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EXAMINING THE RELATIONSHIP AND INFLUENCE OF INFANT
TEMPERAMENT AND MARITAL SATISFACTION ON PARENTING

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Abstract

Parental functioning may be broadly described as one's childrearing strategies, parenting style, and behaviors when interacting with the child. Parental functioning has been shown to be influenced by the parent's personal psychological resources, characteristics of the child, and contextual sources of stress and support (Belsky, 1984). The primary aim of this study was to examine the predictive relationship of child temperament and marital satisfaction at 12 months of age on parental nurturance and restrictiveness at 24 months of age; inter-parent comparisons were also examined. A total of 375 participants were utilized in this study: 125 mothers, 125 fathers, and 125 children. The sample was recruited as part of a longitudinal study following infants and their families from 2 weeks to 25 months of age (Putnam & Stifter, 2002). Results indicate that marital satisfaction within couples was positively associated. The relationship between child temperament and parenting found one significant negative association between surgent child temperament and mother's restrictiveness. Father's parenting behaviors were not related to child temperament. The relationship between marital satisfaction and parenting rendered one nearly significant positive association between father's marital satisfaction and nurturance. Results indicate that mother's nurturance and restrictiveness were more strongly predicted by child temperament, specifically surgency, than by marital satisfaction. Father's nurturance was more strongly predicted by marital satisfaction than by child temperament. Relationships between child temperament and marital satisfaction were not found. One significant interaction revealed that while marital satisfaction did not affect the relationship between high surgency and restrictive parenting, when fathers of low surgent children were dissatisfied in their marriages they were more likely to be restrictive than if they had high marital satisfaction. Future research and limitations of this study are discussed.

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Introduction

Introductory Statement

Parenting practices influence and have implications for child development. The development of social skills in peer interactions, self-esteem, academic performance, and behavior problems are all related to varying parenting behaviors (Rubin, et al., 2002; Buri, 1989; Putnam & Stifter, 2005). Therefore, it is imperative to determine and understand the factors associated with and predictive of parenting behaviors; parental nurturance and restrictiveness are specifically of interest.

Child temperament and marital satisfaction are factors, among many others, related to one's parental functioning (Belsky, 1984). Parental functioning may be broadly described as one's childrearing strategies, parenting style, and behaviors when interacting with the child. Characteristics of children, such as difficult or easy temperament, appear to shape the quantity and quality of parental care they receive (Belsky, 1984). Distress-related temperament characteristics, such as irritability, difficultness, or negative mood, are associated with poor parenting and general unresponsiveness (Hemphill & Sanson, 2000; Hinde, 1989; Linn & Horowitz, 1983). In contrast, child's positive affect and self-regulation are associated with parental responsiveness, social interaction, and use of rewards (Hinde, 1989; Kyrios & Prior, 1990).

Parental functioning is also associated with social support networks; marital support is considered to be one dimension of social support (Belsky, 1984). Social support networks provide parents with needed emotional and instrumental assistance. Regarding the marital support dimension, emotional assistance is considered to be love and acceptance from the spouse and instrumental assistance is considered to be advice, information, and child care help provided

from the spouse. Marital satisfaction may be indicative of marital support. Therefore, it is imperative to examine the relationships, main effects, and interactions between child temperament and marital satisfaction in order to better understand parental functioning.

Purpose of study

This primary aim of the current study is to assess the predictive relationship between child temperament and marital satisfaction at 12 months postpartum and parenting at 24 months postpartum. Because parental functioning is associated with child temperament and marital support (Belsky, 1984), marital satisfaction will be measured by mothers' and fathers' self-reported responses to a questionnaire (Braiker & Kelley, 1979). This study will also assess two subscales of observed child temperament: surgent and negative child temperament. Multiple temperament measures have been predictive of varying types of parenting behaviors. Parental functioning will be measured by a self-report of parental nurturance and parental restrictiveness. Differences between mothers and fathers' parenting behaviors will be investigated; child temperament and marital satisfaction predictive relationships with parenting behaviors for mothers and fathers are expected to be different within parent.

The introduction to this study will begin by providing some background information about temperament, marital satisfaction, and parenting behaviors. Next, several of the relationships between these factors including children's temperament and parenting, marital satisfaction and parenting, and children's temperament and marital satisfaction will be presented. The subsequent implications of these relationships on the child, parent, and environment will then be discussed. The introduction will conclude with the research hypotheses that were tested in the present study.

Literature Review

Parental Functioning: “The Process Model”

Understanding the relationship between the parent and child is critical in studying all aspects of parent or child development. Belsky (1984) studied the determinants of parental functioning in what is known as “The Process Model”. The three determinants that Belsky (1984) identified in influencing parental functioning were personal psychological resources of the parents, characteristics of the child, and contextual sources of stress and support. This model analyzes how contextual factors influence parental functioning. Ultimately, marital relations, work environment, social network (emotional assistance received from family), and child characteristics all influence parental functioning. Characteristics of children, such as difficult or easy temperament, appear to shape the quantity and quality of parental care they receive (Belsky, 1984). Belsky (1984) suggests that marital relations or marital satisfaction and child characteristics such as temperament are crucial components in determining parental functioning. Therefore, the present study is aimed at assessing the relationships between these factors in predicting parenting behaviors. Before reviewing the literature on the relationships between child temperament, marital satisfaction, and parenting, it is important to discuss the concept of temperament.

Child Characteristics: Defining Temperament

Temperament is defined as individual differences in reactivity and self-regulation observed through children’s emotionality, activity, and attention (Rothbart & Bates, 1998). These individual differences exist before many of the cognitive aspects of personality begin to develop. Temperament refers to those aspects of an individual’s personality that are often regarded as innate rather than learned. Temperamental dispositions are considered to be one’s

orientation toward or away from objects, people and events (Kagan, et al., 1994). Dispositions are critical to the development of competence and motivation (Rothbart, et al., 2005). Although temperament has a genetic and biological basis, environmental factors and degree of maturation will influence the way an individual's personality is expressed (Rothbart, et. al., 1981).

Ultimately, an individual's temperament will interact, effect, and change according to the environmental and social factors he encounters. Temperament has crucial implications for one's future behaviors, development, cognitions, and psychopathology.

There are many classification schemes and theories regarding temperament. Thomas et al. (1968) conducted a longitudinal study regarding infant temperament to examine how temperamental qualities influence adjustment throughout life. Young infants were rated on nine temperament characteristics; behaviors for each one of these traits were on a continuum. The nine temperament characteristics were termed activity, regularity, initial reaction, adaptability, intensity, mood, distractibility, persistence and attention span, and sensitivity. The implications of this study revealed that if a child were considered to be high or low on any of the nine temperament measures, then this may be a cause for future concerns. Thomas and Chess (1977) found that babies could be categorized into one of three groups: easy, difficult, and slow-to-warm-up.

Kagan (1994) specifically studied the temperamental characteristic termed "reactivity." According to Kagan (1994), infants, children, and adults differ in their behavioral responses to novel situations. These patterns of behavior show moderate stability throughout childhood. Highly reactive infants were described as "motorically aroused and distressed" to presentations of novel stimuli. Low reactive infants remained "motorically relaxed and did not cry or fret to the same set of unfamiliar events." Kagan (1994) refers to two styles of reactivity in unfamiliar

environments: inhibited and uninhibited. Inhibited persons withdraw from new situations, avoid unfamiliar objects and people, and spend more time on the periphery of the action such as staring or playing alone quietly in social situations. Highly reactive infants predominantly displayed high fear or inhibition to unfamiliar events. Uninhibited persons approached unfamiliar situations with less hesitation, dominated activities, and behaved more spontaneously. Low reactive infants were minimally fearful or uninhibited to novel situations. These temperamental characteristics are important because they have implications for the development of behavior problems and psychopathology.

Temperament and one's future behaviors have been thoroughly investigated because of the predictive relationship between these two factors. An individual's behaviors will influence every aspect of his life; relationships, social interactions, academic performance, career choices, both positive and negative decisions will all be influenced by and, in turn, influence one's behaviors. Temperamental characteristics, such as positive or negative emotionality, render future implications for one's behavior and performance. Putnam & Stifter (2005) assessed positivity and negativity in response to novel stimuli; positivity was the index for approach or exuberance while negativity was the index for inhibition. This study contributed to a better understanding of the nature of early-emerging behavior problems related to temperamental characteristics. Positive responses to novelty, or high approach, were associated with externalizing behaviors while negativity to novelty, or high inhibition, was associated with internalizing behaviors. Context also appears to influence one's degree of approach-inhibition behaviors. Putman and Stifter (2005) found an association between high approach and externalizing behaviors in a low-intensity situation, but this same relationship did not exist in a high-intensity situation. This suggests that inhibition may serve a regulatory, protective function

in dangerous (high intensity) situations. Ultimately, understanding one's degree of approach, in addition to other temperamental characteristics, at an early age is important due to its relationship with future behavior issues.

The relationship between temperament and future behaviors was further studied by Stifter, Putnam & Jahromi (2008). Toddlers who were classified and grouped as exuberant, inhibited, and low reactive as 2 year olds were then studied and assessed at 4.5 years old. At 4.5 years old, temperament, emotional regulation, and problem behaviors were measured and evaluated. Toddlers who were classified as exuberant were more positive, socially responsive to novel persons, less shy, and rated as having more problem behaviors than other children as preschoolers. These problem behaviors included both externalizing and internalizing actions. Expressing more negative affect or less ability to regulate one's emotions when disappointed was related to more problem behaviors. In addition, interaction effects implicated that high levels of unregulated emotion during disappointment were risk factors for problem behaviors in exuberant children. Stifter, Putnam, & Jahromi's (2008) results correspond with existing data; children's reactions to disappointment suggest that exhibiting high levels of negative emotion, specifically anger, were related to more externalizing behaviors such as aggression. These findings are significant because of the implications and consequences of externalizing behaviors in our society. While temperamental characteristics render implications for one's future behaviors, it is also imperative to study relationships between child characteristics and other environmental factors; the parental environment may be influenced by child characteristics and in turn, child characteristics may resultantly shape the parental environment. Ultimately, understanding the relationship between child temperament and parental functioning is critical when investigating child's future behaviors.

Children's Temperament and Parenting

Child temperament influences the environment while the environment influences child temperament. This reciprocal relationship begs consideration regarding these dynamic interactions, effects, and consequences. Rothbart (1989) explains that the infant's temperament regulates and is regulated by the actions of others in the environment from the time of birth. Parents play a central role in the child's development. However, parent-child interactions will behave in a bidirectional manner; parents will influence the child's development while the child's characteristics will influence the parent. The parent-child interaction may play a role, for example, in influencing or determining future behaviors, cognitive development, and personality traits.

Research has shown that distress-related temperament characteristics, such as irritability, difficultness, or negative mood, are associated with poor parenting and general unresponsiveness (Hemphill & Sanson, 2000; Hinde, 1989; Linn & Horowitz, 1983). On the other hand, child's positive affect and self-regulation are associated with parental responsiveness, social interaction, and use of rewards (Hinde, 1989; Kyrios & Prior, 1990). The direction between this relationship is of interest. Multiple temperament attributes in infancy have been found to relate to later attachment security, thus indicating a predictive relationship between temperament and future attachment. Attachment describes the bond between the infant and the primary caregiver, which may be classified as secure or insecure; research has shown the attachment relationship provides the infant with the foundation on which all subsequent close, long-term relationships will be built. The temperamental attributes of sociability to strangers and mother ratings as "easy", proneness to distress, neonatal distress reactivity, and object-orientation versus person-orientation (Frodi, 1983; Belsky & Rovine, 1987; Calkins & Fox, 1992; Lewis & Feiring, 1989)

have been associated with attachment. Attachment security, forecasted by temperamental characteristics, may subsequently influence parents' behavioral responses towards their child. Ultimately, the predictive relationship between temperament and parent-child attachment security renders support for the importance of examining the relationship between temperament and parenting behaviors in the current study.

Furthermore, Van den Boom (1989) conducted a series of studies investigating the dynamic relation between temperament, mother-child interaction, and attachment. Observation of mothers with their infants twice a month till the age of 12 months was implemented to objectively measure mother sensitivity and infant behavior. Mother sensitivity was observed and measured according to looking, affective, stimulating, and soothing behaviors; maternal sensitivity was also self-reported on a rating scale examining mother's general attitude, availability, and physical and social contact with the child. Infant behavior was assessed by observing positive and negative social signals. Both mothers and observers completed temperament scales at 6 and 12 months of age; additionally, attachment was assessed at 12 months. Results indicated that although infant irritability had decreased from 6 to 12 months of age, caring for an irritable infant at 6 months had lasting effects on maternal behavior. Irritability at 6 months of age was associated with maternal perceptions of the infant as difficult at 6 and 12 months. Maternal perceptions of difficultness were associated with less maternal involvement with increasing infant age in addition to these mothers being particularly unresponsive to the positive signals of their infants. Results also indicate that irritable infants were more likely to be rated as insecure, specifically in the avoidant category, in future assessments. Ultimately, this study suggests that changes in mothers' behaviors toward their infant due to early infant temperamental characteristics appear to shape subsequent mother-child

interactions, indicated by attachment. Children's future relationships with others will in turn be influenced by the attachment relationship. These results lend further support for the present study, which will examine the predictive relationship between temperament and parental nurturance and restrictiveness.

Marital Satisfaction and Parenting

While it has been studied and established that child temperament and parenting dimensions interact bi-directionally, the parenting and marital satisfaction dimensions interact and influence each other as well. Marital satisfaction is considered to function as the comparison between one's marital expectations and one's marital outcomes (Lenthall, G., 1977). There is consistent evidence that marital satisfaction and intimacy tend to decrease after the birth of a child (Cox, Paley, Burchinal, & Payne, 1999; Gable et al., 1994; O'Brien & Peyton, 2002; Schulz, Cowan, & Cowan, 2006). Following the birth of a child, a shift in structure and organization in the marital and parental relationships occurs (Minuchin, 1974). During the transition to parenthood, the marital relationship tends to suffer because of multiple contributing factors. The marital relationship is thought to suffer from and be in competition with parenthood for limited resources (Aldous, 1978).

Rothman (2004) conducted a longitudinal study to examine the relationship between changes in marital satisfaction occurring before and after the arrival of a child. Data was collected prior to pregnancy as well as during pregnancy and postpartum. General and transition-specific predictors of marital satisfaction trajectories were evaluated. General predictors were considered depression, aggression, and attributions for partner behaviors. Transition-specific predictors included the planning of pregnancy, infant temperament, infant gender, and division of childcare responsibilities. Marital satisfaction for both spouses remained

stable from the start of marriage through late pregnancy but declined significantly over the transition to parenthood after pregnancy. However, the measures that were correlated with changes in marital satisfaction during this parenthood transition were different for husbands and wives. Husbands' decline in marital satisfaction over the transition to parenthood was related to their less benign attributions for their partners. On the other hand, wives' decline in marital satisfaction was predicted by different factors; greater depression interacted with difficult child temperament to predict this decline in satisfaction. Both factors individually predicted the wives' decline in satisfaction, but in combination, there was an even greater decline in satisfaction. Ultimately, the decline in marital satisfaction over the transition to parenthood was predicted by different measures for husbands and wives.

Marital satisfaction and parental involvement have also been found to be related. Active involvement in the marriage is predicted to “spillover” and result in active investment in the care of the child. McBride and Mills (1993) found that men who were satisfied with their marriage and had wives whom were satisfied with their marriage as well, were relatively highly involved as fathers. Ultimately, fathers parenting involvement has been predicted by his degree of marital satisfaction. The relationship between marital satisfaction and other parenting behaviors, in addition to parental involvement, are also of interest.

The quality of social, familial, and marital relationships influences and interacts with parents' attitudes towards parenting. While it is difficult to determine causation between these variables, relationships and associations can be determined and studied. Crnic et al. (1983) investigated and concluded that intimate support or the marital relation was the most predictive factor of maternal attitudes towards parenting. The greater the marital satisfaction, the more positive attitude towards parenting was displayed. Both Belsky (1984) and Crnic et al. (1983)

agree that the marital relationship is one of the strongest determinants of attitudes towards parenting and parental functioning.

There is also evidence that marital quality is a stronger predictor of fathering behaviors than mothering behaviors (Coiro & Emery, 1998; Leve et al., 2001). Men are more likely to be involved in child caretaking when satisfied with their marriage than when dissatisfied. McBride and Mills (1993) also found a significant relationship between marital satisfaction and fathers' involvement. However, no relation between marital satisfaction and mothers' involvement was found. Fathers' involvement in childcare may be highly sensitive to social, relational, or emotional factors while mothers' involvement may be unwavering to these factors.

Pierce, et al. (1996) describes the indirect yet apparent relationship between marital support and parenting behaviors. Marital support influences the quality of parenting through its impact on one's psychological well-being. Expressions of warmth and caring from a spouse are rewarding and comforting. Numerous studies have found that high marital support is associated with low levels of psychological distress. Therefore, evidence suggests that marital support indirectly influences the quality of parenting by affecting one's emotional well-being. High marital support is more closely associated with parenting behaviors of warmth, appropriate monitoring, and clear communication with the child while low marital support is associated with parental behaviors involving hostility, rejection, and hostility (Pierce, et al., 1996).

The relationship between marital satisfaction and parenting satisfaction for mothers and fathers was investigated by Kurdek (1996). This study was aimed at determining if there was an inter-domain spill-over effect between marital satisfaction and parenting satisfaction. The spill-over effect describes a situation when one variable directly relates and varies as a result of changes in the other variable. Kurdek (1996) found that there is not an inter-domain spill-over

effect between marital satisfaction and parenting satisfaction. However, there is an inter-parent spill-over effect. Spouses' marital satisfaction ratings were strongly associated and linked over time; changes in marital satisfaction at different time points occurred correspondingly in both husbands and wives. This same relationship between spouses was not as pronounced regarding parenting satisfaction ratings. The relationship and correspondence between spouses' marital satisfaction will be determined in this study.

Children's Temperament and Marital Satisfaction

Child temperament has also been shown to be associated with the quality of family relationships. Mehall et al. (2009) concluded that infant temperament was positively related to parents' marital satisfaction at 7 months and 14 months. Mothers and fathers' degree of marital satisfaction were positively associated at both time points. Infants' dispositions may influence parents' emotional tone and mood, thus affecting their perception of other familial relationships. There has been some work to suggest that easier child temperament (i.e., higher levels of emotional and physiological regulation) is linked with higher levels of marital quality (Porter, Wouden-Miller, Silva, & Porter, 2003), whereas infant negativity has been related to poorer marital quality (Leve et al., 2001; McHale et al., 2004). The marital relationship can be described according to multiple characteristics. One dimension that describes the marital relationship is marital conflict. Marital conflict was found to be positively correlated with negative child temperament and negatively correlated with positive child temperament (Gharehbaghy & Vafaie, 2009).

Child's temperament and other characteristics are thought to influence the stresses surrounding the marital relationship (Leve et al., 2001). However, child temperament interacts and influences mothers and fathers' marital satisfaction differently. Infant temperament was not

found to be a significant predictor of postbirth marital functioning for fathers; thus, infant characteristics, such as temperament, and marital satisfaction are not highly related. On the other hand, infant temperament was found to be a significant predictor of postbirth marital adjustment for mothers; high postbirth marital functioning for mothers was predicted when their infant was low in fussiness and/or difficulty (Wright, et al., 1986). These findings suggest that mothers' marital satisfaction and infant temperament are more strongly linked than fathers' marital satisfaction and infant temperament. Mothers, most often being the primary caregiver, have more interactions on a day to day basis with their child. The dynamics of these interactions may be significantly influenced by the child's temperament. Therefore, the child's temperament may, in turn, interact and effect the mother's marital satisfaction as indicated by this study (Wright, et al., 1986).

Child temperament and marital satisfaction have been found to mediate and influence other parenting dynamics. Grych and Clark (1999) found that marital quality and child temperament were predictive of parenting stress at 4 and 12 months postpartum for all fathers. Parenting stress may affect other cognitions and behaviors; stress may play a role in the parent's likelihood of engaging in nurturing or restrictive behaviors towards the child. Stress may be facilitated by having a child with negative temperament or being dissatisfied with one's marriage. One of the goals of the present study was to expand our understanding of this relationship. While marital quality and child temperament were predictive of fathers' parenting stress in this study, there may be another relationship amongst marital quality, child temperament, and the parenting behaviors of nurturance and restrictiveness.

Current Study

The present study is aimed at determining the relationships between child temperament, mother's and father's marital satisfaction, and mother's and father's parenting. Data were drawn from the Emotional Beginnings Project. The Emotional Beginnings Project is a longitudinal study that was conducted in the Infant and Child Temperament Laboratory in the Human Development and Family Studies department at The Pennsylvania State University. This study investigated how infants and toddlers develop the ability to regulate their emotions.

In the current study, infant temperament was observed and measured at 12 months of age. Infants' responsiveness to examiner, general emotional tone, and activity as well as their fearfulness, reactivity, and irritability were observed during a laboratory visit. Marital satisfaction of both parents was also measured at 12 months postpartum using a marital satisfaction questionnaire (Braiker & Kelley, 1979). Finally, father's and mother's self-reported attitudes towards parenting were obtained at 24 months postpartum using a parenting questionnaire (Block, 1965).

The aim of the present study was to examine the predictive relationships between marital satisfaction and parenting as well as child temperament and parenting. The impact of the interaction between marital satisfaction and child temperament on parenting was also examined. An inter-parent spill over effect was predicted for marital satisfaction (Kurdek, 1996). Marital satisfaction ratings for mothers and fathers were expected to be positively correlated. If one partner is satisfied with the marital relationship, then the other partner will also feel satisfied with the marital relationship. Ultimately, satisfaction regarding the marital relationship within parents was predicted to be the same.

It was also hypothesized that child temperament at 12 months would be related to mother's parenting at 24 months. According to interdependence theory (Rusbult & Buunk, 1993), satisfaction with a relationship is influenced by the perceived rewards from the relationship, perceived costs to being in the relationship, and the extent to which perceived outcomes from the relationship match generalized expectations. As mothers are usually the primary caregiver, the close and intricate day to day interactions with the child throughout the first 12 months will influence mother's parenting attitudes. The dynamics and expectations of the mother-child relationship are significantly related to the child's temperament; the child's temperament will affect the mother's mood, sense of control, sleep patterns, stress, and overall parenting satisfaction. In turn, these factors will influence mother's attitudes towards parenting. Therefore, it was expected that mother's nurturance would be positively associated with negative child temperament and negatively associated with surgent child temperament. It was also hypothesized that mother's restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament. These same relationships between parenting and child temperament were expected for fathers. Father's nurturance was predicted to be positively associated with negative child temperament and negatively associated with surgent child temperament. It was also hypothesized that father's restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament.

While mother's parenting was expected to have stronger correlations with child temperament, it was also expected that weaker correlations would exist between mother's parenting and marital satisfaction. Mother's nurturance would be positively related to marital satisfaction while mother's restrictiveness would not have any relationship with marital

satisfaction. Belsky's (1984) process model suggests that marital support as well as child characteristics influences parental functioning. Thus, while child temperament and mother's parenting behaviors were predicted to be strongly related, mother's marital satisfaction and parenting behaviors were expected to be related as well. Mothers with high marital satisfaction were predicted to have higher levels of parental nurturance and mothers with low marital satisfaction were predicted to have lower levels of parental nurturance.

According to Katz and Gottman (1996), husbands who have low marital satisfaction and withdraw from their intimate partners may respectively distance themselves from their children (Coiro & Emery, 1998; Dickstein & Parke, 1988). This relationship is referred to as the spillover effect. Therefore, it was predicted that marital satisfaction at 12 months would be associated with father's parenting at 24 months. While child temperament and father's parenting were predicted to be associated, a stronger relationship between father's marital satisfaction at 12 months and father's parenting at 24 months was hypothesized. In this study, it was predicted that fathers who are more satisfied with their marital relationship will hold more positive feelings towards parenting than fathers who are less satisfied with their marital relationship. These positive feelings will be evident in father's increased sensitivity, responsiveness, and nurturance. Thus, fathers with high marital satisfaction would have higher levels of parental nurturance and fathers with low marital satisfaction would have lower levels of parental nurturance. It was also expected that father's restrictiveness would not be related to marital satisfaction. Father's restrictiveness is indicative of his parental control, power, and authority. One relationship, the marriage, is not likely to strongly influence one's inherent desire for control in relationships.

In addition to the associations between child temperament and parenting as well as marital satisfaction and parenting, it was also predicted that child temperament and marital

satisfaction would be positively related. Mehall et al. (2009) determined that infant temperament was positively related to parents' marital satisfaction at 7 months and 14 months. Therefore, it was hypothesized that child temperament and marital satisfaction for mothers and fathers at 12 months would be directly associated; parents with negatively reactive, emotionally fearful children were expected to rate their marriages lower in satisfaction than parents with socially responsive, high active, emotionally positive children.

In summary, the following hypotheses were tested in the current study. In addition to these hypotheses, the interactions between child temperament and marital satisfaction in predicting parenting were explored.

1. Marital Satisfaction:

- a. Mothers' and fathers' marital satisfaction would be positively correlated.

2. Child Temperament and Parenting:

- a. Mothers' nurturance would be positively associated with negative child temperament and negatively associated with surgent child temperament. Mothers' restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament.
- b. Fathers' nurturance would be positively associated with negative child temperament and negatively associated with surgent child temperament. Fathers' restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament.

3. Marital Satisfaction and Parenting:

- a. Mothers' nurturance would be positively associated with mothers' marital satisfaction. There would be no relationship between mothers' restrictiveness and mothers' marital satisfaction.
 - b. Fathers' nurturance would be positively associated with fathers' marital satisfaction. There would be no relationship between fathers' restrictiveness and fathers' marital satisfaction.
4. Within Parent Comparisons
- a. Mothers' parenting would have a stronger relationship with child temperament than with marital satisfaction.
 - b. Fathers' parenting would have a stronger relationship with marital satisfaction than with child temperament.
5. Child Temperament and Marital Satisfaction:
- a. Marital satisfaction, for mothers and fathers, would be positively associated with surgent child temperament and negatively associated with negative child temperament.

Method

Participants

A total of 375 participants were utilized in this study: 125 mothers, 125 fathers, and 125 children. The sample was recruited as part of a longitudinal study following infants and their families from 2 weeks to 25 months of age (Putnam & Stifter, 2002). Table 1 lists the means, standard deviations, and ranges for parent's age, years of education, and years of marriage when enrolled in the study.

Table 1. Descriptives for Mothers and Fathers

	Mother				Father			
	Mean	SD	Range		Mean	SD	Range	
			Minimum	Maximum			Minimum	Maximum
Years Education	15.59	2.69	10.00	26.00	16.31	3.35	10.00	28.00
Years Married	5.69	3.70	.10	19.00	5.69	3.70	.10	19.00
Age	29.68	5.50	16.00	43.00	31.91	5.96	19.00	46.00

Procedures

Mothers and fathers demographic information was obtained in an interview two weeks postpartum; this information included participants' age, years married, and years of education. Mothers and fathers completed and returned a marital satisfaction questionnaire (Braiker & Kelley, 1979) at 12 and 24 months postpartum; marital satisfaction questionnaire responses at 24 months were used as a control variable. Mothers and fathers also completed and returned a parenting attitudes questionnaire (adapted from Block, 1965) at 24 months postpartum. Subscales of nurturance and restrictiveness were generated from the items on this questionnaire. Infant temperament was observed during laboratory visits and recorded using the Infant Behavior Record by research assistants when infants were 12 months of age.

Measures

1. Child Temperament

Child temperament was an independent variable in this study. Observed temperament was measured using the Infant Behavior Record. Temperamental subscales were created based on the categories of behaviors recorded during the 12 month laboratory visit: surgency and negativity. To determine one's degree of surgency, scores for responsiveness to examiner, general emotional tone, and activity were averaged together. Responsiveness to examiner was rated on a 5-point scale with high scores reflecting infant's inviting, initiating, or demanding behaviors from the examiner. General emotional tone and activity were both rated on a 9-point scale. General emotional tone was considered one's degree of happiness with high scores indicating radiating happiness, animation, and failure to become upset. Activity was described as the amount of gross bodily movement; high scores reflected hyperactivity and the inability to be quieted for sedentary tests. Scores for fearfulness, reactivity, and irritability were all measured on a 9-point scale. The scores for these items were averaged to determine an overall measure for the negativity subscale. Fearfulness was defined as one's reaction to new or strange persons, surroundings, or test materials; high scores reflected a strong indication of fear of the strange to the extent that the infant cannot be brought to play or respond to the tests. Reactivity was defined as the ease with which a child is stimulated to react in general; this may be considered one's excitability or sensitivity. Irritability was defined as the ease with which a child becomes annoyed or angered when stimulated; high scores reflected strong irritability to all degrees of stimulation encountered throughout the examination.

2. Marital Satisfaction

Marital satisfaction was an independent variable in this study. Mothers' and fathers' marital satisfaction was obtained by completion of the Braiker & Kelley (1979)'s Marital Satisfaction Questionnaire. 25 items were assessed on a 9-point scale with a score of 9 indicating "frequently" or "very much" and a score of 1 indicating "very little" or "not at all" in response to the questions. Responses were coded, categorized, and meaned for subscales of love, maintenance, conflict, and ambivalence. Love reflects the degree to which the individual feels affection towards one's partner as well as the degree of interdependence; interdependence reflects closeness or attachment. Maintenance examines the presence or absence of relationship preservation activities such as self-disclosure, efforts to solve problems, and attempts by partners to change themselves. Conflict assesses overt behavioral conflict and communication of negative affect. Ambivalence reflects feelings of uncertainty and doubt about the marital relationship. Overall marital satisfaction scores were obtained for mothers and fathers by the following equation: $(\text{love} + \text{maintenance}) - (\text{conflict} + \text{ambivalence})$. High scores represent higher marital satisfaction.

3. Parenting

A measure of self-reported parenting was the outcome variable for the current study. The parenting questionnaire, adopted from Block (1965), was completed by mothers and fathers at 24 months postpartum. Parents rated on a 5-point scale their agreement (5- strongly agree) or disagreement (1- strongly disagree) with the given statements. Responses were grouped and meaned for subscales of nurturance and restrictiveness. The following chart provides the statements that were used to obtain scores for subscales of nurturance and restrictiveness.

Table 2. Parenting Survey Questions for Nurturance and Restrictiveness

<i>Nurturance:</i>
1. I respect my child's feelings and encourage (him) (her) to express them.
2. I feel a child should be given comfort and understanding when (he) (she) is scared or upset.
3. I express affection by hugging, kissing, and holding my child.
4. I find some of my greatest satisfactions in my child.
5. I usually take into account my child's preferences in making plans for the family.
6. I feel a child should have time to think, daydream, and even loaf sometimes.
7. I am easy going and relaxed with my child.
8. I joke and play with my child.
9. My child and I have warm, intimate times together.
10. I encourage my child to be curious, to explore and question things.
11. I believe in praising a child when (he) (she) is good and think it gets better results than punishing (him) (her) when (he) (she) is bad.
12. I make sure my child knows that I appreciate what (he) (she) tries or accomplishes.
13. When I am angry with my child, I let (him) (her) know it.
14. I find it interesting and educational to be with my child for long periods.
<i>Restrictiveness</i>
1. I try to keep my child away from children or families who have different ideas or values from our own.
2. I believe that a child should be seen and not heard.
3. I prefer that my child not try things if there is a chance (he) (she) will fail.
4. I do not allow my child to get angry with me.
5. I believe in toilet training a child as soon as possible.
6. I teach my child to keep control of (his) (her) feelings at all times.
7. I believe that scolding and criticism makes my child improve.
8. I believe my child should be aware of how much I sacrifice for (him) (her).
9. I let my child know how ashamed and disappointed I am when (he) (she) misbehaves.
10. I want my child to make a good impression on others.
11. I control my child by warning (him) (her) about the bad things that can happen to (him) (her).
12. I don't want my child to be looked upon as different from others.

Results

Descriptive Statistics

Predictor variables of child temperament and marital satisfaction as well as the outcome variable of parenting were measured. Table 3 lists the means, standard deviations, and ranges for mother's and father's marital satisfaction at 12 and 24 months of age, mother's and father's nurturance and restrictiveness at 24 months of age, as well as surgent and negative child temperament at 12 months of age.

Table 3. Statistics for Study Variables

	12M				24M			
	Mean	SD	Range		Mean	SD	Range	
			Minimum	Maximum			Minimum	Maximum
Mom Marital Satisfaction	6.72	4.47	-7.50	13.80	6.87	4.05	-8.40	14.00
Dad Marital Satisfaction	6.28	3.84	-4.90	13.40	6.85	3.88	-8.10	13.30
Mom Restrictiveness					2.29	.36	1.58	3.58
Dad Restrictiveness					2.49	.39	1.58	3.58
Mom Nurturance					4.38	.37	3.57	5.00
Dad Nurturance					4.23	.42	3.00	5.00
Surgent Temperament	14.18	2.88	4.00	21.00				
Negative Temperament	12.84	3.61	5.00	26.00				

Paired sample correlational tests indicated that mother's and father's marital satisfaction were stable across time. Both mother's and father's marital satisfaction at 12 and 24 months of age were found to be significantly correlated, mothers: $r=0.603$, $p<0.001$, fathers: $r=0.699$, $p<0.001$. The degree of marital satisfaction across this 12 months period, however, was not different for either parent. The difference in mother's marital satisfaction at 12 and 24 months of age was not significant, $t(115)= 0.056$, $p=0.956$. The difference in father's marital satisfaction at 12 and 24 months of age was also not significant, $t(110)= -1.276$, $p=0.205$. Additionally, differences between mother's and father's marital satisfaction at 12 months, $t(127)= 1.662$, $p=0.099$, and 24 months of age, $t(113)= 0.388$, $p= 0.699$, were not significant. This indicates that

mother's and father's marital satisfaction at 12 and 24 months of age were relatively similar and comparable in nature for the given sample.

The differences between mother's and father's parenting behaviors were measured by performing paired samples T-tests. Significant differences between mother's and father's restrictiveness and nurturance were found respectively, $t(116) = -4.582, p = 0.001$ and $t(116) = 3.422, p = 0.001$. Father's restrictiveness scores were significantly higher than mother's restrictiveness scores while mother's nurturance scores were significantly higher than father's nurturance scores (See Table 3).

Marital Satisfaction

It was predicted that mother's and father's marital satisfaction would be positively associated. This hypothesis was confirmed, $r = 0.597, p = 0.001$. This relationship indicates that within couples if one partner had high marital satisfaction, then the other partner had high marital satisfaction as well.

Children's Temperament and Parenting

The relationship between child temperament and parent's nurturance and restrictiveness was assessed. The predicted positive relationship between mother's restrictiveness and surgent child temperament was not confirmed; rather the results indicate that a significant relationship between these two variables was in the opposite direction. Mother's restrictiveness was negatively correlated with surgent child temperament, $r = -0.180, p < 0.05$. This negative correlation indicates that mother's restrictiveness decreases with a more surgent child. The relationship between mother's restrictiveness and negative child temperament was not significant, $r = 0.093, p = 0.310$. Mother's nurturance was hypothesized to be negatively associated with surgent child temperament and positively associated with negative child

temperament; these hypotheses were not confirmed. Contrary to the predicted relationships, mother's nurturance was positively associated with surgent child temperament, $r=0.117$, $p=0.200$, and negatively associated with negative child temperament, $r= -0.073$, $p=0.423$; however, neither of these relationships were significant.

The hypotheses that father's restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament as well as father's nurturance would be positively associated with negative child temperament and negatively associated with surgent child temperament were not confirmed: father's restrictiveness and surgent child temperament, $r= -0.007$, $p=0.937$, father's restrictiveness and negative child temperament, $r= -0.124$, $p=0.184$, father's nurturance and negative child temperament, $r=0.146$, $p=0.116$, and father's nurturance and surgent child temperament, $r= -0.119$, $p=0.201$, were not significantly related.

Marital Satisfaction and Parenting

It was hypothesized that both mother's and father's nurturance would be positively associated with marital satisfaction. This hypothesis was partially confirmed for fathers but not for mothers respectively, $r=0.176$, $p=0.064$, and $r= -0.097$, $p=0.300$. The relationship between father's nurturance and marital satisfaction was nearly significant, thus the hypothesis was partially confirmed. It was also hypothesized that no relationship between mother's or father's restrictiveness and marital satisfaction would exist and this was confirmed; both correlation coefficients approached zero: mother's restrictiveness and marital satisfaction, $r=0.021$, $p=0.823$, father's restrictiveness and marital satisfaction, $r= -0.012$, $p=0.896$.

Within Parent Comparisons

Fisher's r-to-z transformation was performed in order to test the significance of the difference between two correlation coefficients for child temperament and marital satisfaction in predicting parenting. It was hypothesized that mother's parenting would have stronger relationships with child temperament than with marital satisfaction. This hypothesis was confirmed for surgent child temperament but not for negative child temperament. Surgent child temperament is a stronger predictor than marital satisfaction for mother's nurturance, $z=1.71$, $p=0.04$, and for mother's restrictiveness, $z=-1.54$, $p=0.07$. Negative child temperament was not confirmed as a stronger predictor than marital satisfaction for mother's nurturance, $z=0.23$, $p=0.41$, and mother's restrictiveness, $z=0.05$, $p=0.30$.

It was also hypothesized that father's parenting would have stronger relationships with marital satisfaction than child temperament; this hypothesis was partially confirmed. Father's nurturance was more strongly predicted by marital satisfaction than surgent child temperament, $z=-2.26$, $p=0.01$. However, no other significant differences in the correlations were found between child temperament and marital satisfaction in predicting father's parenting: nurturance predicted by negative child temperament and marital satisfaction, $z=-0.23$, $p=0.41$, restrictiveness predicted by surgent child temperament and marital satisfaction, $z=0$, $p=0.5$, restrictiveness predicted by negative child temperament and marital satisfaction, $z=-0.83$, $p=0.20$.

Children's Temperament and Marital Satisfaction

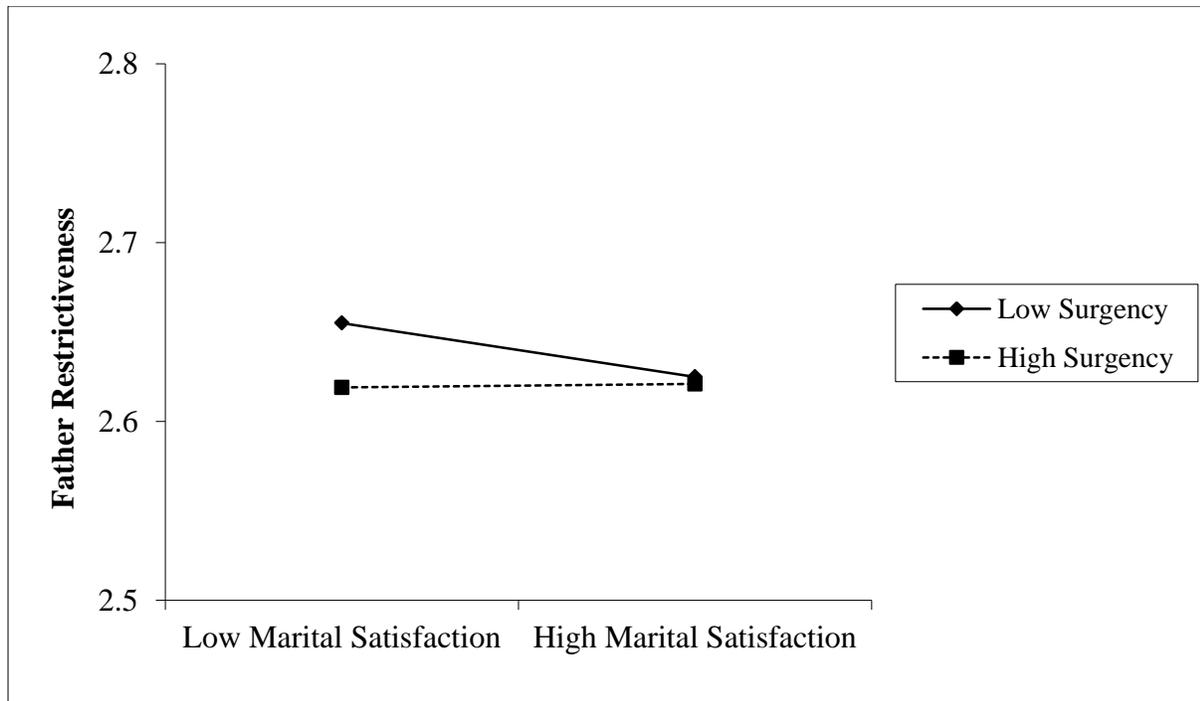
It was hypothesized that marital satisfaction for mothers and fathers would be positively related to surgent child temperament and negatively related to negative child temperament. These hypotheses were not confirmed since no significant relationships were found; marital satisfaction and surgent child temperament were negatively related for mothers and fathers respectively, $r=-0.032$, $p=0.715$, and $r=-0.001$, $p=0.993$. Likewise, the relationship between

mother's marital satisfaction and negative child temperament was not significant, $r= 0.012$, $p=0.890$; the relationship between father's marital satisfaction and negative child temperament was not significant as well, $r= -0.007$, $p=0.953$.

Temperament, Marital Satisfaction, and Parenting

The interaction between marital satisfaction and child temperament in predicting parenting behaviors was examined. Eight multiple regressions were conducted (2 temperament variables by 2 parenting variables for each parent). Only one significant interaction was revealed. When a multiple regression analysis was conducted to analyze father's restrictiveness based on predictor variables of surgent child temperament, marital satisfaction and the surgent child temperament by marital satisfaction interaction, the overall model was not significant, $F(4, 106)=1.463$, $p=0.219$. However, the interaction between the predictor variables – surgent child temperament and marital satisfaction– was significant, $\beta= 0.22$, $t=2.33$, $p=0.02$. No significant main effects or interactions were found amongst these same variables when regression tests were performed for mothers. As can be seen in Figure 1, while marital satisfaction did not affect the relationship between surgency and restrictive parenting, when fathers of low surgent children were dissatisfied in their marriages they were more likely to be restrictive than if they had high marital satisfaction.

Figure 1. Father's Restrictiveness Predicted by Temperament and Marital Satisfaction Interaction



Note: Unstandardized regression coefficients for marital satisfaction: -0.007, surgent child temperament: -0.010, the interaction (surgency by marital satisfaction): 0.008, and the intercept (constant): 2.63.

Discussion

The purpose of this study was to examine the predictive relationship of child temperament and marital satisfaction at 12 months of age on parental nurturance and restrictiveness at 24 months of age. Belsky's (1984) parenting model suggests that parent's psychological resources, child characteristics, and contextual factors such as the marital relationship are determinants of parental functioning. Research has shown that marital satisfaction is a stronger predictor of father's parenting role while child characteristics is a stronger indicator of mother's parenting role (Coiro & Emery, 1998; Leve et al., 2001). Research also suggests that child temperament and marital satisfaction would be directly related (Mehall et al., 2009).

Marital Satisfaction

It was predicted that mother's and father's marital satisfaction, within parents, would be positively associated. This hypothesis was confirmed. This relationship indicates that if one partner had high marital satisfaction, then the other partner had high marital satisfaction as well. This finding supports previous research on the relationship between spouses regarding marital satisfaction known as the inter-parent spillover effect (Kurdek, 1996).

Child Temperament and Parenting

It was hypothesized that mother's nurturance would be positively associated with negative child temperament and negatively correlated with surgent child temperament. These hypotheses were not confirmed. Results indicate that mother's nurturance was positively associated with surgent child temperament and negatively associated with negative child temperament; however, these relationships were not significant. A surgent child who is more socially responsive and generally happier than a negative child may provoke warmer, more

nurturing responses from the mother. When considering items 1, 3, 4, 6, 7, 10, 12 coded for parental nurturance, the relationship between surgent child temperament and parental nurturance may be better understood (Table 1). A surgent child is more likely than a negative child to elicit maternal responses of encouragement to express his or her feelings (item 1), freedom to think and daydream (item 6), encouragement to explore and to be curious (item 10), and appreciation for his or her accomplishments (item 12). A negative child who is highly fearful, unhappy, and irritable towards stimuli is not likely to provoke maternal encouragement to explore and to express his or her emotions. The affectionate response that a surgent child is more likely than a negative child to provoke is indicated by item 3 (I express affection by hugging, kissing, and holding my child). In addition, mothers may find greater satisfaction (item 4) and become more easy going (item 7) with a surgent child who explores, accomplishes, and is happy than a negative child who is irritable and fearful.

While the predicted correlation between child temperament and parental restrictiveness was not found, a significant relationship was found between child temperament and parenting in a different direction. It was expected that mother's high parental restrictiveness would be positively correlated with high surgent child temperament and mother's high nurturance would be associated with high negative child temperament. However, results indicate the opposite relationship between mother's restrictiveness and surgent child temperament exists; mother's restrictiveness was negatively correlated with surgent child temperament. That is, mother's restrictiveness decreases with a more surgent child. According to the Infant Behavior Record, high surgent infants were classified as initiating or demanding responses from the examiner, radiating happiness, and hyperactive in which sedentary tasks were difficult because infant could not be quieted. Surgent temperament was a continuous variable and therefore, there was a range

of characteristics that describe surgent temperament. The highest possible score for surgent child temperament would be 23. Table 2 indicates that the highest surgency score attained in the current sample was 21; no child in this study scored the highest on each dimension of the surgency composite. It may be that children would be better described on each surgency dimension as friendly responsiveness to the examiner, generally appears to be in a happy state, and active during most of the observation. The discovered correlation, mothers are less restrictive when their child is friendly and generally happy, can be explained as follows; mothers' agreement with the statement, "I want my child to make a good impression on others" is indicative of high restrictiveness according to the determined subscales. If the infant is friendly to examiners and generally happy, mothers' may be less concerned with the impression that her infant is making on others; mothers are aware that their infant is already making a good impression on others and ultimately this concern decreases in relevance. As this concern decreases in relevance, reported scores for this item decrease as well. This creates a lower restrictiveness score. Ultimately, this may partially explain the relationship between high surgent infants and mother's low restrictiveness.

It was hypothesized that father's nurturance would be positively associated with negative child temperament and negatively associated with surgent child temperament. In addition, it was predicted that father's restrictiveness would be positively associated with surgent child temperament and negatively associated with negative child temperament. Examining these relationships rendered no significant associations. However, the general relationship was found to be that father's nurturance was positively associated with negative child temperament and negatively associated with surgent child temperament; the opposite association was found between mother's nurturance and child temperament. Mothers and fathers may respond

differently to surgent and negative child temperamental characteristics. Fathers having a child with negative temperament, thus highly fearful and irritable, may feel more inclined to respond with sensitivity and nurturance. Biologically and psychologically, fathers tend to fulfill the stronger, less emotionally expressive role in the family while mothers tend to be more emotionally expressive. Fathers may engage in more receptive, responsive behaviors towards a child with negative temperament than mothers because they are more concerned with altering these maladaptive characteristics from an early age; fathers may believe that by nurturing the child, the fearful and irritable behavioral responses may be lessened. This would be beneficial to the child's future success. In addition, father's restrictiveness was negatively associated with negative child temperament rather than with surgent child temperament. This relationship may also be explained by the above theory; placing fewer restrictions on the child may elicit fewer negative responses. The opposite association was found between mother's restrictiveness and child temperament. It is important to note that these correlations were not significant. Future research is needed to confirm the trends identified in this study.

Marital Satisfaction and Parenting

It was hypothesized that mother's and father's marital satisfaction would be positively associated with parental nurturance and unrelated to parental restrictiveness. These hypotheses were not confirmed for mothers. On the other hand, the relationship between father's marital satisfaction and nurturance was nearly significant; thus, this hypothesis was partially confirmed. This supports previous research on the spillover effect; father's marital relationship spilled over and influenced father's parenting behaviors (Katz & Gottman, 1996; Coiro & Emery, 1998; Dickstein & Parke, 1988). The hypothesis about father's marital satisfaction and restrictiveness however, was not confirmed. While relationships between mother's and father's marital

satisfaction and restrictiveness were not significant, both associations approached zero indicating that no relationship existed as predicted.

Within Parent Comparisons

It was hypothesized that mother's parenting would have stronger relationships with child temperament than with marital satisfaction. This hypothesis was confirmed for surgent child temperament but not for negative child temperament in predicting both maternal nurturance and restrictiveness. Belsky (1984) suggests that parental functioning is influenced by characteristics of the child, contextual sources of stress and support, as well as personal psychological resources of the parents. Surgent child temperament is characterized by friendliness towards the examiner, positive emotional tone, and general activity. A child representative of this description may not require mothers to seek outside resources for support or psychological assistance. Therefore, characteristics of the child would be most indicative of parental functioning according to Belsky (1984). These results also support interdependence theory (Rusbult & Buunk, 1993). Without contextual and extraneous variables (i.e. psychological resources, family support) influencing the parent-child relationship, the parent will better perceive the rewards, costs, and expectations of this relationship. Thus, parenting behaviors may become more routine and in turn, better predicted by surgent child temperament alone than by other extraneous factors. Hypotheses regarding negative child temperament being a stronger predictor than marital satisfaction for mother's parental behaviors may not have been confirmed for various reasons. A highly fearful, negative reactive child may be more difficult and may require more resources for effective parenting. Again, Belsky's (1984) parenting model may explain why these hypotheses were not confirmed. Negative child temperament may elicit a

greater need for sources of support and require more personal psychological resources; therefore, extraneous variables may be interacting with the predicted relationship.

It was also hypothesized that father's parenting would have stronger relationships with marital satisfaction than child temperament; this hypothesis was partially confirmed. Father's marital satisfaction was a stronger predictor than surgent child temperament for father's nurturance. This supports previous research about the strong predictive relationship between marital satisfaction and father's parenting (McBride & Mills, 1993; Coiro & Emery, 1998). Father's restrictiveness did not have this same predictive relationship. It was hypothesized that father's marital satisfaction would render no relationship with restrictiveness; restrictiveness indicates father's degree of control or authority over his child. A father's desire for power in the parent-child relationship would be influenced by various factors, thus not exclusively predicted by the marital relationship. Hypotheses regarding marital satisfaction and negative child temperament in predicting parental behaviors were not confirmed; this may be better understood by the same explanation as described previously for mothers regarding the profound influence of having a child with negative temperament (Belsky, 1984).

Child Temperament and Marital Satisfaction:

It was hypothesized that mothers and fathers with high marital satisfaction would be positively correlated with surgent child temperament and negatively correlated with negative child temperament at 12 months of age. The predicted relationships between child temperament and marital satisfaction at 12 months of age were not confirmed. Contrary to the predicted relationship, mother's marital satisfaction was negatively associated with surgent child temperament and positively associated with negative child temperament; however, these relationships were not significant. The hypothesized relationship between father's marital

satisfaction and child temperament at 12 months of age was also not found. The predicted correlations may not have been found because of the nature in which temperament subscales were measured; the Infant Behavior Record was an observed measure recorded by research assistants during infant laboratory visits at 12 months postpartum. The brief period of time in which infants were observed may have played an influential role. Infants may have acted differently from their normal behaviors during this laboratory visit, thus influencing the responses on the Infant Behavior Record. Future studies should address this concern by measuring child temperament in multiple ways. In addition to observing child temperament, it may be beneficial to have parents contribute by completing a child temperament questionnaire.

Child Temperament, Marital Satisfaction, and Parenting:

The relationships and interactions between marital satisfaction and child temperament in predicting parenting behaviors were explored. The findings indicate that fathers with surgent children, regardless of their marital satisfaction, have similar restrictiveness scores. In comparison, fathers with low surgent children have varying restrictiveness scores depending on their marital satisfaction; low marital satisfaction corresponds with higher levels of restrictiveness with low surgent children while high marital satisfaction corresponds with lower levels of restrictiveness (Figure 1). Low surgent children, according to the Infant Behavior Record, are considered withdrawn or hesitant from the examiner, unhappy, quiet, and mostly inactive throughout most of the procedure. Thus, these characteristics may imply that fathers who are more frustrated or agitated with their children's behaviors in addition to being dissatisfied with their marriage, may feel compelled and warranted in engaging in more restrictive parenting. Ultimately, the interaction between child temperament and father's marital satisfaction is significant in predicting father's parenting restrictiveness or degree of control.

Limitations and Future Research:

There are several limitations to the research findings reported here. The present study was conducted on an extremely homogeneous population; the 150 families recruited were primarily Caucasian, with 5 African/African-American, 2 African, 3 Asian and 1 Native American family (Putnam & Stifter, 2002). Different results may have been obtained from a more ethnically and socially diverse sample. Another limitation of the current study was the way in which temperament scores were obtained. While it is considered a strength that temperament was objectively observed and measured during a laboratory visit, it may also be beneficial to obtain parents' perceptions of their child's temperament in future studies. Comparison of objective results and parents' perceptions may strengthen the temperament measure. In addition, accounting for parents' perceptions of child temperament may help to better understand marital satisfaction and parenting behaviors.

The relationships between child temperament and marital satisfaction on parenting behaviors were assessed in this study. Parenting behaviors were obtained on a self-reported questionnaire (Block, 1965). Thus, the inherent subjective bias of mothers and fathers reporting their own parenting behaviors must be considered. Future studies could address this concern by objectively assessing parental restrictiveness and nurturance in addition to parental self-report responses. Obtaining an objective measure of parenting behaviors would be beneficial; slightly different correlations may result when taking into account an observed measure of parenting behaviors as well as the subjective questionnaire measure.

The current study found a significant interaction between the marital satisfaction by temperament interaction variable and father's parental restrictiveness. Restrictive parenting may invoke a desired sense of control that is seemingly lacking in other aspects of fathers' lives.

Future studies could investigate the relationship between restrictive parenting and various stressors in the father's life. In addition to the child temperament and marital satisfaction interaction, other factors and their subsequent interactions may significantly influence father's level of restrictive parenting. Investigating father's cognitions, attitudes, and emotions before and after engaging in restrictive parenting behaviors may provide insight about restrictive parenting's function in the father's life. A better understanding about the factors that provoke restrictive parenting would be beneficial.

Conclusions:

In conclusion, the present study found many significant relationships between the predictor variables – child temperament and marital satisfaction at 12 months of age- and the outcome variable of parental restrictiveness and nurturance. The predicted relationship between surgent child temperament and parental restrictiveness was not confirmed; however, a significant relationship in the opposite direction as predicted was found between surgent child temperament and mother's restrictiveness. No significant relationships were found between child temperament and father's parenting behaviors. The relationship between marital satisfaction and parenting rendered one nearly significant association between father's marital satisfaction and nurturance in the predicted direction. As hypothesized, mother's nurturance and restrictiveness was more strongly associated with child temperament, specifically surgency, than with marital satisfaction. In addition, father's nurturance was more strongly related to marital satisfaction than to surgent child temperament as hypothesized. The hypothesized relationships between temperament and marital satisfaction were not supported.

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Life Science Option
Bachelors of Science in Psychology
Neuroscience Option

Schreyer Honors College: Fall 2007 – Spring 2011
Honors in Human Development and Family Studies – Emphasis in Infant Temperament

Thesis – Examining the Relationship and Influence of Infant Temperament and Marital Satisfaction on Parenting

Thesis Supervisor – Cynthia A. Stifter, Ph. D

Honors Adviser—Kathryn Hynes, Ph.D.

Experience:

Research Assistant for Human Development and Family Studies Laboratory Jan. 2010- Present
(Back to Baby Basics Project in the Infant Temperament Laboratory)

- Collect, enter and analyze data, observe and record infants' visits in the lab

Internship with Dr. Joseph Puccio May–Aug. 2009/2010

(Adolescent Medicine specialist at Stony Brook University Medical Center)

- Actively engaged and obtained psycho-social medical histories from patients

Externship with Dr. Joseph Puccio July 2008- Aug. 2008

(Adolescent Medicine specialist at Stony Brook University Medical Center)

- Observed physician's day to day activities and responsibilities

The Center for Volunteers in Medicine Oct. 2008- Present

- Volunteer for low income and limited access outpatient office setting

Honors:

Alpha Epsilon Delta (Premedicine Honors Fraternity)	Jan. 2009- Present
National Society of Collegiate Scholars	Aug. 2009-Present
Dean's List	Fall 2007, Fall 2008 - Present

Activities:

Alpha Epsilon Delta	Jan. 2009- Present
• Volunteered at Penn State blood drives and other philanthropic events	
• Organized and ran Penn State Health Fairs	
Eberly College of Science Student Council	Aug. 2009- Present
Kappa Alpha Theta Intramural Soccer Team	Sept. 2008- Present
Biobehavioral Health Society	Aug. 2008- May 2009
Kappa Alpha Theta Fraternity- Beta Phi Chapter	Aug. 2007- Present
• Educational Deputy	Aug. 2009-Present
• Conventions Awards Chairman	Dec. 2007- Jan.2009
Circle K Community Service Club	Aug. 2007-May 2008
Captain of Walk-for-Diabetes team	Aug. 2004-Present