

2011

# Predicting negative attributions in first-time mothers who are teens

Sheri Parsons  
*Iowa State University*

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**Predicting negative attributions in first-time mothers who are teens**

by

**Sheri Lynn Parsons**

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
MASTER OF SCIENCE

Major: Human Development and Family Studies

Program of Study Committee:  
Kere Hughes-Belding, Co-Major Professor  
Brenda Lohman, Co-Major Professor  
Dianne Draper

Iowa State University

Ames, Iowa

2011

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Dedication

Thank you, Hunny, for helping me to press on and through and thank you for gently nudging me to learn more about myself than I ever thought possible. I'll love you forever.

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## ABSTRACT

This study aimed to determine if Cognitive Readiness to Parent and History of Maltreatment predicted Negative Attribution in first-time mothers who are teens (aged 14-19) as well as adult low education (aged 21-36 with less than two years of post-secondary education) and adult high education mothers (aged 21-36 with two or more years of post-secondary education). The mothers were measured on their Cognitive Readiness to Parent, History of Maltreatment and Negative Attribution. The mothers were assessed at three time points: prenatally (during their last trimester of pregnancy), when their child was 6 months old, and when their child was 8 months old. During the prenatal assessments, the Knowledge of Infant Development Inventory (KIDI), the Child Abuse Potential Inventory (CAPI), and the Parenting Style Expectations Questionnaire (PS) were administered. When the child was 6 months old, the mothers were given the Childhood Trauma Questionnaire (CTQ), and when the child was 8 months old, the Attribution Style Measure for Parents (ASMP) was administered. Results indicated that Cognitive Readiness to Parent was more predictive of Negative Attribution than was a History of Maltreatment for all mom types. When both constructs were combined into a statistical model, a History of Maltreatment did not significantly predict Negative Attribution beyond Cognitive Readiness to Parent. Additionally, the CAPI (Child Abuse Potential Inventory) and the Parenting Style measure (Parenting Style Expectations Questionnaire) were the strongest predictors of Negative Attribution. The results indicate that first-time mothers who are teens and adult with low education may benefit most from child development and parenting style education.

## Predicting negative attributions in first-time mothers who are teens

## CHAPTER 1: INTRODUCTION

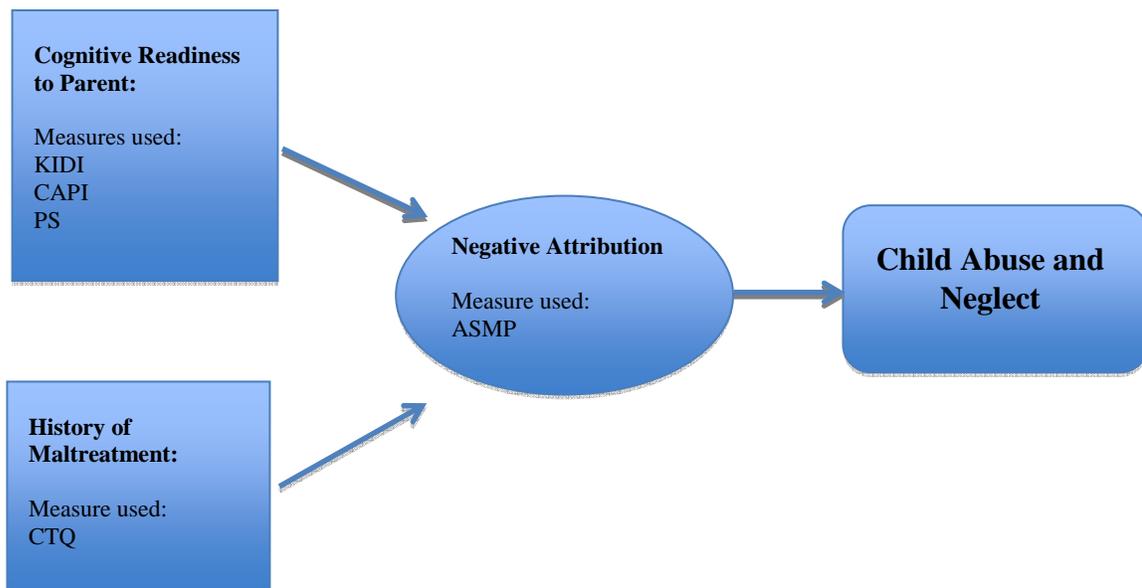
Mothers who are teens have higher rates of child maltreatment than do mothers who are older (Connelly & Straus, 1992; Stier, Leventhal, Berg, Johnson, & Mezger, 1993; Stevens-Simon, Nelligan, & Kelly, 2001; Lounds, Borkowski, & Whitman, 2006) and have been found to neglect their children twice as frequently as older mothers (Stier et al., 1993). Mothers who are teens possess parenting risks that include poor cognitive readiness, lower levels of education and a lack of child development knowledge which contributes to inappropriate expectations for their child (Bugental, Johnston, New, and Silvester, 1998; Bugental & Happaney, 2004). Mothers who are teens are also at-risk for parenting that lacks sensitivity and responsiveness, and tend to practice more harsh parenting than do older parents (Lounds et al., 2006; Tamis-Lemonda, Shannon, & Spellmann, 2002). Consequently, mothers' parenting style may contribute to markedly higher rates of child maltreatment among mothers who are teens (Stevens-Simon & White, 1991). In addition, having a history of maltreatment also contributes to the potential that the mother who is a teen will maltreat her own child. Those who were abused or neglected during their childhood have fewer positive interactions with their children than mothers who were not abused (Milan, Lewis, Ethier, Kershaw, & Ickovics, 2004) and have a higher risk for maltreating her child (de Paúl & Domenech, 2000). The higher rates of child maltreatment among mothers who are not cognitively ready to parent and having a history of maltreatment may have a basis in a cognitive process such as the forming of attributions.

Attribution theory is the theoretical model used in this study because it can help to explain the over-representation of child abuse among mothers who are teens and guide research in this area. Attribution is part of the process by which people interpret the behavior of others. It is possible, according to attribution theory, to predict, at least in part, a person's perception of why an event occurred (Dadds, Mullins, McAllister, & Atkinson, 2003). For example, if a mother has a child who cries often, she will attribute her infant's behavior to some cause, such as the baby's personality or the baby being tired. What the mother attributes her baby's crying to depends upon several factors, including her knowledge of child development. Having some idea of what is typical for her baby to be doing at any stage of her child's development helps the mother to understand her child's behavior, attributing crying to being hungry, tired, etc. In turn, the attribution she gives for the infant's behavior (crying) will affect her parenting response. When a mother makes negative attributions about her child's behavior and consistently uses harsh parenting as a response, over the time the child is more likely to have trouble with social adjustment and to show aggression toward their peers (Hughes, O'Brien, & Peyton, 2001).

Child maltreatment has been linked to parenting risks such as young maternal age, a lack of child development knowledge, harsh parenting beliefs, and a childhood history of abuse (Buchholz & Korn-Bursztyn, 1993; Stier et al., 1993; Dukewich, Borkowski, & Whitman, 1996; Tamis-LeMonda et al., 2002; Milan et al., 2004). Having a History of Maltreatment has been linked to child maltreatment (de Paúl & Domenech, 2000). Negative Attribution has also been linked to child maltreatment (Lorber, O'Leary, & Kendziora, 2003; Karraker & Evans, 1996; Bugental et al., 2004). However, the literature lacks a clear relationship between Cognitive Readiness to Parent and Negative Attribution

and between having a History of Maltreatment and Negative Attribution. This study evaluates the association between Cognitive Readiness to Parent and a History of Maltreatment and Negative Attribution in first-time mothers who are teens and mothers who are adult. See Figure 1 for an explanation of attributions as a suspected route to child maltreatment.

**Figure 1.** Diagram of a hypothesized route to an increased risk of child abuse. Cognitive Readiness to Parent and a History of Maltreatment have been linked to child maltreatment. Negative Attributions have also been linked to child maltreatment. Using attribution theory, I hypothesize that Cognitive Readiness to Parent and having a History of Maltreatment will predict Negative Attributions. For this study, Cognitive Readiness to Parent was measured using the KIDI (Knowledge of Infant Development Inventory), the CAPI (Child Abuse Potential Inventory), and the Parenting Style measure (Parenting Style Expectations Questionnaire). History of Maltreatment was measured using the CTQ (Childhood Trauma Questionnaire). Negative Attribution was measured using the ASMP (Attribution Style Measure for Parents).



## CHAPTER 2: LITERATURE REVIEW

Mothers who are teens tend to have more documented risks associated with early parenting. Some of these risk factors have been identified as her age, child development knowledge and ideas she has about how to raise her child.

First-time mothers who are teens are over-represented in the child maltreatment literature. Researchers have identified parenting risk factors of mothers who are teens. One such risk factor, maternal cognitive readiness to parent, is comprised of the age of the mother, her knowledge of child development, and her prenatal parenting style (O'Callaghan, Borkowski, Whitman, Maxwell, & Keogh, 1999). All of these elements strongly predict how she will interact with her infant in parenting situations (Connelly & Straus, 1992; Buccholz et al., 1993; Stier et al., 1993; Dukewich et al., 1996; Bugental et al., 1998; Gara, Allen, Herzog, & Woolfolk, 2000; de Paúl & Domenech, 2000; Stevens-Simon et al., 2001; Zelenko, Huffman, Lock, Kennedy, & Steiner, 2001; Milan et al., 2004). Typically, mothers who are older tend to have more life experience and will therefore have higher scores on Cognitive Readiness to Parent measures (Sommer, Whitman, Borkowski, Schellenbach, Maxwell, & Keogh, 1993).

Mothers who are teens who have experienced maltreatment as a child are at an increased risk of maltreating their own child (de Paúl et al., 2000; Milan et al., 2004). Having a history of maltreatment has been linked to negative attributions the mother has toward her child, which increases the risk of child maltreatment (Bugental et al., 1998; Bugental et al., 2004). Experiencing maltreatment during childhood influences a mothers' own parenting practices. Mothers who have experienced abuse in their past tend to have

pre-existing schemas that are more aggressive and are more accessible than mothers who have not experienced abuse (Farc, Crouch, Skowronski, & Milner, 2008).

### **Cognitive Readiness to Parent Risk Factors**

#### **Age of the mother.**

The age of the mother and the potential for the maltreatment of her child has been extensively studied. Although much emphasis has been given to the age of the mother, age is often an indicator of other risks, including a lack of financial and emotional resources, a limited knowledge of child development, and strained parenting practices (O'Callaghan et al., 1999; Nath, Borkowski, Whitman, & Schellenbach, 1991; Connelly & Straus, 1992; Birkeland, Thompson, & Phares, 2005). Mothers who are older have more cognitive and emotional resources to draw upon when they are faced with the demands of their child and childrearing (Nath et al., 1991). Contrarily, mothers who are teens often lack these resources and may rely on harsher methods of dealing with the stressors of raising children. Cases of child maltreatment have proven to more highly correspond with mothers who are teens (Stevens-Simon et al., 2001; Dukewich et al., 1996; Connelly & Straus, 1992). Mothers who are teens have far fewer coping skills with the stress of raising children and are more willing to use harsher forms of punishment on their child. The opposite tends to be true for mothers who are older (Stevens-Simon et al., 2001). Thus, in the present study, the age of the mother was evaluated as a factor of maternal cognitive readiness to parent.

#### **Knowledge of infant and child development.**

Understandably, mothers who are teens generally do not understand the course of their developing child, often resulting in ineffective methods of parenting responses when the child may be teething, hungry, etc. (Buchholz et al., 1993). Mothers who are teens, when

compared to mothers who are older, are less accurate in predicting typical infant development (Karraker & Evans, 1996). Teens have more unrealistic expectations of their children in addition to having a poorer understanding of child development (Flanagan, Coll, Andreozzi, & Riggs, 1995), and they tend to have less knowledge about their child's development than do older mothers (Tamis-Lemonda et al., 2002). Consequently, mothers who are teens are typically less responsive and have inappropriate expectations for their child's behavior than do mothers who are older (Tamis-Lemonda et al., 2002). A mother who is a teen may think that her child is capable of performing the desired behavior, but he chooses not to. A mother who is a teen may have a more punitive approach to dealing with her child than an older, more experienced mother (Vukelich & Klingman, 1985). Mothers who are teens, when compared to mothers who are older, demonstrate lower levels of sensitivity to their baby's needs, are unrealistic when it comes to the development of their child, and show more negativity when they interact with their baby (Milan et al., 2004, Tamis-Lemonda et al., 2002). A lack of knowledge of their child's development undermines a mother's effectiveness in responding and dealing with the stressors of parenting, limiting her parenting options. Therefore, in the present study, the mother's knowledge of infant development was measured.

### **Prenatal parenting style.**

Mothers typically have a mental representation of how they should care for their child. Mothers who are teens have a limited range of responses to her child's behaviors and will typically feel more dissatisfaction in their roles as parents (Gara et al., 2000). Mothers who are teens have less child development knowledge, less experience with infants, and misinterpret their child's behavior more than mothers who are adults (Dukewich et al.,

1996; Farc et al., 2008). In turn, mothers who are teens are more at risk to favor a harsher parenting style. Mothers who are teens tend to have more unrealistic expectations of their child than older mothers (Flanagan et al., 1994). Mothers who are teens are more detached, intrusive, and hostile and are less sensitive in their parenting practices than are mothers who are older (Berlin, Brady-Smith, & Brooks-Gunn, 2002). This study measured the first-time mother's age, her knowledge of infant development, and prenatal parenting style to gain a clear picture of maternal cognitive readiness to parent.

### **Maternal History of Childhood Maltreatment**

Mothers who are teens who experienced abuse during their own childhood are more at risk for child abuse than mothers who have not experienced abuse (Gara et al., 2000; de Paúl & Domenech, 2000; Milan et al., 2004). Mothers who are teens who experienced abuse during their own childhood predictably enjoyed interactions with their infant less, had more feelings of incompetence in the parental role, and had greater disappointment in their infants' responsiveness (Milan et al., 2004). Mothers who are teens show higher scores on depression inventories (de Paúl & Domenech, 2000) and have more difficulty in her role as a parent (Milan et al., 2004).

### **Attribution**

Attribution was described as a psychosocial theory by Fritz Heider in 1958. Attribution theory describes a process that explains a person's perception and interpretation of another person's conduct or actions (Heider, 1958). It is a process of interpretation then determination of the motivation of the event or behavior with either an internal or external cause. An *internal* attribution involves assessing the incident and attributing the behavior of another person to personality, attitude, demeanor, etc. In other words, the evaluating person

attributes the behavior of another person to an internal characteristic of that person. On the other hand, an *external* attribution is one in which the evaluating person attributes a behavior of another to the situation that person happens to be in, or other factors that are outside of their control (Dadds et al., 2003). In essence, attributions are a function of the person giving the response and the person evaluating the response either by the interpreter of the behavior, or by the person being evaluated. These attributions are based upon previous belief and experience of the individual.

### **Dimensions of Attribution**

Bernard Weiner expanded on Heider's theory of attribution by proposing dimensions of the attribution process: locus of control, intentionality, stability, and controllability. These four dimensions explain how attributions can mediate an outcome, such as a mother's response to a perceived misbehavior of her child (Bugental et al., 1998).

Milner created a social information processing model that attempted to identify the cognitions of parents that contribute to child abuse, consisting of three cognitive stages and a "cognitive behavioral stage" (Montes, de Paúl, & Milner, 2001). The first stage of Milner's social information processing model is the perception of social behavior; the second stage (interpretation and evaluation of the behavior) gives meaning to the behavior; the third stage involves integrating the evaluations and selecting a response to the behavior. The fourth stage is the response to the behavior where established schemas contribute to the response. According to Milner (1993, 2000), high-risk versus low-risk mothers, infer and evaluate their child's behavior differently and the differences in their interpretations can mediate their responses (Montes et al., 2001).

Attribution theory informs aggressive responses to events. The most pertinent construct to understanding aggression is the perceived controllability of an act (Graham, Weiner, Cobb, & Henderson, 2001). An interpretation is then made when there is an action by another person. How the act of another is interpreted influences the evaluating person's response. Automatically, the receiving person asks, "Was this act intentionally hostile? Or was this act unintentional?" The evaluating person will then react according to their interpretation. If a person encodes actions as hostile when the action was not hostile, or the action was unintentional, unnecessary aggression is the response. Mothers who are teens can have inappropriate responses to their child's behaviors because, in part, of a lack of knowledge of their child's development. Additionally, mothers who are teens have fewer resources, such as family and financial support and life experience, to draw from when they are in parenting situations (Nath et al., 1991).

### **Parental Attributions**

Parental attributions have been a focus of research because of the implications of child abuse and the outcomes of a child's development. The attribution style of a parent is associated with how the parent reacts to their child's conduct, and therefore, over time, is associated to the developmental outcomes of the child (Dadds et al, 2003). According to Miller (1995) there have been three main, overlapping areas of attribution research. One has to do with the parent's interpretation of the immediate causes of the child's behavior. Another focus has to do with the long-term causes of the child's behavior and the determinants that shape the child's development. A third realm of attribution has to do with specific causes of behavior and parental interpretation. Negative attributions toward the

child have been shown to elicit parental reactivity more so than positive attributions (Miller, 1995).

Parental attributions have been studied using questions that are either open-ended (“How does your child respond when you...”) or by answers that are to be chosen from those given by an interviewer (“Does your child...or...”). The typical targets of research have been the age of the child, the sex of the child (especially in research dedicated to math performance), and whether or not the salience of the attribution outcome is either positive or negative.

The effects of attribution are widespread. The way behaviors or actions of others is interpreted informs our reactions. We interpret our environment based on what we have learned from our life experience and through our belief systems. This is of particular importance to parental attributions of their children’s behavior. Attribution theory helps to explain and predict the parenting response of the mother who is a teen because, in part, her beliefs are based upon what she was or was not taught as a child and because she has limited life experience and knowledge. A mother’s attribution for her child’s conduct plays a strong role in the mother’s emotional response to her child’s behaviors (Miller, 1995).

When a child’s behavior is challenging for the parent, the parent assigns meaning to the behavior and reacts accordingly. As an example, a mother who has a child with persistent behavioral problems will have a more negative bias when describing her child’s behaviors (Tamis-Lemonda et al., 2002). The reactions of parents to their children’s behavior are recurring and significant. The ultimate consequence of their reactions is their child’s development.

Several studies have linked negative attribution to harsh parenting (Lorber et al., 2003; Karraker & Evans, 1996; Bugental et al., 1998; Tamis-Lemonda et al., 2002; Bugental et al., 2004). Negative attributions appear to be more prevalent in mothers who have a higher probability of maltreating their child (Bugental et al., 1998).

### **Missing Link between Risks and Negative Attributions**

There is a clear and established link between risk factors (cognitive readiness to parent and a history of maltreatment) and child maltreatment and there is an established link between negative attribution and child maltreatment. However, the literature does not adequately address the prediction of negative attribution. Cognitive readiness to parent and a history of maltreatment may help explain why mothers attribute negative motivations for their child's behaviors. If we understand why mothers who are teens attribute negative causes for their child's behaviors then perhaps interventions could be refined and focused. Theoretically, attribution moderates the relationship between certain risk factors, such as a mother's cognitive readiness to parent or her history of maltreatment on harsh parenting. This study hopes to clarify the relationships between these factors.

### **Research Questions**

Research question 1: Are there differences in cognitive readiness to parent scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

Research question 2: Are there differences in history of maltreatment scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

Research question 3: Do the three groups of mothers differ in their Negative Attribution scores?

Research question 4: Does cognitive readiness to parent and a history of maltreatment predict negative attribution scores?

This study does not seek to assess abuse and neglect, rather it hopes to clarify any relationships between cognitive readiness to parent and having a history of maltreatment and negative attribution.

## CHAPTER 3: METHODS

### **Participants**

The data used for this study were collected through the University of Notre Dame in 1999-2000 for the Parenting for the First Time Project. Data were collected from first-time mothers prenatally (during their last trimester of pregnancy), and then at six months and eight months postnatal. Participants were recruited in four cities across the United States (Washington, D.C., Kansas City, KS, South Bend, IN, and Birmingham, AL). The initial data collection had a total of 682 participants- mothers who are teens, aged 14-19 (N=396), first-time mothers who are adult with low education (N=169), and first-time mothers who are adult with high education (N=117). Mothers with “low education” were aged 21-36 with less than two years of college and mothers with “high education” were aged 21-36 with two or more years of college. Under a grant from the University of Notre Dame, subjects were recruited for a longitudinal study of first-time mothers. Expecting first-time mothers, aged 14-36, were recruited from hospitals and OB/GYN clinics during their last trimester of pregnancy. For this study, there were one hundred seven (N=107) mothers who completed all five measures used to evaluate cognitive readiness to parent and history of maltreatment.

First-time mothers were assessed at three separate time points for this study. The KIDI (Knowledge of Infant Development Inventory), CAPI (Child Abuse Potential Inventory), and the Parenting Style measure (Parenting Style Expectations Questionnaire) assessed the mother’s cognitive readiness to parent and were administered when the mothers were in their last trimester of pregnancy. When their infant was 6 months old, the mothers were assessed for their history of maltreatment using the CTQ (Childhood Trauma

Questionnaire). The last assessment was administered when their child was approximately 8 months old and measured the mothers' parental attribution patterns using the ASMP (Attribution Style Measure for Parents).

## **Measures**

There were five measures used for the current study. The three measures that assessed the mother's cognitive readiness to parent were the Knowledge of Infant Development Inventory (KIDI), the Child Abuse Potential Inventory (CAPI), and the Parenting Style Expectations Questionnaire (PS). The measure used to assess the mother's history of maltreatment was the Childhood Trauma Questionnaire (CTQ), which measures abuse across five different dimensions: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Negative Attributions the mothers felt toward their child were measured using the Attribution Style Measure for Parents (ASMP).

### **Cognitive Readiness to Parent**

First-time mothers were assessed in their cognitive readiness to parent, which includes the mother's knowledge of infant and child development, her potential for maltreating her child, and the mother's parenting style.

#### **Knowledge of Infant Development Inventory (KIDI)-Short Form**

The mother's knowledge of her child's development was assessed using the Knowledge of Infant Development Inventory-Short Form (KIDI; MacPhee, 1981). Answers were given on a Likert scale (1 to 5, from strongly agree to strongly disagree). The Short Form consists of 14 questions (of the original 75) that determine the mother's proficiency in child development and has questions like, "Taking care of a baby can leave a parent feeling tired, frustrated, or overwhelmed" and, "A one year-old knows right from wrong." This measure

has a score range of 14-70. Lower scores on this measure demonstrate poor knowledge of child development. The KIDI has a high test-retest reliability of  $\alpha=.92$  (Bert, Guner, & Lanzi, 2009).

#### Child Abuse Potential Inventory (CAPI)-Short Form

The Child Abuse Potential Inventory-Short Form (CAPI; Milner, 1994) was used to assess the first-time mother's child abuse potential. The Short Form version of the CAPI is comprised of 25 questions and measured using "disagree" (0) or "agree" (1), with a total possible score of 25. Higher scores on this measure indicate a higher risk for abuse. Example questions asked by the CAPI are, "Children should never disobey" and, "Children should stay clean." The CAPI has a test-retest reliability of  $\alpha=.90$  (Milner, 1994).

#### Parenting Style

Parenting style was measured using the Parenting Style Expectations Questionnaire (Bavolek, 1984). The answers were scaled on a five-point Likert scale (1 to 5, strongly agree to strongly disagree) and consisted of 28 questions. This questionnaire measures the mother in four dimensions: responsiveness/empathy, punishment, abuse/neglect, and authoritarianism. Examples of questions asked in this measure are, "Parents will spoil their children by picking them up and comforting them when they cry" and, "Children will quit crying faster if you ignore them." The score range for this measure is 28-140. Higher scores indicate a more positive style of parenting. The reliabilities for the four subscales used in the current study are  $\alpha = .83$  for the responsiveness/empathy subscale,  $\alpha = .86$  for the punishment subscale,  $\alpha = .64$  for the abuse/neglect subscale, and  $\alpha = .52$  for the authoritarian parenting subscale (Bert et al., 2009).

### **History of Maltreatment**

To measure the mother's history of maltreatment, the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994) was administered when their child was approximately six months old. The CTQ consists of 28 questions that were scored on a 5-point Likert scale (1-never true, 5-very often true) with a score range from 28-140. Higher scores on the CTQ indicate more incidence of prior abuse experienced by the mother. The CTQ measures maltreatment in five dimensions: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Each dimension has a score range of 0-25. Questions for this measure begin with, "When I was growing up...". Example questions are, "I knew there was someone to take care of me and protect me" and, "I believe that I was physically abused." The CTQ has a high test-retest reliability of  $\alpha=.88$  (Bert et al., 2009).

### **Negative Attribution**

Mother's negative attributions for their child were measured using the Attribution Style Measure for Parents (ASMP). This measurement assesses the attributions the mother has for her child's behaviors. There were six situations in which minor misbehaviors of their child were measured (for example, "Your child didn't pay attention to you when you talked to him or her."). The mother then answered a series of questions relating to eight dimensions of attribution for each situation. The eight dimensions were blame, control, globality, locus, motivation, negative intent, purposefulness, and stability). Each of the dimensions was rated on a six-point scale ranging from Disagree Strongly to Agree Strongly. A mean score measuring negative attribution was then calculated by taking the average of all the scores across the six situations. Higher scores on this questionnaire indicate more negative attributions toward their child. Cronbach's alpha for the mean score

was  $\alpha = .78$  for the mothers (Hughes et al., 2001). An example of a question given to the mother was, “To what extent do you think your child...in order to annoy you?”

## CHAPTER 4: RESULTS

Mothers were assessed using five measures to determine their cognitive readiness to parent (using the KIDI, CAPI, and Parenting Style measure), their history of maltreatment (using the CTQ), and negative attribution (using the ASMP). Descriptives were run, then ANOVAs and Tukey's HSD tests. Correlations of the measures were run by combining the three mom types. Regression was run with cognitive readiness to parent constituting the first block, history of maltreatment as the second block, and negative attribution as the dependent variable.

Table 1 shows descriptive data for each of the groups of mothers and for the total sample on all variables. In addition, the number of mothers responding to each measure is listed.

Research Question 1: Are there differences in cognitive readiness to parent scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

From the descriptive data we can see the following patterns for the groups of mothers. On the Knowledge of Infant Development Inventory (KIDI), scores range from 14-70, with lower scores indicating less knowledge of child development (Table 1). Mothers who are teens had the lowest mean score, indicating lesser child development knowledge, while mothers who are adult with high education had the highest scores, indicating more child development knowledge.

The Child Abuse Potential Inventory (CAPI) has a score range of 0-25, with higher scores indicative of higher risk for abusive behavior toward their child. Mothers who are

teens had the highest mean scores, while mothers who are adult with high education had the lowest mean scores.

The Parenting Style Expectations Questionnaire (Parenting Style measure) has a score range of 28-140, with lower scores indicating a harsher style of parenting. Mothers who are teens had the lowest mean scores, while the mothers who are adult with high education had the highest mean score.

Table 1. Descriptives of all measures by mother group.

	Teen		Adult Low Education		Adult High Education		Total	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
<b>Cognitive Readiness to Parent</b>								
Knowledge of child development	49.00	5.71	51.70	7.12	56.59	6.17	51.64	6.90
Child abuse potential	9.65	3.33	8.83	4.20	6.07	3.50	8.50	3.90
Parenting Style	104.31	14.73	112.39	14.15	117.97	11.44	109.75	14.90
<b>History of Maltreatment</b>								
Emotional abuse experience	8.44	4.10	7.87	3.00	7.31	3.00	8.01	3.61
Physical abuse experience	7.00	2.92	6.87	2.24	6.38	2.21	6.80	2.60
Sexual abuse experience	6.11	3.55	9.48	6.44	5.17	0.93	6.58	4.21
Emotional neglect experience	10.10	4.68	9.57	4.87	7.31	3.54	9.22	4.56
Physical neglect experience	7.29	2.60	6.83	2.50	5.55	1.57	6.72	2.41
Negative Attribution	84.33	21.17	79.52	26.58	77.86	20.10	81.54	22.13

To determine if mean scores were significantly different between the groups of mothers, ANOVA was used (see Table 2). ANOVA revealed statistically significant differences in scores between the mom types on all of the cognitive readiness to parent measures. Significant ( $p < .01$ ) differences were found between the mom types on the Knowledge of Infant Development Inventory (KIDI), the Child Abuse Potential Inventory (CAPI), the Parenting Style Questionnaire for Parents (Parenting Style measure).

Table 2. ANOVA of between group differences on readiness to parent (N=107).

	df	F	Sig.
Knowledge of child development	2	14.42	.00**
Child abuse potential	2	9.68	.00**
Parenting Style	2	9.84	.00**

\*\* $p < .01$ .

Tukey's HSD tests were then used to identify any differences between the mom types on the cognitive readiness to parent measures. Tukey's HSD revealed significant differences between mom types (Table 3). There were significant differences in scores between mothers who are teens and mothers who are adult with high education ( $p < .01$ ), and between mothers who are teens and mothers who are adult with low education on the KIDI ( $p < .05$ ) (Table 4). Scores on the CAPI revealed significant differences between mothers who are teen and mothers who are adult with low education, and between mothers who are adult with low education and mothers who are adult with high education ( $p < .01$ ). Significant differences also exist between mothers who are teens and mothers who are adult

with low education ( $p < .05$ ), and between teen and mothers with high education ( $p < .01$ ) on the Parenting Style measure. Scores on the CAPI did not reveal any significant differences between mothers who are teens and mothers who are adult with low education.

Table 3. Tukey's HSD results of mom type and cognitive readiness to parent (N=107).

	Teen	Adult Low Education
<u>Teen</u>		
Knowledge of child development	1	
Child abuse potential	1	
Parenting style	1	
<u>Adult Low Education</u>		
Knowledge of child development	-2.70	1
Child abuse potential	0.83	1
Parenting style	-8.08	1
<u>Adult High Education</u>		
Knowledge of child development	-7.59**	-4.90*
Child abuse potential	3.59**	2.76*
Parenting style	-13.66**	-5.60

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

Research Question 2: Are there differences in history of maltreatment scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

The Childhood Trauma Questionnaire (CTQ) measured the mother's history of maltreatment within five dimensions (emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect). The score range for each dimension of the CTQ is 5 - 25, with higher scores indicating more incidence of maltreatment in that dimension. For mothers who are teens, the emotional neglect dimension revealed the highest scores and sexual abuse dimension revealed the lowest scores (Table 1). Mean scores on the emotional

neglect subscale were highest for mothers who are adult with low education, while the physical abuse dimension showed the lowest scores. Mothers who are adult with high education also scored highest on the emotional abuse and the emotional neglect subscale and lowest on the sexual abuse subscale. The highest total mean score for all mom types was on the emotional neglect subscale and the lowest mean score was on the sexual abuse subscale. Mothers who are teens had the highest mean score of all the subscales in the emotional neglect dimension, while the mothers who are adult with high education had the lowest score on the physical neglect subscale. The mean scores on all subscales of the CTQ of the mothers who are teens were highest of all mom types, except for the sexual abuse dimension.

ANOVA revealed significant differences between mom types on the CTQ (Childhood Trauma Questionnaire) (Table 4). Significant differences were found on the sexual abuse dimension ( $p < .01$ ) and on the emotional neglect and physical neglect dimensions ( $p < .05$ ).

Table 4. ANOVA of between group differences on history of maltreatment (N=107).

	<b>df</b>	<b>F</b>	<b>Sig.</b>
Emotional abuse experience	2	.94	.39
Physical abuse experience	2	.55	.58
Sexual abuse experience	2	8.45	.00**
Emotional neglect experience	2	3.80	.03
Physical neglect experience	2	5.39	.01*

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

Tukey's HSD revealed significant differences ( $p < .05$ ) between mothers who are teens and mothers who are adult with high education on the CTQ (Childhood Trauma Questionnaire) emotional neglect and physical neglect dimensions (Table 5). Significant differences were found between adult mothers with low education and adult mothers with high education, as well as mothers who are teens and mothers with low education on the CTQ sexual abuse dimension ( $p < .05$ ).

Table 5. Tukey's HSD results of mom type and history of maltreatment (N=107).

	Teen	Adult Low Education	Adult High Education
<u>Teen</u>			
Emotional abuse experience	1	.57	1.13
Physical abuse experience	1	.13	.62
Sexual abuse experience	1	3.37*	.94
Emotional neglect experience	1	.53	2.78*
Physical neglect experience	1	.46	1.74*
<u>Adult Low Education</u>			
Emotional abuse experience	.57	1	.56
Physical abuse experience	.13	1	.49
Sexual abuse experience	3.37*	1	4.31*
Emotional neglect experience	.53	1	2.25
Physical neglect experience	.46	1	1.27

\* $p < .05$ .

Research Question 3: Do the three groups of mothers differ in their negative attribution scores?

Mothers who are adult with low education had the highest scores on the negative attribution measure (Table 1). Mothers who are adult with high education had the lowest scores on this measure. Although mothers who are adult with low education had the highest scores, there was no statistically significant difference between this group and mothers who are teens. ANOVA revealed that there were no significant differences between mom types on negative attribution (ASMP-Attribution Style Measure for Parents).

Research Question 4: Does cognitive readiness to parent and a history of maltreatment predict negative attribution scores?

In order to answer this question, correlation analyses were first conducted for the total sample on cognitive readiness to parent measures to ensure they are capturing related constructs. Correlation analysis was used to determine the strength of the relationships between the measures for each construct in the study by combining all mom types together. Table 6 shows the correlations between the cognitive readiness to parent measures (KIDI-Knowledge of Infant Development Inventory; CAPI-Child Abuse Potential Inventory; Parenting Style-Parenting Style Expectations Questionnaire) with all mom types combined. All three measures were significantly correlated ( $p < .01$ ) with each other, demonstrating that the KIDI, CAPI, and the Parenting Style instruments measure a similar construct.

Table 6. Correlations of cognitive readiness to parent measures (N=107).

	Knowledge of child development	Child abuse potential
Child abuse potential	-.54**	1
Parenting style	.66**	-.58**

Note. KIDI = Knowledge of Infant Development Inventory, CAPI = Child Abuse Potential Inventory, and PS = Parenting Style Expectations Questionnaire.

\*\* $p < .01$ .

Table 7 shows the correlations between the five dimensions of the CTQ (Childhood Trauma Questionnaire) with all mom types combined. The scores on the different dimensions of the CTQ correlate significantly ( $p < .01$ ) except on the sexual abuse

dimension for the participants in this study. The scores on the sexual abuse dimension correlate at the  $p < .05$  level.

Table 7. Correlations of the history of maltreatment measure.

	Emotional abuse experience	Physical abuse experience	Sexual abuse experience	Emotional neglect experience
Emotional abuse experience	1			
Physical abuse experience	.59**	1		
Sexual abuse experience	.38**	.22*	1	
Emotional neglect experience	.55**	.41**	.16*	1
Physical neglect experience	.40**	.18*	.03*	.70**

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

Cognitive readiness to parent measures correlate highly with the negative attribution measure. The KIDI, CAPI, and Parenting Style measures are all correlated significantly ( $p < .01$ ) with negative attribution. However, the history of maltreatment measure (CTQ) is not correlated with negative attribution, except for the emotional neglect dimension, which is correlated ( $p < .05$ ) with negative attribution.

Table 8. Correlation of cognitive readiness to parent measures, the history of maltreatment measure, and negative attribution.

	Negative Attribution
<b>Cognitive Readiness to Parent</b>	
Knowledge of child development	-.20*
Child abuse potential	.33**
Parenting style	-.35**
<b>History of Maltreatment</b>	
Emotional abuse experience	.05
Physical abuse experience	-.04
Sexual abuse experience	.01
Emotional neglect experience	.14*
Physical neglect experience	.18

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

Cognitive readiness to parent measures predict negative attribution better than the history of maltreatment measure. When the two constructs were placed into a regression model together, cognitive readiness to parent measures, namely the CAPI (Child Abuse Potential Inventory) and the Parenting Style measure (Parenting Style Expectations Questionnaire) were the chief predictors of negative attribution. The history of maltreatment measure (CTQ- Childhood Trauma Questionnaire) actually reduced the predictive power of Negative Attribution when combined with the cognitive readiness to parent measures.

Because mom types did not differ in their negative attribution scores, all mom types were combined for a regression analysis. Cognitive readiness to parent measures were

placed into the first block and the history of maltreatment measure was placed into the second block (Table 9). The largest variance in negative attribution was in the cognitive readiness to parent measures. When the history of maltreatment measure was placed into the second block, the predictive power was insignificant. Regression analysis revealed that 15% of the variance of scores in negative attribution measure was explained by cognitive readiness to parent. Approximately 3% of the variance of scores in negative attribution was predicted by the history of maltreatment measure.

Table 9. Regression of cognitive readiness to parent measures and history of maltreatment measure on negative attribution for all mom types combined.

	$\beta$	F	$R^2$ Change
<b>BLOCK 1</b>			
<b>Cognitive Readiness to Parent</b>			
		5.96	.15
Knowledge of child development	.12		
Child abuse potential	.25		
Parenting style	-.27*		
<b>BLOCK 2</b>			
<b>History of Maltreatment</b>			
		2.60	.03
Emotional abuse experience	.04		
Physical abuse experience	-.18		
Sexual abuse experience	-.01		
Emotional neglect experience	.03		
Physical neglect experience	.06		

Note. Predictors in cognitive readiness to parent: KIDI = Knowledge of Infant Development Inventory; CAPI = Child Abuse Potential Inventory; Parenting Style = Parenting Style Expectations Questionnaire. Predictor for history of maltreatment: CTQ = Childhood Trauma Questionnaire. Dependent Variable: Negative Attribution.

\* $p < .05$ .

## CHAPTER 5: DISCUSSION

This study examined the relationship of cognitive readiness to parent and negative attribution and a history of maltreatment and negative attribution. The scores on cognitive readiness to parent and history of maltreatment measures of mothers who are teens were compared to the scores of mothers who are adult with low education and mothers who are adult with high education. It was hypothesized that parenting risk factors such as cognitive readiness to parent and having a history of maltreatment could predict negative attribution in first-time mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education.

The results show that cognitive readiness to parent measures, the KIDI (Knowledge of Infant Development Inventory), CAPI (Child Abuse Potential Inventory), and the Parenting Style measure (Parenting Style Expectations Questionnaire), predicts negative attribution in all mom types. The history of maltreatment measure (CTQ – Childhood Trauma Questionnaire) does not significantly predict negative attribution for any mom type in this study.

Research Question 1: Are there differences in cognitive readiness to parent scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

Mothers who are teens had lower scores on the cognitive readiness to parent measures (the KIDI and the Parenting Style measure) than their adult counterparts, indicating that mothers who are teens had less knowledge of their infant's development and had a harsher style of parenting. Mothers who are teens had the highest scores on the CAPI indicating that they are at a higher risk for abusing their children than the mothers who are adult in

this study. The biggest difference in scores was between mothers who are teens and mothers who are adult with high education. This suggests that mothers who are teens and mothers who are adult with low education are less cognitively ready for the demands of childrearing. Mothers who are older and have more education tend to be more cognitively ready in parenting. Some differences were found between mothers who are teens and mothers who are adult with low education, but these differences were not as striking as the differences between mothers who are teens and mothers who are adult with high education. There were no differences between mothers who are teens and mothers who are adult with low education on the CAPI (Child Abuse Potential Inventory), indicating that mothers with less education appear to have a similar risk in child abuse potential.

Research Question 2: Are there differences in history of maltreatment scores between mothers who are teens, mothers who are adult with low education, and mothers who are adult with high education?

Mothers who are teens scored higher than the other mom types on all five dimensions of the Childhood Trauma Questionnaire (CTQ), except for the sexual abuse dimension in which mothers who are adult with low education scored highest. This may indicate that mothers who are teens have experienced more maltreatment (except in the sexual abuse dimension) than mothers who are older in this study. The sexual abuse dimension did not reveal significant differences between mom type which may mean that sexual abuse is a more rare occurrence than other forms of maltreatment, or because of the stigma of sexual abuse, it was under-reported in this study. There could be a connection between maltreatment that a teen experiences during her childhood to becoming a mother during her

teen years. Further studies may be able to look more closely at a possible connection between childhood maltreatment and early motherhood.

The CTQ (Childhood Trauma Questionnaire) indicated differences between mom types. However, the primary differences were between mothers who are teens and mothers who are adult with high education. Mothers who are teens and mothers who are adult with low education did not have any differences on this measure, indicating either this measure did not adequately measure childhood abuse and neglect or that mothers who are teens and mothers who are adult with low education are similar in their childhood trauma histories. Further studies into the link between education level and childhood maltreatment are warranted. Few differences exist between adult mothers with low education and adult mothers with high education on the CTQ again indicating a possible link between education level and certain forms of maltreatment. In this study, the CTQ- physical neglect scores of mothers who are adult with low education were different from the scores of mothers who are adult with high education. Further studies may be necessary to look at possible links between education level and different forms of maltreatment.

Research Question 3: Do the three groups of mothers differ in their negative attribution scores?

Scores on the Attribution Style Measure for Parents (ASMP) revealed that mothers who are teens had higher negative attribution scores than the mothers who are adult with high education, indicating that mothers who are teens experience more negative attribution than the mothers who are adult in this study. Interestingly, the scores of the mothers who are adult with low education on this measure were the highest of the three mom types, although this difference is not statistically significant from the scores of mothers who are teens.

Mothers who are adult with high education had the lowest scores on the ASMP (Attribution Style Measure for Parents) which may suggest that mothers with more life experience and have at least two years of college do not attribute their child's behavior to negative causes as much as mothers who are teens or mothers who are adult with low education. Further studies to explore a possible connection between education level and negative attribution may help explain this finding.

Research Question 4: Does cognitive readiness to parent and a history of maltreatment predict negative attribution scores?

In this study, the Knowledge of Infant Development Inventory (KIDI), the Child Abuse Potential Inventory (CAPI), and the Parenting Style Expectations Questionnaire (Parenting Style) were used to measure the mothers' cognitive readiness to parent. A correlation analysis of these three measures indicates they measure a similar construct ( $p < .01$ ). All mom types were combined for the correlation analysis.

The five dimensions of the CTQ (Childhood Trauma Questionnaire) were correlated for all mom types in this study. All dimensions of the CTQ are significantly correlated with each other, except for the sexual abuse and physical neglect dimension.

The scores of the cognitive readiness to parent measures are significantly correlated with the scores of the negative attribution measure for all mom types. This indicates that scores of the cognitive readiness to parent measures have a linear relationship to the scores on the negative attribution measure. However, the scores on the five dimensions of the history of maltreatment measure are not correlated with negative attribution, except for the emotional neglect dimension for all mom types.

Both cognitive readiness to parent and history of maltreatment were placed into a regression model with negative attribution as the dependent variable.

The cognitive readiness to parent measures, when all mom types were combined, predict negative attribution and account for approximately 15% of the variation in negative attribution scores. The amount of variance explained by cognitive readiness to parent suggests that this is an essential contributor to mothers' perceptions of their children and ultimately to her interactions as supported by other research (Milan et al., 2004; Tamis-Lemonda et al., 2002). Interestingly, the Parenting Style measure (Parenting Style Expectations Questionnaire) and the CAPI (Child Abuse Potential Inventory) were the strongest predictors of negative attribution.

When history of maltreatment was added to the regression model, only an additional 3% of the variation in negative attribution was predicted. This may indicate that the CTQ (Childhood Trauma Questionnaire) did not adequately measure the mothers' history of maltreatment or simply having a history of maltreatment is not a good predictor for negative attribution. This result may be clarified by a future study that uses different childhood maltreatment measures to predict negative attribution.

The results of this study supported the important contribution of cognitive readiness to parent on our understanding of risks related to parenting responses and ultimately child maltreatment (Buchholz et al., 1993; Connelly & Straus, 1992; Milan et al., 2004). The measures used to assess cognitive readiness to parent were successful in predicting negative attribution, thereby contributing to the current literature that these constructs likely work together to impact mothers' interactions with their children. This study also revealed that a mother's history of maltreatment is not a strong predictor of negative

attribution. This suggests that the effects reported in other studies about the increased risk of child maltreatment for mothers who experienced maltreatment themselves is not mediated by their perceptions of their children's behavior. More directly, the effects of having experienced maltreatment as a child may have another more direct path to parenting practices and responses than going through a cognitive process, such as attribution. It may be that mothers who experienced maltreatment do not tend to negatively attribute their children's misbehavior, but that they respond more harshly to their children because of their physiological responses to stressful situations. It may be that they view harsh responses as appropriate child discipline when in the parenting moment. In fact, the data from this study indicate that mothers who are teens tend to ascribe to more harsh parenting styles. Perhaps it is because they have such limited exposure to the parenting role and have had few experiences with the demands of raising a child. Mothers who are teens lack an education in child development because of the limited time they have spent as a parent. Mothers who are teens are also physically and psychologically developing and making it more difficult to effectively care for a child who is in need of care (de Paúl & Domenech, 2000). The issue of teen parenting is understandably a focus because children of mothers who are teens face unique obstacles during childhood. At both the individual and societal level, children of mothers who are teens tend to have higher rates of delinquent behavior, poor school performance, learning disabilities, and poor social adjustment (Rogosch, Cicchetti, & Lawrence, 1995; Feldman & Crespi, 2002; Gershoff, 2002; Salzinger, Feldman, Ng-Mak, Mojica, Stockhammer, & Rosario, 2002; Herrenkohl, Huang, Tajima, & Whitney, 2003; Ryan & Testa, 2005; Agathonos-Georgopoulou, 2004; Knox, 2010; Williams, Van Dorn, Bright, Jonson-Reid, Nebbitt, 2010). More research is needed in order

to fully understand the processes relating to cognitive readiness to parent, maltreatment history, negative attribution and actual parenting behavior so that interventions can be individualized to meet the varying needs of mothers.

### **Limitations of Study**

The majority of the participants in this study were Black (69.9% at the first data collection point), although all efforts were made to sample across ethnicities. A study that looked at first-time mothers with an ethnically representative sample would provide increased generalization.

Another limitation of this study is the data collected was from self-report measures. The main concern with self-report measures is a “social desirability bias” in which the person answering the questions seeks to cast themselves in the best light possible. When in an interview or self-report situation, responders who have experienced abuse tend to under-report their experiences because of a social desirability bias or because of the stigma surrounding abuse.

Yet another limitation in this study is the CTQ (Childhood Trauma Questionnaire) may not have been an adequate indicator of childhood maltreatment as a way to predict negative attribution. Another childhood maltreatment measure may reveal different results than this study.

### **Implications of Study**

The implications of establishing the relationship between child maltreatment and negative attribution include timing and allocation of resources in at-risk mothers in an

attempt to reduce the incidence of child maltreatment. Educating young first-time mothers in child development may have positive effects on reducing child maltreatment.

Additionally, children of mothers who are teens have more social and academic problems, and display more behavioral problems during the preschool years (Berlin et al., 2002). By providing child development education to first-time mothers, perhaps the children of these mothers will have fewer social, academic, and behavioral problems.

## REFERENCES

- Agathonos-Georgopoulou, H. (2004). Child abuse and neglect and juvenile delinquency: Communicating chambers? *Psychology: The Journal of the Hellenic Psychological Society*, *11*(2), 141-161.
- Berlin, L., Brady-Smith, C., & Brooks-Gunn, J. (2002). Links between childbearing age and observed maternal behaviors with 14-month-olds in the Early Head Start Research and Evaluation Project. *Infant Mental Health Journal*, *23*, 104-112.
- Bert, S.C., Guner, B.M., & Lanzi, R.G. (2009). The influence of maternal history of abuse on parenting knowledge and behavior. *Family Relations*, *58*, 176-187.
- Birkeland, R., Thompson, J.K., Phares, V. (2005). Adolescent motherhood and postpartum depression. *Journal of Clinical and Adolescent Psychology*, *34*(2), 292-300.
- Buchholz, E.S. & Korn-Bursztyn, C. (1993). Children of adolescent mothers: Are they at a risk for abuse? *Adolescence*, *28*(110), 361-382.
- Bugental, D.B. & Happeney, K. (2004). Predicting infant maltreatment in low-income families: The interactive effects of maternal attributions and child status at birth. *Developmental Psychology*, *40*(2), 234-243.
- Bugental, D.B., Johnston, C., New, M. & Silvester, J. (1998). Measuring parental attributions: Conceptual and methodological issues. *Journal of Family Psychology*, *12*(4), 459-480.
- Connelly, C.D., & Straus, M.A. (1992). Mother's age and risk for physical abuse. *Child Abuse & Neglect*, *16*, 709-718.
- Dadds, M.R., Mullins, M.J., McAllister, R.A., & Atkinson, E. (2003). Attributions, affect, and behavior in abuse-risk mothers: A laboratory study. *Child Abuse & Neglect*, *27*, 21-45.

- De Paül, J., & Domenech, L. (2000). Childhood history of abuse and abuse potential in adolescent mothers: A longitudinal study. *Child Abuse & Neglect*, 24, 701-713.
- Dukewich, T.L., Borkowski, J.G., & Whitman, T.L. (1996). Adolescent mothers and child abuse potential: An evaluation of risk factors. *Child Abuse & Neglect*, 20(11), 1031-1047.
- Farc, M., Crouch, J.L., Skowronski, J.J., & Milner, J.S. (2008). Hostility ratings by parents at risk for child abuse: Impact of chronic and temporary schema activation. *Child Abuse & Neglect*, 32, 177-193.
- Feldman, J.P., & Crespi, T.D. (2002). Child sexual abuse: Offenders, disclosures, and school-based initiatives. *Adolescence*, 37(145), 151-160.
- Flanagan, P., Coll, C.G., Andreozzi, L., & Riggs, S. (1995). Predicting maltreatment of children of teenage mothers. *Archives of Pediatrics and Adolescent Medicine*, 149, 451-455.
- Gara, M., Allen, L., Herzog, E., & Woolfolk, R. (2000). The abused child as parent: The structure and content of physically abused mothers' perceptions of their babies. *Child Abuse & Neglect*, 24(5), 627-639.
- Gershoff, E.T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin*, 128(4), 539-579.
- Graham, S., Weiner, B., Cobb, M., & Henderson, T. (2001). An attributional analysis of child abuse among low-income African-American mothers. *Journal of Social and Clinical Psychology*, 20(2), 233-257.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.

- Herrenkohl, T., Huang, B., Tajima, E., & Whitney, S.D. (2003). Examining the link between child abuse and youth violence: An analysis of mediating mechanisms. *Journal of Interpersonal Violence, 18*(10), 1189-1208.
- Hughes, K., O'Brien, M., & Peyton, V. (2001, April). *Parental caregiving schemas and children's negative social outcomes: An examination of a theoretical model*. Poster presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN.
- Karraker, K.H., & Evans, S.L. (1996). Adolescent mothers' knowledge of child development and expectations for their own infants. *Journal of Youth and Adolescence, 25*(5), 651-666.
- Knox, M. (2010). On hitting children: A review of corporal punishment in the United States. *Journal of Pediatric Health, 24*(2), 103-107.
- Lorber, M.F., O'Leary, S.G., Kendziora, K.T. (2003). Mothers' overreactive discipline and their encoding and appraisals of toddler behavior. *Journal of Abnormal Child Psychology, 31*(5), 485-494.
- Lounds, J.J., Borkowski, J.G., & Whitman, T.L. (2006). The potential for child neglect: The case of adolescent mothers and their children. *Child Maltreatment, 11*(3), 281-294.
- MacPhee, D. (1981). *Manual for the knowledge of infant development inventory*. Unpublished manuscript, University of North Carolina at Chapel Hill.
- Milan, S., Lewis, J., Ethier, K., Kershaw, T., & Ickovics, J.R. (2004). The impact of physical maltreatment history on the adolescent mother-infant relationship: Mediating and moderating effects during the transition to early parenthood. *Journal of Abnormal Psychology, 32*(3), 249-261.
- Miller, S. (1995). Parents' attributions for their children's behavior. *Child Development, 66*, 1557-1584.

- Milner, J.S. (1993). Social information processing and physical child abuse. *Clinical Psychology Review*, 13, 275-294.
- Milner, J.S. (2000). Social information processing and child physical abuse: theory and research. In D.J. Hansen (Ed.), *Nebraska Symposium on Motivation: Vol. 45. Motivation and child maltreatment* (pp. 39-84). Lincoln, NE: University of Nebraska Press.
- Milner, J.S. (1994). Assessing physical child abuse risk—The Child Abuse Potential Inventory. *Clinical Psychology Review*, 14(6), 547-583.
- Montes, M.P., de Paúl, J., & Milner, J.S. (2001). Evaluations, attributions, affect, and disciplinary choices in mothers at high and low risk for child physical abuse. *Child Abuse & Neglect*, 25(8), 1015-1036.
- Nath, P.S., Borkowski, J.G., Whitman, T.L., & Schellenbach, C.J. (1991). Understanding adolescent parenting: The dimensions and functions of social support. *Family Relations*, 40(4), 411-420.
- O'Callaghan, M.F., Borkowski, J.G., Whitman, T.L., Maxwell, S.E., & Keogh, S. (1999). A model of adolescent parenting: The role of cognitive readiness to parent. *Journal of Research on Adolescence*, 9(2), 203-225.
- Ryan, J.P., & Testa, M.F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, 27(3), 227-249.
- Rogosch, F.A., Cicchetti, D., Aber, J.L. (1995). The role of child maltreatment in early deviations in cognitive and affective processing abilities and later peer relationship problems. *Development and Psychopathology. Special Issue: Developmental Processes in Peer Relations and Psychopathology*, 7(4), 591-609.

- Salzinger, S., Feldman, R.S., Ng-Mak, D.S., Mojica, E., Stockhammer, T., and Rosario, M. (2002). Effects of partner violence and physical child abuse on child behavior: A study of abused and comparison children. *Journal of Family Violence*, 17(1), 23-52.
- Sommer, K., Whitman, T.L., Borkowski, J.G., Schellenbach, C., Maxwell, S., & Keogh, D. (1993). Cognitive readiness and adolescent parenting. *Developmental Psychology*, 29, 389-398.
- Stevens-Simon, C., Nelligan, D., & Kelly, L. (2001). Adolescents at risk for mistreating their children: Part I: Prenatal identification. *Child Abuse & Neglect*, 25(6), 737-751.
- Stevens-Simon, C., White, M.M. (1991). Adolescent pregnancy. *Pediatric Annals*, 20, 322-331.
- Stier, D.M., Leventhal, J.M., Berg, A.T., Johnson, L., & Mezger, J. (1993). Are children born to young mothers at an increased risk of maltreatment? *Pediatrics*, 91, 642-648.
- Tamis-Lemonda, C.S., Shannon, J., & Spellmann, M. (2002). Low-income adolescent mothers' knowledge about domains of child development. *Infant Mental Health Journal*, 23(1-2), 88-103.
- Twentyman, C.T., & Plotkin, R.C. (1982). Unrealistic expectations of parents who maltreat their children: An educational deficit that pertains to child development. *Journal of Clinical Psychology*, 38(3), 497-503.
- Vukelich, C., & Klingman, D.S. (1985). Mature and teenage mothers' infant growth expectations and use of child development information sources. *Family Relations*, 34, 189-196.
- Williams, J.H., Van Dorn, R.A., Bright, C.L., Jonson-Reid, M., Nebbitt, V.E. (2010). Child maltreatment and delinquency onset among African American adolescent males. *Research on Social Work Practice*, 20(3), 253-259.

Zelenko, M.A., Huffman, L., Lock, J, Kennedy, Q., & Steiner, H. (2001). Poor adolescent expectant mothers: Can we assess their potential for child abuse? *Journal of Adolescent Health, 29*(4), 271-278.

APPENDIX

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Institutional Review Board  
Office of Research Assurances  
Vice Provost for Research  
1138 Pearson Hall  
Ames, Iowa 50011-2207  
515 294-4566  
FAX 515 294-4267

**DATE:** March 20, 2006  
**TO:** Sheri Parsons  
**FROM:** Dianne Anderson, IRB Co-Chair  
**RE:** IRB ID # 06-144  
**STUDY REVIEW DATE:** March 17, 2006

The Institutional Review Board has reviewed the project, "First time adolescent mothers and negative attributions toward their infant at eight months postnatal" requirements of the human subject protections regulations as described in 45 CFR 46.101(b)(4). The applicable exemption category is provided below for your information. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if your project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or required by the IRB.

Any modification of this research must be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: HDFS  
Kere Hughes  
File