postpartum and last through the first year after the baby's birth (O'Hara & Swain, 1996). According to the American Psychiatric Association, a clinical diagnosis of postpartum depression involves a non-psychotic episode of depression during which a new mom experiences symptoms like dysphoric mood, fatigue, excessive guilt, crying spells, irritability, and significant disturbance in aspects of her life such as sleep, appetite, or concentration (American Psychiatric Association; 1994). Moreover, these symptoms



must be present for at least one week and must present significant impairment to her quality of life (Cooper & Murray, 1995).

O'Hara and Swain (1996) conducted a thorough meta-analysis of 59 studies that have investigated the rates and risk of postpartum distress and depression. In terms of sociodemographic variables, the researchers suggest first time mothers with low levels of income and occupational status are at significantly greater risk for stress, and thus also for postpartum distress and depression. That said, these symptoms do not discriminate socioeconomically, and women who occupy any strata are at risk. Studies included in O'Hara and Swain's (1996) meta-analysis also looked at obstetric variables and found that pregnancy and birth complications increased a woman's risk for postnatal distress and depression. In addition, women with little social support and marital dissatisfaction are more likely to experience distress after the birth of a baby. Finally, the meta-analysis included studies that explored women's personal and family history of psychopathology and found that the presence of past personal psychopathology was a significant predictor of depressed mood, but that a woman's family history was not. A woman who experiences postpartum depression is more likely than not to be pessimistic in her attributional style, and to be a worrier (O'Hara & Swain, 1996).

It should be emphasized here that the literature on postpartum distress and depression has focused primarily on women who give birth to their children. Thus, although research is skewed toward biological mothers, adoptive mothers may also experience distress and depression after the addition of a new child to their family (Chalmers & Chalmers, 1986; Gair, 1999). One study suggests that adoptive mothers can experience symptoms that meet the criteria for both the baby blues and mild to severe

levels of postpartum distress and depression, particularly after taking home a newborn or younger infant (Chalmers & Chalmers, 1986). Thus, it appears that the developmental stage of the baby or child, when adopted, may influence adoptive mothers' distress. In addition, regardless of the age of the child when adopted, many adoptive mothers experience distress from role stressors and role transition while adjusting to caring for the new baby or child (Gair, 1999). That said, the experiences of biological and adoptive mothers are no doubt different in many ways, and thus, the current study solely focused on the experiences of biological mothers.

*Psychodynamic theory and postpartum distress and depression.* Some researchers have taken a psychodynamic orientation toward theorizing about why postpartum distress and depression occur (Besser, Vliegen, Luyten, & Blatt, 2008; Blatt, 2006; Blum, 2007; Nicolson, 1999). The psychodynamic perspective is particularly meaningful to consider in the context of the current study because I did not consider other risk factors for postpartum distress mentioned above, such as hormones or marital satisfaction. Aside from such risk factors, Blum (2007), a clinician and scholar who has treated women suffering from postpartum distress and depression in his private practice for twenty years, posits that dependency conflicts, anger conflicts, and motherhood conflicts are at the core of postpartum distress and depression. Here, it is important to note the Blum is not referring to the treatment of women who become mildly to moderately distressed or depressed during the postpartum period – a group of women much like those included in this study – as opposed to only those women who are severely distressed with clinical levels of postpartum depression. It was important to investigate the population of women who experience mild to moderate levels of distress and depression because research

suggests that bothersome distress- and depression-related symptoms pose the most significant mental health risks for younger women of childbearing and childrearing age (Glied & Kofman, 1995). In fact, women's risk of distress and depressive symptoms increases with the number of children in the house (McGrath, Keita, Stickland, & Russo, 1990).

In his work with this population of women, Blum (2007) suggests that those who are counterdependent, or who have the desire to prove they can handle everything without being dependent on or needing the help of others, are at significantly greater risk for postnatal distress. In terms of the dependency conflict, the author theorizes that in order to take care of an infant, it is critical that the new mother be able to make peace with needing and accept help from supportive people. Otherwise, in the context of caring for a completely dependent new baby, a mother who cannot accept help may find her own needs becoming grossly unfulfilled, and “the counterdependent system breaks down,” resulting in feelings of helplessness and distress (Blum, 2007, p. 53). Similarly, Blatt (1990, 1991) talks about new mothers’ ability to develop a balance between relatedness and self-definition as being key to having a positive transition into motherhood. Essentially, he argues that women who negotiate self-sufficiency with an appropriate amount of relatedness and openness to help and support are those who experience optimal adjustment.

Secondly, Blum (2007) refers to anger conflicts, or difficulty with anger, as being at the psychodynamic root of postnatal distress. In general, people who struggle with this conflict often believe that they should not feel angry, and usually feel guilty or frightened about expressing their anger or displeasure. In the context of motherhood, many women

feel mixed emotions; while they often experience warmth and tenderness toward their baby, sadness, anxiety, and ambivalence can also be present, and this duality can be confusing for many women (Arendell, 2000; Besser et al., 2008). Although the new mother loves and adores her baby, she may also feel angry or resentful about the upheaval in her life that a new baby causes, particularly during the first year when the baby's needs are the greatest, and the new mom feels a loss of independence in not being able to put herself first anymore (Affonso & Arizmendi, 1986; Blum, 2007; Campbell, Cohn, Flanagan, Popper, & Meyers, 1992; Chalmers & Chalmers, 1986; McIntosh, 1993; Nicolson, 1999). Women who are not able to accept the duplicitous nature of their feelings, and cannot acknowledge, tolerate, and express anger or other negative emotions, often have a harder time adjusting to motherhood (Blum, 2007). These women may benefit from the perspective of Nicolson (1999) who urges us to consider that postpartum sadness, anger, or distress, although uncomfortable, may actually be a psychologically *normal* response to the losses involved in becoming a parent (e.g., loss of independence, sense of self), rather than a psychologically *problematic* response.

Thirdly, Blum (2007) considers the impact of motherhood conflicts, or women's problematic relationships with their own mothers, on postpartum distress and depression. The author points out that women who were physically or verbally abused as children, or who perceived that their mothers did not enjoy caring for them, may find it challenging to care for their own baby. He suggests that the *experience* of receiving unconditional love as a child may set the stage for being able to pay that tenderness and love forward (Blum 2007). What is more, researchers suggest that when women have a positive image of their mothers, they are able to draw upon this image as a key role model in their own

mothering, and can more easily internalize a healthy maternal identity (Blum, 2007; Cast, 2004; Koniak-Griffin, 1993). From his experience treating women with mild to moderate levels of postpartum distress and depression, Blum (2007) recognized that those who felt most conflicted over their relationship with their own mothers seemed to have the hardest time finding a balance between motherhood and the other areas of their lives.

In summary, new mothers often experience a range of symptoms during the postpartum period. The baby blues and postpartum distress and depression are common, with estimates suggesting that anywhere between 30 and 90% postpartum women experience these symptoms (Nicolson, 1998). As a result of the range of symptoms that may be experienced, the current study used the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior, Heba, Brown, & Reback, 1993) as a measure of depression *and distress* (See Appendix F). The items of the measure are geared toward picking up on a range of symptoms from having “the blues,” feeling lonely, and feeling sad on one end to feeling depressed and fearful on the other end. Participants were asked to endorse how often they experienced these symptoms, also allowing the researcher to determine the level and pervasiveness of distress or depression. As a result, the items were sensitive to both the baby blues and subsequent feelings of general postpartum distress to more severe and chronic feelings of depression.

*Stress from changes in roles, relationships, and identity.* Researchers have also documented that changes in interpersonal and intrapersonal adjustment are especially salient for first-time mothers (Kumar, Robson, & Smith, 1984; Mercer, 2004). In terms of interpersonal adjustments, a new mother may experience changes in her relationship with her partner (Belsky et al., 1983), along with a marked increase in the amount of

household work and baby care for which she assumes responsibility (Huston & Holmes, 2004). In regards to changes in a new mother's relationship with her spouse, Belsky et al. (1983) were among the first researchers to study marital interactions postpartum. They documented a significant decline in marital satisfaction from pregnancy through nine months postpartum for both partners, and a more marked decline for wives.

Evidence of a decline in marital satisfaction has since been found by a number of researchers. In another study on first-time parents, McHale and Huston (1985) found a significant decline in partners' overall marital satisfaction, in their satisfaction with their spousal interactions, and in their feelings of love for one another. Some reasons for marital dissatisfaction include the unequal division of household labor, loss of time with one's spouse, loss of sleep, and the loss of one's figure, along with more systemic factors like attitudes toward parenting and the sociocultural context (Goldberg, Michaels, & Lamb, 1985; Levy-Shiff, 1994). In a more contemporary study with new mothers, Shapiro, Gottman, and Carrere (2000) found that two-thirds of participants experienced a decline in their satisfaction with their marriage, whereas the remaining one-third reported that their satisfaction with their marriage either stayed the same or improved since the birth of their baby. Although this decline in marital satisfaction has been found across studies, it is important to note that many women report no change in satisfaction with marriage and some report that their marital satisfaction increases. As some women did report an improvement in marital satisfaction, it is valuable to note that having a baby is not necessarily an antecedent to marital dissatisfaction and stress for all women, and in fact, it can indeed be a precipitating factor of increased satisfaction for some.

In terms of baby care, many new mothers admit feeling surprised and overwhelmed by the sheer number of diapers to be changed, the frequency of feeding, and the overall time and energy for interaction that a new baby demands all at once (McIntosh, 1993). Anecdotal accounts of postpartum distress point to the fact that many mothers experience the realities of motherhood as far more all-encompassing than they had imagined and expected (Shields, 2005; Wolfe, 2001). For example, one study asked new mothers to respond to an open-ended question about the changes they have experienced since the birth of their babies (Cavanaugh, 2006). Between one-fifth and one-quarter of participants responded that they have experienced a “lack of time for self, recreation, and day-to-day tasks,” feel “tired, sleep deprived,” or as though they have “no energy,” and feel “inadequate as a new mother and struggle to balance multiple roles” (Cavanaugh, 2006). As a consequence of these demands, many women experience a loss of freedom and independence, along with feelings of social isolation from family and friends, all of which can result in significant distress (Affonso & Arizmendi, 1986; Campbell, Cohn, Flanagan, Popper, & Meyers, 1992; Chalmers & Chalmers, 1986; McIntosh, 1993).

Intrapersonal adjustments often express themselves in terms of changes in self-related information seeking and self-definition for new mothers (Deutsch, Ruble, Fleming, Brooks-Gunn, & Stangor, 1988; Mercer, 2004), as well as more global changes in the way a woman sees herself and the world (Cowan et al., 1985). For instance, a woman must take on the identity of a mother, which often involves defining the meaning of motherhood for herself, thinking about who her maternal role models are and have been, as well as deciding what type of mother she will be (Cast, 2004; Koniak-Griffin,

1993). Research shows that women who have a hard time seeing themselves as mothers, who struggle with adapting to the tasks of motherhood, and who doubt their competence as mothers, often experience greater distress (Affonso & Arizmendi, 1986; Campbell et al., 1992). On the other hand, pregnant women who regularly and clearly visualized themselves as mothers reported greater postpartum adjustment and satisfaction as compared to women who had a more challenging time imagining themselves in their impending new role (Oakley, 1980; Shereshefsky & Yarrow, 1973). Overall, Messias and DeJoseph (2007) summarize these intrapersonal changes as the “personal work” involved in first-time pregnancy and motherhood, emphasizing the purposeful and often laborious process of actively creating and trying on one’s identity as a mother.

### *Coping*

*Stress and coping model.* As is clear from the review of the myriad significant changes in mood, roles, relationships, and identity that a new mother experiences, the first year of caring for a baby can be ripe with a variety of stressors with which to cope. Thus, the stress and coping model is an appropriate framework from which to understand how women attempt to manage the distress that many of them experience during the transition to motherhood. One of the most widely utilized of these frameworks is Lazarus and Folkman’s (1984) stress, appraisal, and coping model. Lazarus and Folkman (1984) posit that one’s personality and the environment are continuously and dynamically connected. Consequently, the authors define coping as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141).



Lazarus and Folkman's (1984) model of stress, appraisal, and coping is conceptualized as a three-stage model. The first stage of this model is the primary appraisal. In this stage, the individual decides whether a potentially stressful situation is, indeed, cause for concern. Stage two of the theory involves secondary appraisal, during which the individual further evaluates the demands of the situation in terms of how stressful they are, and begins to determine ways of coping. In stage three of the model, the person engages in coping with the situation. There is significant variability in the strategies that individuals choose to cope with the stressors in their lives. Lazarus and Folkman (1984) suggest that coping strategies fall into two major categories: problem-focused coping and emotion-focused coping. Problem-focused coping involves defining the problem at hand, generating possible solutions, and choosing among them to lessen distress. In comparison, emotion-focused coping constitutes the use of cognitive processes like avoidance, minimizing, distancing, selective attention, positive comparisons, and finding the positive value in negative events to lessen distress.

In an extensive review of the literature, a limited number of articles were found that explored the relationship between problem-focused coping, emotion-focused coping, and the transition to parenthood or motherhood, more specifically. Levy-Shiff (1999) conducted a study with 180 new mothers and fathers, ranging in age from 18 to 40 years old, to explore these new parents' cognitive appraisals of parenting stress, the coping strategies they employed to deal with distress, and their adjustment to parenthood. Regarding the participants' cognitive appraisals, the researcher measured the extent to which new mothers and fathers perceive parenting as stressful, as a challenge and a threat, and as a situation over which they have control. Coping was measured with

Folkman and Lazarus's (1985) Ways of Coping Checklist, and special attention was paid to the specific strategies of emotion-focused coping and problem-focused coping.

Finally, Levy-Shiff (1999) operationalized her outcome to "adjustment to parenthood" by measuring parental burnout and observed caregiving behaviors (e.g., soothing or comforting the baby).

In her results, Levy-Shiff (1999) reports that, overall, the more that fathers and mothers appraised parenthood as stressful, the more likely they were to endorse the use coping strategies. However, fathers, as compared to mothers, appraised parenting as significantly less stressful and more controllable, were less involved with their infants, and also reported less burnout at the end of the first year. Mothers and fathers both used problem-focused and emotion-focused coping strategies, and the problem-focused strategies were more prevalent across genders. Interestingly, when parents did use emotion-focused coping, this strategy was negatively related to caregiving and well-being among both mothers and fathers, but was more related to adaptive outcomes for mothers as compared to fathers.

Although Levy-Shiff's (1999) research makes a significant contribution to our understanding of the adjustment to parenthood for both mothers and fathers, it could be improved upon in a few key ways. For example, the researcher operationalizes adjustment to parenthood as burnout. First, it is questionable whether burnout is the most appropriate construct to measure the psychological outcome of the adjustment to parenthood. Secondly, Levy-Shiff (1999) commonly refers to her outcome not as burnout, but as "adjustment" and "well-being," but the primary means of measuring the outcome variable is through the burnout instrument. The fields of counseling and

positive psychology urge researchers to measure constructs like adjustment and well-being as not just the *absence* of negative feelings such as depression and burnout, but as the *presence* of positive feelings like love and engagement, just to name a few (Lopez et al., 2006; Seligman, 2008). Thus, it could be argued that the absence of burnout does not necessarily equate with the presence of well-being or adjustment. To improve upon this critique, the present study will include two outcome measures that assess for the presence of optimal functioning – a measure of life satisfaction and a measure of postpartum adjustment, which addresses a new mother’s adaptive functioning in her new role.

Secondly, Levy-Shiff’s (1999) research could be improved upon by reconsidering the ways in which she measures and discusses problem-focused and emotion-focused coping. For instance, as was discussed above, problem-focused coping is comprised of strategies whereby the individual actively approaches the problem and tries to solve it. Examples of items that measure problem-focused coping include, “I make a plan of action and follow it,” and “I just concentrate on what I have to do next” (Folkman & Lazarus, 1985). As a result of the ways in which theory and measurement have guided our understanding of problem-focused coping, the individual who employs this strategy is often seen as a proactive agent who copes healthfully by facing the problem head-on (Tamres, Janicki, & Helgeson, 2002). What is more, research suggests that problem-focused coping is associated with more adaptive outcomes, like lessened distress (Austenfeld & Stanton, 2004; Levy-Shiff, 1999). Traditionally, men are more likely to employ this way of coping, as compared to women, and thus, are sometimes viewed as “better” at coping (Tamres et al., 2002).

Emotion-focused coping, on the other hand, involves one's cognitions and emotions to deal with or avoid stress, and is more commonly associated with maladaptive outcomes, such as increased distress (Austefeld & Stanton, 2004). Examples of emotion-focused coping strategies include blaming or criticizing oneself for creating the problem or denying the existence of the problem (Carver, 1997). Indeed, in Levy-Shiff's (1999) research, the use of emotion-focused coping strategies was positively related to burnout and decreased involvement, among both mothers and fathers, but proved to be somewhat less maladaptive for mothers. The researcher's measure of emotion-focused coping included items like, "I talked to someone about how I was feeling," "I wish that the situation would go away or somehow be over with," and "I try to forget the whole thing" (Folkman & Lazarus, 1985). Most recently, researchers have pointed out that emotion-focused coping scales include both items that deal with *approaching* one's struggle through emotional means (e.g., talking about it, as in the first example item), along with those that focus on *avoidance* of the issue (e.g., wishing it would go away or forgetting about it, as in the latter two example items) (Stanton et al., 2005). Thus, unlike the items measuring problem-focused coping, the items measuring positive and proactive emotion-focused coping strategies are confounded with those that involve avoiding the problem and engaging in self-deprecation (Austefeld & Stanton, 2004). It is because the Levy-Shiff (1999) study surveys the landscape and limitations of coping research during the postpartum period that it has been explored and critiqued so closely. It provides a meaningful point from which to explore the merits of a more novel form of coping, emotional approach coping, during the transition to motherhood.

Besser and Priel (2003) conducted a similar study of personality and coping during the postpartum period, and their research also raises questions about the confounding of strategies. Specifically, they studied the relationship between dependent and self-critical trait vulnerabilities and the use of “approach-coping” strategies versus “emotional/avoidance-coping strategies” in a community sample of one hundred and forty-six Israeli first-time mothers. The results indicate that personality characteristics may influence coping, such that women characterized as “dependent” were more likely to employ approach-coping strategies, as compared to “self-critical” women who were more likely to endorse emotional/avoidance coping strategies (Besser & Priel, 2003).

In this particular study, the term “approach-coping” refers to a host of strategies that are often couched under the term “problem-focused,” while the “emotional/avoidance-coping” label refers to strategies used to avoid the distress associated with the problem. One issue with Besser and Priel’s (2003) labeling is that it is inconsistent with the more common “problem-focused” and “emotion-focused” categories established by Lazarus and Folkman (1984). Consequently, it is difficult for results to be generalized across studies, and unfortunately, this problem is all too common in the broader body of coping literature (Tamres et al., 2002). A second issue with Besser and Priel’s (2003) study is that the researchers’ definition of “approach-coping” appears to be too narrow in that it only includes problem-focused strategies. Several emotion-focused strategies such as emotional processing, positive reappraisal, and emotional expression could also be included among approach-oriented strategies (Lazarus & Folkman, 1984). It would be interesting to learn how the relationship between personality traits and coping might change if Besser and Priel’s (2003)

taxonomy were arranged to include both problem-focused and emotion-focused strategies under the “approach-coping” umbrella, or further, if three subcategories were identified as: approach-oriented/problem-focused strategies; approach-oriented/emotion-focused strategies; avoidance-oriented/emotion-focused strategies, and the data re-analyzed.

A more extensive review of the issue of confounding in coping measurement, along with strategies for parsing out emotional-approach strategies versus emotional-avoidance strategies will follow. For now, to address how the present study improved upon the work of Levy-Shiff (1999) and Besser and Priel (2003), two studies that are extremely relevant to the current study and represent the limited research on coping in postpartum women – the present study included a measure that deals strictly with coping through emotional approach (Stanton et al., 1994). Methodologically separating strategies that involve emotionally approaching the stressor versus emotionally avoiding it helped us to learn whether a positive and proactive form of emotion-focused coping is useful in helping new mothers to achieve postpartum adjustment and satisfaction. It also contributed to the growing body of literature that asserts that some forms of emotion-focused coping are adaptive, and that women can and do cope effectively (Tamres et al., 2002).

*Emotional approach coping.* As was preliminarily addressed above, research on coping strategies has historically suggested that emotion-focused coping is associated with dysfunctional outcomes (Austenfled & Stanton, 2004; Tamres, Janicki, & Helgeson, 2002). However, the most recent studies on this topic argue that items measuring emotion-focused coping strategies are described in such a way that they are confounded with distress and self-deprecation (Austenfled & Stanton, 2004). As a result, the leading

researchers who are currently examining the benefits of emotion-focused coping advocate for scholars to discriminate, at conceptual and empirical levels, between emotion-focused strategies that embrace acceptance, expression and processing emotion from those that include emotional strategies like mental disengagement, which are more descriptive of traditional views of emotional coping (Stanton, Parsa, & Austenfeld 2005). To clarify what this means, researchers interested in studying adaptive emotion-focused coping, referred to here as emotional approach coping, would focus on mechanisms like acknowledging and understanding emotions (emotional processing), and taking time to express emotions to others (emotional expression). Through these strategies, individuals approach and accept their emotions. Maladaptive strategies of emotion-focused coping, like avoiding feelings or feeling anxious about not being able to cope, would be parsed out due to their association with distress and avoidance of emotions.

In order to quantitatively assess coping through actively approaching emotions, Stanton et al. (1994) constructed an instrument to measure emotional approach coping, which includes the subscales of emotional expression and emotional processing. An example of an item in the emotional expression subscale is “I allow myself to express my emotions,” and the emotional processing subscale includes items like, “I delve into my feelings to get a thorough understanding of them” (Stanton et al., 1994). This measure has primarily been used with women who are coping with health-related stressors and transitions (Stanton, Parsa, & Austenfeld, 2005). For instance, coping through emotional approach has been shown to relate positively to adjustment outcomes for women experiencing infertility (Terry & Hynes, 1998). Research also suggests that coping through active acceptance and humor is related to lowered distress in women with breast

cancer, indicating that some forms of emotional coping are positive (Carver et al., 1993). Since emotional approach coping has been studied with women experiencing stressful transitions related to health and infertility, understanding the construct's relevance with women experiencing the transition to motherhood seemed plausible.

In addition, as Nicholson (1998) and other researchers have noted, the arrival of a baby is often portrayed as one of the happiest experiences in a woman's life, and many women do not anticipate experiencing mixed or ambivalent feelings such as both joy and sadness during the transition to motherhood. The reality that this time can be challenging is often hard for women to accept, and new mothers frequently feel like something is wrong with them if they struggle with this "innate" capacity to completely embrace mothering and to do it well (Nicholson, 1998). Consequently, the strategies involved in coping through emotional approach, emotional processing, expression, and acceptance, had the potential to be especially relevant and cathartic for new mothers, as many do not understand their mixed emotions, and often feel guilty or embarrassed about them (Martinez, Johnston-Robledo, Ulsh, & Chrisler, 2001; Romito, Saurel-Cubizolles, & Lelong, 1999). As noted in the review of the psychodynamic literature on the transition to motherhood, those women who have a hard time asking for help (e.g., experience a conflict of counterdependence), struggle with understanding, accepting and voicing their anger, or feel conflicted about their relationship with their own mothers are more likely to experience postpartum depression. The strategies of emotional processing and expression had the potential to be very useful in helping new mothers to work through and process these conflicts, along with expressing their feelings and needs more easily and readily (Blum, 2007).



Finally, from a practical perspective, some situations may not as easily lend themselves to problem-focused coping, and the adjustment to having a new baby often fits into this category. For instance, many first-time mothers report that they feel distressed at not being able to comfort their baby when he or she is crying or does not seem to want to eat or sleep (McIntosh, 1993). Despite using problem-focused strategies like making an action plan of what to do when the baby cries, or trying to understand the problem of why the baby is crying, there will no doubt be moments when, no matter how hard she tries, a new mom will not be able to soothe her baby or help her baby to sleep. At these moments, it may be more effective to understand what a new mother could do to soothe *herself* in the process of caring for an often unpredictable and uncontrollable infant. Here, emotional approach coping strategies like expressing her feelings of frustration or helplessness with a partner may be more likely to help in easing the mother's distress and helping her to adjust to being a parent and achieve overall well-being.

### *Gratitude*

In addition to the traditional and contemporary ways of coping outlined above, researchers have begun to study whether positive traits and emotions, such as joy, contentment, and curiosity, may act as potential mediators between stress and well-being (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Fredrickson & Joiner, 2002; Fredrickson & Losada, 2005). The study of positive emotions and traits has burgeoned within positive psychology, a field of study that strives to understand how individuals can flourish, or experience an optimal level of functioning characterized by growth and generativity (Keyes, 2002). Positive psychologists have recently bestowed significant

attention on the construct of gratitude and its relationship with well-being and life satisfaction (Emmons & Shelton, 2005; Fredrickson, 2000, 2004). While some researchers consider gratitude to be an affective trait (McCullough, Emmons, & Tsang, 2002), others conceptualize it as an emotional state (Fredrickson, 2004).

Those scholars who deem gratitude to be an affective trait define it as “a generalized tendency to recognize and respond with grateful emotion to the roles of other peoples’ benevolence in the positive experiences and outcomes that one obtains” (McCullough et al., 2002, p. 112). In the current study, gratitude is conceptualized in accordance with the items of the Gratitude Questionnaire (GQ-6; McCullough et al., 2002). The items emphasize gratitude as one’ intentional focus on the things he or she has to be grateful for when looking at one’s life or the world. The measure also highlights an individual’s ability to appreciate the people, events, and situations that have been part of his or her life history. The language of the items of the gratitude measure seems to most adequately capture the sense of wholehearted thankfulness, deep appreciation, and “baby love” that new mothers feel.

Fredrickson (2004) is a proponent of conceptualizing gratitude as an emotional state rather than as a trait. As a state, gratitude is conceptualized as feeling motivated to reciprocate aid after being helped by someone else (McCullough et al., 2004). In fact, it is one of the emotions that fits within her “broaden and build theory” of emotions (Fredrickson, 1998). This theory posits that positive emotions broaden people’s momentary thought-action repertoires and build their enduring personal resources, such as social networks and coping strategies, over time (Fredrickson 1998, 2001, 2004). Rather than just helping people to feel good in the present moment, positive emotions are

posited to contribute to an “upward spiral” of broadening attention and cognition, allowing individuals to be more flexible and think more creatively (Fredrickson & Joiner, 2002; Fredrickson & Losada, 2005). Fittingly, Fredrickson refers to the broadening and building effect of positive affect as “durable” because it not only implies health and well-being in the present, but helps to promote and produce optimal functioning in the future (Fredrickson & Losada, 2005). This seems to somewhat suggest that, over time, a person may develop more trait-like levels of gratitude.

While most studies have solely defined gratitude as either a trait or state, researchers suggest that more research is needed to determine how these trait and state levels of the construct might, indeed, interact (McCullough, Tsang, & Emmons, 2004; Wood, Maltby, Stewart, Linley, & Joseph, 2008a). In order to begin to study this potential interface, McCullough, et al (2004) examined this potential interface in two distinct sample populations, adults between the ages of 22 and 77 who had been diagnosed with neuromuscular disease, and college students between 18 and 44 years of age. For both populations, the researchers found that individuals’ daily experiences of trait-like gratitude and state-like gratitude and found that higher trait levels of gratitude were correlated with more numerous and powerful experiences of state gratitude. In addition, Wood, et al (2008a) conducted a three-phase study with undergraduate students between the ages of 18 and 59 from a British university and a college of further education to explore the relationship between state and trait levels of gratitude. In their article, the authors propose a model to begin to explain this relationship and suggest that individuals with higher levels of trait-like gratitude are more likely to appraise interactions during which they are helped as positive and beneficial. These positive appraisals cause the

experience of the state level of gratitude, thus connecting the trait and state levels through appraisals of benefit (Wood et al, 2008a).

Despite these recent developments in viewing gratitude, most researchers have historically sided with the conceptualization of gratitude as a trait, and the only validated gratitude scale measures the construct as such. As a result, in the current study, gratitude was conceptualized as a trait in order to be consistent about the ways in which it is typically conceptualized and operationalized. However, as noted above, researchers have most recently suggested that trait- and state-levels exist and interact with one another (McCullough et al., 2004; Wood et al., 2008a). Thus, the two levels are not completely distinct such that trait-level gratitude may function more like state-level if the individual is placed in a context that evokes their gratitude. Therefore, interpretations and discussions of findings for this construct reflect this in light of the ever-expanding theoretical landscape, with the hope that more contemporary measures may also follow. Moreover, the findings regarding gratitude in the current study were interpreted in light of research on other constructs that can take on both state- and trait-like characteristics. For instance, contemporary research on constructs like optimism and happiness, both of which have been debated for their state- and trait-like properties, suggests that these constructs can, indeed, be learned (Csikszentmihalyi & Hunter, 2003; Seligman, 2002). Thus, the possibility that the construct of gratitude is amenable to change, based on personal and environmental factors, was considered.

*Gratitude and positive psychological outcomes.* Whether defined as a trait, an emotion, or an interaction between the two, researchers have found convincing evidence that gratitude is related to positive psychological outcomes. For instance, Wood, Maltby,

Gillett, Linley, and Joseph (2008b) posit that gratitude leads to the development of social support during a common major life transition – the transition to college. These researchers also found that gratitude leads to improved levels of stress and depression, and that there is no evidence for a reverse or reciprocal relationship (Wood et al., 2008b). In a study of the relationships between character strengths and life satisfaction with a sample of over 5,000 adults, Park, Peterson, and Seligman (2004) discovered that gratitude was positively related to variables such as life satisfaction, vitality, and happiness, and negatively related to depression, and envy. Other researchers have found that gratitude seems to have a ‘moral’ or pro-social nature (Bartlett & DeSteno, 2006; McCullough et al., 2002; Tsang, 2006), and consequently, it is understandably correlated with interpersonal qualities like extraversion, agreeableness, forgiveness, and empathy (McCullough et al., 2002). What is more, gratitude can explain more variance in life satisfaction than traits like love, forgiveness, social intelligence, and humor, suggesting that a causal relationship may exist between gratitude and well-being (Wood, Joseph, & Linley, 2007).

*Relational nature of gratitude.* It is clear that gratitude is often touted for its relational characteristics (e.g., it can be expressed to and for another person), and is highly correlated with other positive interpersonal qualities (McCullough et al., 2002). Thus, it seems plausible that gratitude might be an especially salient construct to explore during the transition to motherhood since a mother is establishing a relationship with her new baby, and may be experiencing changes in her relationship with her partner, others and the world (Belsky et al., 1983; Cowan et al., 1985). Waugh and Fredrickson (2006) sought to explore how experiencing positive emotions might influence the establishment

and growth of new relationships. In their sample population of 247 first year undergraduate students, the researchers found that positive emotions predicted “self-other overlap,” or participants’ feelings of oneness and connectedness with new roommates, and their depth of understanding of roommates after one month. This finding remained significant even after the researchers controlled for participants’ extraversion. What is more, in measuring both positive *and* negative emotions, the researchers determined that it was not merely the absence of negative emotions, but indeed, the presence of positive emotions that predicted self-other overlap and complex understanding (Waugh & Fredrickson, 2006). In the context of motherhood, it seemed reasonable to wonder whether the presence of positive emotions like gratitude, along with facilitating postpartum adjustment, might actually help a mother feel a deeper connection with *her* new roommate – the baby!

Another reason why the construct of gratitude is a relevant variable to study in the context of women’s postpartum adjustment is that mothers often feel deeply grateful for their new babies (Ventura & Boss, 1983). Gratitude is an important component of what researchers refer to as “baby love,” or a mother’s all-encompassing adoration for her new baby (Leach, 1986). What is notable about “baby love” is that it persists above and beyond the postpartum feelings of emotional and physical exhaustion. Thus, as a meaningful aspect of baby love, the experience of gratitude is especially salient for a new mother, and may play an important role in her postpartum adjustment and overall life satisfaction. In fact, in a confirmatory factor analysis study of the ways in which new parents adapted to the challenges of caring for an infant, Ventura and Boss (1983) found that being thankful functioned as a major coping strategy. What is more, in exploring

coping strategies by gender, the researchers found that mothers, as compared to fathers, preferred the coping mechanism of being thankful (Ventura & Boss, 1983). Although Ventura and Boss (1983) make a meaningful contribution to the literature through their factor analysis of preferred coping strategies of new parents, their study does not explore whether these strategies are empirically related to the adjustment to parenthood. As a result, the present study built upon past research by investigating the relationship between gratitude and the outcome variables of postpartum adjustment and life satisfaction.

### *Life Satisfaction*

The majority of research on the first year of motherhood has focused on postpartum distress and depression (Freeman et al., 2005; O'Hara & Swain, 1996). Little research has focused on mothers' appraisals of their well-being and life satisfaction; in fact, no studies were found that measured life satisfaction specifically during the postpartum period. Of the studies that have investigated some aspect of motherhood and life satisfaction, most have been about either the absence of motherhood (as a result of infertility or choice) (McQuillan, Torres Stone, & Greil, 2007; Spurling, 2002), or the balance between motherhood and career pursuits (Pettis, 1988). The one study that explored the relationship between motherhood and life satisfaction using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) looked at mothers with grown children no longer living at home (Silverman, 1999). As a result, we know little about the presence of life satisfaction in first-time mothers during the postpartum period (Keyes, 2002).

Well-being can be divided into an affective component that includes positive and negative affect, and a cognitive component of evaluating one's life satisfaction (Stock,

Okun, & Benin, 1986). Otherwise said, one's evaluation of his or her satisfaction with life is the evaluative component of subjective well-being (Diener et al., 1985). Life satisfaction is based upon an individual's global judgment of the quality of his or her life (Pavot & Diener, 2008). It is a broad concept that includes the experience of such things as pleasant emotions, low amounts of negative moods, and high amounts of life satisfaction (Diener, Lucas, & Oishi, 2005). This construct can take on a more global and distal quality as opposed to the more transition-focused and proximal nature of postpartum adjustment (Diener et al., 2005). Research suggests that global life satisfaction is positively related to domain-specific satisfaction (in this case, postpartum adjustment), but that the global and domain-specific ultimately measure different things (Diener, Suh, Lucas, & Smith, 1999). Thus, it would be meaningful to assess how these two outcome variables, with different temporal qualities, function during the postpartum period. The measure of postpartum adjustment to be used in this study, the Postpartum Adjustment Questionnaire (O'Hara, Hoffman, Philipps, & Wright, 1992) is valuable because it allows one to assess new mothers' adjustment to parenthood within the first year postpartum. Along with measuring postpartum adjustment, a measure of life satisfaction is valuable in the present study because unlike postpartum adjustment, the construct of life satisfaction is relevant across the lifespan. Although the present study looked at life satisfaction at only one point in time, during the first year postpartum, our understanding of the antecedents of life satisfaction during the transition to motherhood contribute to the field's future understanding of the trajectory of this important construct over the longer course of motherhood.



Researchers have begun to explore the relationship between life satisfaction and other key variables in the proposed study, emotional approach coping and gratitude. For example, in a one-month longitudinal study, Stanton et al., (1994) found that female college students who used emotional approach coping strategies to deal with their most salient stressor showed enhanced adjustment and life satisfaction. In a study of lesbian's and gay men's experiences with disclosing their sexual orientation, Beals, Peplau, and Gable's (2003) research showed that the emotional processing component of emotional approach coping mediated the relationship between disclosure-related stress and "end of the day" life satisfaction. Finally, in a study of character strengths with a sample of over 5,000 adults, Park, Peterson, and Seligman (2004) discovered that gratitude was positively related to variables such as life satisfaction, among other positive variables.

As is evidenced by the research outlined above, life satisfaction is a most popular and timely outcome variable for those scholars invested in the study of well-being and positive psychology (Diener et al., 2005). Although the benefits of life satisfaction might seem self-evident, it is worth noting that, indeed, life satisfaction is highly correlated with other positive variables such as goal self-efficacy and goal progress (Lent et al., 2005), dispositional optimism (Scheier & Carver, 1993), and meaning in life (Steger, Frazier, Oishi, & Kaler, 2006). Thus, in the context of investigating what helps new mothers to flourish rather than languish during the first year postpartum, the integration of life satisfaction seems entirely fitting and necessary (Keyes, 2002).

Each of the constructs included in the present study, emotional approach coping, gratitude, postpartum distress and depression, postpartum adjustment, and life satisfaction make a theoretically meaningful contribution to our understanding of how first-time

mothers can optimize their transition to motherhood. To review, the stress and coping model (Lazarus & Folkman, 1984) serves as a framework for the current study.

Gratitude, conceptualized as a psychological trait, can be considered as a resource for coping as psychological traits are our “front line” response system to stress. From the individual differences framework, our basic psychological characteristics make up the lens through which we view our stressors, and influence how we choose to cope with them (Lazarus, 1993). Additionally, emotional approach coping, as a positive and proactive coping strategy, also fits well within the stress and coping model. The current study looked at stress and coping from a strengths-based perspective – a point of view that aligns well with the goals of operating within the context of positive psychology.

The aim of the current study was to explore the direct relationships between the study variables, as well as to investigate whether emotional approach coping mediates the relationship between postpartum distress and the positive outcomes of postpartum adjustment and overall satisfaction with life. The present study also explored whether emotional approach coping mediates the relationship between gratitude and the outcome variables of postpartum adjustment, distress, and life satisfaction. As there is a dearth of research on the healthy outcome of postpartum adjustment and, more generally, overall satisfaction with life during the first year after a baby’s birth, the current study adds valuable knowledge to the current literature.

## Chapter 3

### Statement of the Problem

The purpose of this research was to explore the relationship between coping, gratitude, first time mothers' adjustment to parenthood, distress, and life satisfaction. It has relevance for the general public, as 82% of the population of women in the United States in 2004 had become mothers by the time they were between 40 and 44 years old (United States Census Bureau, 2005). Although becoming a mother is generally thought of as a positive experience, research suggests that the transition to parenthood can also present many challenges, and that new mothers struggle more than new fathers (Belsky, Spanier, & Rovine, 1983; Cowan et al., 1985; Mercer, 2004). Consequently, this study focused specifically on mothers' experiences during the postpartum period.

Historically, researchers have examined the relationship between having a baby and a decline in women's mental health. In particular, studies have highlighted the "baby blues" and mild to severe levels of postpartum distress and depression as negative consequences of becoming a mother (Cox et al., 1999). Aside from changes in mood, researchers have documented that first time mothers also experience changes in their interpersonal relationships and in their relationships with themselves (Kumar et al., 1984; Mercer, 2004). Interpersonally, a new mother may experience changes in her relationship with her partner (Belsky et al., 1983), along with a striking increase in the amount of household work and baby care that she takes on (Huston & Holmes, 2004). Intrapersonal adjustments often express themselves as shifts in how new mothers perceive and define themselves as women (Deutsch et al., 1988), as well as more global changes in the way a woman sees herself and the world (Cowan et al., 1985).

Until just a few decades ago, researchers interpreted these adjustments to mean that the transition to motherhood was a time of crisis in women's lives (Osofsky, 1982). Since then, the adjustment to becoming a parent has been classified as a major life transition, and as such, a normative process of adaptation (Cowan & Cowan, 1988; Kalmuss et al., 1992). Some researchers have portrayed the process as one of the most significant developmental tasks of adulthood (Dion, 1995). Conceptualizing this transition as a normative process encourages and compels researchers to consider the ways in which becoming a mother is an opportunity for personal growth (Cowan & Cowan, 1988). However, there is a dearth of literature about the variables that may mediate the path between stress and growth, and consequently, we do not know enough how new parents successfully adapt to, and even thrive during, this period of significant change. In particular, little research has explored the role that constructs associated with positive psychology might optimize women's adjustment to parenthood and help them to flourish (Keyes, 2002). Consequently, the current research focused on two constructs that are central to positive psychology, namely, gratitude and emotional approach coping. It sought to flesh how these positive constructs relate to new mothers' ability to healthfully adjust to the postpartum period, and to perceive their lives as satisfying.

#### *Research Hypotheses*

Based upon the rationale outlined above, the following hypotheses were posited between the criterion variables, emotional approach coping and gratitude, and the outcome variables, postpartum adjustment, life satisfaction. Distress was explored as both a criterion and outcome variable.

***Hypothesis 1a. Emotional approach coping will correlate positively with postpartum adjustment.***

***Hypothesis 1b. Emotional approach coping will correlate positively with life satisfaction scores.***

***Hypothesis 1c. Emotional approach coping will correlate negatively with distress.***

Although emotional approach coping is a relatively novel coping strategy that has not yet been investigated during the transition to motherhood, researchers have explored this form of coping with women who are struggling with health-related stressors and crises (Stanton et al., 2005). For instance, research suggests that coping through emotional approach is related to more positive adjustment outcomes for women experiencing infertility (Terry & Hynes, 1998). Furthermore, emotional approach coping is also uniquely associated with lower psychological distress in clients adjusting to breast cancer treatment (Stanton et al., 2000). In a study about lesbians' and gay men's daily experiences with disclosing their sexual orientation emotional approach coping, particularly the emotional processing subscale, was related to greater life satisfaction (Austenfeld & Stanton, 2004). Thus, hypotheses that postulate a relationship between emotional approach coping, postpartum adjustment, life satisfaction, and distress during the postpartum period were legitimately posed.

***Hypothesis 2a. Gratitude will be positively correlated with postpartum adjustment.***

***Hypothesis 2b. Gratitude will be positively correlated with life satisfaction.***

***Hypothesis 2c. Gratitude will be negatively correlated with distress.***

Within the past decade, researchers have found evidence that gratitude is related to positive psychological outcomes (Park et al., 2004). Wood, Maltby, Gillett, Linley and Joseph (2008a) found that gratitude naturally leads to reduction of stress and improved depression symptoms. Park, Petersen, and Seligman (2004) discovered that gratitude was positively related to variables such as life satisfaction, vitality, and happiness, and negatively related to depression, and envy. Gratitude can explain more variance in life satisfaction than traits like love, forgiveness, social intelligence, and humor, suggesting that a causal relationship may exist between gratitude and well-being (Wood et al., 2007). Finally, in a qualitative analysis of the life stories of young Chinese immigrants who successfully adapted to life in Hong Kong, the researchers found that the theme of gratitude was associated with feelings of adjustment during this major life transition (Lam & Chan, 2004). This study was one of very few analyses, all qualitative, to explore the relationships between the salient theme of gratitude and adjustment to a major life transition.

### *Research Questions*

Along with the hypotheses above, the following research questions were also explored since several of the variables included in this study have not yet been examined together.

#### ***Research Question 1. How will scores on emotional approach coping relate to scores on gratitude?***

Based upon a review of the literature, it does not appear as though these two specific variables, emotional approach coping and gratitude, have yet been studied together. However, gratitude has been positively correlated with positive reinterpretation

and growth and active coping and planning, variables that share a likeness with emotional approach coping. In addition, it has been negatively correlated with behavioral disengagement, self-blame, substance use, and denial (Wood et al., 2007).

***Research Question 2a. To what extent do emotional approach coping, gratitude, and distress each predict unique variance in postpartum adjustment?***

***Research Question 2b. To what extent do emotional approach coping, gratitude, and postpartum adjustment each predict unique variance in life satisfaction?***

***Research Question 2c. To what extent do emotional approach coping, gratitude, and postpartum adjustment each predict unique variance in distress?***

As noted above, the collective relationship between the study variables had not previously been explored in the literature. Although research has shown that coping is positively related to well-being (Lazarus & Folkman, 1984; Wood et al., 2007) and postpartum health (Terry, 1991), and is negatively related to psychological distress (Stanton et al., 2000), it is unclear as to how the criterion variables, as a group, will relate to each of the outcome variables.

***Research Question 3a. To what extent does emotional approach coping mediate the relationship between distress and postpartum adjustment?***

***Research Question 3b. To what extent does emotional approach coping mediate the relationship between distress and life satisfaction?***

Researchers have explored the relationship between emotional approach coping, distress and depression, and positive adjustment outcomes among women who are struggling with health-related stressors and crises (Stanton et al., 2005). These studies

have investigated the direct relationship between emotional approach coping and both positive and negative adjustment outcomes, but have not looked at emotional approach coping as a mediating variable between distress and adjustment. For instance, researchers have suggested that coping through emotional approach is related to more positive adjustment outcomes for women experiencing infertility (Terry & Hynes, 1998). In addition, emotional approach coping is also uniquely associated with lower psychological distress in clients adjusting to breast cancer treatment (Stanton et al., 2000). In a study about lesbians' and gay men's daily experiences with disclosing their sexual orientation, emotional approach coping, particularly the emotional processing subscale, was related to greater life satisfaction (Austenfeld & Stanton, 2004).

The present study added to the literature by examining emotional approach coping as a mediator, and explicitly measuring distress as the predictor variable, and postpartum adjustment and life satisfaction as the outcomes. The majority of past studies, in contrast, have implicitly assumed that women challenged with infertility or breast cancer, for instance, are distressed, but have not overtly measured emotional approach coping as a mediator between distress and positive adjustment outcomes.

***Research Question 4a. To what extent does emotional approach coping mediate the relationship between gratitude and postpartum adjustment?***

***Research Question 4b. To what extent does emotional approach coping mediate the relationship between gratitude and life satisfaction?***

***Research Question 4c. To what extent does emotional approach coping mediate the relationship between gratitude and distress during the postpartum period?***



In a study with college students, coping was found to partially mediate 11% of the relationship between gratitude and satisfaction with life, and 51% of the relationship between gratitude and stress (Wood et al., 2007). In this study, the researchers measured stress with the Perceived Stress Scale (Cohen & Williamson, 1988); although this is a measure of stress and not distress, some items measure feelings of anger, nervousness, lack of control, and the inability to cope with stress. Since these symptoms of stress share qualities with some of the feelings related to distress, the results have been included as being somewhat relevant to the present study. Thus, there is beginning support for the idea that emotional approach coping may mediate the relationship between gratitude and the outcome variables in the current study with first-time mothers.

At this time, a review of the literature does not suggest that moderation hypotheses are warranted. Thus, in order to preserve the power of this study and to limit an already extensive group of hypotheses and research question, only research questions regarding mediation, which are supported by the literature, were conducted (Wood et al., 2007; Wood et al., 2008a).

Finally, the following two research questions meant to address the open-ended questions that appeared in the study.

***Research Question 5a. How will participants respond to the open-ended question, “Please describe an instance or example related to becoming a mother that has been most stressful for you,” and how will they rate how distressing this instance was for them?***

***Research Question 5b. How will participants respond to the open-ended question, “Please describe an instance or example of when you felt grateful for being a mother?”***

For Research Question 5a, the goal of asking how distressing this instance was for participants is to get a sense of the level of postpartum distress that these women may be experiencing, will be evidenced by the incident they choose to recount. This method for eliciting how distressing or upsetting an experience is has been used by Hoffman and colleagues (2004) in their study of stressful events related to the September 11<sup>th</sup> tragedy, and by Portello and Long (2001) who explore women manager’s appraisals of interpersonal workplace stress. Both studies employed this methodology as an approach to explore how people appraise and cope with stressful events; consequently, the measure is not domain specific and can be used to assess the level of distress across a variety of different experiences and transitions.

In summary, the present study sought to understand the relationships between the predictor variables of emotional approach coping, gratitude, and distress, and the response variables of postpartum adjustment, life satisfaction, and distress during the postpartum period. The research hypotheses postulated a positive relationship between emotional approach coping and the outcomes variables of postpartum adjustment and life satisfaction, and a negative relationship between emotional approach coping and distress. Likewise, a positive association was hypothesized between gratitude and the outcome variables of postpartum adjustment and life satisfaction, and a negative association between gratitude and distress.

In addition, a review of the literature suggests that the variables of emotional approach coping and gratitude have not yet been studied together, so the current study sought to explore their relationship. Furthermore, this research sought to discern the predictive value of the variables of emotional approach coping, gratitude, and distress on postpartum adjustment. The study explored whether emotional approach coping, gratitude, and postpartum adjustment significantly predict life satisfaction. The predictive value of emotional approach coping, gratitude, and postpartum adjustment of distress was examined. This study sought to test the statistical significance of emotional approach coping as a potential mediator between distress and the outcome variables of postpartum adjustment and life satisfaction. In addition, it explored whether emotional approach coping mediates the relationships between gratitude and the outcome variables of postpartum adjustment, life satisfaction, and distress. Finally, the study explored how women respond to open-ended questions about their experiences with distress and gratitude in the context of first-time motherhood.

It was not within the scope of the current study to propose and validate an all-encompassing model of postpartum adjustment. Rather, this study sought to explore the relationships between variables that have not yet been looked at together during this major life transition.

## Chapter 4

### Method

#### *Design*

To explore the hypotheses and research questions, this study predominantly employed a correlational field design. The open-ended questions about new mothers' experiences with distress and gratitude suggest a limited mixed-methods design. The choice of a correlational field design was meant to optimize our understanding of women's postpartum experiences as they occur in a natural setting. A brief discussion of the strengths and limitations inherent in the design of this study is included in the limitations section.

Pearson's correlations determined the relationships between individual criterion variables. Multiple regression analyses were conducted on postpartum adjustment, life satisfaction, and distress to determine how the predictor variables related to these outcome variables. In conjunction with multiple regression analyses, mediation analyses were conducted to determine whether emotional approach coping functioned as a mediator between predictor and outcome variables. Post-hoc analyses examined the relationship between postpartum psychotherapy and key study variables. Post-hoc analyses also examined whether key variables served as mediators. Finally, participants' responses to the two open-ended questions were analyzed to illuminate common themes in qualitative responses.

For this study, a minimum of approximately 100 participants was recommended based on an a priori power analysis specifying a medium effect size, an alpha level of 0.05, and power of 0.80 (Cohen, 1992). For a medium effect size, and alpha level of

0.01, and power of 0.80, a minimum of approximately 130 participants was recommended. The present study ended up with a sample of 152 participants.

### *Participants*

Participants were 152 women with a minimum age of 18 who self-identified as having given birth to their first child in the past year. This parameter was important based on the importance of the first year in term of postpartum adjustment (Cowan & Cowan, 1988). Participants were recruited through online forums that focus on motherhood (e.g., primarily momslikeme.com), via emails to the faculty, staff, and students at the universities with which the researcher is affiliated, and through snowball sampling (Monge & Contractor, 1988). Based upon the fact that new mothers often develop connections with each other, it was likely that participants recruited other subjects from among their acquaintances, thus promoting snowball sampling (Monge & Contractor 1988). A few mothers replied to the survey to say that they had passed it along to people they knew.

In total, two hundred and four participants completed the survey. Seven individuals came to the survey website, gave consent so that they could view the survey, and then exited the site before completing any of the measures. Data from participants missing more than 15% of items was discarded (George & Mallery, 2009). In the current study, 43 women failed to complete more than 15% of the survey items, totaling 50 incomplete surveys out of 204. Thus, the 24.5% attrition rate represents participants who never began or only partially completed the survey. If participants' responses were missing fewer than 15% of items, the missing values were replaced using the

participants' mean score for that particular scale. A total of 54 missing values were calculated for the current sample.

The only trend in the missing data was that some participants who only completed part of the survey stopped responding about half-way through, after the Brief COPE (Carter, 1997) and before Questionnaire (GQ-6; McCullough et al., 2002). There may have been something about either of these surveys that caused them to stop; the 28-item Brief COPE is one of the longest measures in the survey packet, and may have deterred participants from continuing. Aside from this trend, some participants may have been home caring for their babies, for instance, and could have stopped the survey due to the need to care for him or her. In addition, the open-ended questions revealed that one participant had adopted her baby, and another participant was not a first-time mother, so two additional participants' data were removed from the analyses.

The participants ranged in age from 19 to 44, with a mean age of 28.9 years of age ( $SD=4.55$ ). Of the entire sample, 3 participants identified as African American (2.0%), 2 identified as Asian American/Pacific Islander (1.3%), 4 were Asian Indian/Pakistani (2.6%), 3 identified as Biracial/Multiracial (2.0%), 8 were Hispanic/Latina (5.3%). One hundred and thirty-five participants identified as White/European American (88.8%), while 1 selected Foreign National (0.7%) and 5 did not report their racial/ethnic identities (3.3%). About 40% of the sample reported completing college, with just over 30% reported completing graduate school. Just over 40% percent of the sample reported a household income of less than \$60,000, while just under 30% stated an income of \$60,000-100,00 and approximately 25% disclosed making more than \$100,000. Just under 40% of the sample reported full-time

employment, with around 20% reporting unemployment, and another 20% stated that they worked part-time. About 10% of the sample reported being on maternity leave. For a more comprehensive picture of the participants' demographic information, see Table 1. Please note that for some items, participants could select more than one category, so the percentages do not necessarily sum to 100.

Demographic data was also gathered in regards to participants' experiences with fertility, pregnancy, and the postpartum period. Some participants did not reply to all questions, and consequently, some percentage totals do not add up to 100%. For instance, participants were asked to report how long it took them to conceive their baby, and they responded as follows: 40% took three months or less to conceive; about 15% took longer than three months, but less than a year; and it took another 15% of participants over a year to conceive. Eight percent of participants received fertility treatments. For the majority of the sample, nearly 70%, their pregnancy was planned.

In terms of the babies, their mean age was 6.84 months ( $SD=3.61$ ), with the following distribution of their ages: about 25% of babies were less than three months old; approximately 15% were four to six months old; about 25% were seven to nine months old; and 30% were between ten months and one year of age. Thus, there was considerably variability in terms of where the mothers were in their journey through the first year postpartum. Finally, about half of the sample reported having experienced depression (the questionnaire just asked about whether mothers had ever experienced depression, so it cannot be assumed that these women have been formally diagnosed with clinical depression or whether they have just felt "depressed" for a short period of time). A small group reported having participated in psychotherapy during their pregnancy or

<b>Table 1. Demographic Characteristics of Participants (N=152)</b>		
<b><i>Race/Ethnicity</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
African American/Black	3	2.0%
Asian American/Pacific Islander	2	1.3%
Asian Indian/Pakistani	4	2.6%
Biracial/Multiracial	3	2.0%
Hispanic/Latino(a)	8	5.3%
Middle Eastern/Arab	0	0.0%
Native American/Native Alaskan	0	0.0%
White/European American	135	88.8%
Foreign National	1	0.7%
Other	0	0.0%
Not Reported	5	3.3%
<b><i>Age</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
18-25	33	21.6%
26-30	63	41.4%
31-35	38	24.9%
36-40	9	5.9%
41-45	2	1.4%
Not Reported	7	4.6%
<b><i>Highest Level of Education Completed</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Elementary School (K-8)	0	0.0%
High School	13	8.6%
Some College (e.g., AA degree)	22	14.5%
College	61	40.1%
Graduate School	50	32.9%
Other	1	0.7%
Not Reported	5	3.3%
<b><i>Annual Household Income (before taxes)</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Less than 30,000	18	11.8%
30,000-59,999	45	29.6%
60,000-99,999	44	28.9%
100,000-149,999	25	16.4%
150,000 or higher	12	7.9%
Not Reported	8	5.3%
<b><i>Relationship Status</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Married to my partner	126	82.9%
Not married to, but living with my partner	20	13.2%
Not Reported	6	3.9%



<b>Table 1. Demographic Characteristics of Participants (cont.)</b>		
<b><i>Gender of Partner</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
Male	133	87.5%
Female	13	8.6%
Not reported	6	3.9%
<b><i>Duration of Relationship</i></b>		
1-5 years	68	44.7%
6-10 years	63	41.4%
11-15 years	15	9.9%
16-20 years	1	0.7%
Not reported	5	3.3%
<b><i>Current Employment Status</i></b>		
Not employed	36	23.7%
Employed full-time	59	38.8%
Employed part-time	28	18.4%
Maternity leave	15	9.9%
Student	8	5.3%
Not Reported	6	3.9%
<b><i>Employment Status (before baby's birth)</i></b>		
Not employed	7	4.6%
Employed full-time	110	72.4%
Employed part-time	18	11.8%
Student	11	7.2%
Not reported	6	3.9%
<b><i>Duration of Maternity Leave</i></b>		
0-3 months	89	58.6%
4-7 months	14	9.2%
8-11 months	2	1.3%
12-15 months	4	2.6%
Not reported	43	28.3%

during the postpartum period (7.9% and 13/2%, respectively). Additional information about participants' fertility, pregnancy, and postpartum histories is presented in Table 2. Again, please note that for some items, participants could select more than one category, so the percentages do not necessarily sum to 100.

<b>Table 2. Fertility, Pregnancy, and Postpartum Experiences (N=152)</b>		
<b><i>Age of Baby</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
1-3 months	39	25.6%
4-6 months	23	15.1%
7-9 months	39	25.6%
10-12 months	46	30.3%
Not Reported	5	3.3%
<b><i>Gender of Baby</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Male	77	50.7%
Female	70	46.1%
Not Reported	5	3.3%
<b><i>Planned Pregnancy</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Yes	103	67.8%
No	44	28.9%
Not Reported	5	3.3%
<b><i>Time to Conception (if pregnancy was planned)</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
0-3 months	61	40.3%
4-7 months	19	12.5%
8-11 months	4	2.7%
1 year or longer	23	15.3%
Not Reported	45	29.6%
<b><i>Experienced Miscarriage</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Yes	18	11.8%
No	127	83.6%
Not Reported	7	34.6%
<b><i>Received Fertility Treatments</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Yes	12	7.9%
No	127	83.6%
Not reported	6	3.9%
<b><i>Mother's Health During Pregnancy</i></b>		
	<b><i>N</i></b>	<b><i>Percentage</i></b>
Excellent	73	48.0%
Good	56	36.8%
Fair	16	10.5%
Poor	1	0.7%
Not reported	6	3.9%

<b>Table 2. Fertility, Pregnancy, and Postpartum Experiences (cont.)</b>		
<b><i>Overall Difficulty of Labor and Delivery</i></b>	<b><i>N</i></b>	<b><i>Percentage</i></b>
Not at all difficult	44	28.9%
Slightly difficult	44	28.9%
Fairly difficult	23	15.1%
Very difficult	23	15.1%
Extremely difficult	12	7.9%
Not reported	6	3.9%
<b><i>Mother's Current Health Status</i></b>		
Excellent	55	36.2%
Good	81	53.3%
Fair	11	7.2%
Poor	0	0.0%
Not reported	5	3.3%
<b><i>Baby's Health (at birth)</i></b>		
Excellent	112	73.7%
Good	25	16.4%
Fair	8	5.3%
Poor	1	0.7%
Not reported	6	3.9%
<b><i>Baby's Health (currently)</i></b>		
Excellent	139	91.4%
Good	7	4.6%
Fair	1	0.7%
Poor	0	0.0%
Not reported	5	3.3%
<b><i>Mother's History of Depression</i></b>		
Yes	74	48.7%
No	72	47.4%
Not reported	6	3.9%
<b><i>Participation in Psychotherapy (since baby's birth)</i></b>		
Yes	20	13.2%
No	127	83.6%
Not reported	5	3.3%

## *Measures*

*Demographics.* The researcher designed a demographic questionnaire to request information about participants' age, ethnicity, education, occupation, and socioeconomic status. Items will also inquire about the age, gender, and health of the baby. It asked about whether the couple planned to have a baby, and if so, how long between when the couple started trying to conceive and when they became pregnant, along with whether they participated in infertility treatments. The questionnaire included questions about the mother's health during pregnancy and in the postpartum period, and assessed how soon the mother returned to work (if at all). Finally, the survey asked participants about whether they participated in individual or group therapy during pregnancy or after the birth of their baby. (See Appendix D).

*Emotional approach coping.* The Emotional Approach Coping Scale (EAC; Stanton, Kirk, Cameron, & Danoff-Burg, 2000b) was used to measure emotional approach coping. At the authors' instruction, this instrument was embedded in the Brief COPE, meaning that its items were dispersed within a more diverse coping measure. This ensured that participants were not able to detect that the study's main focus was on emotional approach coping over and above other coping strategies. The Brief COPE (Carver, 1997) is a 28-item measure of adaptive and maladaptive coping skills. Example items are, "I've been criticizing myself," and "I've been taking action to try to make the situation better." Items of this measure are assessed on a scale of 1 to 4 where 1 represents "I don't do this at all" and 4 represents "I do this a lot." The measure's directions were modified to make them domain-specific to the postpartum period. The data from the Brief COPE were not analyzed in the present study, as the measure was

used in accordance with directions from the authors of the Emotional Approach Coping Scale (Stanton et al., 2008b). The current study's hypothesis and research questions are based on the Emotional Approach Coping Scale.

This eight-item Emotional Approach Coping Scale contains two separate subscales, Emotional Processing and Emotional Expression, each with four items. An example item from the Emotional Processing subscale is, "I delve into my feelings to get a thorough understanding of them." The Emotional Expression subscale contains items such as, "I allow myself to express my emotions." Items are rated on a scale of 1 to 4 where 1 represents "I don't do this at all" and 4 represents, "I do this a lot," and participants are asked to evaluate their agreement with these statements in relation to their experiences within the past month. The measure's directions were modified to make them domain-specific to the postpartum period. Stanton et al. (2000b) recommend taking an average of each participant's scores for data analysis, and thus, the possible range of scores for this measure is 1-4.

The EAC was developed with a study of 171 undergraduate students. Factor analysis was administered on a batch of coping items, and the EAC developed as a measure of coping that is not confounded with self-deprecation (Stanton et al., 2000b). Overall, the measure demonstrates high internal consistency reliability with alpha levels between .72 and .94, and four-week test-retest reliability of  $r = .72$  to  $.78$ . The subscales are related to each other ( $r = .75$ ), and to other adaptive coping strategies, namely: positive reappraisal, seeking social support, and problem-focused coping ( $r > .40$ ). For women, the emotional processing subscale is significantly correlated with the Beck Depression Inventory ( $r = -.26$ ), the State-Trait Anxiety Inventory ( $r = -.25$ ), the

Rosenberg Self-Esteem Scale ( $r = -.21$ ), and the Satisfaction With Life Scale ( $r = .31$ ) (Stanton et al., 2000b). The emotional expression subscale is significantly correlated with the Ambivalence over Emotional Expressiveness Scale ( $r = -.44$ ), the Hope Scale ( $r = .32$ ), the Satisfaction with Life Scale ( $r = .26$ ), and the Silencing the Self Scale ( $r = -.32$ ), a correlate measure of depression (Stanton et al., 2000b). Chronbach's alpha for the current sample was .89.

*Distress.* The Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior, Huba, Brown, & Reback, 1993) was used to measure distress as manifested through distressed and depressive feelings and behaviors. This scale is appropriate for measuring the presence of symptoms of distress and depression in the general population over the past seven days. The CES-D-8 is an abbreviated, eight-item version of the original, 20-item, CES-D. The CES-D demonstrated an internal consistency of .85 in the general population and .90 in clinical populations (Radloff, 1977). The CES-D-8, which was found to have a correlation of  $r = .93$  with the full CES-D, has a coefficient alpha of .86, and was developed from a community sample of 411 women (Melchior et al, 1993). In a second community sample, the CES-D-8 demonstrated a positive correlation of .54 with the Depression scale of the Basic Personality Inventory (Melchior et al, 1993).

The brief, eight-item instrument was used in the present study. Participants were asked to rate their feelings and behaviors, over the past week, on a scale of 1 to 4 where 1 represents "rarely or none of the time" (or less than one day) and 4 represents "all of the time" (or in the past five to seven days). An example item is "I felt that I could not shake off the blues even with help from my family or friends." Participants' composite scores on the instrument are computed by summing the values they endorse for each item.

Scores may range from 8 to 32, with a score of 16 or higher indicating the presence of distress and depressive symptomology. In the current sample, 34 participants, 22.4% of the sample, had a score of 16 or higher. Chronbach's alpha for the current sample was .90.

*Gratitude.* The Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002) was used to assess dispositional gratitude. As noted in the literature review, this is the only validated measure of gratitude available, despite the current debate over whether gratitude functions as a state or a trait (McCullough et al, 2004; Wood et al, 2008). This six-item measure asks participants to rate the intensity and frequency of their experience with gratitude on a scale of 1 to 7 where 1 represents "strongly disagree" and 7 represents "strongly agree." Scores are calculated as sum totals and can range from 6 to 42. An example item is, "As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history."

The measure was created through exploratory factor analysis and four iterations of confirmatory factor analysis, and demonstrates robust factor structure. It was developed with 238 undergraduate psychology students and cross-validated with 1,228 adults volunteers, predominantly women, who were visitors to various websites about spirituality and health. The GQ-6 has high internal consistency reliability with alphas between .82 and .87. In addition, validity has been shown through positive correlations with measures of optimism, hope, life satisfaction, spirituality, empathy and prosocial behavior, and negative correlations with depression and anxiety (McCullough et al., 2002; Park et al., 2004). In addition to the GQ-6, participants were asked to respond to the open-ended question, "Please describe an instance when you felt grateful for being a

mother.” The purpose of this question was to elucidate the relationship between motherhood and gratitude. Cronbach’s alpha for the current sample was .82.

*Postpartum Adjustment.* The Postpartum Adjustment Questionnaire (PPAQ; O’Hara et al., 1992) measured mothers’ functioning during the first year after the birth of their baby. This 61-item measure assesses the social adjustment of women in seven major role areas: (a) work in the home; (b) work outside of the home; (c) relationships with friends; (d) relationships with relatives; (e) relationship with baby; (f) relationship with other children; and (g) relationship with spouse. Within each of the subscales above, behavioral, cognitive, and affective dimensions of functioning are measured in terms of the following: (a) time spent engaging in the activity; (b) mother’s evaluation of her performance; (c) mother’s perception of how others evaluate her performance; and (d) whether she perceives a change in the quality of her performance since the birth of her baby.

O’Hara et al. (1992) permit the researcher to use the entire questionnaire or to choose to use only the subscales that feel most relevant, independent of other subscales. Since the length of the entire survey was prohibitive in the current study, two subscales, “Change in Role Performance” and “New Baby” were used. The Change in Role Performance subscale assesses how participants’ roles and relationships may have changed since the birth of their baby, and includes 13 items. An example item is, “How have your relationship(s) with your close friends changed since your baby was born?” One item on this scale asks about caring for additional children; it was not used as this study is for first-time mothers only. Additionally, the New Baby subscale addresses mothers’ feeling about their performance as parents, and contains 9 items. An item on



this subscale is, “How would you evaluate the quality of the time you spend participating in play activity with your baby?” Most items are scored on a scale of 1 to 5 where 1 represents “better than average or optimal functioning,” and 5 represents “very poor functioning.” The researcher may average participants’ scores across all subscales to calculate a composite adjustment score. The authors of the scale also permit the researcher to determine a composite average adjustment score for each subscale. Scores on the New Baby subscale can range from 1 to 5.

The PPAQ was normed on a group of 124 women whose average age was 27.6 years and mean education level was 14.2 years. The total PPAQ score significantly correlates with each of the subscales, save that of the “Other Children” subscale. Psychometric properties for the composite scale show a very solid Cronbach’s alpha of .86, and the test-retest reliability data was moderately stable with an  $r$  of .69 over one month. The current sample had a Cronbach’s alpha of .68 for the composite of the two subscales, “Change in Role Performance” and “New Baby,” taken together. Taken separately, the current sample had a Chronbach’s alpha of .66 for the “Change in Role Performance” subscale, and an alpha of .75 for the “New Baby” subscale. Due to the low internal consistency that results from the composite score, and from the “Change in Role Performance” subscale alone, only the “New Baby” subscale was used to measure postpartum adjustment. It, alone, is a viable measure of postpartum adjustment as it purports to measure a mother’s confidence and comfort in her role with her new baby.

*Life Satisfaction.* The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a five-item measure that assesses the positive cognitive components of subjective well-being. Participants were asked to rate their agreement with items on a seven-point scale

where 1 represents “strongly disagree” and 7 represents “strongly agree.” Participants’ scores are computed as sum totals, and can range from 5 to 35. An example of an item on the scale is, “In most ways, my life is close to my ideal.” The reliability and validity of the SWLS have been substantiated in numerous studies, as this measure is widely used (Steger & Kashdan, 2006). The measure has a high Cronbach’s alpha of .87 and a test-retest correlation of  $r = .82$  over two months (Pavot & Diener, 1993). Cronbach’s alpha for the current sample was .93. In addition, Pavot and Diener (1993) have reported strong convergent and discriminant validity. Negative correlations have been found between the SWLS and measures of distress and depression, such as the Beck Depression Inventory (Blais, Vallerand, Pelletier, & Briere, 1989).

### *Procedure*

Participants were recruited through online forums that focus on motherhood (e.g., primarily momslikeme.com), and via emails to the faculty, staff, and students at university with which the researcher is affiliated. The primary online forum from which participants were recruited has a national forum, and ninety-two “sub-forums” in many states and cities around the country. Each “sub-forum” is a separate website. In order to obtain permission to post the survey on the websites, the researcher emailed the site administrators for each “sub-forum” in each state and city. The researcher sent out as many as three emails to each site administrator to request permission to post the survey, and if the site administrator did not reply to the third email, the researcher did not post on that particular state or city’s forum. Of the ninety-two site administrators that were emailed, twenty-nine agreed to allow me to post the research survey on their site.

The momslikeme.com site was of particular interest to the current study because it did include so many states and cities within its reach, thus offering the opportunity to recruit a diverse pool of participants. Of all of the motherhood support websites that the researcher contacted, the momslikeme.com site was also the most responsive to the request to post the survey. This, [www.momslikeme.com](http://www.momslikeme.com) served as the main source of systematic recruiting, as the researcher reposted the survey on each site over a period of six months, about every three weeks. Two other motherhood support group websites also agreed to allow me to post the survey, namely, MOMSense (MOPS) and PunkyMoms. The full list of websites to which I wrote to request permission to post the research survey appears in Appendix A.

Based upon the fact that new mothers often develop connections with each other, it is likely that some participants recruited or passed on the survey link to other subjects from among their acquaintances, thus promoting snowball sampling (Monge & Contractor 1988). This recruitment technique is also likely to have occurred as individuals (e.g., faculty, staff, and students at the researcher's university) who received an email notifying them about the study were asked to pass it along to people they know who were eligible to participate.

The emails and fliers referenced above included information about the purpose of the study, who was eligible to participate, incentives for participation (e.g., name entered into a raffle for a gift certificate), how to access the study, and how to contact the researchers. As noted, women who were parenting a baby under the age of one year were eligible to participate. Participants accessed the survey on a website designated by the researchers. Once participants accessed the survey, they were reminded of the

parameters of eligibility outlined above. Next, the website displayed a document of informed consent, and participants were asked to read the document and agree to anonymously and voluntarily participate in the study. The informed consent also told participants that the survey should take approximately 20 minutes to complete, along with how to contact the researchers should they have questions or concerns. It described the purpose of the study as an effort to better understand women's experiences within their first year of parenting their first child.

After participants agreed to the informed consent, they were asked to fill out each of the measures included in the study. These measures included: the Demographic Questionnaire, created by the researchers; the Brief COPE (Carter, 1997), a shortened version of the full COPE (Carter et al., 1998); the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b); the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993); the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002); the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992); and the Satisfaction with Life Scale (SWLS; Diener et al., 1985).

In addition, precautions were taken to avoid sensitization due to order effects. For instance, the outcome measures, namely, the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992) and the Satisfaction with Life Scale (SWLS; Diener et al., 1985), were presented to participants before the instruments measuring the predictor variables. Responding to the instruments that measure the predictor variables first could adversely affect how participants respond to the measures representing the outcome variables. Additionally, the researchers alternated the shorter instruments with the longer instruments in order to prevent participant fatigue or boredom. Finally, the demographic

questionnaire was presented at the end of the series of measures so that answering questions about demographic data would not influence participants' responses on instruments related to the key variables of the study.

Once participants had completed all measures, they were thanked for their participation, offered a brief description of the purposes of the study, and reminded of how to contact the researchers. In addition, they were offered information regarding postpartum support resources in the event that answering the survey caused them distress. For their time and participation, participants were directed to a separate survey to ensure confidentiality, and could enter their email address into a raffle for a \$50 gift certificate to their choice of Serena and Lily, an online baby boutique, or Target. This gift certificate was awarded at the closure of the study. Finally, participants were invited to refer other eligible individuals to participate in the research.

## Chapter 5

### Results

This results chapter includes preliminary analyses, sample description of demographics and experiences related to fertility, pregnancy, and the postpartum period. It also includes analyses of the hypotheses, research questions, and open-ended questions. Finally, additional post-hoc analyses are included.

#### *Preliminary Analyses*

The analyses were completed using the statistical package software SPSS Version 16. The analyzed variables were screened for missing values, and 35 total missing values were detected. These missing values were replaced using the participant's mean score for that particular scale. Data from the 43 participants missing more than 15% of their data was discarded (George & Mallery, 2009). The only trend in the missing data was that some participants who only completed part of the survey stopped responding about half-way through, after the Brief COPE (Carter, 1997) and before the Gratitude Questionnaire (GQ-6; McCullough et al., 2002). There may have been something about either of these surveys that caused them to stop; the 28-item Brief COPE is one of the longest measures in the survey packet, and may have deterred participants from continuing. Aside from this trend, some participants may have been home caring for their babies, for instance, and could have stopped the survey due to the need to care for him or her.

In addition, seven participants visited the survey website, and gave consent to participate, but did not complete any of the measures. In addition, an examination of participants' open-ended responses indicated that one participant had adopted her baby, and another was not a first-time mother, so the data from these two participants could not

be used. In sum, out of 204 total participants, the data from 52 participants were not viable, and thus, the data from 152 participants was included in the following analyses. Although it was possible to determine how many participants clicked on the survey website but did not complete the survey, it was not possible to determine how many participants saw the announcement of the study and decided to participate or not. Thus, determining a clear response rate is not possible. However, the advantage of this type of a study is the ability to use an increasingly common social network (i.e., online groups) to get participation from women across the country.

In addition to screening for missing values and otherwise unusable data, the normality of each variable was checked. Skewness and kurtosis values were lower than one for scores on the BRIEF Cope (Carter, 1997), Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), and Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992), indicating that participants' scores on these variables are normally distributed. Histograms and Q-Q plots of the scores on each of these variables, as well as the Kolmogorov-Smirnov test, offered additional evidence that they were normally distributed. Skewness and kurtosis values for scores on the Gratitude Questionnaire – 6 (GQ-6; McCullough et al., 2002), Center for Epistemological Studies Depression Scale (CESD; Melchior et al., 1993), and Satisfaction with Life Scale (SWLS; Diener et al., 1985), indicated non-normal distributions. As a result, scores on these variables underwent z-transformations, and z-scores were used in all analyses where normality is an assumption.

Descriptive analyses were also conducted for each measure. Descriptive data for this sample from the demographic questionnaire were presented in the previous chapter

(See Table 1 and Table 2). The means, standard deviations, and internal consistency values for each of the measures administered is presented in Table 3. All measures had adequate internal consistency ( $\alpha > .70$ ), with the exception of the “Change in Role Performance” subscale of the Postpartum Adjustment Questionnaire ( $\alpha = .66$ ) which contributed to the lower than desirable alpha level ( $\alpha = .68$ ) for the two scales of postpartum adjustment (i.e., New Baby and Change in Role Performance) combined. As a result, the “New Baby,” with an alpha level of .75 was used by itself as a measure of the construct of postpartum adjustment. Additionally, exploratory bivariate correlations were conducted between demographic variables and the predictor and outcome variables of the study. Due to the large number of correlations that were conducted, a more strict alpha ( $p < .01$ ) was used to control for familywise error. See Table 4 for these correlations.

#### *Bivariate Correlations*

The correlation matrix reveals a number of interesting significant correlations, apart from those that were hypothesized. Due to the large number of correlations conducted, a more strict alpha level ( $p < .01$ ) was used to control for familywise error. Those correlations that are not discussed elsewhere are presented in the following review of significant findings.

Significant relationships were found between both mother’s health and baby’s health and various other variables. For instance, mother’s self-reported health was negatively correlated with distress ( $r = -.28$ , a small effect), meaning that poorer health was related to higher distress. Mother’s health was positively correlated with emotional approach coping ( $r = .22$ , a small effect), gratitude ( $r = .31$ , a medium effect), postpartum adjustment ( $r = .27$ , a small effect), and satisfaction with life ( $r = .37$ , a medium effect)



Table 3: Means, Standard Deviations, and Internal Consistencies for Measures Used

<i>Measure</i>	<i>Possible Range</i>	<i>Sample Range</i>	<i>Scoring</i>	<i>Mean</i>	<i>SD</i>	<i>Alpha</i>
Center for Epidemiological Studies Depression Scale-8 (CESD-8)	8.00-32.00	8.00-30.00	Likert range 1-4 (higher= greater levels of distress)	12.90	4.94	0.89
Emotional Approach Coping Scale (EAC)	1.00-4.00	1.00-4.00	Likert range 1-4 (higher=more frequent use of coping strategies)	2.58	0.65	0.90
Gratitude Questionnaire-6 (GQ-6)	6.00-42.00	16.00-42.00	Likert range 1-7 (higher=more gratitude)	36.82	4.87	0.82
Postpartum Adjustment Questionnaire (PPAQ)	1.00-5.00	1.00-2.78	Likert range 1-4 (lower=more adjustment) <sup>1</sup>	1.66	0.29	0.75
Postpartum Distress (Single Item)	1.00-5.00	1.00-5.00	Likert range 1-5 (higher=more postpartum distress)	3.57	1.07	N/A
Satisfaction With Life Scale (SWLS)	5.00-35.00	5.00-35.00	Likert range 1-7 (higher=more satisfaction with life)	27.99	6.47	0.93

meaning that better health was related to more frequent use of emotional approach coping, higher levels of gratitude, greater postpartum adjustment, and greater satisfaction with life. Since the variable of mother's health has not been studied extensively in terms of its relationship to important postpartum outcomes, this finding is particularly meaningful. Baby's health was also significantly correlated with distress ( $r=-.23$ ) and emotional approach coping ( $r=.21$ ), both small effects, meaning that better health was related to less distress in mothers, and the more frequent use of emotional approach coping. Again, baby's health had not been extensively studied as a meaningful variable during the postpartum period, but our results indicate that it may have important implications, particularly for first-time mother's level of postpartum distress.

Demographic variables related to the characteristics of mothers who participated in this study are presented next. Socioeconomic status was positively correlated with satisfaction with life ( $r=.24$ , a small effect), with mother's age ( $r=.53$ , a large effect), and with relationship duration ( $r=.35$ , a medium effect). Furthermore, employment status was positively related with baby's age ( $r=.21$ , a small effect) as being employed full-time was associated with an increase in baby's age. This finding makes sense as women whose babies are older are more likely to have ended their maternity leaves and returned to work. Finally, education level was related to the following variables: distress ( $r=-.26$ , a small effect); gratitude ( $r=.21$ , a small effect); satisfaction with life ( $r=.27$ , a small effect); mother's age ( $r=.47$ , a medium effect); duration of relationship with partner ( $r=.36$ , a medium effect); socioeconomic status ( $r=.49$ , a medium effect); and mother's health ( $r=-.25$ , a small effect).

Table 4: Bivariate Correlations for Select Demographic, Predictor, and Outcome Variables

	COPE	CESD	EAC	GQ	PPAQ	SWLS	Level_D	M_Age	SES	B_Age	B_Heal	M_Heal	Emp	Educ
COPE	1.00													
CESD	.12	1.00												
EAC	<b>.48</b>	<b>-.32</b>	1.00											
GQ	-.02	<b>-.49</b>	<b>.37</b>	1.00										
PPAQ	.02	<b>-.33</b>	<b>.25</b>	<b>.22</b>	1.00									
SWLS	<u>-.19</u>	<b>-.65</b>	<b>.29</b>	<b>.52</b>	<b>.24</b>	1.00								
Level_D	<b>.27</b>	<b>.27</b>	-.10	<b>-.49</b>	-.01	<b>-.27</b>	1.00							
M_Age	-.10	-.05	.02	.06	.07	.08	.06	1.00						
SES	-.03	<u>-.19</u>	.08	.15	-.01	<b>.24</b>	<u>-.18</u>	<b>.53</b>	1.00					
B_Age	.14	-.08	.08	.07	<b>.23</b>	.02	<u>.17</u>	.01	-.05	1.00				
B_Heal	.16	<b>-.23</b>	<b>.21</b>	.10	-.06	.09	-.15	.07	.00	-.03	1.00			
M_Heal	-.12	<b>-.28</b>	<b>.22</b>	<b>.31</b>	<b>.27</b>	<b>.37</b>	<u>-.20</u>	-.08	.12	.00	-.02	1.00		
Emp	-.03	.04	.01	.00	.04	-.05	.03	-.14	<u>-.21</u>	<b>.21</b>	.07	.01	1.00	
Educ	-.06	<b>-.26</b>	<u>.14</u>	<b>.21</b>	.03	<b>.27</b>	-.12	<b>.47</b>	<b>.49</b>	-.01	.09	<b>.25</b>	-.04	1.00

Key to Abbreviations in Figure X: COPE (Brief COPE Scale, higher scores are more frequent use of coping strategies); CESD (Center for Epidemiological Studies Depression Scale, higher scores are more depression); EAC (Emotional Approach Coping Scale, higher scores are more frequent use of emotional approach coping strategies); GQ (Gratitude Questionnaire, higher scores are greater gratitude); PPAQ (Postpartum Adjustment Scale, higher scores are better adjustment); SWLS (Satisfaction With Life Scale, higher scores are greater satisfaction with life); Level\_D (subjective amount of postpartum distress experienced, higher scores indicate greater distress); M\_Age (Mother's Current Age); SES (Socioeconomic Status); B\_Age (Baby's Age); B\_Heal (Baby's Health, lower scores are more healthy); M\_Heal (Mother's Health, lower scores are more healthy); Emp (Mother's Current Employment, 1 is full-time, 2 is not full-time); Educ (Mother's Level of Education, higher scores are more education). Correlations significant at  $p < .01$  are shown in **bold**. Correlations significant at  $p < .05$  are underlined.

Variables related to participants' pregnancy and their babies are presented next. Infertility was positively related to level of distress ( $r=.24$ , a small effect), such that having had infertility treatments was related to more subjective distress. Having planned to conceive was positively related to baby's health ( $r=.24$ ), and negatively related to the following variables: satisfaction with life ( $r=-.22$ ); education ( $r=-.39$ ); and socioeconomic status ( $r=-.38$ ). Finally, baby's age was positively correlated with postpartum adjustment ( $r=.23$ , a small effect). Thus, older babies were associated with better postpartum adjustment in their mothers. This finding is important because it suggests that distress decreases over the course of the first year.

*Analyses for Hypotheses and Research Questions*

**Hypothesis 1a. Higher composite emotional approach coping scores will correlate with higher postpartum adjustment scores.**

This hypothesis was supported by the data. The Pearson's Correlation Coefficient between participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b) and their scores on the New Baby subscale of the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992) was  $.25$  ( $p<.01$ ), a small effect meaning that women who reported more frequent use of emotional approach coping strategies also reported higher levels of postpartum adjustment.

**Hypothesis 1b. Higher composite emotional approach coping scores will correlate with higher life satisfaction scores.**

This hypothesis was supported by the data. The Pearson's Correlation Coefficient between participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b) and their scores on the Satisfaction with Life Scale (SWLS; Diener et al.,

1985) was .29 ( $p < .01$ ), a small effect, meaning that women who reported more frequent use of emotional approach coping strategies also reported higher levels of satisfaction with life.

**Hypothesis 1c. Higher composite emotional approach coping scores will correlate with lower distress scores.**

This hypothesis was supported by the data. The Person's Correlation Coefficient between participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b) and their scores on the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993) was  $-.32$  ( $p < .01$ ), a medium effect, meaning that (CES-D-8; Melchior et al., 1993) was  $-.32$  ( $p < .01$ ), a medium effect, meaning that women who reported more frequent use of emotional approach coping strategies also reported less distress.

**Hypothesis 2a. Higher scores on gratitude will be correlated with higher scores on postpartum adjustment.**

This hypothesis was supported by the data. The Pearson's Correlation Coefficient between participants' scores on the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002) and their scores on the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992) was  $.22$  ( $p < .01$ ), a small effect, meaning that women who reported higher levels of gratitude also reported higher levels of postpartum adjustment.

**Hypothesis 2b. Higher scores on gratitude will be correlated with higher scores on life satisfaction.**

This hypothesis was supported by the data. The Pearson's Correlation Coefficient between scores on the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002) and

the Satisfaction with Life Scale (SWLS; Diener et al., 1985) was .52 ( $p < .01$ ), a large effect, meaning that women who reported higher levels of gratitude also reported higher levels of life satisfaction.

**Hypothesis 2c. Higher scores on gratitude will be correlated with lower scores on distress.**

This hypothesis was supported by the data. The Pearson's Correlation Coefficient between scores on the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002) and the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993) was -.49 ( $p < .01$ ), a medium effect, meaning that women who reported higher levels of gratitude also reported lower levels of distress.

**Research Question 1. How will scores on emotional approach coping relate to scores on gratitude?**

To test this, a bivariate correlation was calculated between participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b) and scores on the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002). The data suggest that higher scores on emotional approach coping correlated with higher scores on gratitude. The Pearson's Correlation Coefficient was .37 ( $p < .01$ ), a medium effect.

**Research Question 2a. To what extent do emotional approach coping, gratitude, and distress each predict unique variance in postpartum adjustment?**

Although I proposed to conduct a simultaneous multiple regression analysis to answer this research question, it was determined that a hierarchical regression was more appropriate as correlational analyses indicated that it was necessary to control for various demographic variables. Consequently, a hierarchical multiple regression was conducted

to explore the unique predictive value of emotional approach coping, gratitude, and distress on postpartum adjustment, while controlling for the demographic variables of baby's age and mother's current health. Participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002), the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993), and the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992), respectively, were used. The variables of baby's age and mother's current health were entered as the first block, and then the variables of emotional approach coping, gratitude, and distress were entered as the second block.

The multiple regression was significant overall ( $F_{3, 141}=6.87, p<.001$ ) and predicted 19.6% of the variance. The beta weights of each predictor variable, namely, emotional approach coping, gratitude, and distress were examined to determine their unique contribution to postpartum adjustment. Distress emerged as a significant individual predictor ( $p<.01, \beta=-.25$ ), a large effect, with a squared semi-partial correlation of .04. Thus, distress makes a unique contribution of 4% to the explanation of variance in postpartum adjustment. The control variable of baby's age also emerged as a unique predictor of postpartum adjustment ( $p<.01, \beta=.20$ ), with a squared semi-partial correlation of .04. Thus, baby's age made a unique contribution of 4% to the explanation of variance in postpartum adjustment. (See Table 5).

**Research Question 2b. To what extent do emotional approach coping, gratitude, and postpartum adjustment each predict unique variance in life satisfaction?**

Although I proposed to conduct a simultaneous multiple regression analysis to answer this research question, it was determined that a hierarchical regression was more appropriate as correlational analyses indicated that it was necessary to control for various demographic variables. Consequently, a hierarchical multiple regression was conducted to explore the unique predictive value of emotional approach coping, gratitude, and postpartum adjustment on life satisfaction, while controlling for the following variables: socioeconomic status; mother's current health; whether the couple planned to conceive; mother's education level; mother's participation in postpartum psychotherapy; and mother's experience with feeling depressed. The research question was addressed using participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002), the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992), and the Satisfaction with Life Scale (SWLS; Diener et al., 1985), respectively. The following variables were entered as the first block: socioeconomic status; mother's health; whether the couple planned to conceive; mother's education level; mother's participation in postpartum psychotherapy; and mother's experience with feeling depressed. The following variables were entered as the second block: emotional approach coping; gratitude; and postpartum adjustment. The multiple regression was significant overall ( $F_{9, 133}=11.35, p<.001$ ) and predicted 43.9% of the variance. The beta weights of each predictor variable, namely, emotional approach coping, gratitude, and postpartum adjustment were examined to determine their unique contribution to life satisfaction. Gratitude emerged as a significant individual predictor ( $p<.001, \beta=.40$ ), and had a large effect, with a squared semi-partial correlation



of .12. Otherwise stated, gratitude makes a unique contribution of 12% to the explanation of variance in life satisfaction.

For the control variables, whether the couple planned to become pregnant emerged as a unique predictor ( $p < .05$ ,  $\beta = -.17$ ), with a squared semi-partial of correlation of .02. Thus, it makes a unique contribution of 2% to the variance in life satisfaction. In addition, a second control variable, having participated in psychotherapy during the postpartum period, is also a unique predictor ( $p < .01$ ,  $\beta = .21$ ), with a squared semi-partial of correlation of .04. Thus, having participated in psychotherapy explains 4% of the variance in life satisfaction over and above the other variables. (See Table 6).

Table 5: Summary of hierarchical regression analysis of emotional approach coping, gratitude, distress, baby's age, and mother's current health as predictors of postpartum adjustment ( $N=152$ ).

<i>Variables</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$	$\beta$	$\rho$
Postpartum Adjustment							
Step 1:	.34	.12	.12	9.74	9.74		.000***
Baby's Age						.23	.00**
Mother's Health						-.25	.00**
Step 2:	.44	.20	.08	6.87	4.66		.000***
Baby's Age						.20	.01**
Mother's Health						-.14	.09
Emotional Approach Coping						.12	.14
Gratitude						-.01	.95
Distress						-.25	.01**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Table 6. Summary of hierarchical regression analysis of emotional approach coping, gratitude, postpartum adjustment, socioeconomic status, mother's current health, whether the couples planned to conceive, mother's level of education, whether mother participated in postpartum psychotherapy, and mother's experience with feeling depressed as predictors of life satisfaction ( $N=152$ ).

<i>Variables</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$	$\beta$	$\rho$
Life Satisfaction							
Step 1:	.53	.28	.28	8.63	8.63		.000***
Socioeconomic Status (SES)						.15	.09
Mother's Health						-.23	.01**
Plan to Conceive						-.15	.06
Mother's Education Level						.08	.39
Postpartum Psychotherapy						.19	.02*
Mother's Feeling Depressed						.15	.06
Step 2:	.66	.44	.16	11.55	12.88		.000***
Socioeconomic Status (SES)						.13	.10
Mother's Health						-.10	.17
Plan to Conceive						-.17	.02*
Mother's Feeling Depressed						.02	.82
Postpartum Psychotherapy						.21	.00**
Mother's Depression History						.05	.55
Emotional Approach Coping						.07	.30
Gratitude						.40	.00***
Postpartum Adjustment						.09	.25

**Research Question 2c. To what extent do emotional approach coping, gratitude, and postpartum adjustment each predict unique variance in distress?**

Although I originally proposed to conduct a simultaneous multiple regression analysis to answer this research question, it was determined that a hierarchical regression was more appropriate as correlational analyses indicated that it was necessary to control for various demographic variables. Consequently, a hierarchical multiple regression was conducted to explore the unique predictive value of emotional approach coping, gratitude, and postpartum adjustment on distress, while controlling for the following variables: baby's current health; mother's current health; mother's level of education; and mother's experience with feeling depressed. The research question was addressed using participants' scores on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002), the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992), and the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993), respectively. The following variables were entered as the first block: baby's health; mother's health; mother's educational level; and mother's experience with feeling depressed. The following variables were entered as the second block: emotional approach coping; gratitude; and postpartum adjustment. The multiple regression was significant overall ( $F_{3, 138}=13.14, p<.001$ ) and predicted 40.0% of the variance. The beta weights of each predictor variable, namely, emotional approach coping, gratitude, and postpartum adjustment were examined to determine their unique contribution to distress. Gratitude emerged as a significant individual predictor ( $p<.001, \beta=-.30$ ) and had a large effect, with a squared semi-partial correlation of .07. Otherwise stated, gratitude makes a

unique contribution of 7% to the explanation of variance in distress over and above the other predictors. Postpartum adjustment also emerged as a significant individual predictor ( $p < .01$ ,  $\beta = -.20$ ) and had a medium effect, with a squared semi-partial correlation of .04. Postpartum adjustment makes a unique contribution of 4% to the explanation of variance in distress over and above the other predictors. For the control variables, baby's current health is a unique predictor ( $p < .05$ ,  $\beta = .16$ ), with a squared semi-partial correlation of .02. Thus, baby's current health makes a unique contribution of 2% to the explanation of variance in distress. Mother's experience with feeling depressed is also a unique predictor ( $p < .01$ ,  $\beta = -.23$ ), with a squared semi-partial of correlation of .04. This variable explains an additional 4% of the variance. (See Table 7).

**Research Question 3a. To what extent does emotional approach coping mediate the relationship between distress and postpartum adjustment?**

There are four steps (and three regression equations) involved in testing for mediation, according to Frazier, Tix, and Barron (2004). The first step is to test whether there is a significant relationship between the predictor variable and the criterion variable. The second step is to test whether there is a significant relationship between the predictor variable and the proposed mediator. The third step is to test whether there is a significant relationship between the mediator and the criterion variable. The final step to test for mediation is to show that the strength of the relationship between the predictor variable and the criterion variable is weakened (for partial mediation) or becomes statistically non-significant (for full mediation) when the mediator is added to the model (Frazier et al., 2004). In the current model, this would mean that, according to step one, there must

Table 7. Summary of hierarchical regression analysis of emotional approach coping, gratitude, postpartum adjustment, baby's current health, mother's current health, mother's level of education, mother's history of depression as predictors of distress (N=152).

<i>Variables</i>	<i>R</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$	$\beta$	$\rho$
Distress							
Step 1:	.52	.27	.27	12.91	12.91		.000***
Baby's Health						.19	.01**
Mother's Health						.20	.01**
Mother's Education Level						-.16	.04**
Mother's Feeling Depressed						-.32	.000***
Step 2:	.63	.40	.13	13.14	10.11		.000***
Baby's Health						.16	.02*
Mother's Health						.07	.37
Mother's Education Level						-.13	.06
Mother's Feeling Depressed						-.23	.00**
Emotional Approach Coping						-.04	.64
Gratitude						-.30	.00***
Postpartum Adjustment						-.20	.00**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

be a significant relationship between distress and postpartum adjustment. According to step two, there must be a significant relationship between distress and emotional approach coping. Step three says that there must be a significant relationship between emotional approach coping and postpartum adjustment. Finally, according to step four,

the strength of the relationship between distress and postpartum adjustment must weaken or become non-significant when emotional approach coping is added to the model, for the mediation effect to hold.

Mediation was explored through participants' scores on the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993), the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), and the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992). First, distress was regressed on postpartum adjustment to establish their relationship, finding a significant relationship ( $F_{1, 150}=18.58, p<0.001$ ). As the second step, distress was regressed separately on emotional approach coping ( $F_{1, 150}=17.24, p<0.001$ ). As the third step, emotional approach coping was regressed on postpartum adjustment, and a significant relationship was found ( $F_{1, 150}=9.97, p<0.01$ ). As a final step, distress and emotional approach coping were regressed on postpartum adjustment, and the significance of the relationship between distress and postpartum adjustment did not decrease or disappear once emotional approach coping was added to the model. This indicated that emotional approach coping does not fully or partially mediate the relationship between distress and postpartum adjustment. Table 8 presents the mediation model.

**Research Question 3b. To what extent does emotional approach coping mediate the relationship between distress and life satisfaction?**

This research question was explored based on the four criteria, previously described, to test for mediation, according to Frazier et al., (2004). Mediation was explored through participants' scores on the Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993), the Emotional Approach Coping Scale (EAC; Stanton et al.,

Table 8: Testing mediator effects of emotional approach coping on the prediction of postpartum adjustment from postpartum distress (N=152).

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	$\beta$	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Postpartum Adjustment				1,150	.11	.11	18.58***
Predictor: Distress	-.10	.02	-.33***				
Testing Step 2							
Outcome: Emotional Approach Coping				1,150	.10	.10	17.23***
Predictor: Distress	-.21	.05	-.32***				
Testing Step 3							
Outcome: Postpartum Adjustment				1,149	.13	.13	11.43***
Mediator: Emotional Approach Coping	-.08	.02	-.28**				
Predictor: Distress	.07	.04	.16*				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

2000b), and the Satisfaction with Life Scale (SWLS; Diener et al., 1985). First, distress was regressed on life satisfaction to establish their relationship, finding a significant relationship ( $F_{1, 150}=106.97, p<0.001$ ). As the second step, distress was regressed separately on emotional approach coping ( $F_{1, 150}=17.23, p<0.001$ ). As the third step, emotional approach coping was regressed on life satisfaction, and a significant relationship was found ( $F_{1, 150}=13.28, p<0.001$ ). As a final step, both distress and emotional approach coping were regressed on life satisfaction, and the significance of the relationship between distress and life satisfaction did not decrease or disappear once



emotional approach coping was added to the model. This indicated that emotional approach coping does not fully or partially mediate the relationship between distress and postpartum adjustment. Table 9 presents the mediation model.

**Research Question 4a. To what extent does emotional approach coping mediate the relationship between gratitude and postpartum adjustment?**

This research question was explored based on the four criteria, previously outlined, to test for mediation, according to Frazier et al., (2004). Mediation was explored through participants' scores on the Gratitude Questionnaire – 6 (GQ-6; McCullough et al., 2002), the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), and the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992). First, gratitude was regressed on postpartum adjustment to establish their relationship, finding a significant relationship ( $F_{1, 150}=7.63, p<0.01$ ). As the second step, gratitude was regressed separately on emotional approach coping ( $F_{1, 150}=24.17, p<0.001$ ). As the third step, emotional approach coping was regressed on postpartum adjustment, and a significant relationship was found ( $F_{1, 150}=9.97, p<0.01$ ). As a final step, both gratitude and emotional approach coping were regressed on postpartum adjustment, and the significance of the relationship between gratitude and postpartum adjustment decreased, but did not become zero, when emotional approach coping was added to the model. This suggests that emotional approach coping partially mediates the relationship between gratitude and postpartum adjustment. The last step was to determine whether the partial mediation was statistically significant, and the Sobel test was used (Baron & Kenny, 1986). The result of the Sobel test ( $z=2.10, p<.05$ ) indicated that the partial mediation of the relationship between gratitude and postpartum adjustment by emotional approach

Table 9. *Testing mediator effects of emotional approach coping on the prediction of life satisfaction from postpartum distress (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Life Satisfaction				1,150	.42	.42	106.97***
Predictor: Distress	-.65	.06	-.65***				
Testing Step 2							
Outcome: Emotional Approach Coping				1,150	.10	.10	17.23***
Predictor: Distress	-.21	.05	-.32***				
Testing Step 3							
Outcome: Life Satisfaction				2,149	.42	.42	54.63***
Mediator: Emotional Approach Coping	.13	.10	.09				
Predictor: Distress	-.62	.07	-.62***				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

coping was statistically significant. Thus, being more grateful led to more frequent use of emotional approach coping, which led to greater postpartum adjustment. Table 10 and Figure 1 present the mediation model.

**Research Question 4b. To what extent does emotional approach coping mediate the relationship between gratitude and life satisfaction?**

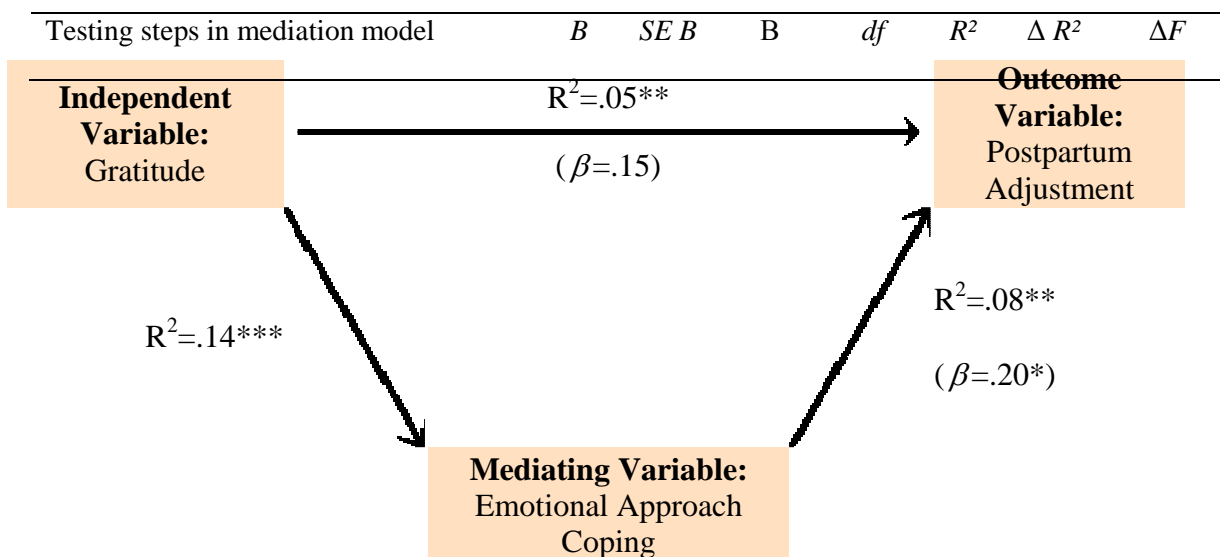
This research question was explored based on the four criteria, previously outlined, to test for mediation, according to Frazier et al., (2004). Mediation was (McCullough et al., 2002), the Emotional Approach Coping Scale (EAC; Stanton et al.,

Table 10. *Testing mediator effects of emotional approach coping on the prediction of postpartum adjustment from gratitude (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Postpartum Adjustment				1,150	.05	.05	7.62**
Predictor: Gratitude	.07	.02	.22**				
Testing Step 2							
Outcome: Emotional Approach Coping				1,150	.14	.14	24.17***
Predictor: Gratitude	.24	.05	.37***				
Testing Step 3							
Outcome: Postpartum Adjustment				2,149	.08	.08	6.57**
Mediator: Emotional Approach Coping	.09	.04	.20*				
Predictor: Gratitude	.04	.03	.15				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Figure 1: *Partial mediation of relationship between gratitude and postpartum adjustment by emotional approach coping (N=152).*



explored through participants' scores on the Gratitude Questionnaire-6 (GQ-6; 2000b), and the Satisfaction with Life Scale (SWLS; Diener et al., 1985). First, gratitude was regressed on life satisfaction to establish their relationship, finding a significant relationship ( $F_{1, 150}=54.25, p<0.001$ ). As the second step, gratitude was regressed separately on emotional approach coping ( $F_{1, 150}=24.17, p<0.001$ ). As a third step, emotional approach coping was regressed on life satisfaction, and a significant relationship was found ( $F_{1, 150}=13.28, p<0.001$ ). Finally, both gratitude and emotional approach coping were regressed on life satisfaction, and the significance of the relationship between gratitude and life satisfaction remained statistically significant when emotional approach coping was added to the model. Thus, emotional approach coping does not mediate the relationship between gratitude and life satisfaction. Table 11 presents the mediation model.

Testing Step 1					
Outcome: Life Satisfaction				1,150	.27 .27 54.25***
Predictor: Gratitude	.52	.07	.52***		
Testing Step 2					
Outcome: Emotional Approach Coping				1,150	.14 .14 24.17***
Predictor: Gratitude	.24	.05	.37***		
Testing Step 3					
Outcome: Life Satisfaction				2,149	.28 .28 28.36***
Mediator: Emotional Approach Coping	.17	.12	.11		
Predictor: Gratitude	.48	.08	.48***		

Table 11: *Testing mediator effects of emotional approach coping on the prediction of life satisfaction from gratitude (N=152).*

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Research Question 4c. To what extent does emotional approach coping mediate the relationship between gratitude and distress?**

This research question was explored based on the four criteria previously described to test for mediation, according to Frazier et al., (2004). Mediation was explored through participants' scores on the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002), the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b), and Center for Epidemiological Studies Depression Scale (CES-D-8; Melchior et al., 1993). First, gratitude was regressed on distress to establish their relationship, finding a significant relationship ( $F_{1, 150}=48.06, p<0.001$ ). As the second step, gratitude was regressed separately on emotional approach coping ( $F_{1, 150}=24.17, p<0.001$ ). Next, emotional

approach was regressed on distress, and a significant relationship was found ( $F_{1,150}=17.23, p<0.001$ ). As a final step, both gratitude and emotional approach coping were regressed on distress, the relationship between gratitude and distress remained significant ( $\beta=-.16, p<.05$ ). The result of the Sobel test ( $z=-1.94, p>.05$ ) confirmed that emotional approach coping does not mediate the relationship between gratitude and distress. Table 12 presents the mediation model.

Table 12. *Testing mediator effects of emotional approach coping on the prediction of postpartum distress from gratitude (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	$\beta$	<i>Df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Distress				1,150	.24	.24	48.01***
Predictor: Gratitude	-.49	.07	-.49***				
Testing Step 2							
Outcome: Emotional Approach Coping				1,150	.14	.14	24.12***
Predictor: Gratitude	.24	.05	.37***				
Testing Step 3							
Outcome: Distress				2,149	.26	.26	26.81***
Mediator: Emotional Approach Coping	-.24	.12	-.16*				
Predictor: Gratitude	-.43	.08	-.43***				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

### *Additional Analyses*

After examining the data, it was determined that a few additional analyses would further illuminate the experiences of first-time mothers during the postpartum period. The first analysis that was conducted was a correlational analysis between the demographic variable of whether participants had participated in psychotherapy during the postpartum period and the study's predictor and criterion variables. A positive relationship emerged between having participated in psychotherapy postpartum and satisfaction with life ( $r = .22$ ,  $p < .01$ , a small effect). A negative relationship emerged

between having participated in psychotherapy postpartum and distress ( $r=-.18, p<.05$ , a small effect). Thus, participating in psychotherapy after the birth of their baby was associated with participants' higher satisfaction with life and lower distress.

In addition, various significant findings emerged from the mediation analyses that did not follow from the hypotheses and research question, and the findings from these additional analyses are presented here. First, following Research Question 3a, I initially tested emotional approach coping as a mediator between distress and postpartum adjustment. However, the analysis revealed that distress actually may be the mediator because the significance of the relationship between emotional approach coping and postpartum adjustment became marginal ( $\beta=.16, p=.05$ ) once distress was added to the model. To determine whether the partial mediation was statistically significant, the Sobel test was used (Baron & Kenny, 1986). The result of the Sobel test ( $z=2.66, p<.01$ ) indicated that distress partially mediates the relationship between emotional approach coping and postpartum adjustment. Thus, more frequent use of emotional approach coping strategies led to lessened distress, which, in turn, led to greater postpartum adjustment. Tables 13 and Figure 2 present the mediation model.

Secondly, following Research Question 3b, I tested emotional approach coping as a mediator between distress and life satisfaction. However, the analysis revealed that distress actually may be the mediator because significance of the relationship between emotional approach coping and life satisfaction disappeared ( $\beta=.10, p>.05$ ) once distress was added to the model. To determine whether the partial mediation was statistically significant, the Sobel test was used (Baron & Kenny, 1986). The result of the Sobel test ( $z=3.77, p<.01$ ) indicated that distress partially mediates the relationship between



Table 13: *Testing mediator effects of distress on the prediction of postpartum adjustment from emotional approach coping (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Postpartum Adjustment				1,150	.06	.06	9.97**
Predictor: Emotional Approach Coping	.11	.04	.25**				
Testing Step 2							
Outcome: Distress				1,150	.10	.10	17.23***
Predictor: Emotional Approach Coping	-.49	.12	-.32***				
Testing Step 3							
Outcome: Postpartum Adjustment				2,149	.13	.13	11.43***
Mediator: Distress	.07	.04	.16				
Predictor: Emotional Approach Coping	-.08	.02	-.28**				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

emotional approach coping and life satisfaction. Thus, higher scores or reported use of emotional approach coping led to lower levels of distress, which, in turn, led to greater levels of postpartum adjustment. Tables 14 and Figures 3 present the mediation model.

Figure 2: *Partial mediation of relationship between emotional approach coping and postpartum adjustment by distress (N=152).*

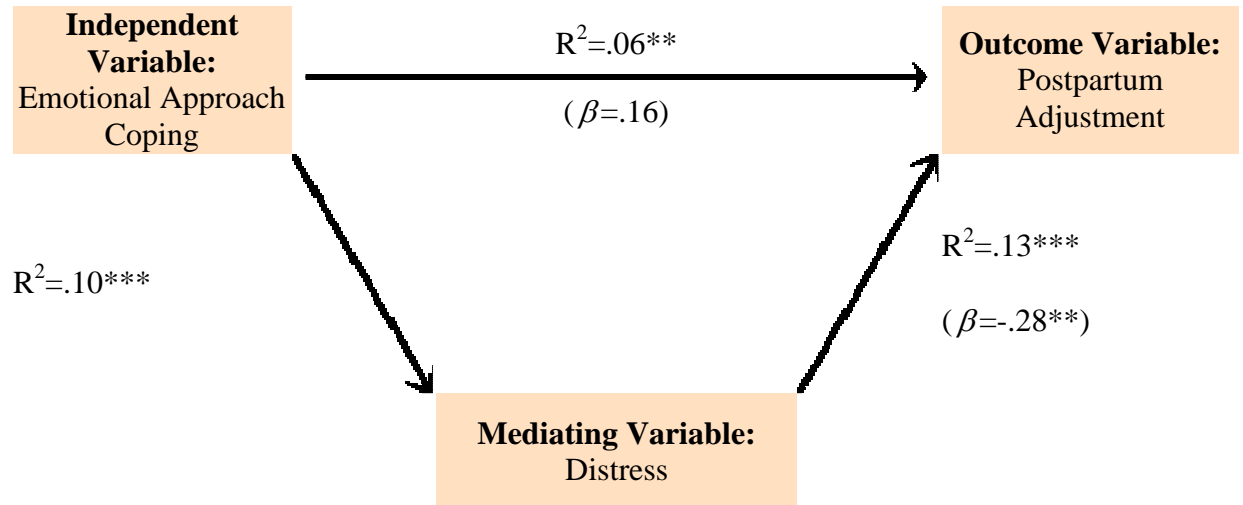
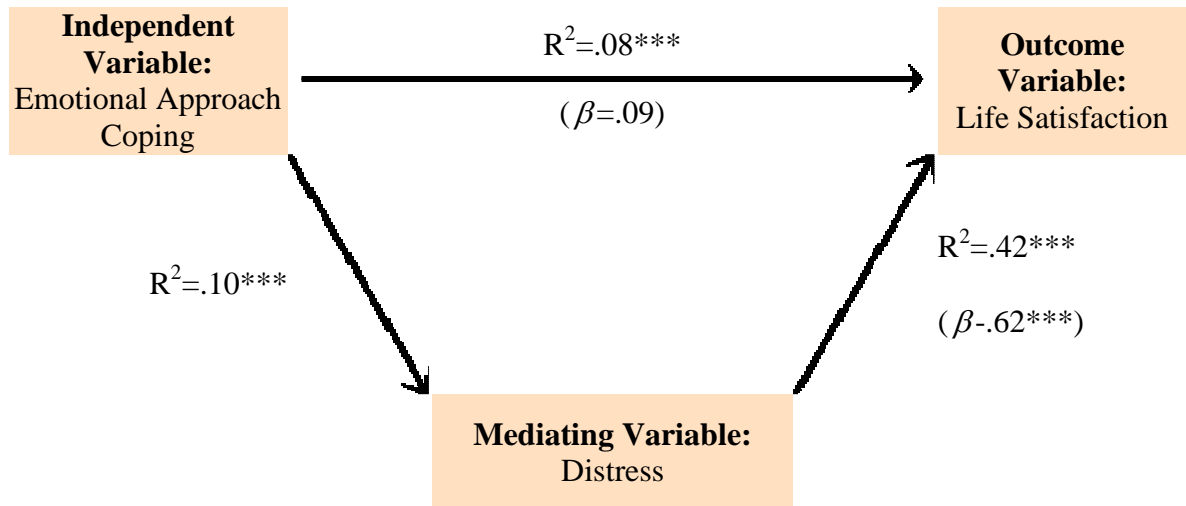


Table 14: *Testing mediator effects of Distress on the prediction of Life Satisfaction from Emotional Approach Coping (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	$\beta$	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Life Satisfaction				1,150	.08	.08	13.28***
Predictor: Emotional Approach Coping	.44	.12	.29***				
Testing Step 2							
Outcome: Distress				1,150	.10	.10	17.23***
Predictor: Emotional Approach Coping	-.49	.12	-.32***				
Testing Step 3							
Outcome: Life Satisfaction				2,149	.42	.42	54.63***
Mediator: Distress	-.62	.07	-.62***				
Predictor: Emotional Approach Coping	.13	.10	.09				

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

Figure 3: *Partial mediation of relationship between emotional approach coping and life satisfaction by distress (N=152).*



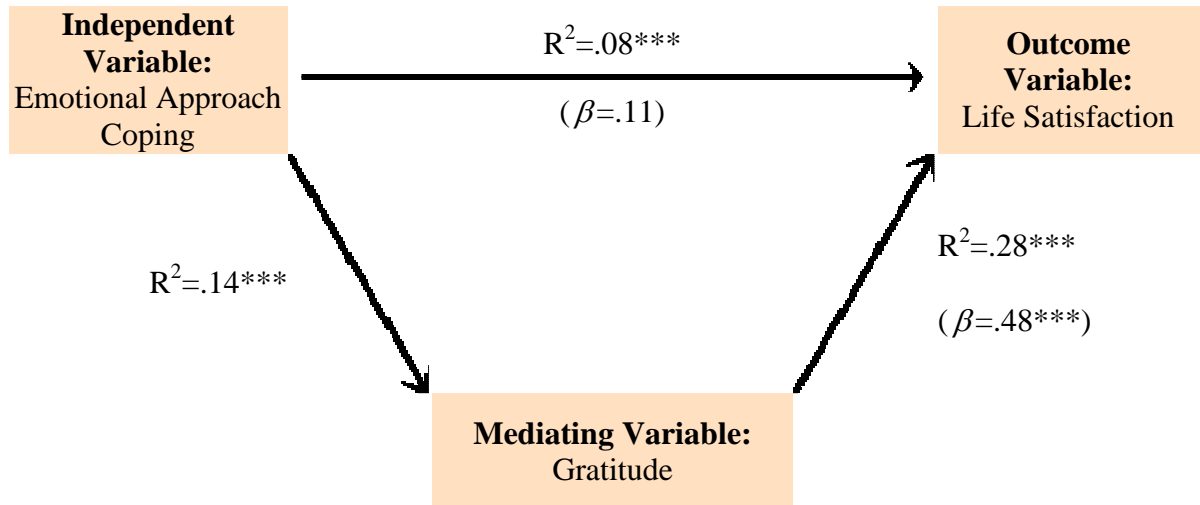
Thirdly, in accord with Research Question 4b, I tested emotional approach coping as a mediator between gratitude and life satisfaction. However, the analysis revealed that gratitude actually may be the mediator because the significance of the relationship between emotional approach coping and life satisfaction disappeared ( $\beta=.11, p>.05$ ) once gratitude was added to the model. To determine whether the mediation was significant, the Sobel test was used (Baron & Kenny, 1986). The result of the Sobel test ( $z=3.90, p<.01$ ) indicated that gratitude does indeed partially mediate the relationship between emotional approach coping and life satisfaction. Thus, higher scores or reported use of emotional approach coping strategies led to higher reports of gratitude, which, in turn, led to reports of greater life satisfaction. Thus, the two meditational analyses just discussed consistently suggest that frequent reported use of adaptive coping strategies led to positive emotions, which led to better outcomes overall. Table 15 and Figures 4 present the mediation model.

Table 15: *Testing mediator effects of gratitude on the prediction of life satisfaction from emotional approach coping (N=152).*

Testing steps in mediation model	<i>B</i>	<i>SE B</i>	$\beta$	<i>df</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	$\Delta F$
Testing Step 1							
Outcome: Life Satisfaction				1,150	.08	.08	13.28***
Predictor: Emotional Approach Coping	.48	.12	.29***				
Testing Step 2							
Outcome: Gratitude				1,150	.14	.14	24.17***
Predictor: Emotional Approach Coping	.57	.12	.37***				
Testing Step 3							
Outcome: Life Satisfaction				2,149	.28	.28	28.36***
Mediator: Gratitude	.48	.08	.48***				
Predictor: Emotional Approach Coping	.17	.12	.11				

\**p* <.05; \*\**p*<.01; \*\*\**p*<.001

Figure 4: *Partial mediation of relationship between emotional approach coping and life satisfaction by gratitude (N=152).*



#### *Summary of Quantitative Findings*

In summary, I began by exploring correlational relationships between many of the variables in this study that were being examined together for the first time. All of the correlations emerged as we expected; our positive variables of gratitude, emotional approach coping, postpartum adjustment, and life satisfaction showed positive correlations with one another, with effect sizes that range from small to medium in their magnitude. Select variables from this cohort of positive variables also exhibited negative correlations with distress, as was expected. In addition, some of the health-related variables that we asked about in our demographic questionnaire emerged as significantly correlated with various predictor and outcome variables. For instance, mother's health was negatively correlated with distress, and positively correlated with emotional approach coping, gratitude, postpartum adjustment, and satisfaction with life. Having a healthy baby was also associated with less distress. Finally, participating in

psychotherapy during the postpartum period was correlated with less distress and greater life satisfaction.

In terms of the regression analyses, hierarchical regressions replaced the planned simultaneous regressions in order to control for various demographic variables; we initially proposed to conduct them as simultaneous regressions, but needed to make the shift after investigating the correlational results. As expected, the results of the first hierarchical analysis indicated that emotional approach coping, gratitude, and distress significantly predicted postpartum adjustment. The predictor variable, distress, and the control variable, baby's age, each contributed uniquely to the explanation of variance in postpartum adjustment. As expected, the results of the second hierarchical regression analysis indicated that emotional approach coping, gratitude, and postpartum adjustment significantly predicted life satisfaction. Gratitude, and the control variables of planning to become pregnant, and having participated in psychotherapy during the postpartum period, each emerged as unique predictors of life satisfaction. Finally, as expected, the third regression analysis indicated that emotional approach coping, gratitude, and postpartum adjustment significantly predicted distress. Gratitude and postpartum adjustment, and the control variables of baby's current health and mother's history of depression, all emerged as unique predictors.

Finally, in terms of the mediation analyses, some results supported the research questions, while others did not. Four mediation analyses yielded partially significant results. Distress partially mediated the relationship between emotional approach coping and postpartum adjustment. Distress also partially mediated the relationship between emotional approach coping and life satisfaction. Thus, the two mediational analyses just

discussed consistently suggest that frequent reported use of adaptive coping strategies led to positive emotions, which led to better outcomes overall. Furthermore, emotional approach coping partially mediated the relationship between gratitude and postpartum adjustment, while gratitude partially mediated the relationship between emotional approach coping and life satisfaction.

#### *Analysis of Open-Ended Questions*

**Research Question 5a. How will participants respond to the open-ended question, “Please describe an instance or example related to becoming a mother that has been most stressful for you,” and how will they rate how distressing this instance was for them?**

**Research Question 5b. How will participants respond to the open-ended question, “Please describe an instance or example of when you felt grateful for being a mother?”**

To analyze Research Questions 5a and 5b, the author and her faculty advisor read over the qualitative responses to the questions and came up with possible categories for each question. They discussed these categories and agreed on ten categories that broadly described participants’ responses to the open-ended question about distress, and eight categories that broadly described participants’ responses to the open-ended question about gratitude. To ensure that these categories made sense to external raters and worked for the data, a small team of additional researchers read and coded the open-ended responses of study participants and provided feedback regarding the ease of coding, the clarity of the categories and any other general comments. Based on these comments, the author refined the categories.



Once coding was completed, the team came together to discuss codings, talk through disagreements, and arrive at consensus. It should be noted that participants' responses could be coded into more than one category if raters saw fit. Inter-rater reliability kappas were calculated to determine statistical agreement between raters on the content domains. Inter-rater reliability for Research Question 5a (distress) ranged between 78.8% and 86.0%, with kappas ranging between .79,  $p < .001$  and .86,  $p < .001$ . The average kappa for Research Question 5a was .81, or 81.2% agreement. Inter-rater reliability for Research Question 5b (gratitude) ranged between 70.7% and 94.4%, with a kappas of .71,  $p < .001$  to .94,  $p < .001$ . The average kappa for Research Question 5b was .79, or 79.4% agreement. Tables 16 and 17 present the categories and the percentage of responses that were coded into each category. Because participants' responses were often coded into more than one category, as noted above, percentages do not sum to 100.

Table 16: *Categories for Qualitative Data for Research Question 5a: Please describe an instance or example related to becoming a mother than has been most stressful for you (N=138).*

<b>Ten Categories of Stressful Instances</b>	<b>N</b>	<b>% of Total N</b>
1. Caring for a fussy, sick, or inconsolable baby	36	26.1%
2. Losing myself, my identity, or my freedom	11	8.0%
3. Feeling isolated or disconnected from others	10	7.2%
4. Experiencing sleep deprivation and exhaustion	37	26.8%
5. Struggling to maintain balance and "do it all"	21	15.2%
6. Having difficulties in relationship with partner	13	9.4%
7. Struggling with breastfeeding	18	13.0%
8. Experiencing difficulties with labor and delivery	6	4.3 %
9. Feeling globally distressed or overwhelmed/recognizing the enormity and pressures of motherhood	21	15.2%
10. Coping with stressful external factors	26	18.8%

*Note. Because participants' responses were often coded into more than one category, percentages do not sum to 100%.*

<b>Eight Categories of Grateful Instances</b>	<b>N</b>	<b>% of Total N</b>
1. Seeing baby respond positively toward mom or world	80	58.8%
2. Confidence in role as a mother	13	9.6%
3. Having special time to bond with and enjoy baby	22	16.2%
4. Looking at or having a happy, healthy, and beautiful baby	29	21.3%
5. Finding a new perspective on life or oneself/finding greater purpose	18	13.2%
6. Feeling that baby enhances interactions and relationships with others	11	8.1%
7. Being able to conceive and become a mother	11	8.1%
8. Everyday/always	27	19.9%

*Note. Because participants' responses were often coded into more than one category, percentages do not sum to 100%.*

As can be seen in the table above, the most common categories of stressful instances are the following: “experiencing sleep deprivation and exhaustion;” “caring for a fussy, sick, or inconsolable baby;” and “coping with stressful external factors.” These stressful external factors include such things as experiencing trouble with finances, being laid-off from work, and struggling to finish school with an infant. For the open-ended question about grateful instances, the most common categories were “seeing baby respond positively toward mom or world;” “looking at or having a happy, healthy, and beautiful baby;” and “everyday or always.”

Finally, after giving their open-ended response about an instance or an example during the transition to motherhood that was distressing for them, participants were asked to rate *how distressing* the instance was on a scale of 1-5, where 1=not at all distressing; 2=slightly upsetting; 3=fairly upsetting; 4=very upsetting; and 5=extremely distressing. Each of the ten categories that summarize participants' qualitative responses to Research

Question 5a were matched with participants' respective distress ratings of their responses. Descriptive statistics were then run on participants' subjective distress ratings to determine which categories were most subjectively distressing for participants. These analyses revealed that participants' distress ratings across categories were very similar. The subjective distress ratings for each category ranged between 2 and 5 (on a scale of 1-5). Mean distress ratings ranged from 3.19 to 3.86 with standard deviations ranging between .97 to 1.30. Thus, participant reported that, on average, the instances of distress that they reported were fairly upsetting to them.

## Chapter 6

### Discussion

This chapter begins by providing a context for understanding the descriptive data on the sample by comparing it to the United States Census information. Next, the findings for each research hypothesis or question are presented. Then, a discussion of the results from additional post-hoc analyses, including the correlational result is included. Finally, an overall summary of the findings, study limitations, and implications for future research and practice are presented.

#### *Sample*

A brief overview of the sample appears here, and a more thorough discussion of the implications of the sample's characteristics is included later in the discussion, as well as in the strengths and limitations section. The sample was predominantly comprised of White/European American women with an average age of about twenty nine years. Participants' babies were an average of about six and a half months old, with over half of the babies being between three and ten months old. Based on the selection criteria, it was necessary for participants to be living with their partner, and all reported being in a committed relationship. The sample primarily was comprised of well-educated women, whose reported household incomes placed them within the middle- to upper-middle class. In comparison to the general population of first-time mothers, the sample population of first-time mothers appears to be more educated and more affluent.

Secondly, in describing the sample population, it is noteworthy to compare the current sample's scores on the independent and dependent variables to the results found in previous studies. Although participants' scores on current study's measure of distress

were not normally distributed, their scores are similar to previously studied samples of mothers (Beebe et al., 2008; Field et al., 2004). Overall, studies have shown that the majority of first-time mothers will report low to moderate levels of distress during the postpartum period, as compared to more severe levels of postpartum depression (Freeman et al., 2005; O'Hara & Swain, 1996). Furthermore, the sample gathered for this study was a community sample, and thus, was more likely to reflect milder versions of distress as compared to a clinical sample of individuals whose psychological health may be more severely compromised. The authors of the Center for Epidemiological Studies Depression Scale (Melchior et al., 1993) suggest that participants whose cumulative score on the measure is 16 or higher may be experiencing significant depressive symptomology. In the current sample, approximately one-quarter of the sample had a score of 16 or higher.

Women in the current sample reported higher levels of both gratitude and life satisfaction than samples of participants in other studies. One possible reason for this discrepancy is that previous studies looking at these variables primarily have used college students as their sample population (Emmons & McCullough, 2003; McCullough et al., 2002; Wood et al., 2007; Wood et al., 2008a; Wood et al., 2008b). Thus, the current study's sample population of first-time mothers might score higher on a measure of gratitude, especially while participating in a study about *motherhood*, if they are feeling grateful for the recent birth of their new baby. Participants also may have reported heightened levels of gratitude because there is societal pressure to be grateful for a new baby, and participants may have felt this pressure that they *should* feel grateful. In addition, participants' high scores on life satisfaction may also indicate that having a

baby meaningfully increased their cognitive appraisals of their well-being, and thus contributed to their overall perception of their life satisfaction.

### *Hypotheses and Research Questions*

*Bivariate correlations.* Since many of the variables in the present study have not yet been examined with a sample of first-time mothers, the first step was to examine whether significant bivariate correlational relationships existed between demographic variables, and both the predictor and outcome variables. The next step was to examine whether significant bivariate correlations existed between predictor and criterion variables. First, a meaningful set of relationships emerged between the demographic variables of mother's health and baby's health, and key predictor variables. Poorer health in mothers was related to higher distress, whereas better health in mothers was related to more frequent use of emotional approach coping, higher levels of gratitude, greater postpartum adjustment, and greater satisfaction with life. Additionally, better health in babies was related to less distress in mothers, and the more frequent use of emotional approach coping. Neither mother's health or baby's health has been extensively studied as a meaningful variable during the postpartum period, but our results indicate that it may have important implications, particularly for first-time mother's level of postpartum distress. These findings also alert us to the importance of considering health-related variables as potential stressors in the context of the stress and coping model.

*Emotional approach coping.* As hypothesized, participants who scored higher on emotional approach coping also scored higher on postpartum adjustment and life satisfaction, and scored lower on distress. These findings are not surprising as researchers have explored this emotional approach coping with cohorts of women other

than first-time mothers, and have found similar results. For instance, Terry and Hynes (1988) found that coping through emotional approach strategies was related to more positive adjustment outcomes for women experiencing infertility. In a study of breast cancer patients, Stanton et al. (2000) found that emotional approach coping was uniquely associated with lower psychological distress when the patients were in the process of adjusting to breast cancer treatment (Stanton et al., 2000). Thus, similar to women in the current study who were adjusting to becoming first-time mothers, the women in Stanton et al.'s (2000) study were also adjusting to a major transition in their lives when their level of psychological distress was measured. Finally, in a study about lesbians' and gay men's daily experiences with disclosing their sexual orientation, emotional approach coping was related to greater life satisfaction (Austenfeld & Stanton, 2004).

Although the construct of emotional approach coping had not yet been studied in a sample population of first-time mothers prior to this study, the results are consistent with the results of previous studies. Importantly, previous studies used to contextualize the current findings were conducted with participants who were in the process of adjusting to potentially stressful major life transitions and changes in their identities, similar to the first-time mothers in the present study. Thus, since the descriptive data suggests that first time mothers reported the use of emotional approach coping strategies, the correlational data further suggest that these strategies are related to greater postpartum adjustment and life satisfaction, and less distress, during the postpartum period.

*Gratitude.* As hypothesized, participants who scored higher on gratitude also scored higher on postpartum adjustment and life satisfaction, and scored lower on distress. These findings are not surprising given that researchers have found robust

evidence over the past decade that gratitude is positively related to healthy psychological outcomes and negatively related to adverse psychological outcomes (Park et al., 2004). For example, in a study conducted with a college student sample, Wood et al. (2008a) found that gratitude led to a reduction of stress and an improvement in depression symptoms. Similarly, Park et al. (2004) discovered that gratitude was positively related to variables such as life satisfaction, vitality, and happiness, and negatively related to depression, and envy in an internet sample of 5,299 adults who took the Values in Action Inventory of Strengths. Finally, in a qualitative analysis of the life stories of young Chinese immigrants who successfully adapted to life in Hong Kong, the researchers found that the theme of gratitude was associated with feelings of adjustment during this major life transition (Lam & Chan, 2004). This was one of very few studies, all qualitative, to explore the relationships between gratitude and participants' positive adjustment to a major life transition.

Similar to the construct of emotional approach coping, gratitude has not received significant study within the literature on motherhood to date. In fact, the researchers did not find any quantitative studies looking at the relationship between gratitude and motherhood. Consequently, there is no known research on gratitude and motherhood with which to compare the present study's findings. As a result of this dearth in the literature, the present study makes a significant contribution by introducing its findings related to gratitude with a new population. Since the results coincide with previous findings with other sample populations, this seems to suggest that the positive relationship between gratitude and both postpartum adjustment and life satisfaction, and the negative relationship between gratitude and distress, is fairly consistent across various



populations. It is also meaningful to note that these correlations between gratitude, postpartum adjustment, life satisfaction, and distress were found during the transition to motherhood – an adjustment period during which the new mother often experiences a vast assortment of mixed emotions. Thus, it appears that the experience of gratitude is related to enhanced psychological functioning and decreased distress during the postpartum period.

*Emotional approach coping and gratitude.* As hypothesized, participants who endorsed more frequent use of emotional approach coping also scored higher on gratitude. Based upon a review of the literature, it does not appear as though these two specific variables, emotional approach coping and gratitude, have yet been studied together. However, these findings do align with the results of studies that have looked at the relationship between variables that are arguably similar to emotional approach coping and gratitude. For instance, in a study conducted with a college student sample, Wood et al. (2007) found that gratitude was positively associated with positive reinterpretation and growth and active coping and planning, variables that share a similarity with emotional approach coping, as all of these strategies involve the purposeful processing and expression of emotions. In addition, gratitude has been negatively correlated with behavioral disengagement, self-blame, substance use, and denial – coping strategies that are very *dissimilar* from emotional approach coping, lending additional context within which to understand the present study's findings (Wood et al., 2007). Knowing that maladaptive coping strategies have been negatively correlated with gratitude, it makes intuitive sense that there would be a positive correlation between gratitude and emotional approach coping.

It may be that first-time mothers who report using emotional approach coping strategies to a greater extent and also report greater postpartum adjustment are more “freed up” emotionally to experience gratitude. Indeed, a positive correlation was found between emotional approach coping and postpartum adjustment in the current study. On the other hand, since the measure of gratitude that was used purports to measure this variable in its trait-like form, it may be that women who are predisposed to being grateful are also more likely to perceive that they use positive and adaptive coping strategies to a greater extent than those who are not predisposed to being grateful. Ostensibly, their style or personality may be more optimistic in general, as prior studies have found positive correlations between optimism and the daily experience of gratitude (McCullough et al., 2004). Indeed, according to Fredrickson’s (2001) “broaden and build” hypothesis, individuals who experience more positive emotions are also more likely to have more varied and adaptive coping mechanisms.

*Regression Analyses.* In addition to the results of the bivariate correlations described above, a series of multiple regressions were conducted to examine whether the predictor variables accounted for unique variance in the criterion variables. In addition, several of the study variables had not previously been explored together in the literature. Although research has shown that coping is positively related to well-being (Lazarus & Folkman, 1984; Wood et al., 2007) and postpartum health (Terry, 1991), and is negatively related to psychological distress (Stanton et al., 2000), it is unclear as to how the predictor variables, as a group, will relate to each of the criterion or outcome variables. Although three simultaneous multiple regression analyses were planned, three

hierarchical regressions were conducted because correlational analyses dictated the need to control for several demographic variables.

The first regression of emotional approach coping, gratitude, and distress on postpartum adjustment was significant. Distress predicted unique variance in postpartum adjustment above and beyond the contributions of emotional approach coping and gratitude. Although emotional approach coping and gratitude when considered alone were both significantly and positively correlated with postpartum adjustment when examined simultaneously along with distress, neither predicted unique variance in new mothers' postpartum adjustment. Overall, since the predictive value of postpartum adjustment by this set of predictors is relatively low (19.6%), though still important, there are clearly other factors that impact postpartum adjustment.

The second regression examined the hypothesis that emotional approach coping, gratitude, and postpartum adjustment would predict life satisfaction and this hypothesis was partially supported. Gratitude predicted unique variance in life satisfaction above and beyond the contributions of emotional approach coping and postpartum adjustment. Although emotional approach coping and postpartum adjustment when considered alone were both significantly and positively correlated with satisfaction with life, neither predicted unique variance in new mothers' life satisfaction. Overall, this set of predictors accounted for about 44% of the variance and although important, it is meaningful to note that there are still other unexplored factors that impact distress. In a previous study, Wood et al. (2007) found that gratitude explained more variance in life satisfaction than traits like love, forgiveness, social intelligence, and humor, and suggested that a causal relationship may exist between gratitude and well-being. The predictive value of

gratitude found in the current study supports previous findings about the relationship between gratitude and life satisfaction.

The third regression examined the hypothesis that emotional approach coping, gratitude, and postpartum adjustment would predict distress and this hypothesis was partially supported. Both gratitude and postpartum adjustment emerged as significant predictors above and beyond emotional approach coping. Although emotional approach coping when considered alone was significantly and positively correlated with distress, it did not predict unique variance in distress. Overall, this set of predictors accounted for 40.0% of the variance, and although important, it is meaningful to note that there are still other unexplored factors that impact distress. It appears as though gratitude may serve as a protective factor against distress during the postpartum period. Indeed, it figures significantly in the prediction of both distress and life satisfaction.

*Mediation.* Mediation analyses revealed that distress partially mediated both the relationship between emotional approach coping and postpartum adjustment, and relationship between emotional approach coping and life satisfaction. Emotional approach coping partially mediated the relationship between gratitude and postpartum adjustment. Finally, gratitude partially mediated the relationship between emotional approach coping and life satisfaction.

First, I will explore the role of distress as a partial mediator between emotional approach coping and postpartum adjustment, and between emotional approach coping and life satisfaction. In both cases, participants' reports of their use of emotional approach coping strategies led to lessened distress, which led to both the outcomes of greater postpartum adjustment and greater life satisfaction. These results indicate that the

participants who endorsed using greater levels emotional approach coping also experienced postpartum adjustment and life satisfaction, *in the presence of* lower levels of distress. Since distress *partially* mediates these relationships, it is clear that other variables also impact the influence of emotional approach coping on postpartum adjustment and life satisfaction. Overall, these two mediational analyses suggest that greater reported use of adaptive coping strategies led to positive emotions, which led to better postpartum outcomes overall.

Previous researchers have explored the relationship between emotional approach coping, distress, and positive adjustment outcomes among women who are struggling with health-related transitions (Stanton et al., 2005). These studies have investigated the direct relationship between emotional approach coping and both positive and negative adjustment outcomes, but have not looked at emotional approach coping as a mediating variable between distress and adjustment. For instance, researchers have suggested that coping through emotional approach coping is related to more positive adjustment outcomes for women experiencing infertility (Terry & Hynes, 1998). In addition, emotional approach coping is also uniquely associated with lower psychological distress in clients adjusting to breast cancer treatment (Stanton et al., 2000).

In another mediation analysis, emotional approach coping partially mediated the relationship between gratitude and postpartum adjustment. Thus, for our population of new mothers, those who experienced greater levels of gratitude also experienced greater levels of postpartum adjustment when their use of emotional approach coping strategies was also more frequent. These results indicate that the participants who endorsed experiencing greater levels of gratitude also experienced postpartum adjustment *in the*

*presence of* greater use of emotional approach coping strategies. Since emotional approach coping *partially* mediates this relationship, it is clear that other variables also impact the influence of gratitude on postpartum adjustment. Thus, the findings of the present study suggest that emotional approach coping strategies, which can be learned, may mitigate the effects of distress and may lead to more optimal adjustment.

In the final mediation analysis, gratitude partially mediated the relationship between emotional approach coping and life satisfaction. These results indicate that the participants who endorsed the more frequent use of emotional approach coping strategies also experienced life satisfaction *in the presence of* the experience of greater levels of gratitude. Since gratitude *partially* mediates this relationship, it is clear that other variables also impact the influence of emotional approach coping on life satisfaction. In a study with college students, coping was found to partially mediate 11% of the relationship between gratitude and satisfaction with life (Wood et al., 2007), and thus, our findings differ from previous research.

It appears as though the variables of gratitude and emotional approach coping function differently with one another in the presence of different outcome variables. This may have occurred for a variety of reasons. First, it is conceivable that these two positive variables – emotional approach coping and gratitude – may have a recursive and bidirectional relationship with one another. Indeed, the two variables show a moderate correlation with one another, and since positive characteristics often beget other positive characteristics, these two variables may mutually reinforce one another. In addition, it is meaningful to note that these analyses showed *partial* mediation, and thus, there are

likely to be numerous other variables that mediate the relationships that we have not accounted for.

Furthermore, the field of positive psychology is relatively new, and we are just beginning to understand the relationships between variables such as emotional approach coping and gratitude. We are also only beginning to examine and understand the construct validity of the relatively new instruments that are measuring these constructs. That said, the regression and mediation results suggest that there are many viable entry points for interventions that seek to alleviate postpartum distress and ease women's transition into motherhood. Gratitude and emotional approach coping seem to combine in flexible ways to produce outcomes that we hope for in our clients – healthy postpartum adjustment and life satisfaction. Thus, these findings could be encouraging to both practitioners who are designing interventions, and to their clients who may benefit from them.

#### *Additional Analyses*

After examining the data, it was determined that additional analyses would further illuminate the experiences of first-time mothers during the postpartum period. For instance, the role of psychotherapy during the postpartum period has received very little attention in the literature. Consequently, a correlational analysis of the relationship between participating in postpartum psychotherapy and the variables of postpartum adjustment, life satisfaction, and distress was conducted. A positive relationship emerged between having participated in psychotherapy postpartum and satisfaction with life, and a negative relationship emerged between having participated in psychotherapy postpartum and distress. However, the relationship between postpartum psychotherapy and

postpartum adjustment was not significant. This means that women who participated in postpartum psychotherapy reported greater life satisfaction and less distress.

It seems noteworthy that the association between postpartum psychotherapy and the domain-specific measure of postpartum adjustment was not significant. It could be that participants' psychotherapy sessions were not geared specifically to the areas covered in the measure of postpartum adjustment, or that participants' work in psychotherapy was not directly related to being a first-time mother. It could also be that psychotherapists have not found the best and most targeted ways to enhance postpartum adjustment, and thus, no relationship exists between psychotherapy and this key outcome variable. The vast majority of studies on psychological health and the postpartum period have focused on the relationship between psychotherapy and a decrease in postpartum depression, but few, if any, have focused on the relationship between psychotherapy and positive postpartum adaptation (O'Hara, Stuart, Gorman, & Wenzel, 2000).

#### *Open-Ended Questions*

##### *Open-Ended Responses to Distress Prompt*

The two open-ended questions revealed the nuances of participants' experiences with both distress and gratitude during the postpartum period. The first open-ended question asked participants to describe an instance or example related to becoming a mother that has been most stressful for them. One hundred and thirty-eight participants responded to this question. Out of those who responded, "experiencing sleep deprivation and exhaustion" was the most common stressful instance that was endorsed by participants, with thirty-seven responses (26.8%) falling into this category. One participant wrote, "My sleep level is at its lowest and sometimes I feel like I am going



crazy!” The second most common response was, “caring for a fussy, sick, or inconsolable baby,” with 26.1% of responses falling under this category. One participant’s response that was coded under this category was, “The crabby teething baby, who at the same time has his very first cold!” Many mothers whose responses were coded within this category talked about the stress of hearing their babies upset, along with the feeling of powerlessness from not knowing how to make their babies feel better.

The third most common response dealt less with activities pertaining to the care of the baby, and more with external factors in participants’ lives that impacted their well-being as mothers. Responses that fell underneath this category, “coping with stressful external factors” included worrying about finances or being laid off, struggling to finish school or return to work with the demands of a new baby, or experiencing tumult in relationships with friends or extended family. One participant responded, “Trying to finish my M.D. and MBA has been stressful with a baby,” and another said, “Just balancing being a 21-year-old full time student and motherhood is tough. Especially when money is very tight and even paying the rent is hard...”

Other participants (15.2%) talked about feeling distress from “struggling to maintain balance and ‘do it all’.” A response that was coded within this category was, “What has made becoming a mother so stressful for me is the fact that the social expectation is that I can still do everything and balance a family. I have a hard time balancing home: cleaning, laundry, cooking; family: spending quality time with my spouse and infant; work: making sure the job gets done and keeping the schedule free to pick up where my husband cannot. I feel like a failure for not being able to successfully

balance everything.” The same percentage of women (15.2%) also talked about feeling overwhelmed by the recognition of the enormity of motherhood. As one participant put it, “...I felt badly about feeling scared about the enormity of what we had done, as our son was completely dependent upon us. We were so overwhelmed at first!”

Thirteen participants’ (9.4%) responses were coded in the category of “having difficulties in relationship with partner.” These difficulties ranged from feeling as though one’s partner did not help out enough with baby care or housework, to feeling distressed about the lack of intimacy and sex in the relationship, to experiencing a lack of emotional support and appreciation from one’s partner. One woman wrote, “I resented my husband for not helping me with night feedings. I resented him even more when he got laid off and I was working – and still doing all night feedings.” Another commented, “My husband seems to lack sympathy at times for my exhaustion or frustrations. He expects me to be the same old me, but things have changed.” Some women also talked about feeling frustrated with their partners’ lack of coping skills or maturity to handle the transition to parenthood. For instance, one woman wrote that, “Feeling the need to manage my husband's stress and frustration” has been the most stressful part of the transition to motherhood. She continues, “Sometimes his inability to manage his stress in a way that I am comfortable with is more stressful to me than anything that stresses me out about the baby!”

Finally, a subset of participants also wrote about feeling disconnected from themselves or from others. Eleven participants’ responses (8.0%) were coded underneath the category of “losing myself, my identity, or my freedom.” An example of what participants wrote includes, “The most stressful instance in the general feeling of losing

myself. I have felt that I am not ME anymore, I am just MOM.” Other participants (7.2%) talked about “feeling isolated or disconnected from others.” One participant responded, “I am at home taking care of my baby full-time – none of my family lives nearby and my husband works all day. None of my friends have children, so I am very isolated. This has been the most stressful thing.”

It is evident from participants’ responses that their sources of stress are rich and varied. Some struggle most with caring for their babies, and coping with the fact that they sometimes feel powerless to soothe them when they are sick or inconsolable. Other women find caring for themselves to be very challenging, whether it be maintaining their identities other than that of “mom,” or finding the time and energy to do things that they considered to be “simple” before having a baby. Another cohort of women talked about the more global pressures of “doing it all” or coming to terms with the enormous task that they perceived motherhood to be. Some talked about experiencing distress in their relationships with their partner as a result of factors such as lack of support, both emotionally and instrumentally (e.g., helping with baby care or housework). Finally, other women talked about the external pressures that greatly impacted their well-being in the postpartum period, such as worrying issues related to career, finances, education, and relationships with extended family members.

The responses that women gave to the open-ended question about distress could help to inform the content of new or improved measures of postpartum adjustment. This could be a particularly meaningful and salient application of the qualitative data since the Postpartum Adjustment Scale (O’Hara et al., 1996), the most commonly used measures of adjustment, did not exhibit strong psychometric properties in this study, and in past

studies. Future measures of postpartum adjustment may want to include items related to distress around the following themes: difficulty with baby care (particularly with breastfeeding); difficulty with self-care; loss of identity; isolation; struggling to “do it all” (especially to balance work and home life); disappointment in relationship with partner; global feelings of distress or depression; having had complications with labor and delivery, and struggling with impactful external factors (e.g., struggles with finances).

#### *Open-Ended Responses to Gratitude Prompt*

The second open-ended question asked participants to describe an instance or example when they felt most grateful for being a mother. The most frequent response, endorsed by 58.8% of women was, “seeing baby respond positively toward mom or world.” Responses that were coded in this category include, “Every time he smiles at me or turns to hear my voice or reaches for me,” and “The daily life of a new mother is very stressful, but that difficult life is punctuated by transcendent moments of joy and happiness when my baby coos, giggles, and smiles.” The second most popular response category was “looking at or having a happy, healthy, and beautiful baby,” with 21.3% of participants responses being coded within this category. A response that fell into this category includes, “When I hold my baby in my arms after her bath and she is going to sleep and I marvel at how charming and sweet and innocent and beautiful she is.”

Other women (16.2%) talked about particular special moments with their babies that provided the opportunity to bond with them, and these were coded as, “having special time to bond with and enjoy baby.” A response that was coded within this category was, “When breastfeeding finally became easy at 12 weeks, and I was able to comfortably nourish, nurture, and bond with my son.” Interestingly, many, but not all of

the responses in this category centered around breastfeeding or late-night feedings. For some women, there seems to be something special about a mother's ability to nourish and bond with her child through breastfeeding.

Another set of participants' responses were coded under the category, "finding a new perspective on life or oneself, or finding greater purpose." Examples of responses that were coded in this category include, "Becoming a mom has made me totally change my priorities. I am no longer stressed out about my career or anxious about what now seem to be trivial, day-to-day things. I feel like being a mom has helped me focus on what's most important in my life, namely family," and "My daughter has given me a completely different/better/bigger outlook on life in a hugely positive way." Finally, a participant eloquently replied, "Having a baby has opened up a space and grace in my life, as though I found a beautiful, perfect room in my home that I didn't know was there. I have discovered a greater capacity for love than I knew was even possible. My whole being is greater for being a mother."

As is evident from participants' rich responses to this open-ended question, new mothers' instances of feeling grateful are abundant and complex. Many women wrote about their gratitude for having a healthy, happy, and beautiful baby, and experiencing that baby respond positively to them and to the world. They also wrote about being grateful that they were able to conceive and give birth, particularly after struggles with infertility. Other women responded to the question by writing about how their baby had enhanced their interactions with other important people in their lives, from husbands to extended family members, to friends. Finally, participants talked about the ways in

which motherhood has transformed them, and has given them a new perspective on the world, themselves, and their purpose.

The responses that women gave to the open-ended question about gratitude could help to inform the content of a measure of domain-specific gratitude during the transition to motherhood. The theme of “baby love” that was talked about in the literature review seemed salient for the current study’s participants. As a reminder, “baby love” is a term used to describe a mother’s all-encompassing adoration for her new baby that seems to persist above and beyond the postpartum feelings of emotional and physical exhaustion (Leach, 1986). Participants did indeed describe in some instances that despite the challenges associated with having a new baby, certain aspects of their relationship with their baby (e.g., when the baby smiled at them; the experience of breastfeeding; just looking at their healthy and happy baby) transcended the stress inherent in becoming a mother. Thus, it would be useful for a domain-specific measure of “new baby gratitude” to try to capture the feeling of “baby love.” The measure might include the following themes: confidence in role as a mother; enjoying special bonding moments with the baby; finding a new perspective on or purpose in one’s life; seeing how the baby enhances other relationships; and being able to conceive and become a mother. Measuring domain-specific gratitude during the transition to motherhood may help researchers to understand the potential distinctions and overlaps between trait- and state-levels of gratitude.

### *Limitations*

The present study has several limitations. First, the sample was predominantly comprised of White/European American (88.8%) women with an average age of 28.9

years ( $SD=4.55$ ). In comparison to these statistics, the Pew Research Center (2010) reports that in 2008, 53% of mothers of newborns were White women. In 2006, the average age for a woman's first birth was 25.0 years (U.S. Department of Health and Human Services, 2009). Additionally, although 100% of women in the current study were in committed relationships, 38.5% of first-time mothers in the United States in 2006 were single at the time of their baby's birth (U.S. Department of Health and Human Services, 2009). Consequently, there are differences between the sample population and the general population of first-time mothers, and the sample is not representative of this population on some criteria.

In terms of socioeconomic status and employment data, the sample was primarily comprised of well-educated women, whose reported household incomes place them within the middle- to upper-middle class. Specifically, over seventy percent of the sample reported having attained at least a Bachelor's degree, and almost half of these women reported having attained a graduate degree. Over half of the sample reported earnings at or above \$60,000. According to statistics gathered by the Pew Research Center (2010), 54% of mothers of newborns had at least some college education, and the U.S. Department of Commerce (2009) reported that the median income in the United States in 2008 was \$50,303. Thus, the sample population of first-time mothers was more educated and affluent than the general population of mothers of newborns.

Participants' scores on key variables suggest that they were fairly non-distressed and were in good physical health. Their scores on the gratitude and life satisfaction measures demonstrate a ceiling effect, and thus, the current study's sample may have reported higher levels of these variables as compared to the general population of first-

time mothers. As a result, a limitation of the current study is that the sample suffers from restricted range. The participants exhibit better psychological and physical health and well-being as compared to the general population of first-time mothers. Furthermore, the correlations between participants' scores on several of the key variables exhibited small effect sizes. Although these correlations were still significant at the .01 level, it is meaningful to note that several of the relationships between variables were in the weak to moderate range. The predominance of small to medium sized effects may be due, in part, to the sample and measurement characteristics. For instance, future studies may evidence higher effect sizes if researchers can recruit a sample with a less restricted range on key dimensions. Larger effect sizes might also be found if domain-specific measures of key variables, along with measures with better psychometric properties, are used.

Despite these differences, the sample of first-time mothers was similar to the general population of first-time mothers in terms of employment status, with fairly similar percentages of women employed in some capacity within the first year after their baby's birth. In addition, the sample offered rich geographic diversity, and provided meaningful variability in terms of the age of participants and their babies, as well as their assorted experiences with infertility, conception, and pregnancy. The women who participated in this study may be similar to women who use online forums on motherhood, but the statistics do not yet exist on the characteristics of women who use these forums.

Another limitation concerns the method for data collection and has two related parts. The first part is the use of online surveys as the primary means to collect data. This method limits the representativeness of the sample as the majority of participants, if



not all, will be mothers who choose to seek online support to help them with the transition to motherhood. As a result, the present study may reflect a self-selection bias among participants such that women who choose to respond to the survey may be more likely to be experiencing higher levels of distress, for instance. In addition, the demographics of those participants who have access to computers, the internet, and to online support groups may look different from the general population of new mothers. One consequence of using an online sample is the difficulty of obtaining and calculating a response rate. A second consequence is that since only a subset of the population of new mothers can and would seek online postpartum support, the results of the study are not generalizable to all postpartum women.

The second part of the limitation related to methods for data collection is the fact that the present study did not control for snowball sampling (Monge & Contractor, 1988) in order to get an adequate sample size. Although the researchers made a concerted effort to directly recruit participants from a variety of mothers' online support groups, our ability to reach a sizeable number of new mothers within the first year postpartum was limited. Since new mothers often befriend one another and share experiences, snowball sampling could have operated as an especially effective way to reach more participants. What is more, individuals often will talk to others about their participation in research, so unless researchers know for sure that participants have read about the study firsthand, it is not easy to control for a natural snowballing effect. Thus, the advantage of not actively discouraging this sampling strategy in order to recruit a large enough sample size seemed to outweigh the costs (Cohen, 1990). However, we remain mindful that snowball sampling naturally may have created a more homogenous sample since people tend to

group themselves based upon similarities. Efforts were made to critically consider the representativeness of the sample and to whom the results may be generalized.

Furthermore, the success of the correlational field design is highly dependent on a variety of factors related to internal and external validity (Anderson, Lindsay & Bushman, 1999), in particular, choosing reliable and valid measures (Heppner, Wampold, & Kivlighan, 2008). The use of newer instruments to measure the novel constructs (e.g., emotional approach coping) in the current study meant that instruments were used that have validated these measures with a limited range of populations. These populations generally did not include first-time mothers. Consequently, the psychometric properties of these instruments needed to be explored with the current population to ensure that their reliability, based upon their use with other populations experiencing life transitions, were replicated in the current study. However, this allowed for the current study to explore the role of newer constructs such as emotional approach coping and gratitude in the lives of new mothers – an aspect of the study that is one of its strengths. Furthermore, well-validated and reliable measures of coping, life satisfaction, and distress were employed in the current study. These measures provided a solid methodological base for examining the less studied measures of emotional-approach coping and gratitude. The results of this study make a valuable contribution to our understanding of postpartum adjustment and life satisfaction with this population and the measurement of new constructs.

The current study's measure of postpartum adjustment, the Postpartum Adjustment Questionnaire (PPAQ; O'Hara et al., 1992) did not demonstrate adequate psychometric properties as a composite scale. Historically, the composite scale of this questionnaire has a reported Cronbach's alpha of .86. However, the current sample had a

Cronbach's alpha of .68 for the composite of the two subscales, "Change in Role Performance" and "New Baby," taken together. Viewed separately, the current sample had a Chronbach's alpha of .66 for the "Change in Role Performance" subscale, and an alpha of .75 for the "New Baby" subscale. Due to the low internal consistency that resulted from the composite score, and from the "Change in Role Performance" subscale alone, only the "New Baby" subscale was used to measure postpartum adjustment.

Cavanaugh (2006) encountered a similar issue with the psychometric properties of the PPAQ in her study on self-esteem and playfulness in first-time mothers, and chose to use only "New Baby" subscale as her measure of postpartum adjustment. Thus, there are clear limitations with the PPAQ, and the field would benefit from a critical examination of the reliability and validity this measure, along with the potential development of other measures of postpartum adjustment. For instance, the qualitative results of the present study suggest that there are aspects of the transition to motherhood that are not included in the items of the PPAQ, but that are sources of distress for first-time mothers. These aspects include feelings of loneliness and isolation; lack of time for self-care; difficulties with labor and delivery; difficulties with breastfeeding; feeling globally overwhelmed by the enormity of motherhood; and the presence of stressful external factors like lack of job security or financial problems.

Another limitation of this study was the reliance on self-report measures which introduces mono-method bias and response distortions, since participants' feelings and behaviors were only measured from their perspectives. That said, the present study's use of open-ended questions, although still in the self-report format, addresses the data in a different way. The open-ended questions allowed for a more nuanced and personal

understanding of the data by allowing participants to generate their own responses as opposed to strictly completing a set of survey items generated by researchers.

Finally, a strength of the correlational field design is that simple correlations can help researchers understand the magnitude of relationships between variables (Heppner et al., 2008). These correlations set the stage for more complex analyses that can begin to investigate causality. Multiple regression analyses can be useful in determining the effects of a group of predictor variables on one or more criterion variables. In addition, researchers can examine the mediating or moderating effects of these variables (Baron & Kenny, 1986). These analyses can aid researchers in beginning to develop more comprehensive theoretical models for human behavior through structural equation modeling (Martens & Haase, 2006; Quintana & Maxwell, 1999; Weston & Gore, 2006).

#### *Implications for Research*

This study has a number of implications for future research. First, results suggest that postpartum adjustment is not just the absence of distress. For instance, the measures of distress and postpartum adjustment in the current study were only moderately correlated,  $r = -.33$ , a medium effect, meaning they are not measuring the same underlying construct. The strength and direction of correlations with other key study variables also differed across these two measures. Consequently, future research on postpartum adjustment and postpartum distress and depression should include measures of both distress and adjustment in their studies. In addition, as has been noted previously, the fields of counseling and positive psychology urge researchers to measure constructs such as adjustment and well-being that reflect not just the *absence* of negative feelings such as distress and depression, but the *presence* of positive feelings, such as gratitude (Lopez et

al., 2006; Seligman, 2008). Including a balance of measures that assess for both psychological strengths and weaknesses aligns with some of the major thrusts in the field of psychology – particularly in the area of positive psychology. For instance, in using a stress and coping model as a framework for understanding major life transitions, such as the transition to motherhood, researchers may want to be mindful to include measures of both positive psychological resources (e.g., gratitude), and positive coping strategies (e.g., emotional approach coping) in their study.

Secondly, as gratitude functioned as a significant predictor of both life satisfaction and distress during the postpartum period, its role among new mothers should be investigated more closely. In particular, research could focus on distinguishing between the roles of state- and trait-levels of gratitude, and their interaction, during the postpartum period. In the current study, the exploration of gratitude as an emotion was limited as the only validated measure of gratitude assesses this construct as a trait versus as an emotion. To get at the emotional component, participants were asked to describe an instance or example related to becoming a mother that has made them *feel* grateful. However, the current study was unable to tap into the potential subtle nuances between state and trait levels of gratitude as well-validated measures of state levels of gratitude do not yet exist. Future research should seek to examine the distinction between state- and trait-levels of gratitude, and continue to examine the role of gratitude during the transition to motherhood.

As was shown in the current study, if mother and baby are healthy, new mothers report greater gratitude, positive coping, adjustment, and life satisfaction, and less distress. Research on motherhood has not focused as closely on health-related variables

as the current study suggests might be important. Furthermore, interesting correlations emerged between variables like planning to conceive and participation in postpartum psychotherapy, and various predictor and outcome variables. Thus, future researchers may want to continue to examine various factors related to conception, pregnancy, and postpartum attitudes and behaviors that might impact healthy postpartum adjustment.

Furthermore, future studies should attempt to recruit more diverse samples of participants. Since it is unrealistic to sample every new mother in the world, the next best steps for increasing sample diversity might be to study various other cohorts of mothers. For instance, future research might include single mothers, adoptive mothers, and lesbian mothers. The experience of fathers during the postpartum period has also been relatively unexplored, particularly single fathers or gay couples who choose to parent. Finally, future studies could pay particular attention to the postpartum experiences of couples who have struggled with infertility, or those whose pregnancies were planned versus unplanned, as these demographic variables were significantly correlated with key predictor and criterion variables in the current study. There are many exciting avenues for future research in the area of the transition to parenthood, as many key populations and variables remain unexplored.

#### *Implications for Practice*

Given the exploratory nature of the current study, some implications for practice can be cautiously made. First, the variables of gratitude and emotional approach coping may have meaningful implications for postpartum adjustment, postpartum distress, and life satisfaction, but it is important to note that the effect sizes of some of these correlations were small, and the relationships between these variables need more

exploration in the literature. Therapeutic interventions with women during pregnancy and during the postpartum period could consider these constructs as ones that enhance women's postpartum health. Both gratitude and emotional approach coping are meaningful constructs to continue to study as they can likely be enhanced through interventions.

For instance, as more research accumulates on gratitude, practitioners may wish to explore crafting interventions that increase the experience of gratitude in women during the postpartum period. Some studies have found that having individuals create a "gratitude journal" in which they write down a number of things that they are grateful for, results in higher self-reports of gratitude among participants (Froh, Sefick, & Emmons, 2008). This intervention could be adapted to fit the needs of women during the postpartum period, and may be useful for women with mild levels of distress. More research will need to be done to determine whether interventions such as this, if implemented during pregnancy, might have lasting effects in helping to ward off postpartum distress, but evidence from studies with other populations suggest that this might be the case (Froh et al., 2008). In addition to behavioral interventions like a gratitude journal, practitioners may wish to consider integrating an experiential focus on gratitude into their therapy sessions. During the session, practitioners could invite new mothers to try to access what makes them grateful about becoming a mother, and to experience the thoughts, emotions, and sensations that come up for them around the experience of gratitude. These women could try to recreate this experience outside of therapy during moments when they are feeling particularly stressed or overwhelmed.

Practitioners may also wish to focus on helping new mothers to integrate

emotional approach coping strategies into their lives during the postpartum period. For instance, therapists might want to explore with new mothers the extent to which they feel as though they are actively processing and expressing their emotions. If the client is not doing so, it could be meaningful to wonder with clients about what might be getting in the way of processing and expressing how they are feeling. Practitioners may even want to use the items on the Emotional Approach Coping Scale (EAC; Stanton et al., 2000b) as a general framework from which to assess clients' use of emotional approach coping strategies. For instance, in terms of the emotional processing items on the EAC, are clients able to acknowledge and delve into their feelings to get a thorough understanding of them, and realize that their feelings are valid and important? In terms of the emotional expression subscale of the EAC, clinicians can be guided by such questions as whether clients feel free to express their emotions, and let their emotions come out freely. Along with processing and expressing their feelings, the findings on the importance of the health of both the mother and baby during the postpartum period suggest that it may be helpful for new mothers to also attend to how they are feeling physically, and how these feelings may be influencing their psychological health and well-being.

Speaking of mother's physical health, the finding indicated that better health is strongly and meaningfully related to less distress, better coping, and higher levels of gratitude, postpartum adjustment, and life satisfaction indicates that health-related interventions could be meaningful. For instance, interventions aimed at helping women achieve healthy pregnancies could be useful in setting them up for better postpartum health. For instance, women may benefit from engaging in activities like yoga and meditation during pregnancy, and during the postpartum period, if possible. Encouraging



women to visit their doctors regularly and attempt to maintain a good diet during pregnancy, as well as to prepare for some of the physical challenges during the postpartum period (e.g., recovering from a cesarean section or managing the potential challenges of breastfeeding), may be particularly useful interventions.

Finally, both medical and mental health practitioners involved in the care of new mothers could be aware of the variables that have been shown to be related to postpartum psychological health. These variables include the health of the mother and the baby, the age of the baby, whether the couple planned to conceive, and whether the new mother is participating in postpartum psychotherapy. Thus, there are several facets of a new mother's life that can be attended to by various professional to aid her in adjusting to being a mother. Overall, the results of the current study, while exploratory in nature, may tentatively offer ideas for therapeutic interventions that may help first-time mothers to thrive during their transition to parenthood.

#### *Overall Summary of Findings*

To conclude, this study furthers the literature on positive approaches to coping with distress during the postpartum period for first-time mothers. It explored the psychological resource of gratitude and an emotional approach coping strategy – two positive constructs related to coping and thriving that have not previously been examined in studies of first-time mothers. Furthermore, this study looked at the role of these positive constructs in predicting variables that more traditionally have been examined in research with new mothers (e.g., postpartum distress), along with more novel, positive outcome variables (e.g., postpartum adjustment and life satisfaction). The findings of this study revealed that women who reported higher levels of both gratitude and emotional

approach coping also reported better postpartum adjustment, greater life satisfaction, and less postpartum distress and depression, and that gratitude played a particularly important role in predicting both life satisfaction and distress. In addition, mothers' reports of better physical health in both themselves and their babies were related to positive psychological health outcomes, adding to the literature on the connections between physical and psychological health for this population. Women's responses to the open-ended questions revealed that their experiences with instances of distress and gratitude during the postpartum period are rich and varied. Their qualitative responses help us to better understand the nuances of the experience of becoming a mother, as well as ways to complement our current ways of measuring variables related to postpartum adjustment. The findings provide novel and meaningful areas for continued research, including ideas for interventions that can aid women in optimizing their psychological health in their first year as new mothers.

## Appendix A

## List of Online Sites for Participant Recruitment

<b>Website Name</b>	<b>Website Address</b>
Baby Center	<a href="http://www.babycenter.com">www.babycenter.com</a>
The Baby Corner	<a href="http://www.thebabycorner.com">www.thebabycorner.com</a>
Café Mom	<a href="http://www.cafemom.com">www.cafemom.com</a>
Christianity Today	<a href="http://www.christianitytoday.com">www.christianitytoday.com</a>
Craigslist	<a href="http://www.craigslist.org">www.craigslist.org</a>
DC Urban Mom	<a href="http://www.dcurbanmom.com">www.dcurbanmom.com</a>
Family Education	<a href="http://www.familyeducation.com">www.familyeducation.com</a>
iVillage Pregnancy and Parenting	<a href="http://www.parenting.ivillage.com">www.parenting.ivillage.com</a>
Latina Mami	<a href="http://www.latinamami.com">www.latinamami.com</a>
Maya's Mom	<a href="http://www.mayasmom.com">www.mayasmom.com</a>
Minti	<a href="http://www.minti.com">www.minti.com</a>
Mom Junction	<a href="http://www.momjunction.com">www.momjunction.com</a>
Moms Like Me	<a href="http://www.momslikeme.com">www.momslikeme.com</a>
Mommy Talk	<a href="http://www.mommytalk.com/groups">http://www.mommytalk.com/groups</a>
Mothers Click	<a href="http://www.mothersclick.com">www.mothersclick.com</a>
The National Parenting Center	<a href="http://www.tnpc.com">www.tnpc.com</a>
Parenting	<a href="http://www.parenting.com">www.parenting.com</a>
Parents	<a href="http://www.parents.com">www.parents.com</a>
Parenthood	<a href="http://www.parenthood.com">www.parenthood.com</a>
Punkymoms	<a href="http://www.punkymomsforum.com">www.punkymomsforum.com</a>

Simply Moms	<a href="http://www.simplymoms.com">www.simplymoms.com</a>
Southern Moms Online	<a href="http://www.southernmomsonline.com">www.southernmomsonline.com</a>
Work It Mom	<a href="http://www.workitmom.com">www.workitmom.com</a>

## Appendix B

## Recruitment Posting/Email

Are you a new mother? If you have had your first baby within the last 12 months, and are married to and/or living with your partner, PLEASE consider completing a questionnaire designed to explore the adjustment experience of new mothers to parenthood.

Your participation will assist researchers interested in understanding more about positive and adaptive coping strategies that new mothers employ to adjust to their new role. It is our hope that the survey may also be meaningful for *you* as you reflect on some of your answers to the questions!

The questionnaire should take you about 15-20 minutes to complete and can be accessed by visiting the following web site:

---SITE HERE---

We would be very grateful for your participation and thank you, in advance, for your time.

Whether or not you qualify to complete our survey, kindly consider passing this email along to others who do.

Many thanks,

Sarah Piontkowski, B. A.  
Doctoral Student, Counseling Psychology  
University of Maryland, College Park  
spiontko@umd.edu

Mary Ann Hoffman, Ph.D.  
Professor, Counseling Psychology  
University of Maryland, College Park  
hoffmanm@umd.edu

## Appendix C

### Informed Consent

This is a research project being conducted by Mary Ann Hoffman and Sarah Piontkowski at the University of Maryland, College Park. We are interested in your responses to this survey because you are a woman over the age of 18 who has given birth to your first baby within the past 12 months, and is married to and/or living with your partner. The purpose of this study is to learn more about the experiences of women adjusting to motherhood.

The procedure involves completing an online survey, which will take about 15-20 minutes. You will be asked questions about how it feels to be a first-time mother, what the high and low points are of having a newborn, and how you cope with the stressors often experienced during this period of adjusting to your new role.

The survey does not ask for identifying information, and the confidentiality of your answers will be protected as best as possible. Due to the public nature of the Internet, absolute confidentiality cannot be promised, but the likelihood of someone accessing your data is very low. Closing your Internet browser when you have completed the survey will help to ensure that another person using that same computer cannot see your responses.

The main possible risk from participating in this survey is that the questions might bring about negative emotions (e.g., feelings of distress you may be experiencing in your adjustment to having a new baby).

Although this research is not intended to benefit you directly, its findings will help the researchers to learn more about how new mothers experience the joys and cope with the stressors associated with the adjustment to parenthood. Your responses will be contributing to research in a meaningful and valuable area of study.

Your participation in this survey is completely voluntary. You may ask questions or withdraw from survey participation at any time without penalty.

If you have any questions about the research study, please contact:

Mary Ann Hoffman, Ph.D. or Sarah Piontkowski, B.A.  
University of Maryland  
Counseling and Personnel Services  
3222 Benjamin Building  
College Park, MD 20742  
Phone: 301.405.2865.  
Email: [hoffmanm@umd.edu](mailto:hoffmanm@umd.edu), [spiontko@umd.edu](mailto:spiontko@umd.edu)

If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, MD, 20742, at 301-405-0678, or email at [irb@deans.umd.edu](mailto:irb@deans.umd.edu).

## Appendix D

## Demographics

Please answer the following questions about yourself.

1. Age: \_\_\_\_\_
2. Racial/Ethnic Background (Mark all that apply):
  - \_\_\_\_\_ African American/Black
  - \_\_\_\_\_ Asian-American/Pacific Islander
  - \_\_\_\_\_ Asian-Indian/Pakistani
  - \_\_\_\_\_ Biracial/Multiracial
  - \_\_\_\_\_ Hispanic/Latina
  - \_\_\_\_\_ Middle Eastern/Arab
  - \_\_\_\_\_ Native American/Native Alaskan
  - \_\_\_\_\_ White/European American
  - \_\_\_\_\_ Foreign National (please specify): \_\_\_\_\_
  - \_\_\_\_\_ Other (please specify): \_\_\_\_\_
3. Highest level of education completed:
 

_____ Elementary School (K-8)	_____ College
_____ High School	_____ Graduate School
_____ Some College (e.g., AA degree)	_____ Other
4. Current employment status:
 

_____ Not employed	_____ Employed full-time
_____ Employed part-time	_____ Student
_____ Maternity leave	
5. Employment status before the birth of your baby:
 

_____ Not employed	_____ Employed full-time
_____ Employed part-time	_____ Student
6. If you have returned or plan to return to work after the birth of your baby, what was/is the duration of your maternity leave? \_\_\_\_\_ Months
7. Annual household income (before taxes):
  - \_\_\_\_\_ Less than 30,000
  - \_\_\_\_\_ 30,000-59,999,
  - \_\_\_\_\_ 60,000-99,999
  - \_\_\_\_\_ 100,000-149,999
  - \_\_\_\_\_ 150,000 or higher
8. Relationship status:
 

_____ Married to my partner	_____ Not married to, but living with my partner
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9. If you are currently in a relationship, please indicate the gender of your partner:  
 Male  Female
10. If you are currently in a relationship, please indicate its duration:  
 Years  Months
11. Age of baby (in months):  Months
12. Your baby's gender:  Boy  Girl
13. Was your pregnancy planned?  Yes  No
14. If so, for how long did you try to conceive?  Months
15. Have you experienced miscarriage(s)?  Yes  No
16. Did you receive infertility treatments?  Yes  No
17. Please rate your health during your pregnancy:  
 Excellent  Good  Fair  Poor
18. Please rate the overall difficulty of your labor and delivery:  
 Not at all difficult  Slightly difficult  Fairly difficult  
 Very difficult  Extremely difficult
19. Please rate your current health status:  
 Excellent  Good  Fair  Poor
20. Please rate the health of your baby **at birth**:  
 Excellent  Good  Fair  Poor
21. Please rate the **current** health of your baby:  
 Excellent  Good  Fair  Poor
22. Have you ever experienced depression?  
 Yes  No
23. Did you participate in psychotherapy during your pregnancy?  
 Yes  No
24. Have you participated in psychotherapy since the birth of your baby?  
 Yes  No

## Appendix E

## The Gratitude Questionnaire - 6 (GQ-6)

*Directions:* Using the scale below as a guide, please write a number beside each statement indicating how much you agree with it.

1 = strongly disagree

2 = disagree

3 = slightly disagree

4 = neutral

5 = slightly agree

6 = agree

7 = strongly agree

1.    \_\_\_    I have so much in life to be thankful for.
  
2.    \_\_\_    If I had to list everything that I felt grateful for, it would be a very long list.
  
3.    \_\_\_    When I look at the world, I don't see much to be grateful for.
  
4.    \_\_\_    I am grateful to a wide variety of people.
  
5.    \_\_\_    As I get older, I find myself more able to appreciate the people, events, and situations that have been part of my life history.
  
6.    \_\_\_    Long amounts of time can go by before I feel grateful to something or someone.

*Scoring:* Items 3 and 6 are reverse scored.

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112-127.

## Appendix F

## Center for Epidemiological Studies Depression Scale – 8 (CES-D-8)

*Directions:* Below is a list of some of the ways you may have felt or behaved **during the past week**. Please indicate how often you have felt this way during the past week by placing a check mark in the blank provided for each question.

1. I felt that I could not shake off the blues even with help from my family or friends.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)
2. I felt depressed.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)
3. I thought my life had been a failure.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)
4. I felt fearful.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)
5. My sleep was restless.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)
6. I felt lonely.  
 Rarely or none of the time (less than a day)  
 Some or little of the time (1-2 days)  
 Occasionally or a moderate amount of the time (3-4 days)  
 All of the time (5-7 days)

7. I had crying spells.
- Rarely or none of the time (less than a day)
  - Some or little of the time (1-2 days)
  - Occasionally or a moderate amount of the time (3-4 days)
  - All of the time (5-7 days)
8. I felt sad.
- Rarely or none of the time (less than a day)
  - Some or little of the time (1-2 days)
  - Occasionally or a moderate amount of the time (3-4 days)
  - All of the time (5-7 days)

*Scoring:*

- 1 point for “Rarely or none of the time” (< 1 day)
- 2 points for “Some of a little of the time” (1-2 days)
- 3 points for “Occasionally or a moderate amount of time” (3-4 days)
- 4 points for “All of the time” (5-7 days)

A total scale score is obtained by summing the numeric values for each item. Scores may range from 8 to 32, with higher scores indicating more depression. A score of seven or higher is the recommended “threshold” of depressive symptomatology.

Melchior, L. A., Huba, G. J., Brown, V. B., & Reback, C. J. (1993) A short depression index for women. *Educational and Psychological Measurement*, 53, 1117-1125.

## Appendix G

### Satisfaction with Life Scale

*Directions:* Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 = Strongly agree
- 6 = Agree
- 5 = Slightly agree
- 4 = Neither agree nor disagree
- 3 = Slightly disagree
- 2 = Disagree
- 1 = Strongly disagree

1.     \_\_\_ In most ways my life is close to my ideal.
2.     \_\_\_ The conditions of my life are excellent.
3.     \_\_\_ I am satisfied with my life.
4.     \_\_\_ So far I have gotten the important things I want in life.
5.     \_\_\_ If I could live my life over, I would change almost nothing.

*Scoring:*

A total scale score is obtained by summing the numeric values for each item. Scores may range from 5 to 35, with higher scores indicating greater satisfaction.

- 31 - 35 = Extremely satisfied
- 26 - 30 = Satisfied
- 21 - 25 = Slightly satisfied
- 20 = Neutral
- 15 - 19 = Slightly dissatisfied
- 10 - 14 = Dissatisfied
- 5 - 9 = Extremely dissatisfied

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.

## Appendix H

## Brief COPE

These items deal with the ways you've been coping with the stress in your life since having a baby. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not – just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true *for you* as you can.

1 = I haven't been doing this at all.

2 = I've been doing this a little bit.

3 = I've been doing this a medium amount.

4 = I've been doing this a lot.

1.    \_\_\_    I've been turning to work or other activities to take my mind off things.
2.    \_\_\_    I've been concentrating my efforts on doing something about the situation I'm in.
3.    \_\_\_    I've been saying to myself "this isn't real."
4.    \_\_\_    I've been using alcohol or other drugs to make myself feel better.
5.    \_\_\_    I've been getting emotional support from others.
6.    \_\_\_    I've been giving up trying to deal with it.
7.    \_\_\_    I've been taking action to try to make the situation better.
8.    \_\_\_    I've been refusing to believe that it has happened.
9.    \_\_\_    I've been saying things to let my unpleasant feelings escape.
10.   \_\_\_    I've been getting help and advice from other people.
11.   \_\_\_    I've been using alcohol or other drugs to help me get through it.
12.   \_\_\_    I've been trying to see it in a different light, to make it seem more positive.
13.   \_\_\_    I've been criticizing myself.
14.   \_\_\_    I've been trying to come up with a strategy about what to do.
15.   \_\_\_    I've been getting comfort and understanding from someone.

16. \_\_\_ I've been giving up the attempt to cope.
17. \_\_\_ I've been looking for something good in what is happening.
18. \_\_\_ I've been making jokes about it.
19. \_\_\_ I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. \_\_\_ I've been accepting the reality of the fact that it has happened.
21. \_\_\_ I've been expressing my negative feelings.
22. \_\_\_ I've been trying to find comfort in my religion or spiritual beliefs.
23. \_\_\_ I've been trying to get advice or help from other people about what to do.
24. \_\_\_ I've been learning to live with it.
25. \_\_\_ I've been thinking hard about what steps to take.
26. \_\_\_ I've been blaming myself for things that happened.
27. \_\_\_ I've been praying or meditating.
28. \_\_\_ I've been making fun of the situation.

*Scales are computed as follows:*

<b>Scale</b>	<b>Items</b>
Self-distraction	1, 19
Active coping	2, 7
Denial	3, 8
Substance use	4, 11
Use of emotional support	5, 15
Use of instrumental support	10, 23
Behavioral disengagement	6, 16
Venting	9, 21
Positive reframing	12, 17
Planning	14, 25
Humor	18, 28
Acceptance	20, 24
Religion	22, 27
Self-blame	13, 26

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, 4, 92-100.

## Appendix I

## Emotional Approach Coping Scale (EAC)

We want to understand how women respond when they become a mother for the first time. These items ask what *you are doing to cope with any of the stress you may be experiencing while adjusting to motherhood*. There are many ways to deal with stressors. We want to know to what extent (how much or how frequently) you have been doing what each item says. Make your answers as true *for you* as you can.

1 = I haven't been doing this at all.

2 = I've been doing this a little bit.

3 = I've been doing this a medium amount.

4 = I've been doing this a lot.

1.    \_\_\_    I take time to figure out what I'm really feeling.
2.    \_\_\_    I delve into my feelings to get a thorough understanding of them.
3.    \_\_\_    I realize that my feelings are valid and important.
4.    \_\_\_    I acknowledge my emotions.
5.    \_\_\_    I take time to express my emotions.
6.    \_\_\_    I let my feelings come out freely.
7.    \_\_\_    I allow myself to express my emotions.
8.    \_\_\_    I feel free to express my emotions.

*Scoring:*

Emotional Processing subscale – items 1-4

Emotional Expression subscale – items 5-8

Stanton, A. L., Kirk, S. B., Cameron, C. L., & Danoff-Burg, S. (2000). Coping through emotional approach: Scale construction and validation. *Journal of Personality and Social Psychology*, 78, 1150-1169.



## Appendix J

## Postpartum Adjustment Questionnaire (PPAQ)

We are interested in finding out how you have been doing since the birth of your baby. The particular time period that we would like you to keep in mind is the past month. Various aspects of your life will be covered ranging from household tasks to relationships with your spouse, family, and friends. Write in the number corresponding to the answer that best describes how you have been in the past month.

**For questions 1 – 11, please use the following responses:**

- 1 = Better than before.**
- 2 = Same as before.**
- 3 = Slightly worse than before.**
- 4 = Much worse than before.**
- 5 = Very much worse than before.**

1.    \_\_\_    How has your performance in cooking/preparing food for your family changed since the birth of your baby?
2.    \_\_\_    How has your performance in maintaining your household changed since the birth of your baby?
3.    \_\_\_    How has your job performance changed since your baby was born?
4.    \_\_\_    How have your relationship(s) with your close friends changed since your baby was born?
5.    \_\_\_    How have your relationship(s) with your casual acquaintances changed since your baby was born?
6.    \_\_\_    How has the quality of your relationship(s) with your sibling(s) changed since your baby was born?
7.    \_\_\_    How has the quality of your relationship(s) with your parent(s) changed since your baby was born?
8.    \_\_\_    How has the quality of your relationship(s) with your in-laws changed since your baby was born?
9.    \_\_\_    How has your display of affection toward your spouse changed since your baby was born?
10.   \_\_\_    How has the quality of your efforts to participate in shared activities with your spouse changed since your baby was born?

11. \_\_\_\_ How has the quality of your efforts to confide in your spouse about yourself and your problems changed since your baby was born?

**The next set of questions refers to your new baby. Please circle the number next to the response that fits you the best.**

12. How much time do you spend caring for your baby's needs (i.e. bathing, feeding, changing diapers)?
1. Too much time.
  2. About the right amount of time.
  3. Not quite enough time.
  4. Much below what is necessary/desirable.
  5. No time.
13. How would you evaluate your performance in regard to caring for your baby's needs?
1. Excellent.
  2. Average/good.
  3. Somewhat below average.
  4. Poor.
  5. Very poor.
14. How have others (i.e. spouse, family, and friends) evaluated your performance in regard to caring for your baby's needs?
1. Others have commented on my good performance.
  2. No one has commented on my performance one way or the other.
  3. It is clear that others have recognized that my performance is below average, but no one has expressed any concern or criticism.
  4. Others have expressed concern or criticism about my poor performance.
  5. Others have expressed significant concern or criticism about my poor performance.
15. How much time do you spend engaging in physical contact with your baby (i.e. holding, rocking, kissing)?
1. Too much time.
  2. About the right amount of time.
  3. Not quite enough time.
  4. Much below what is necessary/desirable.
  5. No time.

16. How would you evaluate the quality of the time you spend engaging in physical contact with your baby?
1. Excellent.
  2. Average/good.
  3. Somewhat below average.
  4. Poor.
  5. Very poor.
17. How have others (i.e. spouse, family, and friends) evaluated the quality of the time you spend engaging in physical contact with your baby?
1. Others have commented on how well I engage in physical contact with my baby.
  2. No one has commented one way or the other on the quality of the time I spend engaging in physical contact with my baby.
  3. It is clear that others have recognized that I have had some problems with the quality of the time I spend engaging in physical contact with my baby, but no one has expressed concern or criticism.
  4. Others have expressed concern or criticism about the quality of the time I spend engaging in physical contact with my baby.
  5. Others have expressed significant concern or criticism about the quality of the time I spend engaging in physical contact with my baby.
18. How much time do you spend engaging in play activity with your baby (i.e. singing, playing patty-cake, etc)?
1. Too much time.
  2. About the right amount of time.
  3. Not quite enough time.
  4. Much below what is necessary/desirable.
  5. No time.
19. How would you evaluate the quality of the time you spend participating in play activity with your baby?
1. Excellent.
  2. Average/good.
  3. Somewhat below average.
  4. Poor.
  5. Very poor.

20. How have others (i.e. spouse, family, friends) evaluated the quality of the time you spend participating in play activity with your baby?
1. Others have commented on how well I participate in play activity with my baby.
  2. No one has commented one way or the other on the quality of the time I spend participating in play activity with my baby.
  3. It is clear that others have recognized that I have had some problems with the quality of the time I spend participating in play activity with my baby, but no one has expressed concern or criticism.
  4. Others have expressed concern or criticism about the quality of the time I spend participating in play activity with my baby.
  5. Others have expressed significant concern or criticism about the quality of time I spend participating in play activity with my baby.

*Scoring:*

To calculate subscale scores, the authors instruct researchers to sum the valid items of the subscale and divide by the number of valid subscale responses.

O'Hara, M. W., Hoffman, J. G., Philipps, L. H. C., Wright, E. J. (1992) Adjustment in childbearing women: The postpartum adjustment questionnaire. *Psychological Assessment*, 4(2), 160-169.

## Appendix K

## Open-Ended Questions

1. Please describe an instance or example related to becoming a mother that has been most stressful for you.

How distressing was this instance (experience) for YOU?

1 \_\_\_ Not at all upsetting

2 \_\_\_ Slightly upsetting

3 \_\_\_ Fairly upsetting

4 \_\_\_ Very upsetting

5 \_\_\_ Extremely upsetting

2. Please describe an instance or example of when you felt grateful for becoming a mother.

## Appendix L

## Debriefing Form

Thank you very much for participating in this study.

Much of the previous psychological research on motherhood has focused on the negative effects of postpartum stress and depression on women's lives. Without a doubt, feelings of distress are commonly and understandably part of the transition for many new mothers. However, the majority of research on motherhood has overlooked the positive emotions that women feel upon becoming mothers, along with the positive and adaptive coping strategies that new mothers employ to successfully adjust to this major life transition. In order to address this gap in our knowledge, the purpose of this study was to explore how gratitude and emotional approach coping relate to the postpartum adjustment, life satisfaction, and distress of new mothers.

Please be certain that your responses to the survey will be held in strict confidence, which will not be violated under any circumstances. Due to the ongoing nature of this study, we ask that you kindly not discuss this survey with others. This is important in protecting the quality of the results.

If you would like further information on postpartum distress and depression, please visit the website of Postpartum Support International ([www.postpartum.net/index.html](http://www.postpartum.net/index.html)) or the American Psychological Association ([www.apa.org/pi/wpo/postpartum.html](http://www.apa.org/pi/wpo/postpartum.html)). If you are interested in locating a psychologist with whom to discuss any of the concerns that may have come up for you while completing this questionnaire, please visit <http://helping.apa.org/> or call 1-800-964-2000.

For your participation, you are eligible to participate in a drawing for a \$50 gift card to either Target or Serena and Lily (an online baby boutique). By clicking this link (link will be inserted here), you will be taken to another site where you can enter your email address for the drawing. This separate link is to protect your confidentiality and to make sure that your name and identity are not associated with your survey.

Please contact us if you have any questions or concerns about your participation in this study. We appreciate your time and effort in assisting us with this important study.

Sincerely,

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