

THE IMPACT OF CHILD ADJUSTMENT TO PRESCHOOL ON MATERNAL
SEPARATION ANXIETY

by

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DEDICATION

For all working mothers, without whom I could not have done this, and for my family, especially my mother and father, my husband, Arman, and children, Daniel, & Michael, without whom, I could not do at all.

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THE IMPACT OF CHILD ADJUSTMENT TO PRESCHOOL ON MATERNAL SEPARATION ANXIETY

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The purpose of the proposed study is to examine longitudinally how a mother's perception of her child's temperament and adjustment to preschool may mediate the relationships found in previous research between maternal separation anxiety and maternal role conflict, child care satisfaction, and job satisfaction. Approximately 110 working mothers with preschool-aged children participated in this study. In order to account for higher drop out rates that are associated with longitudinal research designs, approximately 200 mothers from various ethnic and SES backgrounds will be recruited from preschools and day care centers in the Maryland and Virginia suburbs of Washington, D.C. A participant will only be included in the sample if she is working at least 15 hours per week and has a preschool-aged child (age 2-6 years). A child can be attending no higher than a kindergarten class level to be considered a preschooler.

The results of this study suggest that child temperament is significantly related to both a child's adjustment to preschool and maternal separation anxiety. However, The results of the current study suggest that a child's positive adjustment to preschool or day care does not effect the relationships between MSA at Time 1 (i.e., the beginning of the school year) and MSA at Time 2

(i.e., 4 months later), nor does it mediate MSA and role strain as measured by scales of work-family conflict, or MSA and maternal job satisfaction, nor MSA and maternal child care satisfaction. The possible implications of this research are explored.

INTRODUCTION

In the past 30 years there has been a significant increase in the number of employed women who have young children. In the 1970s, only 30% of working women had children under the age of three (Symons & McLeod, 1994). By 1996, however, approximately two-thirds of women with preschool children in the United States were in the work force (Deater-Deckard, Pinkerton, & Scarr, 1996). According to the latest national census data (2000), over 24 million women with children under 18 work in the United States, and 40% of these women (over 9 million) have a child under the age of six (U.S. Census Bureau). The changes with regard to mothers of infants have been even more significant. Today, the majority of mothers in the United States who return to work after having a child do so before their child's first birthday. Recent figures (for 1998-1999) indicate that 58% of all women with infants under 1 year of age are in the labor force (Bureau of Labor Statistics, 2000) compared to 27% in 1970 and 46% in 1985 (Kamerman, 2000).

As the number of women who enter the work force increases with each passing decade, there has been a corresponding increase in the number of very young children cared for by someone other than their mother. For example, the percentage of preschool children being cared for by someone other than a parent rose dramatically from 13% in

1977 to 38% in 1990 (Spedding, 1993). This means that in 1990 more than 10 million children below the age of 5 years were being cared for by someone other than a parent (The National Child Care Survey, 1990) and by 1995, 49% of children under the age of 5 were cared for by nonrelatives while one or both parents were working (U.S. Census Bureau). As the number of children in day care has increased over time, so has the research interest in the effects of nonmaternal care on children.

It is not surprising, therefore, that the history of research on working mothers began with a search for the main effects of maternal employment on various child outcomes. For example, some research showed that maternal employment appeared to be related to more insecure mother-infant attachments or less adjusted to school, (Belsky, 1988; Belsky & Rovine, 1988; Lamb, Sternberg, & Prodromidis, 1992; Peleg, Halaby & Whaby, 2006), more aggressive behavior, and lower school achievement in children (Chase-Lansdale & Owen, 1987). However, longitudinal research has also found that a mother's working status is not significantly related to various dimensions of children's development from infancy through school-age (Hock, 1980; Owen & Cox, 1988; Gottfried, Gottfried, & Bathurst, 1988; Prodromidis, Lamb, Sternberg, Hwang, & Broberg, 1995; Erel, Oberman, & Yirmiya, 2000). In fact, Gottfried, Gottfried, and Bathurst (1988) and Crockenberg and Litman (1991) have suggested that there may be some positive effects for children who have employed mothers (e.g., higher educational aspiration, increased enrollment in out-of-school lessons, greater child compliance at home).

Since these early studies failed to obtain consistent findings, researchers began to consider variables that may moderate or mediate the relationship between maternal employment and child outcomes. This next wave of research moved on to examine how various maternal characteristics, including work-related attitudes and beliefs, might influence the relationship between maternal employment and child outcomes. The literature suggests that prenatal work plans and work preference (Volling & Belsky, 1993), maternal role satisfaction, anxiety and depression (Owen & Cox, 1988), career salience (Morgan & Hock, 1984), and social support (Crockenberg & Litman, 1991) all have a significant influence on a woman's decision to work (Volling & Belsky, 1993), maternal role investment (Owen & Cox, 1988), and parenting practices which, subsequently impact her child's behavior (Crockenberg & Litman, 1991). For a more complete and in-depth review of this literature on the effects of maternal employment on child outcomes, please see Hoffman (1989). This body of research significantly expanded the number of factors examined, but the results of maternal employment on child outcomes remained contradictory and exactly how maternal employment impacts children continued to be unclear.

One hypothesis which has been advanced to explain why the findings on maternal employment and child outcomes are consistently varied and often contradictory is because these studies are predominantly "child focused" (Owen & Cox, 1988). This means that only two main factors were routinely examined: maternal employment status and child development and behavior. This model is based on an underlying assumption that working mothers and stay-at-home mothers are two very distinct groups of women.

However, as more and more women join the work force, this distinction may be less clear-cut. As Owen and Cox (1988) point out, most mothers were probably employed before the birth of their infants and will likely become employed again at some point during their children's preschool years. As a result, attitudes regarding employment may not differ as much between employed and nonemployed mothers of infants as in previous generations, and it is not as informative as it may have once been to simply compare employed mothers to nonemployed mothers on various factors associated with child development.

Therefore, some research has moved away from "child focused" hypotheses to look more closely at the experiences of women who have to integrate the responsibilities of being a mother and an employee (Hock, 1980; Hock, 1984; Hock, McBride, & Gnezda, 1989). While this area of research has received less attention, it also has important consequences for understanding the effects of maternal employment on women and their children. It is important to consider the experiences of the millions of working mothers in the United States today because the demands associated with balancing multiple roles are often stressful and can have a significant influence on a mother's psychological well-being, her parenting practices, and her performance at work. As a result, a large body of recent research has begun to focus on various factors related to the experiences of working mothers in order to better understand and ameliorate the strain that may result from balancing these two critical roles.

One factor that has received a considerable amount of attention is the concept of maternal separation anxiety. Maternal separation anxiety is the negative feelings and

concerns a mother has about leaving her child (Hock, 1980). A review of the literature shows that maternal separation anxiety is significantly related to several maternal employment variables, including if and when a mother decides to return to work (McBride, A.B., 1990; Hock & DeMeis, 1990) and mothers' employment preference (Mathieu-Hansen, 1995; Hock, DeMeis, and McBride, 1988; Hock and DeMeis, 1990; Symons and McLeod, 1994), as well as a mother's psychological health (McBride & Belsky, 1988; Hock, Schirtzinger & Lutz, 1992), parenting practices (Hock, McBride & Gnezda, 1989), and her experiences related to the balancing her maternal and employee roles, including role satisfaction, role conflict and role strain (McBride, A. B., 1990; Owen & Cox, 1988).

While the majority of the research on maternal separation anxiety has focused on its relationship to several maternal personality and employment characteristics, one very important and often neglected area of research is maternal concerns about child care. Child care is a critical issue that every working mother has to address. A recent survey sponsored by the YMCA of the USA illustrates how important child care is to working parents today (1998). According to the survey, three-quarters (75%) of respondents said that child care today has become "a greater problem" for Americans than it was 10 years ago. By large percentages, respondents said they were concerned about availability, cost and quality of child care programs. A resounding 82% said they were "extremely" or "somewhat" concerned about child care availability, 78% said the same about its cost, and 83% about its quality. Forty-three percent of respondents said that the ability to find reliable child care had affected their jobs or businesses, while 59% said it had affected the

jobs or businesses of friends, coworkers or employees. Given the results of this survey, it is not surprising that the quality and characteristics of a child care setting and a mother's satisfaction with her child care arrangements might have a significant influence on how she copes with the competing demands of motherhood and employment (i.e., role conflict) as well as her feelings about being separated from her child. Since maternal separation anxiety has been related to maternal role conflict, it is not surprising that the research has also linked maternal separation anxiety to how a mother chooses child care (Hock, DeMeis & McBride, 1988), the quality of child care (McBride, S. L., 1990), and her satisfaction with child care (Erdwins, Buffardi, Casper & O'Brien, 2001).

While we need to learn more about how a mother's separation anxiety may be related to her feelings about her child care, it also seems likely that both of these may be impacted by characteristics of the child. According to developmental theory, there is an interactional relationship between mother and child, such that a mother's values, role satisfaction, and behavior can influence and *be influenced* by her child's characteristics (Lerner and Galambos, 1986b; Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990). A review of the research supports this bi-directional model of development, showing that a mother's perception of her child's characteristics, specifically infant temperament, has a powerful effect on a her decision to work (Lerner and Galambos, 1986a), her mood (Mayseless & Scher, 2000), her role conflict (Lerner and Galambos, 1986b), her parenting (Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990), and the amount of separation anxiety she feels when away from her child (Fein, Gariboldi & Boni, 1993).

As the research above demonstrates, maternal perception of infant temperament is related to various maternal experiences and characteristics, including separation anxiety. This suggests that other maternal perceptions of child characteristics may also have a significant influence on her experience of maternal separation anxiety. For example, a mother's perception of her preschool child's adjustment to child care may also be related to her separation anxiety. However, there is limited research on maternal perception of child adjustment to day care in general, and no studies on how a mother's perception of her child's adjustment to the child care setting influences her experiences, attitudes and emotional responses to working, including maternal separation anxiety. Considering the large number of women in the United States who balance motherhood and employment, it is critically important to continue to explore what factors and variables influence working mothers' experiences as they relate to her child's and her own psychological well-being.

Therefore, the following review of the literature will look more closely at the construct of maternal separation anxiety, how it is measured, its theoretical foundations, and its possible limitations. It will also examine in more detail how maternal separation anxiety is multiply determined, such that characteristics of the mother, her job, her child, and her child care setting all influence the nature and degree of anxiety that a mother experiences when she is at work and away from her child. Finally, this review will highlight one factor that may have a significant influence on maternal separation anxiety, the child's adjustment to his/her child care setting, which has been neglected in the previous literature.

REVIEW OF THE CURRENT LITERATURE

Maternal Separation Anxiety: The Construct and Its Measurement

Maternal separation anxiety is a complex, multidimensional, and multiply determined construct. Hock, McBride and Gnezda (1989) first defined the construct of maternal separation anxiety as “an unpleasant emotional state tied to the separation experience: it may be evidenced by expressions of worry, sadness, or guilt” (p. 794). Maternal separation anxiety is a unique dimension of the maternal personality, distinct from other quality-of-mothering measures, and related to women’s employment desires, employment status, and career aspirations (DeMeis, Hock, & McBride, 1986; Hock, DeMeis, & McBride, 1988). The Maternal Separation Anxiety Scale (MSAS) was designed to tap a mother’s cognitions and feelings about closeness to and separation from her child (Lutz & Hock, 1995). The MSAS is a 35-item, self-report questionnaire that measures three aspects of maternal separation anxiety by providing scores on three subscales: (1) *Maternal Separation Anxiety*: This subscale contains 21 items that reflect general anxiety about separation or the extent to which a mother feels sad, fearful, or nervous about leaving her child. Examples of items include the following: “When I am away from my child, I feel lonely and miss him/her a great deal” and “I like to have my child close to me all the time.” High scores on Subscale 1 reflect a great deal of maternal anxiety, sadness, and concern about spending time away from her child. (2) *Perception*

of Separation Effects on the Child: This second subscale includes seven items that reflect perceptions of the effect of separation on the child, particularly in terms of the promotion of independence. Examples of items include the following: “Exposure to many different people is good for my child” and “There are times in the lives of young children when they need to be with people other than their mothers.” Mothers who have low scores on this subscale believe their child will be comfortable during the separation and that their child may even benefit socially from being away from her, whereas high scores reflect a mother’s belief that separations may be detrimental to her child. (3) *Employment-Related Separation Concern:* This third subscale appraises the importance and amount of interest a mother expresses in both a career or job for herself and her role as mother. It contains seven items which assess concerns about balancing her maternal role and employment outside the home. Examples of items include the following: “I would resent my job if it meant I had to be away from my child” and “I would not regret postponing my career in order to stay home with my child.” Mothers who are stressed by being away from their child in order to go to work would have high scores on this subscale; conversely, low scores indicate that a mother is more career oriented and is not bothered by being away from her child while at work (Hock, et al., 1989).

Research has shown that maternal separation anxiety is only modestly related to levels of general anxiety, which implies that a mother’s anxiety about separation from her child is a unique phenomenon distinguishable from other forms and measures of anxiety. However maternal separation anxiety has been related to observable behaviors of the mother that reflect concern about leaving her child, such as attempts to familiarize her

child with the environment and prepare for her departure, any acknowledgement or approach of her baby, and any interactions with the child or babysitter as well as self-reports of her feelings when away from her child, how distressed she thinks her child is during the separation, and if she is concerned about the quality of the child care provided (Hock, McBride, & Gnezda, 1989). Additional studies have found that the three subscales of the MSAS were stable over a seven month period (Hock, McBride, & Gnezda, 1989; McBride & Belsky, 1988) and maternal separation anxiety as measured by the MSAS is consistent within individuals across situations; however, the authors of the measure suggest that the specific characteristics of a situation may heighten or lower levels of separation anxiety (DeMeis, et al., 1986; Hock, et al., 1989).

The Antecedents of Maternal Separation Anxiety

Dispositional Antecedents: Maternal Attachment

The construct of maternal separation anxiety is grounded in attachment theory. Based on Bowlby's theory of attachment (1969, 1982), the internal working model of a person is developed through repeated experiences with attachment figures or caregivers during childhood. This internal working model organizes an individual's affect regulation mechanisms and internalized beliefs about close relationships, including the availability and trustworthiness of others and the emotional responses to separation. As a result of a sensitive and responsive attachment figure, a child creates an internal working model of the world as safe and others as trustworthy. Conversely, experiences with insensitive attachment figures who provide parental rejection or threats of abandonment

create an insecure attachment style that is based on a negative perception of the world and others. According to Bowlby (1988), an insecure working model leads to the development of personalities prone to depression and intensified separation anxiety.

Bowlby and other researchers have suggested that a mother's internal working model of relationships, that is, her comfort and security with respect to all interpersonal relationships, is directly related to the amount of maternal separation anxiety she feels when away from her child. A mother who has a secure attachment style would want to be near her child in order to remain sensitive and responsive to her child's needs. As a result, a secure mother would be expected to feel a moderate amount of separation anxiety when away from her child (Hock & Schirtzinger, 1992; Hock, Schirtzinger & Lutz, 1992; Lutz & Hock, 1995). Mothers who have an insecure attachment history, (i.e., those who experienced impoverished parental love in their own childhood) try to fulfill their excessive need for closeness by severely limiting the child's ability to explore and becoming overinvolved with their children, to the extent that they may emotionally abandon other social relationships (Bowlby, 1988). When these mothers are away from their children, they experience the separateness as rejection or loss which is interpreted as severe separation anxiety.

Lutz and Hock (1995) examined whether a mother's attachment representation and specific memories of her childhood experiences actually do contribute to a mother's thoughts and feelings about separation from her own infant. They had a sample of 49 women who at the time of recruitment were seven months pregnant with their first child. Each mother's recollection of childhood experiences with parents and peers was assessed

using the Mother-Father-Peer Scale and her representations of attachment relationships were evaluated using the Adult Attachment Interview before giving birth in order to control for the possibility that a mother may reorganize her past relationship experiences following childbirth (Lutz & Hock, 1995). When their infants were two months old the mothers completed the Maternal Separation Anxiety Scale. Subscale 1 (Maternal Separation Anxiety) was used in the analyses as an index of a mother's ability to balance separation and closeness in her relationship with her child. First, the authors found that childhood memories of experiences with parents were associated with adult mental representations of relationships. Specifically, childhood memories of maternal acceptance, love, and encouragement of independence were positively correlated with secure adult attachments and childhood memories of maternal rejection were associated with an insecure attachment style as an adult (Lutz & Hock, 1995). Second, Lutz and Hock found that women with higher levels of maternal separation anxiety were more likely than those with lower levels to remember their mothers as rejecting, their fathers as overprotective and both parents as discouraging independence. This finding suggests that negative childhood experiences do contribute to heightened separation anxiety in mothers after the birth of their child. Finally, this study supports the theory that it is through an internalized representation of relationships, or an "internal working model" of attachment, that childhood memories of experiences with parents influence maternal separation anxiety. The authors found that women with insecure attachment representations were more likely to have high levels of maternal separation anxiety, and those who were described as having secure attachment styles were more likely to report

moderate levels of anxiety when they are away from their infants (Lutz & Hock, 1995). The authors suggest that high levels of separation anxiety may indicate that insecure mothers are attempting to compensate for their own lack of felt security from childhood.

A similar study by Mayseless and Scher (2000) also found that a mother's own attachment style was related to maternal separation anxiety. A sample of 97 mothers, aged 21-49, completed measures of maternal separation anxiety (MSAS), attachment to spouse (the Attachment Concerns Questionnaire), and perceptions of infant temperament (the Infant Characteristic Questionnaire). The authors reported a direct relationship between a mother's attachment to her husband and degree of maternal separation anxiety when her child was 9 months old, above what was predicted based on the mothers' worries about separation when her infant was 3 months old. Specifically, those mothers who were described as insecure (i.e., high in fear of being dependent) experienced more maternal separation anxiety when the child was nine months than when their child was three months old, especially if the mother perceived her child as being adaptable. Secure mothers, on the other hand, only reported increased maternal separation anxiety at nine months if they perceived their child as being unadaptable at three months. In general, this study suggests that insecure mothers (especially those who have a strong fear of being dependent on their husbands) are characterized as having higher levels of maternal separation anxiety (Mayseless & Scher, 2000).

In sum, the research on maternal separation anxiety supports Bowlby's (1982, 1988) supposition that when a mother has a secure internalized representation of relationships, she is able to balance closeness and separation from her infant in a sensitive

and healthy way, such that a secure mother experiences moderate feelings of separation anxiety when away from her infant. A mother who has an insecure attachment style has a more difficult time managing closeness and separation from her infant, and therefore experiences excessive maternal separation anxiety (Lutz & Hock, 1995; Mayseless & Scher, 2000).

Dispositional Antecedents: Maternal Personality

The stability of maternal separation anxiety scores over time have led some researchers to propose that maternal separation anxiety is a function of a mother's basic disposition or personality structure (Hock, DeMeis, & McBride, 1988; McBride & Belsky, 1988; Symons & McLeod, 1994). While it is important to examine how dispositional MSA relates to various personal and work variables, a potentially significant limitation of studies of situational maternal separation anxiety is an often overlooked dimension of maternal personality, specifically negative affectivity or emotionality. Positive and negative emotionality refers to an individual's generalized tendency to react positively or negatively to a broad range of stimuli. According to Watson, Clark, and Tellegen (1988), positive affect is a state of "high energy, full concentration, and pleasureable engagement" while negative affect is "a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness" (p.1063). In other words, an individual who reports experiencing frequent negative mood states (e.g., upset, distressed, scared, etc.) over long periods of time has a personality that

can be described as being high in negative emotionality. Negative affectivity may be a significant confounding factor for research on maternal separation anxiety because a woman who has a temperament that is high in negative affect may experience more intense maternal separation anxiety partially as a result of her underlying “negative emotionality” rather than as a result of the situational variables being examined. Therefore, it would be important to control for mothers’ negative affectivity when examining maternal separation anxiety.

In fact, while much of the literature suggests that maternal separation anxiety may be influenced in part by a mother’s personality structure, only a handful of studies have sought to examine how MSA is related to various personality characteristics and no research has specifically examined the relationship between MSA and negative affectivity. For example, McBride and Belsky (1988) examined how three personality factors related to maternal separation anxiety. They had 63 mothers involved in the Pennsylvania Infant and Family Development Project complete questionnaire assessments of maternal separation anxiety when their infants were 3 and 9 months old, as well as measures related to maternal demographics, prenatal employment plans, employment status, maternal personality, infant temperament, and attachment. The mothers in their study completed three personality subscales which assessed ego strength (i.e., emotional stability and maturity), interpersonal affect (i.e., the nature and extent of an individual’s empathic feelings towards others) and self-esteem. They found that women with higher levels of interpersonal affect expressed greater maternal separation anxiety. They suggest that mothers who are more sensitive to interpersonal affect may

have higher separation anxiety as a result of being more sensitive to the feelings of their infant. Another study by Symons and McLeod (1994) examined the relationship of maternal separation anxiety, maternal personality characteristics, and postpartum employment patterns. They used five personality subscales to assess maternal nurturance (i.e., giving sympathy and caring for others), succorance (i.e., seeking sympathy, reassurance, and feeling insecure), endurance (i.e., willing to work long hours and being unrelenting in their work habits), autonomy (i.e., tries to break away from restraints and restrictions of any kind), and achievement (i.e., accomplishing difficult tasks and willing to work towards distant goals). The authors reported only one significant effect of a personality factor on a woman's decision to return to work following the birth of her child. Specifically, women who returned to work after they had planned to do so had significantly higher scores on autonomy than those women whose initial plans had been to remain home (Symons & McLeod, 1994). They did not report any relationship between the personality characteristics examined and maternal separation anxiety. While these studies illustrate how MSA may be related to several personality characteristics, by overlooking negative affectivity they have overlooked a potentially significant confounding factor. As a result, there is a considerable gap in our understanding of the body of research on the situational antecedents and outcomes of maternal separation anxiety.

Situational Antecedents: Maternal Employment Variables

Maternal separation anxiety has been related to various maternal employment variables including a woman's decision to return to work after the birth of her child (McBride, 1990; McBride & Belsky, 1988), how long after the child's birth she returns to work (Hock & DeMeis, 1990), and what kind of experiences she has on her job (McBride, 1990). McBride (1990), Hock and DeMeis (1990), Mayseless and Scher (2000), and McBride and Belsky, (1988) all found that mothers who expressed higher levels of general separation anxiety and were more anxious about work-related separations (Subscales 1 and 3) tended to stay home with their children or return to work later in the first year of their children's lives. McBride (1990) also reported that mothers who worked fewer hours reported more anxiety about the effects of separation on their children and employment-related separations (Subscales 2 and 3).

Research has also shown that while maternal separation anxiety tends to decrease for all women (employed or not) over the course of the first year of the child's life, for well-educated women who wanted to return to the work force, maternal separation anxiety decreased earlier and at a faster rate than that of working women who preferred to be at home (DeMeis, Hock, McBride, 1986; McBride and Belsky, 1988). This decrease in maternal separation anxiety over time is due, in part, to a mother's realization that she can leave her infant for short periods of time without negative consequences to her child. That is, a mother may feel a great amount of anxiety about leaving her infant in the care of another for the first time when she returns to work. However, over time she

sees that her child continues to flourish and develop normally, and as a result, her fears for her child abate and her maternal separation anxiety decreases.

The characteristics of a mother's job and the suitability of her current occupation have also been related to levels of maternal separation anxiety experienced by working mothers. According to McBride's (1990) research, mothers who expressed higher levels of general maternal separation anxiety (Subscale 1) also reported that they held more demanding jobs, they tended to be in positions in which they felt less autonomous, and they received less support from their supervisors. Mothers who scored high on Subscale 1 also expressed significantly more work/psychological spillover (i.e., the frequency of negative job-related moods such as preoccupation with work, fatigue, and irritability with children). Additionally, Pattison and Moyse (1995) found that mothers whose current occupation matched their reported occupational interests experienced less general maternal separation anxiety. The authors suggest that occupational investment may be a more important indicator of maternal separation anxiety than employment status alone.

In sum, these studies suggest that maternal separation anxiety may be related to a number of situational variables related to maternal employment. First, mothers who experience greater maternal separation anxiety tend to decide not to return to work. Of those mothers who do return to work after the birth of their children, mothers who report more separation anxiety return to work later in the first year of their children's lives. Second, maternal separation anxiety is related to how much a mother works, such that mothers who work more hours report less maternal separation anxiety. Third, maternal separation anxiety tends to decrease for all mothers during the first year of their child's

life; however, maternal separation anxiety decreases faster for those women who want to work compared to those women who want to be at home. Finally, greater maternal separation anxiety has been related to more negative perceptions of work and work/family spillover.

Prenatal Work Plans versus Current Employment Status

Several studies suggest that there are other influential factors that account for differing experiences of maternal separation anxiety beyond simple employment status. For example, Houndoumadi (1999) found that mothers who prenatally planned to return to work following the birth of their child had significantly lower general maternal separation anxiety (subscale 1). She also reported that employment-related separation concerns (Subscale 3) were greatest among those mothers who intended to return to work before the child was one year old.

McBride and Belsky (1988) also concluded that prenatal work plans were significantly related to variations in maternal separation anxiety. This study found that mothers who planned to stay home with their children before the child was born had the greatest amount of separation anxiety on all three subscales compared to women who planned to return to work within the first year of their children's lives. The authors also reported that general separation anxiety (Subscale 1) declined over a six month period for those mothers who worked outside the home, but not for those who stayed home with their infants. Finally, they showed that employment-related separation anxiety (Subscale 3) was lowest among working mothers. Based on these findings, the authors suggest that

one reason women may want to stay at home with their very young children is because of concerns they have about balancing their roles as parent and worker.

These two studies suggest that maternal separation anxiety is related to a woman's employment plans even before the child is born. However, maternal separation anxiety and employment status may be influenced by the mothers' underlying reasons for returning to work and/or her employment preferences. Therefore, research that focuses on mothers' employment preferences and employment status will be examined below.

Employment Preference versus Current Employment Status

Recent research has also investigated how employment preference may be related to a mother's experience of maternal separation anxiety (Mathieu-Hansen, 1995; Hock, DeMeis, and McBride, 1988; Hock and DeMeis, 1990; Symons and McLeod, 1994). For example, Mathieu-Hansen (1995) showed that of the 73 married, first-time mothers studied, those who preferred to work and liked their jobs had lower levels of maternal separation anxiety. Mothers who had the greatest levels of maternal separation anxiety did not prefer to be working, did not like their jobs, had more traditional views of motherhood and had husbands who shared these views.

Hock, DeMeis, and McBride (1988) investigated how the discrepancy between employment preference and actual employment status may be related to maternal separation anxiety. They asked the 130 women in their sample if they were currently working and what they would prefer to be doing (working or staying home with their children) if they could. Subsequently the women were grouped into one of four

categories: those who preferred to be working and were (employment-preference/employed), those who would have preferred to be home but were working (home-preference/employed), those who were home but preferred to be working (employment-preference/home) and those who preferred to be home and were (home-preference/home). The women who reported a preference to be employed were strongly committed to their careers and usually worked for personal as well as financial reasons. Women who reported a preference to be at home scored significantly higher on the Maternal Role Investment Scale than their employment-preference counterparts and reported that if they were working it was primarily for financial reasons. Women who preferred to work had significantly less maternal separation anxiety than mothers who preferred not to work. Additionally, the home-preference mothers' beliefs about the effects of separation on their child became more negative and their anxiety about employment-related separation increased over a fourteen month period.

A similar study by Hock and DeMeis (1990) focused on 209 mothers who completed measures of maternal separation anxiety, stress, and depressive symptoms when their children were twelve months old. They grouped the women into the same four categories as the previous study by Hock, DeMeis, and McBride (1988) (i.e., employment-preference/employed, home-preference/employed, employment-preference/home, home-preference/home) and found that incongruence between employment preference and employment status is a good predictor of mental health for mothers of young children. This research showed that those mothers in the employment-preference/home group had significantly higher scores on depressive symptoms than the

other three groups. While there were no significant differences among the groups of mothers with regard to stress, the mean scores of the mothers who wanted to work but were at home were, again, the highest of all four groups. Consistent with other research, the mothers who preferred to stay at home and were not employed reported significantly more maternal separation anxiety compared to the only other group of women whose preferences matched what they were doing – the working mothers who preferred to work.

In a follow-up study, 164 women were divided into the same four groups based on employment preference and employment status as described above. The women completed the same measures as in Study 1, as well as measures of maternal role investment and career salience. As might be expected, the employment preference/employed and employment-preference/home groups had higher scores than the home-preference/home and home-preference/employed groups for career salience and less investment in the maternal role. When the subscales of the Maternal Separation Anxiety Scale were analyzed separately, there were additional differences among the groups of women. For example, employment-preference/employed mothers were less anxious about separation (Subscale 1) and about employment-related separation (Subscale 3) than mothers in both home-preference groups. Mothers in the employment-preference/home group reported less anxiety about employment related separation (Subscale 3), but not less anxiety about separation in general (Subscale 1) than the two home-preference groups. As in Study 1, the mothers in the employment-preference/home group were generally more stressed and reported significantly higher levels of depressive

symptoms. An additional finding of this study showed that this group of women also had the lowest self-esteem of all the groups.

Further analysis of the data showed that the mothers in the employment-preference/home group were somewhat unique when compared to the other groups in that their reported levels of general maternal separation anxiety and investment in their maternal role were comparable to the home-preference mothers, yet they were also significantly higher than these groups in terms of career salience. Therefore, the authors concluded that these mothers are strongly pulled in two opposing directions, which could result in their higher levels of stress and depression (Hock & DeMeis, 1990). This is supported by the finding that all the other groups of mothers were consistent in their attitudes, regardless of their employment status. For example, while the mothers in the home-preference/employed group had a work preference/status incongruency, their attitudes were complementary in that they reported high separation anxiety and anxiety about employment related separation and relatively low scores on career salience.

A similar study by Symons and McLeod (1994) also categorized new mothers based on their stated work preference at the time of their child's birth and their employment status when their children were six-months-old. The sample of 192 women were divided into four groups: those who planned to remain at home and did so (home/home); those women who planned to remain at home and were either employed part- or full-time (home/outside); those who planned to work outside the home and did so (outside/outside); and women who planned to work outside the home but had remained home (outside/home). The mothers in this study filled out measures of maternal

separation anxiety as well as occupational and infant characteristics when their children were 5 days, 3 and 6 months old. Unlike other research which suggests that maternal separation anxiety decreases over time for working mothers (Hock, et al., 1988) this study did not find any decreases in any of the subscales of maternal separation anxiety over the six month period. Additionally, the amount of income, indices of job flexibility (i.e., maternity benefits, availability of part-time work), and whether women cited financial need as a reason to return to work or not were not associated with group membership.

In sum, these studies strongly indicate that employment preference and employment status are both significantly related to maternal separation anxiety and maternal mental health. Women who prefer to work have lower levels of maternal separation anxiety, are strongly committed to their careers, and usually work for personal as well as financial reasons. Conversely, women who prefer to be at home with their young children report greater separation anxiety, are strongly invested in their maternal role, have more negative beliefs about the effects of separation on their child, and work primarily for financial reasons. These studies also illustrate the risk for women who try to balance conflicting work-related preferences. For example, those mothers who prefer to work, but stay at home to take care of their children report significantly higher levels of depressive symptoms, stress, and lower self-esteem than any other group of women studied. However, it is possible that underlying maternal personality characteristics may be significant moderators of the interaction between mothers' work-related experiences and attitudes and maternal separation anxiety noted in these studies. Therefore, research

that focuses on the relationship between various maternal personality characteristics and maternal separation anxiety will be further examined.

Outcomes Related to Maternal Separation Anxiety

Maternal Psychological Health

Attachment theory suggests that excessive maternal separation anxiety leads to the development of symptoms of negative emotional functioning (Bowlby, 1988). In fact, recent research indicates that high levels of maternal separation anxiety are related to mothers' negative representations of self, poor self-esteem, and depressive symptoms. As described above, McBride and Belsky (1988) examined the relationship of maternal separation anxiety to multiple personality characteristics, including self esteem. The authors found that those mothers with lower self-esteem expressed greater amounts of maternal separation anxiety. The authors proposed that mothers who are generally more sensitive and empathic to the feelings of their infants (i.e., secure mothers) express a moderate amount of separation anxiety. Low self-esteem may be related to high levels of maternal separation anxiety because a lack of confidence about mothering may result in a mother's increased concern about leaving her child (McBride & Belsky, 1988).

Attachment and developmental theory also suggest that a child's age, as well as maternal attachment characteristics have a significant influence on levels of maternal separation anxiety. Both theories support the idea that as children develop, they have a progressively greater physical and cognitive ability to experience their world independently as well as an increased psychological need for autonomy. Therefore, it

would be expected that maternal separation anxiety is higher when a child is an infant and more dependent on the mother, and then normally decreases with a child's growing competencies and independence. This natural decrease in maternal separation anxiety over time is supported by research which shows that mothers generally experience more separation anxiety when their infants are younger, such that mothers reported more separation anxiety when their children were 3 months than when they were 9 months old (McBride & Belsky, 1988). An extension of this theory and research suggests that mothers' who continue to report high levels of maternal separation anxiety when their children are at an age when separation is necessary, normal and expected (i.e., school age) have more psychological dysfunction as evidenced by higher levels of depressive symptoms.

Hock and Schirtzinger (1992) specifically examined this relationship with a sample of 87 mothers and their children who were participants in a 6-year longitudinal study. The mothers completed the Maternal Separation Anxiety Scale and three subscales on the Maternal Risk for Depressive Symptomatology-Questionnaire Form (Internal Representation of Self Subscale, Coping Ability, and Support Subscale). As expected, the authors report that maternal separation anxiety scores decreased slightly over the first six years of the child's life. The authors also found that mothers who reported extremely high levels of separation anxiety when they were away from their six-year-old child tended to have higher levels of depressive symptoms. These findings are also consistent with previous research that links excessive maternal separation anxiety to negative perceptions of the self and low self-esteem (McBride & Belsky, 1988).

Specifically, those mothers who reported high levels of maternal separation anxiety tended to perceive themselves as poorer mothers and wives and reported having lower self-esteem since becoming mothers than those women who reported low levels of maternal separation anxiety. Conversely, low levels of separation anxiety were not related to negative self perception, low self-esteem, or increased levels of depressive symptoms.

Similar research also suggests a relationship between a mother's difficulty separating from her child and maternal depression (Hock, Schirtzinger, & Lutz, 1992). A sample of 84 mothers completed measures assessing levels of depression and maternal separation anxiety when their oldest child was six. They found that higher levels of maternal separation anxiety were significantly correlated with higher scores on depression. Their analysis also showed that maternal separation anxiety made the greatest unique contribution, accounting for 13.5% of the variance, in their final prediction of the mothers' depressive symptoms (Hock, Schirtzinger, & Lutz, 1992).

In sum, these findings suggest that moderate levels of separation anxiety appear to represent healthier psychological functioning in mothers, whereas mothers with high levels of separation anxiety may be at risk for the development of low self-esteem and depressive symptoms; these dysfunctional traits may, in turn, have negative consequences on parenting practices and consequently the mother-child relationship.

Maternal Parenting Practices

Higher levels of maternal separation anxiety have been related to an overprotective, insensitive parenting style, and the subsequent development of unhealthy (i.e., insecure) mother-child attachment relationships (Hock, McBride & Gnezda, 1989; Stifter, Coulehan & Fish, 1994; McBride & Belsky, 1988). Excessive amounts of separation anxiety may lead to parenting styles that are characterized as overindulgent, oversolicitous, and extremely overprotective. As a result, a child's developmentally appropriate attempts at autonomy are undermined, and an unhealthy, insecure mother-child relationship may develop.

Hock, McBride, and Gnezda (1989) found that levels of maternal separation anxiety were related to ratings of maternal behavior in a sample of 36 women. Higher levels of maternal separation anxiety were associated with anxious maternal behaviors, such as soothing a nondistressed child, questioning the caregiver extensively about the child's behavior, or asking their infants if they missed them, when a mother reunited with her child after a short separation. Mothers who expressed higher levels of maternal separation anxiety also lingered in the lab after being told that they could leave in order to continue to interact with their children and reassure themselves that everything was alright.

Another study that supports attachment theory's assertion regarding parenting behavior and attachment style was conducted by Stifter, Coulehan, and Fish (1994). They examined the link between employment status, maternal separation anxiety, and maternal sensitivity and intrusiveness across a five month period. The subjects were 73

mother-infant pairs who were observed in several laboratory situations when the children were 5, 10 and 18 months old. The results showed that mothers of insecure infants were significantly less sensitive and more intrusive than mothers of secure infants. Some results of this study also suggest that there are important similarities between working and non-working mothers' behaviors. All mothers, regardless of employment status demonstrated an increase in sensitive behavior from when their child was 5 to 10 months. Additionally, the employed and nonemployed mothers looked very similar when interacting with their infants and there were not any significant differences between secure and insecure attachment groups based on employment status alone. However, consistent with other research which has shown significant differences between mothers who work and those who stay at home when examining maternal separation anxiety, the authors found that employed mothers reported lower employment-related separation anxiety (Subscale 3). This study also showed that mothers who returned to work before the infant's 5th month and who reported high levels of maternal separation anxiety were likely to be more intrusive with their children at 10 months old than less anxious employed mothers. In fact, while all other mothers decreased in intrusiveness over the 5-month period, highly anxious employed mothers increased their intrusive behaviors. The children of highly anxious employed mothers were also more likely to be described as having an anxious-avoidant attachment style at 10 months old. The authors suggest that while these mothers are just as sensitive and responsive to their infant's needs as other mothers, they may overcompensate for their work-related absences by becoming overstimulating and intrusive, rather than following the child's interests, pace and signals.

In keeping with attachment theory's assertions that higher maternal separation anxiety is related to insecure mother-child attachments, McBride and Belsky (1988) found that mothers of securely attached infants (as classified in the Strange Situation) experienced moderate amounts of general separation anxiety and high levels of employment-related separation anxiety, regardless of whether or not they were employed outside the home. In contrast, mothers who reported high levels of separation anxiety were more likely to have children whose attachment was described as insecure-avoidant (McBride & Belsky, 1988).

In sum, this research highlights how maternal separation anxiety may be related to maternal parenting practices, and hence child adjustment. Specifically, mothers who report greater separation anxiety also appear to engage in more anxious and intrusive parenting practices and have more insecurely attached children.

The Relationship of Maternal Separation Anxiety to Maternal Role

In addition to the factors that have been reviewed thus far, including a mother's own attachment style, psychological health, and parenting practices, another important set of variables that may influence and be influenced by maternal separation anxiety are those related to a working mother's experience of balancing multiple roles, specifically mother and employee. There are a variety of concepts associated with a working mother's experiences of her different roles, including: role conflict, role satisfaction, role overload and role strain. In order to understand how these constructs may be related to maternal separation anxiety, they, first, need to be clearly defined and differentiated.

A review of the literature on the problems and benefits associated with women who are balancing multiple roles (McBride, A. B., 1990) suggests that women experience more change than men when becoming parents and the subsequent stress of that transition is even greater for employed mothers. Employed mothers have to balance the demands of their jobs as well as their families, often without much additional help with common household responsibilities such as shopping, cooking, and cleaning. Role conflict is experienced when one role in a person's life (worker, for example) intrudes into another (mother) (Johnson & Johnson, 1980). Another aspect of working mothers' experience has been conceptualized under the term, role overload. Role overload is a mother's experience of having more role obligations than time available to fulfill them, or accomplish them as well as she would like (Barnett & Baruch, 1985). Role strain is another term that is frequently found in the research on working mothers. However, role strain is not a clear-cut construct, and is sometimes used synonymously with role conflict,

sometimes as another term for role overload, and sometimes as a general term for both constructs (Erdwins, personal communication). Conversely, role satisfaction relates to having more positive than negative experiences of a particular role (Hoffman, 1989).

Examining the experiences, attitudes and beliefs working mothers have about their different roles is important because the literature suggests that a woman's skill at balancing work and parenting roles can have significant psychological consequences for her. For example, the research of both Hock and Schirtzinger (1992) and Owen and Cox (1988) found that mothers' role satisfaction (whether employed or not employed) was negatively related to depressive symptoms and positively related to her personal adjustment.

Research also suggests that role dissatisfaction and role strain may adversely affect the parenting practices of employed mothers, and that, conversely, role satisfaction may beneficially affect parenting. For example, Lerner and Galambos (1986a) found that satisfaction with the maternal role is related to parenting practices. They reported that in a sample of 93 mothers and their three year olds, those mothers who expressed higher levels of dissatisfaction with the maternal role were rated as having higher levels of maternal rejection during short periods of observed mother-child interactions. They also found that maternal rejection when the child was three was related to subsequent ratings of child difficulty at age four, with more difficult children having more rejecting mothers. Lerner and Galambos (1986b) suggest that a mother's role satisfaction may be more important than working or not working because mother-child interactions are influenced directly by the mother's overall feelings and satisfaction with her role. Examining data

from the New York Longitudinal Study (NYLS) they found that those employed mothers who had the most outside help with their housework, had jobs that best accommodated their parental roles, and had the fewest number of children under the age of six showed the least amount of role strain. They also reported that mothers' dissatisfaction with their roles was positively related to higher amounts of rejection of their children. They conclude that maternal role satisfaction and the quality of mother-child interactions, rather than employment status per se, significantly impacts child development.

These previous studies show that, like maternal separation anxiety, a mother's experiences, beliefs, and attitudes related to her maternal and working roles have a significant influence on her psychological well-being, her parenting, and, subsequently, on her child's development. However, these concepts have only been loosely connected to maternal separation anxiety in the literature through studies of maternal role investment. In one of the earliest studies on maternal separation anxiety and women's experiences of their different roles, Gnezda (1983) found that women who experienced greater maternal separation anxiety following return to work during the first three months after the birth of their child were more invested in the maternal role and less career oriented. Hock and DeMeis' (1990) also found a direct correlation between the beliefs and expectations a woman has about the maternal role and her career investment and the amount of anxiety she later feels when separated from her child. Specifically, women who were highly invested in their careers experienced less maternal separation anxiety, and those women who reported high investment in their role as mother also reported higher amounts of separation anxiety. Hock and Schirtzinger (1992) further state that

mothers who reported higher levels of separation anxiety when their children were six years old also tended to have more traditional sex-role expectations and increased rates of depressive symptoms. McBride (1990), in one of the few studies to examine the relationship between maternal separation anxiety and a mother's working experiences beyond investment in the maternal role, reported that mothers who expressed higher levels of maternal separation anxiety expressed significantly more work/psychological spillover as evidenced by greater preoccupation with work, fatigue, and irritability with children (McBride, S., 1990).

In sum, women who work and have young children have to balance the often conflicting demands that accompany the roles of mother and employee. As a result, a working mother is especially at risk for experiences subsumed under the constructs of role conflict, role overload, role strain, and role dissatisfaction. As the research highlighted above shows, women who report higher levels of role conflict, role strain, and role dissatisfaction are also at greater risk for increased depression, low self-esteem, and poor parenting practices. However, the relationship of maternal separation anxiety with a working mother's experiences of competing roles has only begun to be explored. The research suggests that maternal separation anxiety is higher for women who are also highly invested in their maternal role and who experience more work/psychological spillover, a concept that appears to be closely related to role overload. Considering the significant influence women's experiences of their roles of mother and worker (i.e., role conflict, role overload, role strain, role satisfaction) has on their own well-being and their children's development, additional research needs to more closely investigate how these

constructs may be related to maternal separation anxiety. For example, some studies have linked role conflict and role strain to maternal separation anxiety through satisfaction with child-care arrangements (McBride, A. B., 1990). This important body of research will be examined more closely below.

The Relationship of Maternal Separation Anxiety to Child Care

Choice of child care has been related to such practical considerations as cost, location, flexibility, and program services. Additionally, Hock, DeMeis and McBride (1988) have proposed that child care decisions may also be closely related to a working woman's investment in the maternal role. Specifically, working mothers, as a result of having to consciously balance work and maternal roles, may become more sensitive to their children's separation experiences and consequently strive to find better child care. Based on previous research which demonstrates a significant relationship between maternal separation anxiety and investment in maternal role as well as attitudes about the effects of nonmaternal care, Hock, DeMeis and McBride (1988) examined how maternal separation anxiety might be related to a mother's choice of child care. Their sample was composed of 107 mothers, 73 of whom had worked for the first three years of their children's lives and 34 who had been at home. They found that those mothers who had significantly lower levels of anxiety about the effects of separation on their children (Subscale 2 of MSAS) used day care centers more often than family day care or an in-home babysitter. In addition, of those mothers who used day care centers, those women who were more highly anxious about employment-related separations (Subscale 3) used

day care centers fewer months over the three-year period compared to other mothers who also used group day care. Among the nonemployed mothers, the use of preschool was the only type of care reported and the greater the concerns a mother had about separation as measured by the MSAS, the less she was likely to enroll her child in preschool. These findings suggest that a woman who is highly anxious about separation may select a different type of child care than a woman who is less anxious. In particular, women who are more anxious about separating from their children use family day care or an in-home babysitter more often than group day care centers.

In order to determine whether maternal separation anxiety plays a role in the quality of care that mothers choose for their children, McBride (1990) examined 49 mothers of children two-to-three years of age who were attending day care centers. She found that mothers who expressed higher levels of general separation anxiety (Subscale 1) reported significantly more difficulty in locating child care. Mothers who expressed higher levels of general separation anxiety and anxiety related to the effects of separation on the child (Subscale 2) also had their children in classrooms with lower adult-child ratios. Mothers who reported higher levels of anxiety about the effects of separation on their children (Subscale 2) were significantly more likely to indicate that the physical environment (versus quality of staff) was their first consideration in choosing a center for their children. Lastly, mothers who expressed more employment-related separation anxiety (Subscale 3) were more likely to have children in lower-quality day care centers (i.e., centers with lower ratings on enriched environment and where caregiver interactions were scored as being less sensitive and more harsh). These results indicate that, in

general, mothers with high levels of maternal separation anxiety have a harder time finding child care and tend to place their children in low quality day care centers. However, it is impossible to conclude that these trends are due to a mother's anxiety about separation because it is also possible that a mother's anxiety may increase as a result of her child care arrangements. For example, it may be that high-quality child care contributes to the decrease in maternal separation anxiety for employed mothers because if a mother feels confident that her child is being looked after well by high quality caregivers in her absence she is less likely to believe her absence may have negative effects on her child, and, as a result, her separation anxiety diminishes. Conversely, if a mother is aware of the low quality of her child care, she may become more anxious about the effects such care may have on her child over time, and experience a subsequent increase in her general experience of maternal separation anxiety. This is supported by the research of Hock, McBride, & Gnezda, (1989). They reported that parental strain the accumulates from feelings of guilt and responsibility for inadequate arrangements for the care of children contributes to the poor mental health of the mother, which in turn, has been shown in other research to adversely affect the children's well-being (Pierce, Vinokur, & Buck, 1998). This explanation suggests that it may not be the characteristics of the child care facility (high vs. low quality, adult to child ration, etc.) per se that influence maternal separation anxiety, but rather, a mother's degree of satisfaction with her child care. The following studies examine more closely how a mother's child care satisfaction may influence her working experiences, including her experiences of separation anxiety.

Child Care Satisfaction

Some research has suggested that maternal concerns about separation may change over time as a result of the type and quality of child care because the mother who feels some stress about substitute care arrangements is more likely to experience more role conflict, and as a result, increased maternal separation anxiety. This is exactly what Erdwins, Buffardi, Casper, & O'Brien (2001) found in their research. Their results showed that greater child care satisfaction was significantly related to lower maternal separation anxiety and less work-family conflict.

In a similar study by Buffardi and Erdwins (1997), 189 women completed measures of child care satisfaction, role conflict, maternal separation anxiety and multiple work-related variables. They found that child care satisfaction was significantly related to various job characteristics including greater job satisfaction, affective organizational commitment and decreased role conflict. One subscale of child care satisfaction was also significantly related to maternal separation anxiety. Specifically, mothers who reported greater satisfaction with Caregiver Communication (i.e., the caregiver's responsiveness to suggestions, the feedback the caregiver provides, the caregivers' disciplinary style, the relationship with the caregiver, caregiver's attitude toward parental visitation, and the way the caregiver deal with meals/snacks) also reported lower levels of maternal separation anxiety. As the authors suggest, it is likely that women who have caregivers who are responsive to their suggestions and open about sharing information about the child may be able to feel involved with and connected to their child, even when they are

separated. As a result, these mothers may not feel as though they abandon their maternal role in order to also be a professional. As a result of reduced experiences of role conflict, they feel less anxious, stressed, and guilty about being away from their children and, therefore, are able to devote more mental energy to work.

In sum, it appears that maternal separation anxiety is significantly related to mothers' choice of child care (Hock, DeMeis, & McBride, 1988), what qualities of the child care setting they consider to be important (McBride, 1990), and their satisfaction with their child care (Erdwins, Buffardi, Casper, & O'Brien, 2000). The review of the literature thus far has established strong associations between a mother's work, personal, and child care contexts and her experiences of maternal separation anxiety. What remains to be examined is how characteristics of the child may also affect these already complex relationships.

Child Characteristics

The Relationship of Maternal Separation Anxiety to Child Temperament

While the majority of the research reviewed above suggests that the antecedents and consequences of maternal separation anxiety are complex and multiply determined, a review of the literature shows that very few studies have investigated the role the child may play in influencing maternal separation anxiety. Specifically the child's age and temperament would appear to be potentially important variables influencing maternal feelings and parenting practices. Many researchers agree that development takes place within bi-directional relationships such that a mother's attitudes, values, and satisfaction

can both influence and *be influenced by* her child's characteristics (Lerner and Galambos, 1986b; Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990). Thus, maternal employment and personality may only partially explain the degree of maternal separation anxiety a woman experiences because important child characteristics, such as infant temperament, are also influential.

Temperament refers to the characteristic style of emotional and behavioral responses of individuals (Prior, 1992). Temperament is thought to be stable rather than fluctuating and concerns dispositions rather than discrete behaviors (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983). Based on a review of the literature (Prior, 1992) the facets of infant temperament that have received the most consensus among researchers appear to be Sociability, Activity, and Emotionality. Sociability is a factor that has most commonly been related to positive emotionality as well as to how willing a child is to approach and adapt well to novel environments. Children who are rated as being low in sociability are usually characterized as inhibited and generally slow to approach or adapt to new situations. Activity level refers to consistent patterns of frequency and intensity, or the quantity and quality of motor responses. A child who is described as having a high activity level will frequently move around a room in a manner that is more boisterous (e.g., running, jumping) than children who are rated as being low in activity. Finally, emotionality is defined as the general prevailing positive or negative mood of a child. Positive emotionality encompasses frequent laughing and smiling, while negative emotionality includes regular displays of anger, fear, and distress.

The “difficult” temperament commonly referred to in the literature (Lerner & Galambos, 1986a; Fein, Gariboldi & Boni, 1993; Mayseless & Scher, 2000) is a cluster of child characteristics, specifically negative emotionality (e.g., irritability, negative mood), low sociability (e.g., low adaptability and cooperation), and high activity (e.g., recurring, intense physical reactions like frequent crying), that are related to management problems for caretakers. While there is no absolute standard for what constitutes a difficult temperament, there is broad agreement that some kinds of temperament which are perceived as difficult by a caretaker may make a child more vulnerable to poor outcomes (Prior, 1992).

According to the “goodness-of-fit” model between parent and child characteristics (Lerner and Lerner, 1983), the child receives positive feedback when there is a match between child characteristics and parent characteristics and negative feedback when there is a mismatch between dispositions. This means that children with different physical and behavioral characteristics can provoke different responses in different people. For example, a child who is generally calm, able to self-soothe, and maintains a regular schedule of sleeping and eating would likely have a very different effect on parents who are also highly routinized and scheduled versus an infant who is more irritable and has a very irregular sleeping and eating schedule, in other words a “difficult temperament.” Over time, the relationship that emerges between a mother and her “difficult” child could potentially affect her decision to work, her mood, level of role conflict, and amount of separation anxiety she feels if she does work and consequently how she interacts with her child.

Research by Lerner and Galambos (1986a) found that child temperament was as important as parental demographic factors in predicting a mother's return to work when her child was still an infant. In one study of 93 mothers and their children involved in the New York Longitudinal Study (NYLS), they found that mothers of children who were classified as having a "difficult" temperament (defined as irregularity of biological functions, withdrawal responses, high intensity of reactions, negative mood, and slow adaptability) or who had a chronic physical problem (e.g., asthma) had lower levels of employment during the child's infancy and toddlerhood. Similar research using data from the NYLS also found that mothers who were employed had children who were temperamentally "easier" than children of mothers who were not employed (Lerner and Galambos, 1986b). Lerner and Galambos (1986a, 1986b) propose that "easy" children allow mothers to return to work since they adjust easily to alternative care arrangements and are pleasant and predictable. They further suggest that the mother of an irritable infant or child may experience more role conflict and experience more negative moods once she returns to work because she is anxious about her child's welfare. Based upon these findings, it seems likely that there is a significant relationship between a mother's perception of her child's temperament and the amount of anxiety she feels when away from her child.

McBride and Belsky (1988) were among the first researchers to examine how maternal perception of child temperament may be related to maternal separation anxiety. They found that infant temperament had an inconsistent effect on maternal separation anxiety such that mothers who described their infants as "dull" or "unpredictable"

reported experiencing more general separation anxiety and anxiety regarding the effects of separation on the baby. However, mothers who described their infants as fussy/difficult reported less general separation anxiety compared to mothers of “dull”, “unpredictable” or “easy” infants. The authors suggest that mothers of “difficult” infants may have lower levels of separation anxiety because they experience work as a place to “escape” from the demands associated with a fussy child.

Fein, Gariboldi, and Boni (1993) studied 83 Italian mothers who had enrolled their infant or toddler in a day care center sponsored by a northern Italian city. The mothers completed questionnaires that assessed their level of maternal separation anxiety (MSAS), perception of infant temperament (Infant Behavior Questionnaire) and perceived emotional and practical support for parenting (Social Network Form). Additionally, home visitors completed the Home Observation for Measurement of the Environment (HOME) inventory in order to measure the amount of stimulation available in the home environment. They found that maternal separation anxiety was higher in mothers who were younger, less educated, received less support, provided less varied stimulation in the home, and had temperamentally negative infants prior to entry of their children into day care. They also found that maternal perceptions of negative child temperament were correlated with maternal separation anxiety for mothers of toddlers, but not for mothers of infants. This may be because toddlers are, in general, more demanding to care for than infants because of developmentally appropriate attempts to be independent, and a “difficult” or negative toddler may be even more so (e.g., more temper tantrums, aggression, noncompliance). As a result, a mother who perceives her

child as having a negative temperament may be more concerned that someone else may not be able to effectively care for and control her child. The authors concluded that when mothers of toddlers receive less social support, they perceive their toddlers as having a more negative temperament and their perceptions of negative temperament lead these mothers to be more anxious about separation.

In sum, this research suggests that a mother's perception of her child's temperament can have some influence on the amount of anxiety she feels when separated from her child, her subsequent decision to return to work, and how she experiences her work. It is also likely that a child's temperament would affect the degree of anxiety he/she would feel when separating from his/her mother, and thus influence how well that child adjusts to child care.

Children's Adjustment to Preschool

A child's adjustment to day care can be influenced by various factors including a child's previous experience in day care, hours per day in day care, and the age at which the child entered day care (Bates, Marvinney, Kelly, Dodge, Bennett, & Pettit, 1994). For example, Bates, Marvinney, Kelly, Dodge, Bennett, & Pettit (1994) found that children who experienced more day care at an early age tended to show less positive adjustment in kindergarten. Research has shown that a child's temperament may also play a significant role in his/her adjustment to care outside the home (Jewsuwan, Luster, & Kostelnik, 1993). Children who are sociable and easy going may adjust differently to the demands of day care than children who are highly active or withdrawn and fearful.

As the “goodness-of-fit” model proposes, the extent to which temperament may contribute to a child’s adjustment depends on how others perceive and respond to that child’s characteristics, as well as what the setting demands of the child (e.g., at day care centers a child is required to follow the teacher’s schedule, respond appropriately to teacher requests, manage multiple peer social cues, etc.). For example, Zajdeman & Minnes (1991) found that the happier a child was perceived to be by teachers, the better they adjusted to day care. Jewsuwan, Luster, and Kostelnik (1993) found that three aspects of child temperament (i.e., Sociability, Emotionality, and Soothability) were related to behavioral adjustment to preschool, scores on a global rating of adjustment, and to the Anxious Subscale of a child behavioral problems measure. Specifically, children who had high scores on Sociability and Emotionality as perceived by mothers and fathers, and children whose mothers perceived them as soothable were rated as being better adjusted to preschool. This study also found that children who had high scores on a fourth temperamental characteristic, Activity level, showed more problem behaviors generally.

Only two studies have examined the relationship between parents’ separation anxiety and the adjustment of their children to kindergarten (Martin-Huff, 1982; Peleg, et al., 2006). Martin –Huff (1982) found that the greater the mothers’ separation anxiety, the lower the child’s adjustment. Specifically, general maternal separation anxiety (subscale 1) was significantly related to five aspects of the child’s adjustment as rated by the teacher on the First Grade Adjustment Scale: Physical State and Motor Behavior, Emotional Behavior, Intellectual Abilities, Adjustment to Classroom, and the Total

Adjustment Score. Based on these findings, Hock (1984) suggested that there may be a causal relationship by which a mother's anxiety is transmitted to her child. For example, if a mother is anxious about her child going to school she will relay her unrest, perhaps in subtle ways, to her child; and, as a result, the child will believe that there is something to be feared in going to school and, therefore, will not adjust well to the new environment. This theory appears to be supported by the findings of Peleg, et al. (2006) who reported strong relationships between mothers' and children's separation anxiety. They also reported that children's separation anxiety was correlated with their adjustment to kindergarten. The authors report that, "these results suggest the family of origin patterns (of anxiety) are passed down from one generation to the next" (Peleg, et al., 2006). While this is a plausible hypothesis, it fails to take into account what the above research also suggests: that there is significant relationship between a child's temperament and his/her adjustment to day care.

An alternative hypothesis may be that a child's adjustment to his/her day care is the result of, in large part, his/her own temperament, and how well that child adjusts can significantly influence the mother's separation anxiety. For example, if a child has a difficult temperament, he/she is more likely to not adapt or adjust well to day care. The child's poor adjustment will probably be very clear to his/her mother in a myriad of ways, including crying, clinging to her, increased aggressive behaviors and tantrums, etc. As a result of her child's obvious poor adjustment and unhappiness, the mother will be more anxious about separation, more dissatisfied with her child care, experience more role

conflict, and have more negative perceptions of work characteristics than if her child had no problems adjusting to day care.

One way to explore the relative merits of these two competing hypotheses would be to examine the relationship between maternal perception of child temperament, adjustment to day care and maternal separation anxiety over time. For example, if Hock's hypothesis is true, then no change would be expected between the initial and subsequent measurements of maternal separation anxiety and child adjustment. On the other hand, if child temperament is significantly related to child adjustment, some degree of change would be expected between the first measurement of perceived child adjustment and measurements of child adjustment a few months later, and there would be a corresponding change in measures of maternal separation anxiety (as long as the potential for a mother's negative perception of her child is controlled for). However, there has been no longitudinal study of this nature and the role that child temperament plays in child adjustment to day care and maternal separations anxiety remains unclear.

METHOD

Participants:

A participant was only included in the sample if she was working at least 15 hours per week and had a preschool-aged child (age 2-6 years). A child could be attending no higher than kindergarten class level to be considered a preschooler. The participants were recruited from private preschools, Montessori schools and daycare centers in the metropolitan D.C. area. Due to the demographics of the surrounding communities and the selection of private preschools, it is likely that this sample was better educated, had higher average incomes, and was less ethnically diverse than an ideal sample. The following demographic information was collected from all participants: age, relationship status, race/ethnicity, level of education completed, income, number and age of children in household, type of occupation, number of hours worked outside the home, number of hours per week child spends at preschool/daycare, length of time child has been in nonmaternal care, and previous nonmaternal care settings. Table 1 presents demographic information on the 114 participants who completed valid surveys at times 1 and 2.

As can be seen from this table, the women who participated were generally Caucasian, married, and in their mid 30s. Most were working full time (40 hours or more a week) as a professional with a household income over \$100,000, and had completed a masters degree or some kind of graduate school. Most of their children were 4 years old, had been enrolled in their current preschool or day care center for less than a year and had been enrolled in a different preschool or day care center previously. It should be

noted that over 90% of the children were in the same childcare setting for the same amount of time a day at time 2 as time1. Of those children who were no longer enrolled in the same center or preschool, most had been placed in a new center or preschool because of a family move.

Table 1: Demographics at Time 1 (Beginning of the school year)

	Frequency	Percent
Gender		
Female	114	100%
Average Age		
	36.9	
Age Range		
	22-48	
Race		
African-American	6	5.3%
Asian	17	14.9%
Caucasian	80	70.2%
Hispanic	3	2.6%
Native American	2	1.8%
Other	6	5.3%
Missing	0	0
Marital Status		
Married	92	80.7%
Divorced	5	4.4%
Single	11	9.6%
Separated	3	2.6%
Missing	2	1.8%
Type of Employee		
Full-time (40 hours or more)	77	67.7%
Part-time (15-38 hours)	35	30.4%
Missing	2	1.8%
Education		
No college	1	.9%
Some to all of baccalaureate	35	30.7%
Some graduate	5	4.4%
Masters Degree	44	38.6%
Additional graduate	28	49.2%
Missing	1	.9%

Occupation		
Professional	105	92.1%
Support Staff	9	7.9%
Missing	0	0
Household Income		
\$11,000 to \$50,000 per year	10	8.8%
\$50,000 to 70,000 per year	7	6.2%
\$70,000 to 100,000 per year	18	15.8%
More than \$100,000 per year	79	69.3%
Missing	0	0
Age of Identified Child		
2 years old	14	12.3%
3 years old	34	29.9%
4 years old	49	42.9%
5 years old	16	14.0%
Missing	0	0
How Long at Current Child Care		
<1 year:	48	42.3%
1-2 months (just started)	30	26.3%
3-11 months	18	16%
1-2 years	46	40.5%
2-3 years	14	12.5%
3 years or more	4	3.6%
Missing	2	1.8%
Previous Child Care Experience		
None	14	12.3%
In-home care:		
Babysitter/nanny/au pair	21	18.4%
Relative	6	5.3%
Different Center/Preschool	38	33.3%
Non relative in another home (home daycare)	25	21.9%
Missing	10	8.8%
Child attending same preschool as at time 1		
Yes	111	97.4%
No	3	2.6%
Missing	0	0%

Table 1: Demographics at Time 1(continued)

If no, what is the new childcare setting		
N/A	111	97.4%
Home with parent	1	.9%
Home with relative	0	0%
Home with non-relative caregiver	0	0
Home daycare	0	0%
New preschool/day care	2	1.8%
Other	0	0
Missing	0	0
Reason for new setting		
N/A	111	97.4%
Family move	2	1.8%
Behavior concerns	1	.9%
Other	0	0
Missing	0	0
Number of hours child currently attends preschool		
1-10	8	7.1%
11-20	9	8.1%
21-30	22	19.3%
31-40	31	27.3%
41-50	38	33.4%
51 or more	1	.9%
Missing	5	4.4%
Is this the same number of hours as at Time 1		
yes	107	93.9%
no	2	1.8%
Missing	5	4.4%
If no, was the time spent at daycare at Time 1 more or less than present		
N/A	112	98.2%
more	2	1.8%
less	0	0
Missing	0	0

Procedure:

Principals and directors of local private preschool and day care centers were initially contacted by telephone in late August and early September in 2004 to inform them about the purpose of this study and seek their permission to contact their parents so that participation in the study coincided with the beginning of the school year as much as possible in order to capture a child's initial adjustment to preschool. If the directors indicated they were interested, they were mailed written permission forms with self-addressed, stamped envelopes as well as handouts to be sent home to parents informing them of the study. Once the principals and directors returned their signed permission slips to the principal investigator, the director of the school or day care center was contacted by telephone a second time in order to get an approximate number of questionnaires that would be needed for that day care center or school. That number of packets of questionnaires was then dropped off at the school or center. In one instance the director of a nearby preschool asked the principal investigator of the study to attend the "back to school night." The director introduced the investigator to the parents who attended and questionnaires were made available at that time for mothers who were interested in participating. Included in the initial packet of questionnaires was a self-addressed, stamped envelope as well as the following measures: Positive and Negative Affectivity Schedule (PANAS), to assess mothers' degree of negative and positive affectivity; the EAS, a measure of child temperament; maternal demographic information; the Maternal Separation Anxiety Scale (MSA) to tap a mother's cognitions

and feelings about closeness and separation regarding herself and her child; and the Entry into Daycare Questionnaire (Kipp, 1992) to assess the child's initial adjustment to day care. An incentive of being placed in two separate lotteries for an award of \$50 for the first completed packet, and \$150 for the second served to encourage individuals to participate. Participants filled out a separate page with identifying information (e.g., name, address, and telephone number) that was detached from the questionnaire as soon as the packet was received in order to maintain complete participant confidentiality. Only those participants' questionnaires were coded and included in this study if they had signed and returned the "consent to participate in research" form. A total of 1553 packets of the initial questionnaires were distributed to various preschools and day care centers, but it was impossible to track if those packets were reliably distributed to parents. A total of 127 signed and dated Informed Consent Forms, included in the initial packet of questionnaires, were returned. Assuming all packets were distributed, that is an 11% response rate. By the end of the data collection period, a total of 116 participants had completed both the first and second packets of questionnaires (a 92% response rate from Time 1 to Time 2). However, after examining the data more closely, only 114 responses were valid and eligible to be included in data analysis. This suggests that 10 individuals withdrew from the study after completing the informed consent and the first packet of questionnaires only. No indication was given that those individuals who decided not to continue with the study did so for any particular reason or suffered any harm as a result of participation in the first half of the study.

When the investigator received the packet of questionnaires the participant was assigned a code number to identify all of the questionnaires. Participants were assured that their names would not be associated with the questionnaires. All of the initial packets of questionnaires were distributed to the preschools and day care centers by the end of September 2004. In January and February of 2005, the second packet of questionnaires were mailed directly to qualifying participants who had completed the first packet, as several preschool teachers indicated that 4-5 months was an adequate amount of time to expect a preschool-aged child to adjust to a new school environment. The second packet of questionnaires also included maternal demographic information to ensure that nothing significant had changed in the mother and child's life during the four months since completing the first packet of questionnaires. The MSA and Entry into Daycare Questionnaire were also administered again to create change scores for maternal separation anxiety and adjustment to preschool over time. Measures of job satisfaction, inter-role conflict, and child care satisfaction were also included in the second packet with another self-addressed, stamped envelope. As the principal investigator received the second packet of questionnaires in the mail, participants' responses were coded on an Excel spreadsheet by matching the ID number written on each questionnaire to the ID numbers created when participants completed the first packet of questionnaires. Assuming a 15% response rate and the possibility of invalid responses, approximately 1500 individuals were initially contacted to complete this study. Of those contacted, 114 individuals validly completed packets of questionnaires at Time 1 and Time 2.

Measures:

Negative and Positive Affectivity

The Positive and Negative Affectivity Schedule (PANAS) Scales was used to assess mothers' degree of negative and positive affectivity. Negative affectivity (NA) corresponds to the personality factor of anxiety/neuroticism which taps an individual's tendency to experience a variety of negative mood states including anger, contempt, disgust, guilt, fear and nervousness (Watson, et al., 1988). Positive affectivity (PA) reflects the extent to which a person feels enthusiastic, active, and alert (Watson, et al., 1988). The PANAS scale consists of 20 words that describe positive and negative mood states. Participants rate the extent to which they have experienced each mood state during a specified time frame (moment, today, past few days, week, past few weeks, year, general) based on a 5-point scale (very slightly or not at all, a little, moderately, quite a bit, and very much). The internal consistency reliabilities which make up the PANAS PA and NA scales range from .84 to .90. After an 8-week interval, the test-retest reliability coefficients for the PANAS PA and NA scales ranged from .39 (today) to .71 (general). The authors of the scale suggest that the stability coefficients of the general ratings are high enough that they may be used as trait measures of negative and positive affect (Watson, et al., 1988). The PANAS PA and NA scales also have adequate convergent and discriminant validity. The NA scale correlated strongly with one of two factor scores generated from a principal factor analysis of 60 mood descriptors (with convergent correlations for Factor 1 ranging from .91 to .93) and was negatively correlated with the

other factor score (discriminant correlations with Factor 2 ranged from -.09 to -.18). The reverse pattern was seen for the PA scale of the PANAS (PA scale correlations for Factor 1 ranged from -.02 to -.17 and correlations for Factor 2 ranged from .89 to .95). The PA and NA scales have also demonstrated adequate convergent and discriminant external validity with measures of related constructs of perceived stress (i.e., Hopkins Symptom Checklist, Beck Depression Inventory, and the A-State), but the coefficients are not so high as to indicate they are tapping the same constructs (correlations range from .51 to .74 when testing under the “Today, Past few days, and Past few weeks conditions) (Watson, et al., 1988).

Maternal Separation Anxiety

The Maternal Separation Anxiety Scale was designed to tap a mother’s cognitions and feelings about closeness and separation regarding herself and her child (Lutz & Hock, 1995). The Maternal Separation Anxiety Scale (MSAS) is a 35-item, self-report questionnaire that measures three dimensions of maternal separation anxiety by providing scores on three subscales: (1) *Maternal Separation Anxiety*. This subscale contains 21 items that reflect general anxiety about separation or the extent to which a mother feels sad, fearful, or nervous from or in anticipation of leaving a child. Examples of items include the following: “When I am away from my child, I feel lonely and miss him/her a great deal” and “I like to have my child close to me all the time.” (2) *Perception of Separation Effects on the Child*. This subscale includes seven items that reflect the mother’s perception of the effect of separation on her child, particularly in terms of the

promotion of independence. Examples of items include the following: “Exposure to many different people is good for my child” and “There are times in the lives of young children when they need to be with people other than their mothers.” (3) *Employment-Related Separation Concerns*. This subscale contains seven items which measure maternal concerns about separation as they specifically relate to employment and work-related separations. Examples of items include the following: “I would resent my job if it meant I had to be away from my child” and “I would not regret postponing my career in order to stay home with my child” (Hock, et al., 1989).

It should be noted that as a result of a copying error, only items 1 through 24 of the measure were used at both Time 1 and Time 2 of the study. Because of the missing items, it was not possible to compute reliable scores for the two of the measure’s subscales (i.e., *Perception of Separation Effects on the Child & Employment-Related Separation Concerns*). However, the reliability scores for those items that contributed to the general MSA subscale were not negatively affected by the omitted items (e.g. Cronbach’s alpha = .864 at Time1 and .884 at Time 2), therefore, the general MSA subscale scores were used in subsequent statistical analysis.

Research has shown that maternal separation anxiety is only modestly related to levels of general anxiety, which implies that anxiety about separation is a unique phenomenon with a significant portion of the variance accounted for by other variables (Hock, McBride, & Gnezda, 1989). Additional studies have found that the three subscales of the MSAS are stable over time (Hock, McBride, & Gnezda, 1989; McBride & Belsky, 1988) and maternal separation anxiety as measured by the MSAS is consistent

within individuals over time and across situations; however, the authors of the measure suggest that the specific characteristics of a situation may heighten or lower levels of separation anxiety (DeMeis, et al., 1986; Hock, Et al., 1989).

Child Temperament

Maternal perception of child temperament was measured with the Emotionality, Activity, and Sociability (EAS) Temperament Survey. The EAS was developed by Buss and Plomin (1984); it has 6 subscales which were used in this study: (1) Sociability (approach/withdrawal tendencies); (2) Shyness (comfortableness with unfamiliar people); (3) Emotionality (positive or negative mood and intensity of reaction); (4) Activity (intensity and frequency of movement); (5) Attention span/persistence (persistence in the face of competing stimuli and the ability to attend or concentrate over time); and, (6) Soothability (ability to calm). Parents were presented with 30 items and asked to indicate on a 5-point scale (1 = *not at all typical*; 5 = *very typical*) how well each item described their child's behavior. According to Buss and Plomin (1984) internal consistencies, as measured by Cronbach's alpha, ranged from .70 for Sociability to .87 for Shyness.

Child Adjustment to Preschool/Daycare

The Entry into Daycare Questionnaire (Kipp, 1992) focuses on children's behavior as they adjust to day care. This measure contains 22 items rated on a 5-point scale from never to always in terms of the frequency of specific adjustment behaviors. Eleven questions assess the child's behavior upon arrival at day care (e.g., latency to play

with toys and peers, inhibition of vocalization, and clinging and proximity to parent). This measure yields three distinct categories of child behavior: *Positive behavior* (i.e., joining peers in play and playing with toys), *Negative behavior* (i.e., crying or fussing, throwing tantrums, and negative verbalizations), and *Withdrawal behavior* (i.e., clinging to the parent, seeking proximity to the parent, seeking teacher attention, becoming quiet, refusing to engage in play, and watching others). During development of this measure, parent's responses were correlated with experimenter observation of child behaviors. Average inter-rater agreement for the overall questionnaire was 81%. Average inter-rater agreement for positive behaviors was 63%, 98% for negative behaviors, and 71% for withdrawal behaviors (Kipp, 1992).

Job Satisfaction

General job satisfaction was measured using the Job Diagnostic Survey (Hackman & Oldham, 1974). This instrument contains 5 items with each item answered on the basis of a 7-point Likert scale, ranging from 1 (strongly agree) to 7 (strongly disagree). Respondents are asked to state the extent to which they agree with statements such as "Generally speaking, I am very satisfied with my job," and "I frequently think of quitting my job." Hackman and Oldham (1975) have reported the scale's reliability with an internal consistency of .76.

Inter-Role Conflict

The Work-Family Conflict and Family-Work Conflict Scales (Netemeyer, Boles, & McMurrian, 1996) was used to assess the degree of inter-role conflict between the requirements and obligations of both work and family spheres. Work-Family Conflict (WFC) is a type of inter-role conflict in which “the general demands of, time devoted to, and strain created by the job interfere with performing family-related responsibilities” (Netemeyer, et al., 1996). Family-Work Conflict (FWC) is defined as the inter-role conflict that results when “the general demands of, time devoted to, and strain created by the family interfere with the performance of work-related responsibilities” (Netemeyer, et al., 1996). The WFC and FWC scales each contain five items that have 7-point responses ranging from 1 (strongly disagree) to 7 (strongly agree) and have been shown to have adequate levels of internal consistency, dimensionality, and discriminant validity. The scales have coefficient alpha levels ranging from .83 to .89, with an average alpha of .88 for WFC and .86 for FWC (Netemeyer, et al., 1996).

Child Care Satisfaction

The Child Care Satisfaction Scale (Buffardi & Erdwins, 1997) was used to assess mothers’ satisfaction with their child’s day care/preschool. This 28-item measure uses a 5-point Likert scale to rate degree of satisfaction ranging from 1 (extremely dissatisfied) to 5 (extremely satisfied). The Child Care Satisfaction Scale (CCSS) taps different aspects of child care experiences (e.g., responsiveness of the caregiver/teacher to parent suggestions, flexibility of pick-up/drop-off schedules, quality of activities, cost to attend)

and has been shown to have discriminate validity and moderate-to-high levels of internal consistency (Buffardi & Erdwins, 1997).

RESULTS

Description of Sample Used for Data Analyses:

A power analysis was conducted to determine the adequate number of participants needed for the study, (Cohen, 1992) using the conventions of a significance criterion ($\alpha = .05$) to minimize Type I error and power equal to .80 to minimize Type II error. Medium effect sizes of approximately .30 are considered satisfactory in correlational and regression studies with 6 predictors. To attain this, approximately 100 participants were needed. At the completion of data collection, 114 participants had completed valid surveys at Time 1 and Time 2, and this data was used for the following data analyses and hypothesis testing. As noted above, the women who participated were generally Caucasian, married, and in their mid 30s. Most were working full time (i.e., 40 hours or more a week) as a professional with a household income over \$100,000 and had completed a masters degree or some kind of graduate school. Most of their children were 4 years old, had been enrolled in their current preschool or day care center for less than a year and had been enrolled in a different preschool or day care center previously

Preliminary Analyses:

Means, standard deviations, and ranges for all the study variables, subscales and items are presented in Table 2 and Table 2A. Preliminary analyses to determine alpha coefficients were also computed for all the measures and subscales before the hypothesis testing was conducted. All measures were found to have sufficient reliability, with two exceptions. As noted in the Method's section, as a result of a copying error, only items 1 through 24 of the 35-item maternal separation anxiety scale (MSA) were used at both Time 1 and Time 2 of the study. Because of the missing items, the reliability scores for two of the measure's subscales PER and EMP (i.e., *Perception of Separation Effects on the Child & Employment-Related Separation Concerns*) were deemed to be too low to use. However, the reliability scores for those items that contributed to the general MSA subscale were not negatively affected by the omitted items (e.g. Cronbach's alpha = .864 at Time1 and .884 at Time 2). Therefore, the general MSA subscale scores were used in all subsequent statistical analyses.

TABLE 2
Means, standard deviations, sample sizes, and alpha coefficients for all measures and subscales ($n = 114$)

Variable	<i>n</i>	Mean	S.D.	Alpha
PANAS				
PA	114	34.28	6.96	.857
NA	114	20.15	6.39	.838
EAS:				
SHY	113	11.56	3.85	.791
SOC	112	15.99	2.81	.723
ACT	114	20.35	3.34	.734
EMOT	111	12.42	3.95	.823
ATT	113	12.54	3.38	.772
SOOTH	114	16.61	3.37	.756
MSA				
<i>Time 1</i>				
MSA	112	46.81	9.74	.864
PER	111	6.51	2.51	.558
EMP	112	10.27	2.96	.621
<i>Time 2</i>				
MSA	113	45.19	9.99	.884
PER	112	6.50	1.66	.546
EMP	112	10.18	2.95	.635
AdjPS				
<i>Time 1</i>				
POS	110	12.95	4.28	.907
NEG	112	10.40	4.24	.829
WITH	107	29.05	10.08	.915
<i>Time 2</i>				
POS	110	13.24	4.01	.913
NEG	112	9.57	3.91	.837
WITH	107	28.11	8.27	.874
IRC				
WFC	114	18.61	7.78	.915
FWC	114	16.40	7.17	.868
Job Sat	112	25.64	5.59	.806
CCS	102	101.11	10.87	.861

PANAS = Positive and Negative Affectivity Schedule (*PA* = Positive Affectivity, *NA* = Negative) Affectivity; **EAS** = Emotionality, Activity, and Sociability temperament Survey (*SHY* = shyness, *SOC* = Sociability, *ACT* = Activity, *EMOT* = emotionality, *ATT* = Attention span/persistence, *SOOTH* = soothability); **MSA** = Maternal Separation Anxiety Scale (*MSA* = general scale, *PER* = Perception of Separation Effects on the Child, *EMP* = Employment-Related Separation Concerns); **AdjPS** = Child Adjustment to Preschool = Entry into Daycare Questionnaire (*POS* = Positive behavior, *NEG* = negative behavior, *WITH* = withdrawal behavior); **IRC** = Inter-Role Conflict (*WFC* = Work-Family Conflict Scale, *FWC* = Family-Work Conflict Scale); **Job Sat** = Job Satisfaction; **CCS** = Child Care Satisfaction Scale

TABLE 2A
Means, standard deviations, and sample sizes, for measure items ($n = 114$)

Variable	<i>n</i>	Mean	S.D.
PANAS [5-point scale]			
PA			
Item1	114	3.82	.927
Item3	114	3.08	1.122
Item5	114	3.22	1.119
Item9	114	3.37	1.075
Item10	114	3.89	1.087
Item12	114	3.39	.936
Item14	114	2.82	1.231
Item16	114	3.56	.978
Item17	114	3.48	.895
Item19	114	3.65	1.152
NA			
Item2	114	2.51	1.131
Item4	114	2.54	1.065
Item6	114	2.17	1.336
Item7	114	1.60	.947
Item8	114	1.46	.874
Item11	114	2.90	1.136
Item13	114	1.22	.750
Item15	114	2.13	1.069
Item18	114	1.171	1.079
Item20	114	1.56	.912
EAS: [5 point scale]			
SHY			
Item3	113	2.50	1.045
Item14	113	1.79	.949
Item19	113	1.73	.916
Item21	113	2.65	1.101
Item30	113	2.88	1.186
SOC			
Item7	112	4.55	.757
Item10	112	3.67	1.085
Item16	112	3.56	.918
Item24	112	4.21	1.015
ACT			
Item8	114	3.98	.986
Item12	114	4.44	.799
Item15	114	3.52	1.243
Item20	114	4.42	.763
Item25	114	3.99	.926

TABLE 2A (continued)
Means, standard deviations, and sample sizes, for measure items ($n = 114$)

Variable	<i>n</i>	Mean	S.D.
EAS			
EMOT			
Item4	111	2.50	1.387
Item11	111	2.92	1.063
Item17	111	1.97	.929
Item23	111	2.24	.993
Item28	111	2.88	1.118
ATT			
Item1	113	2.15	.847
Item2	113	2.48	.955
Item6	113	2.67	.977
Item18	113	2.42	.962
Item22	113	2.81	.921
SOOTH			
Item5	114	3.43	1.030
Item9	114	3.31	.932
Item13	114	3.48	.943
Item27	114	2.98	.902
Item29	114	3.41	.929
MSA, general scale (time 1) [5 point scale]			
Item1	112	3.89	1.043
Item2	114	3.51	1.107
Item3	114	2.99	1.208
Item6	114	2.76	1.257
Item7	114	3.31	1.213
Item8	114	2.89	1.124
Item9	114	2.42	.930
Item12	114	2.78	1.111
Item13	114	2.41	1.046
Item14	114	2.33	.909
Item17	114	2.96	1.051
Item18	114	2.67	.984
Item19	114	3.43	.940
Item22	114	3.17	1.104
Item23	114	3.26	1.097
Item24	114	1.90	.704

TABLE 2A (continued)
Means, standard deviations, and sample sizes, for measure items ($n = 114$)

Variable	<i>n</i>	Mean	S.D.
MSA (time 2)			
Item1	114	3.64	1.023
Item2	114	3.39	1.086
Item3	114	2.80	1.074
Item6	114	2.53	1.191
Item7	114	3.16	1.172
Item8	114	2.99	1.109
Item9	114	2.30	.892
Item12	114	2.54	.997
Item13	114	2.46	1.090
Item14	113	2.33	.871
Item17	114	2.78	1.054
Item18	114	2.65	1.004
Item19	114	3.38	.972
Item22	114	3.04	1.105
Item23	114	3.28	1.077
Item24	114	1.94	.720
AdjPS (time 1) [5 point scale]			
POS			
Item1-5	112	3.32	1.210
Item1-6	112	3.34	1.143
Item2-5	112	3.11	1.240
Item2-6	111	3.21	1.214
NEG			
Item1-1	113	2.06	1.136
Item1-8	113	1.52	.867
Item1-9	113	1.82	1.063
Item2-1	113	2.12	1.116
Item2-8	113	1.35	.667
Item2-9	113	1.60	.882

TABLE 2A (continued)
Means, standard deviations, and sample sizes, for measure items ($n = 114$)

Variable	<i>n</i>	Mean	S.D.
AdjPS (time 1 continued)			
WITH			
Item1-2	113	2.46	1.210
Item1-3	112	2.94	1.358
Item1-4	113	2.12	1.208
Item1-7	111	2.88	1.051
Item1-10	112	1.71	.953
Item1-11	110	2.70	1.146
Item2-2	113	2.52	1.303
Item2-3	112	2.71	1.380
Item2-4	113	2.01	1.161
Item2-7	112	2.91	1.070
Item2-10	112	1.66	.982
Item2-11	110	2.58	1.136
AdjPS (time 2)			
POS			
Item1-5	110	3.18	1.102
Item1-6	111	3.38	1.176
Item2-5	111	3.35	1.093
Item2-6	111	3.37	1.144
NEG			
Item1-1	113	1.75	.978
Item1-8	112	1.38	.659
Item1-9	112	1.71	.981
Item2-1	112	1.81	.991
Item2-8	112	1.37	.710
Item2-9	112	1.54	.879
WITH			
Item1-2	113	2.21	1.114
Item1-3	112	2.71	1.241
Item1-4	112	2.21	1.150
Item1-7	110	2.85	1.003
Item1-10	111	1.59	.767
Item1-11	110	2.66	1.078
Item2-2	112	2.21	1.248
Item2-3	112	2.57	1.278
Item2-4	112	2.10	1.082
Item2-7	111	2.85	1.020
Item2-10	111	1.59	.768
Item2-11	111	2.53	1.077

TABLE 2A (continued)
Means, standard deviations, and sample sizes, for measure items ($n = 114$)

Variable	<i>n</i>	Mean	S.D.
IRC [7 point scale]			
WFC			
Item1	114	3.83	1.853
Item2	114	3.75	1.802
Item3	114	4.11	1.787
Item4	114	3.50	1.771
Item5	114	3.41	1.789
FWC			
Item6	114	3.34	1.764
Item7	114	3.21	1.772
Item8	114	2.96	1.724
Item9	114	3.93	1.852
Item10	114	2.96	1.752
Job Sat [7 point scale]			
Item1	113	5.35	1.406
Item2	114	5.68	1.430
Item3	113	2.95	1.822
Item4	113	4.71	1.193
Item5	112	3.19	1.534
CCS (5 point scale)			
Item1	102	4.54	.520
Item2	102	4.32	.647
Item3	102	4.41	.979
Item4	102	4.15	.801
Item5	102	3.50	.1.106
Item6	102	4.17	.759
Item7	102	4.44	.669
Item8	102	4.44	.839
Item9	102	4.23	.964
Item10	102	4.60	.721
Item11	102	4.30	.842
Item12	102	4.45	.753
Item13	102	4.45	.828
Item14	102	3.94	.993
Item15	102	4.18	.849
Item16	102	4.62	.690
Item17	102	4.21	.848
Item18	102	4.35	.740
Item19	102	4.35	.779
Item20	102	3.76	1.314
Item21	102	4.23	1.250
Item22	102	4.09	1.178
Item23	102	3.53	1.325
Item24	102	3.85	1.246

Hypothesis Testing:

Hypothesis one predicted a significant relationship between a mother's perception of her child's temperament and her child's positive adjustment to preschool at Time 1, after controlling for maternal negative affectivity. To test this hypothesis, a two-tailed partial correlation analysis was conducted. The results show that after controlling for maternal negative affectivity, a child's positive adjustment to preschool at Time 1 was significantly correlated with a mother's perception of her child's shyness ($r = -.400, p < .001$), activity level ($r = .236, p < .01$), and sociability ($r = .218, p < .05$). In other words, these results suggest that controlling for maternal negative affectivity, 1) the lower the level of shyness, 2) the higher the level of activity, and 3) the higher the level of sociability, the higher the level of positive adjustment to preschool at Time 1. However, the results also show that after controlling for maternal negative affectivity, a child's positive adjustment to preschool at Time 1 was not significantly correlated with the mother's perception of her child's emotionality, attention span, or soothability (see Table 3). Based on these results, hypothesis one was partially supported.

TABLE 3

Partial Correlations between EAS subscales and Positive Adjustment to Preschool at Time 1, Controlling for Maternal negative Affectivity

Scale	<i>Positive Adjustment to Preschool (i.e., positive behavior)</i>
<i>Shyness</i>	-.400 ^{***}
<i>Sociability</i>	.218 [*]
<i>Activity</i>	.236 ^{**}
<i>Emotionality</i>	-.129
<i>Attention</i>	-.088
<i>Soothability</i>	.145

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

Hypothesis two predicted a significant association between a mother's perception of her child's temperament and her experience of maternal separation anxiety after controlling for maternal negative affectivity. A two-tailed partial correlation analysis was conducted to test this hypothesis. The results indicate that after controlling for maternal negative affectivity, maternal separation anxiety at Time 1 was significantly correlated with a mother's perception of her child's shyness ($r = .167, p < .05$). That is, these results suggest that given the same level of maternal negative affectivity, the higher the child's shyness, the higher the mother's maternal separation anxiety at Time 1. However, after controlling for maternal negative affectivity, no other significant correlation between child temperament variables (i.e., sociability, emotionality, activity, and attention span) and maternal separation anxiety was found (see Table 4). Based on these results, hypothesis two was partially supported.

TABLE 4
 Partial Correlations between EAS subscales and Maternal Separation Anxiety at Time 1,
 Controlling for Maternal Negative Affectivity

Scale	<i>Maternal Separation Anxiety</i>
<i>Shyness</i>	.167*
<i>Sociability</i>	-.107
<i>Activity</i>	-.073
<i>Emotionality</i>	.055
<i>Attention</i>	-.086
<i>Soothabilty</i>	-.015

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

Hypothesis three predicted a significant association between a mother's perception of her child's poor adjustment to preschool at Time 1 and her maternal separation anxiety at Time 1 after controlling for maternal negative affectivity. A two-tailed partial correlation analysis was conducted to test this hypothesis. The results show that after controlling for maternal negative affectivity, maternal separation anxiety at Time 1 was significantly correlated with negative adjustment to preschool at Time 1 ($r = .301, p < .001$) and withdrawing behaviors at Time 1 ($r = .386, p < .001$). These results suggest that given the same level of maternal negative affectivity: 1) the higher the level of the child's negative behaviors at Time 1 the higher the level of maternal separation anxiety at Time 1; and 2) the higher the level of the child's withdrawing behaviors at Time 1, the higher the level of maternal separation anxiety at Time 1. These results support hypothesis three. Additionally, controlling for maternal negative affectivity, maternal separation anxiety at Time 1 was significantly, negatively correlated with a

child's positive adjustment to preschool at Time 1 ($r = -.327, p < .001$). That is, the lower the level of the child's positive adjustment to preschool at Time 1, the higher the level of maternal separation anxiety at Time 1 (see Table 5).

TABLE 5
Partial Correlations between Maternal Separation Anxiety and Adjustment to Preschool at Time 1, Controlling for Maternal Negative Affectivity

Scale	<i>Maternal Separation Anxiety</i>
Adjustment to Preschool	
<i>Negative</i>	.301 ^{***}
<i>Withdrawing</i>	.386 ^{***}
<i>Positive</i>	-.327 ^{***}

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

Hypothesis four predicted that mothers' ratings on certain subscales of child temperament which characterize their children as more active, shy and/or fearful and inhibited (i.e., high in maladaptability) at Time 1 would be significantly correlated with their children's positive adjustment to preschool at Time 2, controlling for maternal negative affectivity. This hypothesis was tested using a two-tailed partial correlation. The results show that controlling for maternal negative affectivity, a child's positive adjustment to preschool at Time 2 was significantly correlated with maternal perception of a child's shyness at Time 1 ($r = -.262, p < .01$). That is, given the same level of maternal negative affectivity, the lower the level of maternal perception of a child's shyness at the beginning of the school year (Time 1), the higher the level of positive

adjustment to preschool approximately four months later (Time 2). There were no other significant relationships between factors of child temperament (i.e., sociability, emotionality, activity, and attention span) and positive adjustment to preschool at Time 2 (see Table 6). Therefore, based on these results, hypothesis four was only partially supported.

TABLE 6
Partial Correlations between EAS subscales at Time 1 and Positive Adjustment to
Preschool at Time 2, Controlling for Maternal Negative Affectivity

Scale	<i>Positive Adjustment to Preschool</i>
<i>Shyness</i>	-.262**
<i>Sociability</i>	.141
<i>Activity</i>	.081
<i>Emotionality</i>	-.084
<i>Attention</i>	-.050
<i>Soothabilty</i>	.022

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

Based on Baron and Kenny's (1986) work, the following three steps were used to test each of the hypotheses on mediating effects (i.e., hypotheses 5-8). First, the potential mediator variable is regressed on the predictor/independent variable. Second, the criterion/dependent variable is regressed on the predictor/independent variable. Third, the criterion/dependent variable is regressed on both the potential mediator variable and the predictor/independent variable. The mediating effect of a variable would be proven if a)

the predictor variable has a significant association with the potential mediator variable; b) the predictor variable has a significant association with the criterion variable; and c) the potential mediator variable has a significant association with the criterion variable after controlling for the predictor variable. If the association between the predictor variable and the criterion variable disappears (decreases to zero) when the mediator is included, the mediator is considered to have a perfect mediating effect. If the association between the predictor variable and the criterion variable decreases a significant amount but not to zero with the inclusion of the mediator, the mediator is considered to have a partial mediating effect. The Sobel test, a significance test of the mediating effect, was also used to test the mediation hypotheses. However, given the relatively small sample size of this study, an SPSS macro for the Sobel test was used to conduct the analysis (Preacher & Hayes, 2004).

Hypothesis five stated that the child's positive adjustment to preschool at Time 2 would influence maternal separation anxiety at Time 2 over & above the effects of maternal separation anxiety at Time 1. This hypothesis was tested following the steps used to test mediation described above. The results show that a) maternal separation anxiety at Time 1 was significantly associated with maternal perception of the child's positive adjustment to preschool at Time 2 ($\beta = -0.36, p < .05$), and b) maternal separation anxiety at Time 1 was significantly associated with maternal separation anxiety at Time 2 ($\beta = .89, p < .001$). The results, however, indicate that c) maternal perception of the child's positive adjustment to preschool at Time 2 was not significantly associated with maternal separation anxiety at Time 2 ($\beta = -.05, p > .05$), controlling for

maternal separation anxiety at Time 1. The association between maternal separation anxiety at Time 1 and maternal separation anxiety at Time 2 did not decrease significantly ($\beta = .87, p < .01$) when maternal perception of the child's positive adjustment to preschool at Time 2 was included. The Sobel test indicated that the mediation effect was not significant ($z = -1.3, p > .05$). Therefore, based on these results, hypothesis five should be rejected.

Hypothesis six stated that maternal perception of child adjustment to preschool at Time 2 would partially mediate the relationship between maternal separation anxiety at Time 1 and maternal conflict between work and family roles at Time 2. This hypothesis was tested, following the steps described above. The results show that a) maternal separation anxiety at Time 1 was significantly associated with maternal perception of child adjustment to preschool at Time 2 ($\beta = -.36, p < .05$), and b) maternal separation anxiety at Time 1 was significantly associated with maternal conflict between work and family roles at Time 2 ($\beta = .63, p < .05$). However, the results indicated that c) maternal perception of child adjustment to preschool at Time 2 was not significantly associated with maternal conflict between work and family roles at Time 2 ($\beta = .18, p > .05$), controlling for maternal separation anxiety at Time 1. The association between maternal separation anxiety at Time 1 and maternal conflict between work and family roles at Time 2 did not decrease ($\beta = .70, p < .01$) when maternal perception of child adjustment to preschool at Time 2 was included. The Sobel test indicated that the mediation effect was not significant ($z = -1.00, p > .05$). Therefore, based on these results, hypothesis six was not supported.

Hypothesis seven stated that a portion of the negative relationship between maternal separation anxiety at Time 1 and maternal job satisfaction at Time 2 would be mediated by the child's overall adjustment to preschool at Time 2. This hypothesis was tested, following the steps used to test mediation described above. The results show that a) maternal separation anxiety at Time 1 was significantly, negatively associated with maternal perception of her child's adjustment to preschool at Time 2 ($\beta = -.34, p < .05$), and b) maternal separation anxiety at Time 1 was significantly, negatively associated with maternal job satisfaction at Time 2 ($\beta = -.54, p < .05$). However, the results indicated that c) maternal perception of child adjustment to preschool at Time 2 was not significantly associated with maternal job satisfaction at Time 2 ($\beta = .06, p > .05$), when controlling for maternal separation anxiety at Time 1. The association between maternal separation anxiety at Time 1 and maternal job satisfaction at Time 2 did not decrease significantly ($\beta = -.52, p < .01$) when maternal perception of child adjustment to preschool at Time 2 was included. The Sobel test showed that the mediation effect was not significant ($z = -.51, p > .05$). Therefore, based on these results, hypothesis seven was not supported.

Finally, this study tested the hypothesis that a mother's perception of her child's adjustment to preschool at Time 2 would partially mediate the relationship of maternal separation anxiety at Time 1 and maternal child care satisfaction at Time 2. This hypothesis was tested and the results show that a) maternal separation anxiety at Time 1 was significantly associated with maternal perception of her child's adjustment to preschool at Time 2 ($\beta = -0.39, p < .001$), and b) maternal separation anxiety at Time 1

was significantly associated with maternal child care satisfaction at Time 2 ($\beta = -.29, p < .005$). However, the results indicated that c) maternal perception of child adjustment to preschool at Time 2 was not significantly associated with maternal child care satisfaction at Time 2 ($\beta = .01, p > .05$), after controlling for maternal separation anxiety at Time 1. The association between maternal separation anxiety at Time 1 and maternal child care satisfaction at Time 2 did not decrease significantly ($\beta = -.28, p < .01$) when maternal perception of child adjustment to preschool at Time 2 was included. The Sobel test showed that the mediation effect was not significant ($z = -.16, p > .05$). Therefore, based on these results, hypothesis eight was also unsupported.

Results of Exploratory Analyses:

While a mother's perception of her child's adjustment to preschool seems to be the variable that most likely mediates the relationships outlined in the above hypotheses, it is also possible that a mother's perception of her child's temperament mediates these relationships. Hence, additional exploratory analyses were conducted to investigate whether maternal perception of child temperament would mediate the relationships between (1) maternal separation anxiety at Time 1 and maternal separation anxiety at Time 2, (2) maternal separation anxiety at Time 1 and maternal conflict between work and family roles at Time 2, (3) maternal separation anxiety at Time 1 and maternal job satisfaction at Time 2, and (4) maternal separation anxiety at Time 1 and maternal child care satisfaction at Time 2. Each of the subscales of the EAS child temperament scale was considered as a potential mediator. The results of the exploratory analyses indicate

that child temperament did not significantly mediate any of the four relationships mentioned above.

DISCUSSION

Previous research has shown that maternal separation anxiety is significantly related to both a mother's personality and her experiences of balancing her maternal and employee roles, including role satisfaction, role conflict and role strain (McBride, A. B., 1990; Owen & Cox, 1988), maternal employment characteristics (i.e., job satisfaction, number of hours worked per week, and perceived organizational support), and child care satisfaction (Erdwins, Buffardi, Casper, & O'Brien, 2001). Since there are millions of women who are both mothers and employees, and successfully balancing these roles has been associated with lower rates of depression, higher self-esteem, and improved job performance, it is critical to evaluate all of the variables that may influence a woman's experience of motherhood and work. The present study examined one factor which has been neglected in the previous literature and yet may have a significant influence on maternal separation anxiety, specifically, a mother's perception of her child's adjustment to preschool.

The principal aim of the present study was to investigate the relationships between (1) a mother's perception of her child's temperament and her experience of maternal separation anxiety, and (2) her child's adjustment to day care over time with any corresponding change in maternal separation anxiety over the same time period. Based on the only study which has previously demonstrated a link between increased maternal

separation anxiety and a child's poor adjustment to kindergarten (Martin-Huff, 1982), Hock (1984) hypothesized that mothers who are anxious somehow transmit their anxiety to their children, who then internalize beliefs that the world is not safe and should be feared, which makes them anxious, in turn. As a result, these children adjust to preschool less positively than their non-anxious peers. Hock's theory assumes one direction of causation: from mother to child. As a result, this theory implies that it is almost entirely a mother's fault if her child is anxious and does not adjust well to school. However, it is equally possible that causality is in the other direction, from child to mother. This perspective puts more emphasis on the importance of a child's innate temperament, including a child's tendency to be anxious or shy, which significantly reduces the overwhelming responsibility and blame that already stressed working mothers experience in parenting their children, especially when their children do not have perfect temperaments. Specifically, this theory suggests that some children are born temperamentally more anxious than their peers and their resulting poor adjustment to life experiences (e.g., attending preschool or daycare), is more the result of their own temperament than their mother's experience of separation anxiety. It could be further hypothesized that a mother's experience of separation anxiety may increase more for a temperamentally anxious child than a nonanxious one, which would explain the trend for more anxious mothers to have more anxious children. The current research is based on two fundamental observations found in previous research. The first finding is that temperament directly affects how an individual, whether as a child or an adult, interacts with and experiences his or her world (Prior, Smart, Sanson & Oberklaid, 2001). A

logical continuance of this finding is that an individual's temperament and not another person's emotional experiences would have the most influence on how they experience life.

The second finding, also supported by the literature, is that child temperament is related to school adjustment (Garrison, Earls & Kindlon, 1984; Murray-Harvey & Slee, 1998; Keogh, 1990; Keogh, 1986). Based on these observations found in previous research the current study sought to create evidence for an alternative explanation of why mothers with high levels of MSA also tend to have children with high levels of anxiety. This theory (i.e., anxious children, in effect, create anxious parents) was tested by creating a longitudinal study that measured a child's adjustment over time, which should, if accurate lead to a corresponding reduction in MSA.

The first step in the current study was to confirm the two previous observations upon which the study was based: first, as noted in other research, this study found that there is a significant relationship between a child's temperament and child's adjustment to preschool; and second, a child's temperament and MSA are significantly related, which also supports previous research (McBride & Belsky, 1988; Fein, Gariboldi, & Boni, 1993) which has suggested that a mother's perception of her child's temperament can have some influence on the amount of anxiety she feels when separated from her child, her subsequent decision to return to work, and how she experiences her work. As a result of the longitudinal design of this study, it was possible to determine if a child's adjustment to preschool or temperament partially mediates other relationships discussed in previous research on MSA, which underscores the significant effect MSA can have in

a variety of a working mothers' life experiences, including job satisfaction, role strain, and child care satisfaction. These findings are important because they provide a additional support in a nascent area of MSA research, which is investigating how various child characteristics, including child temperament, may be related to and influence MSA in a meaningful way which in the past has been considered a purely maternal characteristic. In sum, this study found support for significant relationships between child temperament, child adjustment to preschool and MSA, but the proposed causality flow (i.e., from child to mother) was not supported.

The Results of the Primary Hypotheses:

Is Child Temperament related to a Child's Adjustment to Preschool and Maternal Separation Anxiety?

The results of this study suggest that child temperament is significantly related to both a child's adjustment to preschool and maternal separation anxiety. Specifically, four findings should be highlighted.

First, it was found that the child temperament shyness factor was negatively related to positive child adjustment to preschool such that children who were characterized as being more shy displayed fewer positive behaviors like joining peers in play and playing with toys upon arrival at day care.

Second, the child temperament factors: activity and sociability were both positively related to positive adjustment to preschool. This means that the more active

and social a child was considered to be, the more he/she displayed behaviors associated with positive adjustment to preschool.

Third, maternal separation anxiety (MSA) was positively correlated with a child's shyness, but was not related to sociability, emotionality, activity, or attention. In other words, the higher a mother scored on the MSA scale, the higher her child scored on the shyness factor of child temperament, but increased MSA did not have a relationship to either increased or decreased levels of the other measured factors of child temperament (i.e., sociability, emotionality, activity, or attention).

Fourth, MSA was also significantly, positively correlated with negative and withdrawing child adjustment behaviors, and significantly, negatively correlated with positive child adjustment behaviors and/or other behaviors that suggest positive adjustment. In other words, the more a mother experiences separation anxiety, the more likely her child is to display negative or withdrawing behaviors at preschool or day care (negative behaviors = crying or fussing, throwing tantrums, and expressing negative verbalizations; withdrawing behaviors = clinging to the parent, seeking proximity to the parent, seeking teacher attention, becoming quiet, refusing to engage in play, and watching others) and the less likely they are to display behaviors associated with positive adjustment to preschool (i.e., joining peers in play and playing with toys).

Does a child's adjustment to preschool or a child's temperament mediate relationships between MSA and constructs associated with a mother's work experience?

As noted earlier, Hock (1984) suggested that there may be a one-way causal relationship between increased maternal separation anxiety and poor child adjustment to nonmaternal care with the direction of causality going from mother to child. That is, a highly anxious mother may signal her child through her own fearful/anxious reactions that day care is something to fear; the child internalizes this fear, becomes anxious as well and, as a result, adjusts poorly to child care. This proposed relationship, however, fails to take into account a mother's perception of her child's temperament, which has been significantly related to maternal separation anxiety (McBride and Belsky, 1988; Fein, Gariboldi, and Boni, 1993; Mayseless & Scher, 2000) and MSA appears to have a subsequent significant influence on her child's adjustment to nonmaternal care (Jewsuwan, Luster, & Kostelnik, 1993; and DiLalla, 1998). In other words, in order to test the proposal that child temperament significantly influences maternal separation anxiety, it was hypothesized that a decrease in measurements of maternal separation anxiety between time 1 (i.e., the beginning of the school year) and time 2 (i.e., 4 months later) would be associated with the child's positive adjustment to preschool at time 2.

In order to create additional evidence for the proposed flow of causality from child to mother, this study examined whether child temperament significantly influenced a variety of working mothers' experiences, including role conflict, maternal employment characteristics, and child care satisfaction. The present study also examined whether a mother's perception of her child's adjustment to day care partially mediates the

relationships between maternal separation anxiety and the variables associated with working mothers' experiences mentioned above. The results of the current study suggest that a child's positive adjustment to preschool or day care does not effect the relationships between MSA at Time 1 (i.e., the beginning of the school year) and MSA at Time 2 (i.e., 4 months later), nor does it mediate MSA and role strain as measured by scales of work-family conflict, or MSA and maternal job satisfaction, nor MSA and maternal child care satisfaction. It was also found during the exploratory analyses that none of the child temperament factors significantly mediate those same relationships. Therefore, the direction of causality from child to mother proposed by this study was not supported. Based on the lack support of the current study, it could be suggested that Hock's proposed direction of causality, from mother to child (i.e, that anxiety is transmitted from mother to child which results in poor child adjustment to preschool) is correct. However, alternative interpretations of the data will be explored below.

Possible Interpretations of the Findings

The chief results of this study provide additional support for important relationships previously noted in the literature; first, a child's temperament and child's adjustment to preschool are significantly related; and second, a child's temperament and MSA are significantly related. The hypothesis that a child's temperament or adjustment to school may cause changes in MSA (i.e., flow of causality from child to mother) was

not supported. This lack of support does not necessarily mean that an anxious mother causes her child's poor adjustment to preschool via the transmission of her anxiety to her child (i.e., flow of causality from mother to child). First, it is probable that a theory which most accurately and completely captures the complicated socio-emotional relationship between a mother's experiences of anxiety and her child's adjustment is not unidirectional at all, as Hock and this research suggest, but bidirectional. Additionally, the lack of significant results in this study may be due, in part, to being based on a faulty assumption: namely, that child adjustment changes or evolves over time in a negative-to-positive direction, which, in turn, results in corresponding decreases in MSA.

Second, it may be that the mother is responsible for her child's anxiety, but not because she passes along her anxiety through her behavior or emotional reaction to separating from her child, but rather through her genes. It is not surprising to many mothers or families to learn that the clinical literature supports a genetic/familial link in the transmission of anxiety (DSM-IV, 2000).

Third, as previous research has suggested, a child's temperament may account for some of the significant effects MSA has on a working mother's role strain, job satisfaction, and maternal child care satisfaction (McBride & Belsky, 1988). The present study did not provide support for the hypothesis that child temperament mediates the effects MSA has on a working mother's role strain, job satisfaction, or maternal child care satisfaction. However, when the results of the current study are examined more closely, it becomes evident that the SHY factor of child temperament as well as behaviors associated with poor adjustment to preschool (i.e., negative and withdrawing),

consistently have more robust effects than the more positive child temperament factors like activity, sociability, and soothability and behaviors associated with positive adjustment to preschool. It is possible that there is something important that is being measured, but possibly masked in the constructs used for this study. Some previous research has also noted that more negative child temperament characteristics have significant effects on how a child responds to his/her environment in general, and on adjustment to school in particular. For example, Garrison, Earls, and Kindlon (1984) found that in a sample of three-year-old toddlers entering school for the first time, the child temperament dimensions of low rhythmicity and high intensity increased the likelihood for maladjustment at school entry. Murray-Harvey and Slee (1998) also reported that more difficult temperament was predictive of teachers rating children as poorly adjusted to school. These studies suggest that some negative dimensions of child temperament are significantly related to adjustment to school. The present study found support for a significant relationship between MSA and child adjustment. This study took the next step and attempted to provide evidence for the hypothesis that links these relationships in the following way: since child temperament effects adjustment and adjustment appears to affect MSA; then it is likely that temperament effects MSA. However no support was found for this. The lack of support may be because the above statement of relationships was too broad. After examining the results of this study and the previous research, the statement of relationships may be better described as: since negative dimensions of child temperament effect adjustment to school and adjustment to school appears to affect MSA, then therefore, negative dimensions of child temperament

should effect MSA. Why this may be and how this refinement may impact the relationships among the variables studied is one important direction for future research. One possibility for why negative dimensions of child temperament as well as those behaviors that were indicative of negative adjustment to preschool (i.e., those associated with negative or withdrawing behaviors) have more powerful effects on MSA may be that there is some overlap in measuring a child's behavior which indicates fearfulness and social isolation which is also commonly related to social immaturity. While a mother may be anxious about separating from her child she knows is having difficulty adjusting to school because of socially immaturity, it is easy to assume that she believes that attending school is precisely what her child needs to help him/her become more socially mature. This notion may help the mom create emotional distance from her child's distress and, thus, it may not significantly impact her experiences related to working, like role strain, job satisfaction, or child care satisfaction

Fourth, this study hypothesized that the direction of causality is not from mother to child as previously suggested, but from child to mother. This proposal puts more emphasis on a child's innate temperament, including a child's tendency to be anxious or shy. However, mothers may not be completely off the proverbial hook either; as it is possible that another "parent-focused" variable plays a pivotal part in moderating and/or mediating the relationships between a child's temperament, school adjustment, and MSA. For example, future research is needed to further examine and determine if and what specific parenting skills (or perhaps just the belief that you are an effective parent) may mediate these relationships and can prevent emotional spillover from parenting a difficult

child to the workplace and vice versa. Thus parenting may serve as a kind of protective factor, even from mom's own separation anxiety when adjusting to school. For example, a recent study found that maternal responsiveness was positively related to her child's adjustment at school (Georgiou, 2008). Other recent research that examines "parent-focused" variables includes a study that found that a mother's low use of avoidant coping strategies and less avoidance in close relationships with significant others were found to moderate the effect of many socio-emotional experiences, including children's levels of loneliness, feelings of hope, secure attachment and behavioral adjustment to school (Al-Yagon, 2007).

Fifth, some other previously unconsidered "child-focused" constructs, other than child temperament, may have a significant influence on a child's adjustment to school and MSA. For example, recent research has suggested that motor function shows significant predictive value to both scholastic adaptation and social and emotional adjustment to school (Bart, Hajami, Bar-Haim, 2007). Additionally, another recent study found that a child's negative reactivity, parental hostility, and teacher-child conflict were related to children's social-emotional and academic difficulties, and that a child's effortful control and reduced teacher-child conflict moderate the effects of these negative factors on preschoolers' school adjustment (Myers, 2007).

It may also be possible that, while a child generally needs 4-5 months to adjust more positively to new experiences (e.g., starting preschool/daycare), there may be an additional lag time required for the mother to receive the feedback that her child is adjusting more positively, which will result in a corresponding adjustment to her own

emotional reactions. Therefore, it may be that the current study did not allow enough time to pass between Time 1 and Time 2 in order to capture more profound effects.

Other methodological limitations of the current study will be addressed below.

Limitations of the Current Study

There were also some methodological limitations in this study which may have negatively impacted the findings. First, the information gathered in this study relied on self-report questionnaires from mothers alone, which could be open to different biases. Since the data was collected solely from the mother, it may be influenced by common factors such as the mothers' mood, disposition, mental health, and so forth. For example, it is possible that a mother's negative affectivity (i.e., dispositional influences on MSA) may over influence or color her judgments of the child's adjustment and temperament as well as her own experiences of separation (situational influences on MSA).

Therefore, it was important to be able to distinguish between dispositional and situational influences on maternal separation anxiety. The author attempted to address this limitation by measuring and statistically controlling for mothers' negative affectivity. As a result, while the data were collected from one source, they were thought not to be seriously contaminated by any possible negative maternal characteristics or biases of the source (i.e., mother). It is unclear how excluding the perceptions of the children's teachers, fathers or other co-parents may have impacted this research. Future studies on

this topic may benefit from collecting fathers' perceptions of mothers' working experiences in order to compare and contrast.

Second, it is also possible that instead of missing other sources of information, the current study may have missed other variables or constructs that significantly influenced the research findings. For example, this study assumed that a mother's perceptions about her life would have the most impact on her thoughts and feelings about working. However, it may be argued that there are other constructs, not measured in the current study, which may have a more significant and powerful impact on a mother's working experience including, but not limited to: relationship stress; monetary stress; or a general experience of life stress.

Third, the research sample used in the current study was limited in terms of demographics (i.e., sample mostly Caucasian and highly educated). As a result, it is not representative of the larger population, which can negatively impact the generalizability of these findings.

Lastly, it is possible that since most of the children who were included in the study (i.e., 55.2%) had previous experiences going to school or day care before the start of this study, they may not have had as strong an adjustment reaction if this had been their initial experience of preschool or daycare. Therefore, future research may have more robust findings if they "catch" the children at earlier ages when attending school/daycare for the first time or, even more effectively, capturing this same data, but with a longer amount of time between Time 1 (i.e., the start of the school year) and Time

2 (6-7 months later) using only children who are entering preschool or daycare for the first time.

Future research would do well to address these potentially confounding factors in order to get a more accurate understanding of how child temperament influences a mother's work life experiences.

Implications of the Current Study & Directions for Future Research

As noted earlier, the most obvious and significant implication of this line of research is that it reduces the overwhelming responsibility and blame that already stressed working mothers experience in parenting their children.

While future research would benefit from exploring other "parent- and child-focused" constructs which may significantly influence both MSA and a child's adjustment to school, a large amount of previous research has continually supported the observation that temperament, as a general construct, has a significant effect on many of a child's life experiences (e.g., socio-emotional development, school success, and the prevention of future behavior problems). Such an extensive body of evidence cannot be ignored. So while child development research would benefit from being able to identify what feature of a child, other than temperament, may significantly influence adjustment to school, the next logical step of this research is to identify exactly what specific factors and features of temperament have the most effect on future significant life experiences;

(e.g., starting school and school adjustment, which may set the tone for a child's perspective on learning and over time either work to build or erode self-esteem).

To recap the primary results of this study: significant relationships were found between child temperament and child adjustment to preschool as well as child temperament and MSA, but no support was found for child temperament or child adjustment mediating the relationships between MSA and variables associated with maternal employment, including work-family conflict, job satisfaction, or child care satisfaction. As a result, this study provides a good foundation for future research because it provides good support for how these variables may be related to each other. Future studies should pursue a more detailed examination into the relationships between these variables (e.g., why a child's shyness and other negative factors of child temperament appear to have a more powerful effect on MSA and maternal employment variables) and should also seriously consider a bidirectional relationship between child and mother characteristics and related socio-emotional experiences.

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