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Examining the relationship between female parents with low perceived control and adolescent child stress

Brendan P. Monaghan
University of Central Florida

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EXAMINING THE RELATIONSHIP BETWEEN FEMALE
PARENTS WITH LOW PERCEIVED CONTROL AND
ADOLESCENT CHILD STRESS

by

BRENDAN P. MONAGHAN

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in the Burnett Honors College
at the University of Central Florida
Orlando, Florida

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Thesis Chair: Dr. Valerie Sims

ABSTRACT

Adolescence is a stressful time for many children. Changes in their environment or changes in social situations are some typical stressors that an adolescent child might encounter. Interactions with parents can also be a stressor for a child. Previous research has shown that a risk factor for a parent using harsh parenting techniques is perceived control. Parents who have low perceived control are at a higher risk to engage in physical parenting techniques or child abuse. This study included 198 middle school students and their female parent or guardian pairs (296 total participants), with the adolescent participants ranging in age from 10-year-old to 14-years-old. The adult participants were evaluated for their level of perceived control and the adolescent participants were evaluated for their level of perceived stress. The results showed that parents who perceived themselves as have a low amount of control over their child's behavior (low ACF), regardless of the level of control the parents perceived the child to have over their own behavior (CCF), were linked with their child have a high level of perceived stress, $F(1, 182) = 5.14, p = .025$. This effect was found only for the 14-year-old participants, $t(30) = 2.774, p = .009$. Implications of thesis results and areas of further research are suggested. It is possible that as a child gets older and enters puberty, the parent of the child feels as if they are losing control over their child and, as a result, resort to more forceful parenting techniques to regain control.

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INTRODUCTION

During adolescence, children are very susceptible to their environment and many of these environmental factors shape their personality. A lot of research has been completed examining stress in children due to factors such as puberty, trauma, and family relationships. One factor that has been evaluated in the area of family relationships is perceived control. Perceived control is the level of control a person feels that they have over a person or situation, regardless of the actual level of control (Bugental, Blue, and Cruzcosa, 1989). Current research has only focused on looking at parenting style techniques in relationship to low perceived control and has shown that parents who have low perceived control are at a higher risk for using harsher parenting techniques and child abuse (Bugental, Blue, and Cruzcosa, 1989). This has effect has yet to be tested or evaluated as to whether or not a the child of a low perceived control parent will exhibited higher levels of stress on even the most basic levels such as a simple correlational study.. No research has evaluated low parental perceived control in relation to adolescent stress. The aim of this research is to correlate these two areas: perceived control in parents and their child's corresponding stress levels.

BACKGROUND

Perceived Control

Perceived control is defined as the amount of control that a person feels they have over a situation or another person (Bugental, Blue, and Cruzcosa, 1989). Specifically, perceived control for a parent is defined as the amount of control that the parents think they have over their child, regardless of the actual level of control they have in reality. Consequently, low perceived control (LPC) is defined as a parent seeing themselves as having less power or control than their child. Essentially, this is a balance of power between parent and child over who has the most control (Bugental, Blue, and Cruzcosa, 1989).

Much of the research on perceived control has been completed by Daphne Bugental (Bugental, Blue, and Cruzcosa, 1989) evaluating how being LPC affects parental parenting style and techniques. Consequently, research has shown that parents who are more likely to use harsh or aggressive parenting techniques, such as spanking, feel LPC towards their children. This is essentially prevalent when the children display behavior patterns that are seen as threatening to the parent and their control over the relationship. This “threatening” behavior could be anything from the children being outwardly aggressive or disobedient to the parent to the child simply being unresponsive to the parent’s disciplinary techniques. This interpretation of threatening behavior occurs in LPC parents because, when the parent does not have time to reflect on the child’s actions, he or she interprets the child as being more dominant than the parent is even if that is not the case.

From a more biological stance, LPC could be the result of cortisol levels in parents. Cortisol crosses the blood-brain barrier to enter the brain and stimulates the amygdala and hippocampus the most because both areas contain the highest concentrations of cortisol receptors. The amygdala is the center of the brain that is responsible for fear and anxiety responses in the body (Martorell and Bugental, 2006). Since research has shown that parents with LPC have higher levels of cortisol in their body, it can be hypothesized that higher cortisol puts the parent in danger of exhibiting harsher parenting techniques due to threatening child behavior causing aggressively defensive techniques in the parent brought about through fear of losing control.

Unfortunately, when there is a harsh or aggressive parenting style there is the possibility of child abuse. Current research has shown that abusive parents are more likely to believe that they have little control over negative care giving results but their children have a lot of control over these negative care giving results. Essentially, they are more likely to believe that the parental abuse is dependent upon the child because they have no control of the situation (Bugental, Brown, and Reiss, 1996). Research has even directly found that LPC parents were more likely to abuse their children if the parents viewed their children as “difficult”. In fact, when parents are told that their difficult children are misbehaving intentionally, they were angrier and were more likely to overreact than if they were told that it was not their child’s fault (Martorell and Bugental, 2006).

These coercive control techniques do not exclusively relate to parents and child. Research by Azzam, Beaulieu, and Bugental has shown that individuals with low perceived control exhibit more hostile reactions to strangers, more so to immigrant strangers than to native-born strangers

(2007). In fact, while LPC individuals showed increased hostility to immigrant strangers, they actually showed decreased hostility toward native-born strangers. This result was seen in an even greater amount when the stranger became a rival. The researchers hypothesize that this is because a native-born stranger poses less of a threat to the individual than an immigrant stranger does because the native-born stranger and the individual are externally alike (Azzam, Beaulieu, and Bugental, 2007).

This effect is not only viewed with strangers, but also with everyday relationships. Research has shown that increased hostility in LPC individuals is shown by men who feel they have low control over their romantic relationships and also with homophobic men in relationship to homosexual men (Azzam, Beaulieu, and Bugental, 2007). This hostility is related the same social problems mentioned earlier with parents and children in that any hostile behavior exhibited is believed to be the result of the other person's actions (Bugental, Brown, and Reiss, 1996). The man in a romantic relationship feels he has little power over his significant other, so he overcompensates with aggression and possibly domestic violence to gain control. Likewise, the homophobic man may feel he has little control over his own sexuality when interacting with a homosexual man and will be aggressive to regain control (Azzam, Beaulieu, and Bugental, 2007).

This effect can even be seen with children. When a child has a LPC parent, the child views the world as their parents do, a world that is built off of power or status. Research has shown that the children of LPC parents are more competitive and aggressive towards their peers (Bugental and Mortorell, 1999). This personality style is then carried over to adulthood and passed down to children, perpetrating the cycle of LPC, hostility, and potential abuse.

Essentially, an LPC parent feel that, in the relationship, they have less control over their child while the child more control than the parent. This loss of control leads to the parent overcompensating with their disciplinary techniques which results in more harsh parenting styles and possibly child abuse. This finding is consistent with current social power literature, which shows that when an individual doubts their own power, they are more likely to use coercive control techniques to regain their power (Bugental, Brown, and Reiss, 1996). In the context of this research, these coercive control techniques are harsh parenting styles and possibly physical child abuse.

Adolescent Stress

Much of the research shown has been supplied by a single source, which is a meta-analysis of the current research on child and adolescent stress. Stress in adolescents and children is defined in two ways. The first is stress being defined in the context of stressful life events or stressors that require some form of adaptation from the child. This could be something such as a child's parents divorcing for the child being moved to a new school. The second way to define stress is looking at stress in the context of how the child appraises the situation, implying that the stressful events are subjective. Many researchers use a single definition and many use a combination of both when defining stress (Smith and Carlson, 1997).

When looking at child stress in the context of stressful life events and stressors, there are a myriad of stressors that can affect children. These stressors can be anywhere from very mild to very severe in terms of provoking stress and can either be internal (originate from the child) or

external (originate from the child's environment). Stressors can also be acute or chronic, meaning, respectively, either appearing and having an effect immediately or lasting for and becoming apparent over a large period of time. Research has noted some examples of acute stressors as death of a parent, divorce, moving to a new location/home, a major injury, or a family member becoming ill (Smith and Carlson, 1997). Research has noted some examples of chronic stressors as deprivation, abuse, discrimination, personally viewing violence, becoming homeless, or any condition that handicaps the child (either mentally or physically). Finally, stressors can be viewed as ordinary or unusual. Ordinary stressors are stressors that are experienced by most children at some point in their life, such as going to a new school. Unusual stressors are stressors that are experienced by only a small percentage of children, such as a serious illness in the family or experiencing a hurricane (Smith and Carlson, 1997).

For adolescents, certain acute stressors are experienced more intensely. These acute stressors are any stressors that are related to school or interpersonal relationships with peers or family. Adolescents are constantly searching to define themselves through intimacy and are typically undergoing painful self-examination. As a result, "stressful events that involve threats or challenges to or the loss of relatedness would be expected to hold particular interpersonal meaning" (Smith and Carlson, 233, 1997). Early adolescence in particular is a potentially stressful experience in itself because of uncontrollable changes in practically every facet of their development and social life.

There are multiple risk factors that can affect stress levels and overall successful development in children and adolescents as well. These include biological factors, family and environmental risk factors, and social interactions. Family and environmental risk factors can be

especially detrimental to the successful development of children. Examples include family conflict, marital problems/divorce, and neglectful/abusive parenting styles and techniques. Specifically, neglectful or abusing parenting styles and techniques can have very negative effects on a child or adolescent. These effects include problems with delinquency, aggression, and a warping of internalizing or externalizing problems and solutions in their life (Smith and Carlson, 1997).

Children and adolescents, just like adults, use coping strategies and tactics to deal with the stressors that they experience throughout their life. Coping is defined as changing thoughts and behaviors to try to manage mental or physical stressors (Smith and Carlson, 1997). Unlike adults, though, children use different coping strategies to manage stressors because the stressors that children experience are differently appraised due to immaturity and are less controllable than stressors that adults experience (Smith and Carlson, 1997).

The process for coping takes place in four steps (Smith and Carlson, 1997). The first is to appraise the situation or stressors. This includes determining whether or not the event is stressful and whether or not the individual can control the event. The second step is to select a coping strategy that the individual thinks will be the most effective. The third step is to carry out the coping strategy and, finally, the fourth step is to evaluate the effectiveness of the coping strategy (Smith and Carlson, 1997).

The second step to coping, as mentioned, is to choose a coping strategy. Unfortunately, children do not typically have reliable coping strategies as there is a wide range of strategies that children and adolescents use. These strategies can be separated into the categories of active and passive. Active, or primary, coping strategies are problem-focused, meaning they are

used to alleviate the actual stressor. Passive, or secondary, coping strategies are emotion-focused, meaning that they are used to make the individual feel better without necessarily fixing the stressor. Adolescents and older children typically use passive coping strategies while children (first or second graders) typically use active coping strategies (Smith and Carlson, 1997).

Coping is also limited to the resources that the individual can utilize. Beliefs and morals are a large resource, especially beliefs that include the individual's control over their life. If the individual does not believe that they can control the stressors that affect them, their coping strategies will be ineffective. Knowledge and intelligence are also large resources, specifically problems-solving skills. Good social skills and economic resources are also important for passive coping techniques (Smith and Carlson, 1997). When coping strategies are not employed or chosen properly, they can be very ineffective and, as a result, the stressors that the individual is combating will have extremely negative influences on the individual. With a child or adolescent, this negative influence can include mild to serious problems with childhood development (Smith and Carlson, 1997).

A study performed by Sontag and Graber (2010) evaluated two different types of coping strategies and their effects on adolescent stress outcomes. The two types of strategies studied were disengagement coping (denying or avoiding the stressor when presented with one) and engagement coping (problem solving or emotion regulation when presented with a stressor). Sontag and Graber found that, for both boys and girls, peer stress was associated with increased anxiety and depression and use of disengagement coping was associated with higher levels of anxiety and depression. For boys only, use of disengagement coping was also associated with

higher levels of overt aggression. For girls only, use of engagement coping was associated with lower levels of anxiety and depression (Sontag & Graber, 2010).

The different types of coping that either gender of adolescent uses is also different based on a number of factors, including masculinity and femininity. A study by Renk and Creasey (2003) showing that female adolescents typically used emotion-focused coping strategies more often than male adolescents. Late adolescents who were found to be high in masculinity typically used problem-focused coping strategies and those late adolescents who were high in femininity were more likely to use emotion-focused coping strategies. On the other hand, neither gender or masculinity and femininity were found to be indicative of the use of avoidant coping strategies. The researchers conclude that it is important to evaluate both gender and levels of masculinity and femininity when assessing coping in adolescents (Renk and Creasey, 2003).

It can be seen from these results that peer stress has been shown to increase anxiety and depression in adolescent children. The participants used in Sontag and Graber's study were of middle school age ($M = 12.39$) (Sontag & Graber, 2010). If peer stress has an effect on the levels of anxiety and depression exhibited by middle school age children, it is possible that stress obtained from interactions with a parent will have similar effects.

Middle school is something that will be experienced by most children. Transitioning from elementary school to middle school can also have negative effects on children, yet certain things can also work as protective factors for children entering middle school. Research has shown that parenting style and interaction with a child is a protective factor when a child enters middle school, specifically helping the children develop proper social skills and decreasing the amount that the child externalizes problems (Burchinal, Roberts, Zeisel, and Rowley, 2008). One of the

factors that was part of the research by Burchinal, et al. (2008) to determine “parenting” was warmth of the parent.

While Burchinal, et al. (2008) did not analyze whether or not different aspects of their categorization of “parenting” were specifically important to the effects that were found, it is possible that warmth was a main factor in “parenting” being a protective factor for children entering middle school. If this were true, educated speculation can be used hypothesize that parents who resort to more harsh or physical parenting techniques would be exhibiting less warmth when engaging in these techniques. This would, when coupled with Burchinal, et al. (2008), lead to reason that the protective factors seen by increased warmth of “parenting” would be lessened or eliminated significantly, possibly leading to increased stress.

According to Elias, Gara, and Ubriaco (1985), “Middle school presents an increased potential conflict with adult authority figures and with peers, combined with reduced availability of old friendships” (Elias, Gara, and Ubriaco, 114, 1985). Many different stressors were identified in the study, including arguing with teachers, being teased, coming to class with the wrong materials, and having too much homework (to name a few). Three of the stressors reported by at least half of the participants (both children entering middle school students and administrative persons alike) were being sent to the principal’s office, arguing with teachers, and not getting along with teachers. In fact, all three stressors were identified as having a constant potency throughout the school year (Elias, Gara, and Ubriaco, 1985). These results show that adult authority figures are considered to be stressors of children entering middle school that have an effect throughout the year. It is not mentioned as to whether the effects last into subsequent years in middle school. Parents, though, are adult authority figures just as teachers are. It is

possible that middle school students worry about and are affected by stressors introduced by parents just as do for teachers or authority figures within their school.

Essentially, experiences during adolescence and middle school can have serious effects on an individual. The child is more susceptible to these experiences, especially in terms of interpersonal relationships between parents and peers. These experiences can make or break and individual and current research shows a gap in studying middle school students in terms of their actual experiences in middle school. While many studies focus on the transitions from elementary to middle to high school, there is very little on the actual time spent between these transitions in middle school.

Both mothers and fathers each have a large role on the outcome of adolescents, especially during this time period. Research by Bosco, Renk, Dinger, Epstein, and Phares (2003) found that mothers and father have different effects on adolescents' emotional and behavioral problems, which also vary depending on the gender of the adolescent. Both male and female adolescents internalized disorders when there were higher levels of interparental problems and the adolescent felt that they were being put in the middle of the conflict (referred to as triangulation). When the father shows higher levels of depression and anxiety and the mother exhibits lower levels of control, a daughter will exhibit greater levels of internalizing emotional and behavioral problems. A son was found to internalize emotional and behavioral problems when they had negative feelings towards their mother and perceived a lower level of acceptance from their mother (Bosco, Renk, Dinger, Epstein, and Phares, 2003).

This same research also found male adolescents demonstrated increased externalizing of behavioral problems when the adolescent perceived increased parental control, decreased

parental acceptance, increased negative views about their mother, and decreased emotional availability from their mother. With female adolescents, externalizing behavioral problems was demonstrated when the father exhibited increased psychopathology and decreased acceptance of the adolescent. Interparental conflict and triangulation was also associated with increased externalizing problems with female adolescents (Bosco, Renk, Dinger, Epstein, and Phares, 2003).

Parenting and Stress

Parenting styles have been studied frequently over the years, with different ideas and implications or the development of a child being given. One of the pioneers in this area is Diana Baumrind. Baumrind developed three categories of parenting styles: permissive, authoritarian, and authoritative (Baumrind, 1966). The permissive style parent is accepting of the child's behavior, allows the child to do as they please, and acts as something for the child to "use" as opposed to being someone the child can "emulate". The authoritarian style parent is the opposite of a permissive parent. This type of parent sets rigid rules that must be obeyed so that the child can be shaped and controlled. These rules are typically absolute and originate from something other than the parent, such as a religious dogma or social norms. The authoritative style parent is somewhere in between the permissive and authoritarian styles. This type of parent explains the reasoning behind rules, listens to the child when he or she refuses to follow instructions, and encourages a verbal "give and take" between the parent and the child (Baumrind, 1996).

It is the opinion of the researcher that a parent that is low in perceived control would most likely fall into the category of authoritarian. An LPC parent has a higher chance of using harsher parenting techniques or abuse, as mentioned above, so Baumrind's criteria leads to suggest that these parents would be authoritarian because they would set rigid rules, become frustrated when the child does not follow these rules, and not listen to the child when they refuse to follow rules.

Harsh parenting styles that include physical punishment or even abuse have been studied by many researchers for their effect on children later in life. Schneider, Baumrind, and Kimerling (2007) found that physical abuse in childhood significantly leads to frequent mental distress in the child, the child becoming frequently overwhelmed, frequent anxiety and sadness, and a probable chance of the child developing post-traumatic stress disorder. This study was only done with females, though, and did not include male participants. Alvarez, Pavao, Baumrind, and Kimerling, also found that obese women were significantly more likely to report being abused as children than women who were not obese (2007).

These results, though, are found when a child is actually abused, but physical punishment used by a parent (such as spanking) is not considered abuse. Elizabeth T. Gershoff (2002) performed a meta-analysis to determine if physical punishment (called "corporal punishment" or "CP" in her research) is harmful to children and if it has a high chance of leading to parental abuse later in life. Gershoff concluded that while CP was effective in immediate compliance from the child (indicating its usefulness) it was also associated with increased child and adult aggression, lower levels of moral internalization, decreased child and adult mental health, increased child delinquency and antisocial behavior, increased risk of later physical abuse,

increased criminal and antisocial behavior in adulthood, decreased quality of relationship between parent and child, and increased risk of abusing their own child or spouse (Gershoff, 2002).

Baumrind, Larzelere, and Cowan (2002), have stated in response to Gershoff that her results are clear in showing that physical abuse and other extreme forms of punishment have harmful effects. They argue, though, that Gershoff's results do not adequately conclude that CP is extreme enough to have the detrimental effects that abuse does on children (Baumrind, Larzelere, & Cowan, 2002).

Research by Renk, McKinney, Klein, and Oliveros (2006) showed that physical parenting styles or abuse are not the only types of harsh parenting that can have an effect on an adolescent later in life. Their results showed that a child whose mother has a psychologically assaultive parenting style in childhood was related significantly higher levels of depression and anxiety and significantly lower levels of self-esteem later in life (in this study's case, in college). A father using psychologically assaultive parenting styles was also significantly related to depression. Surprisingly, when a mother used more physically assaultive parenting styles it was only found to be related to anxiety later in life but not depression or self-esteem (Renk, McKinney, Klein, and Oliveros, 2003). This research suggests that harsh parenting styles could also include being psychologically aggressive and may have an even greater effect on children than physical punishment.

LPC and Early Adolescent Stress Correlation

Up to this point, no research has looked at the connection between perceived control and adolescent stress. Much research has focused on perceived control in terms of behavior patterns that manifest in parents who have low perceived control. Current research has evaluated perceived control effects on either very young children, such as infants, or on adults' friends of the person with low perceived control. As stated above, early adolescence has been shown to be a very critical age for children. A child can experience, as mentioned above, a variety of stressors which can have a serious effect on a child. These include anything from death of parent to moving homes to being a victim of child abuse (Smith and Carlson, 1997). As shown by Elias, Gara, and Ubriaco, (1985), smaller stressors can also have an effect, such as worrying about having too much homework or arguing with the teacher. These stressors all, in their own way, have an effect on a child which, if the stressor is large enough, could result in a very negative effect in the child's life (Smith and Carlson, 1997).

Research has focused on stress in adolescents in a myriad of contexts. This stress, though, has not been evaluated to see if it is brought about by actions of low perceived control parents. Parenting styles have also been studied and different opinions have been given as to what sort of parenting style has beneficial effects on a child. It remains, though, that parental perceived control and early adolescent stress have not been studied to determine if a correlation exists between the two. My research will look at this connection directly, without implying causality if a connection is found. If a correlation is found and research to determine causality is performed in later studies, diagnosis of stress related illnesses in adolescents will be more properly performed and treatment can include the changing child's the parent's perceived control.

Due to previous research, it has been found that parents with low perceived control exhibit harsher parenting styles and are at a higher risk for exhibiting child abuse (Bugental, Blue, and Cruzcosa, 1989). It is possible that being subject to a harsher parenting style will increase a child's level of perceived stress. This is because these harsher parenting styles can include not only verbal, but more physical forms of discipline, such as spanking, for the child. This idea, it is not a stretch of the imagination to think that low parental perceived control will be correlated with increased stress in their children due to their child being subject to a harsh parenting style.

While Bugental is an expert in the field of perceived control, has looked at LPC in multiple contexts, and has contributed invaluable insight into the field, any study that she has performed that included children in any way when compared to parental perceived control only studied toddlers or young kids. Less comprehensively, Bugental has also studied parental perceived control and the parent's relationships with their peers. As indicated by the above research on adolescent stress, the early adolescent ages (around 10 to 12) is a very dangerous period in an adolescent's life where they are most susceptible to stress related problems (Smith and Carlson, 1997). My study will begin do what Bugental's research has not yet covered, evaluate parental perceived control and adolescent stress at a very crucial period in a child's life: early adolescence.

If this research yields significant results, it will show a practical and immediate application for implementing perceived control counseling and criteria into evaluating and counseling stress related problems in adolescent children. While my study will not determine causality, it will show that a relationship exists and needs to be properly addressed in a clinical

setting. By addressing this effect from a clinical point of view, early adolescent stress related problems can possibly be lessened, or even eliminated, if the parents is evaluated for their level of perceived control. If it is supported that LPC parents are correlated with increased levels of stress in an early adolescent child, psychologists will be able to work with the parent to alter their level of perceived control. This will, in theory, lower the child's level of stress. In the past, this correlation has not been evaluated so this specific strategy for correcting stress related problems in early adolescents has not been used but this research could possibly change that and greatly benefit the field of child psychology.

My hypothesis is that perceived control in parents will be negatively correlated with early adolescent stress levels. This hypothesis has been decided upon due to increased level of harsh parenting techniques that a parent has a higher chance of engaging in due to their low level of perceived control. This increased level of harsh parenting techniques being used will have a great effect on the adolescent in that it will increase their stress level due to the adolescent's susceptibility to stress. Increased susceptibility to stress in adolescents and the harshness of parenting techniques being used will lead to the lower the perceived control of the parent being correlated with higher levels of stress in the adolescent.

METHOD

Participants

Students and parents from Glenridge Middle School in Orlando, Florida were used as participants in this study. One-thousand two-hundred seventy-two students were each given a manila envelope to bring home to their female parent or guardian to be completed. Two hundred ten students returned the packets properly completed by their parent or guardian and gave assent to participate themselves. It was later found that the parent or guardian of two of the 206 who agreed to participate did fill out the informed consent form correctly but did not fill in any of the information in the measures so their information and their child's information were not used, resulting in 204 students and their female parent or guardian being used as participants in this study.

After coding the data, it was found that many 18 participants missed one or more questions in the demographics forms. Their information was not used when analyzing the aspect of the demographics form that they did not complete, changing the total number of participants for that analysis.

Out of the 204 students and female parent or guardian participant pairs, 5 parents or guardians did not complete the section indicating the gender of their child participant, leaving 199. Approximately 38% of the student participants were male and 62% were female (male = 76, female = 123). One of the remaining parents or guardians did not complete the section indicating the age of their child participant, leaving 198 total participants. The ages of the student participants ($M = 12.40$) ranged from 10-years-old to 14-years-old (10 and 11 = 39, 12 = 71, 13 =

56, 14 = 32). Two of the parents or guardians did not complete the section indicating their own age. The ages of the parents or guardians ranged from 21-years-old to 67-years-old ($M = 42.24$).

Measures

Parent Attribution Test

The Parent Attribution Test (PAT) was created by Dr. Daphne B. Bugental and is used in this research to determine the level of perceived control over their child experienced by the parent or guardian participant. The PAT is a 21 question, likert-scale measure. The PAT is split into three sections: a three question example section, a six question section positive interaction section, and a twelve question negative interaction section. The positive interaction section presents the participant with a scenario in which the participant has taken care of a neighbor's child and both the participant and child had a good time together. The negative interaction section present the participant with a scenario in which the participant has taken care of a neighbor's child and the participant and child did not get along well. Each section then asks questions pertaining to how important different factors of the participant's or the child's behavior were to the participant and the child getting along or not getting well. There are currently three forms of the PAT: a short form to be taken by parents, a normal form previously used to be taken by undergraduate students, and a Spanish form. A French form is available upon request. The short form has been shown to be both reliable ($r = .61$) and valid.

Scoring the PAT yields three different numbers. The positive interaction section yields an average called Uncontrollable Success (US). This number is not used in the scoring. The negative interaction section yields two averages: high perceived control over failure (ACF) and

low perceived control over failure (CCF). The ACF score represents how much the participant perceives themselves to have control over a child's behavior and the CCF score represents how much the participant perceives the child to have control over their own behavior. If the ACF score is higher than the CCF score, the participant is labeled as having High Perceived Control. If the CCF score is higher than the ACF score, the participant is labeled as having Low Perceived Control. Scores of the PAT have been found to be more reliable for females than males.

Perceived Stress Scale

The 14-item Perceived Stress Scale (PSS-14) was created by Cohen, Kamarck, and Mermelstein (1983) and is a measure designed to numerically gauge the amount of perceived stress experienced by the participant. The scale was designed to be used with participants who had at least a junior high education. There are two versions of the PSS, a 10-item version (PSS-10) and a 14-item version (Pss-14). The PSS-14 is a 14 item likert-scale ranging from 0 to 4. Questions on the PSS-14 are phrased either positively or negatively, with the positive questions being negatively coded during scoring. Examples of positively phrased questions are: "In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?" and "In the last month, how often have you felt that things were going your way?" Examples of negatively phrased questions are: "In the last month, how often have you been upset because of something that happened unexpectedly?" and "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?" The PSS-14 has been shown to be reliable and valid for evaluating a participant's level of perceived stress.

Scoring the PSS-14 by simply summing the scores of the responses given by the participant. The positively phrased questions are negatively scored (so 0 becomes 4, 1 becomes 3, 2 remains the same, 3 becomes 1 and 4 becomes 0). The negatively scored items are not changed. Higher scores indicate a higher level of perceived stress and lower scores indicate a lower level of perceived stress.

Demographics Survey

A demographics survey was created for this research. The demographics survey contained 13 items to be completed by each female parent or guardian participant in the study. The items on the survey were the parent or guardian's relationship to their adolescent, the parent or guardian's current age, their adolescent's current age, their adolescent's gender, the parent or guardian's highest level of education, the parent or guardian's zip code, the parent or guardian's ethnicity, how many siblings the parent or guardian has, how many siblings their adolescent has, the parent or guardian's current marital status, the parent or guardian's first language, and if any extended family (grandparents, aunts, uncles, step-parents, etc.) were currently living in the parent or guardian's house. A "please specify" question was also provided for if the parent or guardian answered "yes" to extended family living in the household. Required responses to the items were multiple choice if the response was not numerical. Those items that required a numerical response were fill-in-the-blank.

Procedure

A research team visited to Glenridge Middle School in Orlando, Florida for the entire school day with the permission of the principal. This team was comprised of undergraduate and graduate students and one tenured faculty from the University of Central Florida. During this time, a researcher visited each science class throughout the all grade levels during each period of the day. The researcher distributed a manila envelope to every student and instructed them to bring the envelopes to their home. The researcher told the students that they were to give the envelope to their female parent or guardian, have their female parent or guardian fill out the forms inside, and return the envelopes by the time that the researchers returned, two weeks later.

The manila envelope contained the PAT, a demographics survey, and the informed consent form. Each envelope, PAT and demographics survey was had a number between 1 and 1,400 written on it so that anonymity could be achieved after the informed consent was removed from the envelope upon return. Two weeks later, the research team returned to Glenridge Middle School. As they did in their first visit, a researcher visited each science class throughout all grades during each period of the day. The researcher collected the returned manila envelopes and checked to see which envelopes had been returned with the informed consent completed by the student's parent or guardian. The students whose parent or guardian had properly completed the informed consent were verbally asked if they wanted to participate in the research study by completing a short measure. Those who responded "no" were thanked for their participation instructed that no further participation was necessary. Those who responded "yes" were given the PSS-14 and were instructed to complete the measure. The number from their manila envelope was also written on the top of their PSS-14.

Once the student was finished completing the PSS-14, the research also instructed the student to write on the bottom of the PSS-14 the ages of all their siblings. Next to the ages, the students were also instructed to write the gender of each sibling. The PSS-14 was then collected by the research and placed into the manila with the other completed forms. This process was repeated with every student whose parent or guardian returned their manila envelope with the informed consent completed.

RESULTS

A 2 (ACF code: high or low) by 2 (CCF code: high or low) by 4 (Age of child: 10/11, 12, 13, or 14-years-old) between subject ANOVA was performed. Only 2 of the student participants were 10-years-old so 10-year-olds and 11-year-olds were put into the same category for analysis. Performing this analysis of variance produced a main effect for ACF Code, $F(1, 182) = 5.14$, $p = .025$. This effect, specifically, showed that in this study, children whose parents were low ACF ($M = 27.11$) exhibited higher levels of perceived stress than children whose parents were high ACF ($M = 24.30$).

This analysis of variance also produced an ACF Code X Age of Child interaction, $F(3, 182) = 3.255$, $p = .023$. Further evaluation of this interaction was necessary, so t-tests were performed for each age group of the children individually. The results of these t-tests showed that ACF was a significant factor for the 14-year-old age group only and not for the other age groups, $t(30) = 2.774$, $p = .009$. For 14-year-olds, children whose parents were low ACF exhibited significantly higher levels of perceived stress ($M = 31.02$) than 10/11-year-olds ($M = 25.90$), 12-year-olds ($M = 25.59$), and 13-year-olds ($M = 25.93$), $t(30) = 2.77$, $p = .009$.

Tables and Figures

Table 1: Analysis of Variance

Dependent Variable: PSS Total

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
ACF Code	340.794	1	340.794	5.138	.025
CCF Code	17.327	1	17.327	.261	.610
Age of Child	90.395	3	30.132	.454	.715
ACF Code * CCF Code	13.341	1	13.341	.201	.654
ACF Code * Age of Child	647.623	3	215.874	3.255	.023
CCF Code * Age of Child	300.018	3	100.006	1.508	.214
ACF Code * CCF Code * Age of Child	336.44	3	112.147	1.691	.171
Error	12071.26	182	66.326		

Table 2: Descriptive Information for Analysis of Variance

Dependent Variable: PSS Total

ACF Code	Age of Child	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
High	10 and 11	23.014	1.830	19.404	26.625
	12	26.965	1.343	24.314	29.615
	13	25.563	1.490	22.622	28.503
	14	21.649	1.969	17.765	25.534
Low	10 and 11	25.903	1.969	22.018	29.787
	12	25.586	1.437	22.751	28.421
	13	25.933	1.616	22.744	29.123
	14	31.021	2.199	26.682	35.36

Table 3: T-Test for 14-Year-Olds for Differences Between High and Low ACF Scores

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
PSS Total	Equal Variances Assumed	2.774	30	0.009	8.68	3.13	2.289	15.076
	Equal Variances not Assumed	2.675	23.441	0.013	8.68	3.246	1.975	15.39

Figure 1: Mean PSS Scores for ACF by Age

DISCUSSION

Summary and Explanation of Results

The results of the analysis of variance show that a main effect was found for ACF code. Since ACF code shows how much a parent perceives that they have control over their child's behavior (this does not include how much the parent perceives their child to have control of the child's behavior, which is CCF code), finding a main effect for ACF code indicates that how much a parent perceives themselves to have control over their child's behavior is related to their child's level of stress. Specifically, the children of the parents who were identified as having a low ACF score had a higher score on the perceived stress scale. Further evaluation of the data through the analysis of variance also showed a main effect for ACF code when coupled with the age of the child. The t-tests performed for each age group showed that the effect seen, that the children of low ACF parents have high PSS scores, is only seen in children who are 14-years-old. This effect was seen in both male and female children.

This effect is different than previous research performed in this field. Previous research shows that the ACF score is not significant in regards to the various effects and traits exhibited by LPC parents and students, but rather the CCF score is important. In this study, the CCF score showed no significance while the ACF score did, indicating that how much a parent feels they themselves have control over a child's behavior is related to their child's level of perceived stress. Low ACF scores in parents are possibly linked with higher levels of perceived stress in children due to overcompensation for a feeling of less control. The parent feels they have little

control over their child, so they possibly exert their power and control more often so that they can feel that they have regained control over their child.

Since previous research has only evaluated the effects of LPC parents on very young children such as toddlers, it is possible that the importance of ACF and CCF scores change with the age of the child. This is supported by the results indicating that ACF score is not related to PSS score in any age group other than 14-year-olds, which was the oldest age group sampled in this research. This effect could also carry over into older adolescent children, such as those in high school.

It is possible that this effect is seen only in 14-year-olds due to most male children entering puberty around this time. The typical time for puberty to begin in boys is 13 to 14-years-old so many of the male boys in the sampled population would be just entering puberty. Since puberty has so many effects on a child's body and mind in terms of development, many children are more susceptible to stress during the beginning of puberty. This susceptibility to stress could be why low ACF parents have a significant link with their child having a high level of perceived stress. The effect of ACF and age was found for both males and females, though, and it has also been shown that puberty in girls starts much earlier than in boys, typically around the ages of 10 to 11-years-old. Because of this earlier start, the explanation that low ACF being linked to high perceived stress in 14-year-olds being due to and increases susceptibility to stress during puberty would not be valid for the female student participants.

It is possible that the effect is only seen in 14-year-olds because, at this age most children (boys and girls alike) have entered puberty. It could be argued, then, that the effect is only significant in 14-year-olds because enough children have entered puberty, triggering the low

ACF feature in their parent or guardian. This study did not study causality in any direction so this is merely speculation. 14-year-olds are the age group that are also about to enter high school. It is possible that as a child enters puberty and prepared to enter high school, the parent feels as if they are losing control due to their child growing up. As a result, they exert their control to try to keep their child close.

This also explains why CCF would not be a significant factor. Their child is getting older, causing the parent to feel a loss of control. This would only affect their ACF. The parent has, possibly, already established what control they have over their child so their CCF would not change, but their ACF would. Previous research has not determined if perceived control changes over time. While it has not been shown to change with age, this is due to a gap in research and it is possible that the parent or guardian's level of perceived control could change as their child ages, resulting in an effect only being seen in 14-year-olds.

These results are concurrent with current research on developmental psychology in that as a child gets older, they will start to express their independence. It is possible that the effect being seen between low ACF and higher levels of stress being a negative thing. While there is a significant main effect, this effect does not necessarily need to be negative. The stress being seen could be due to the child naturally growing and beginning to advance to later adolescence and adulthood. This increased feeling of wanting independence could then make the parent feel as if they have less control over a child, but this does not necessarily have to be a bad thing either. A parent starting to feel as if their child is more independent could make them feel as if they have less control but this could also be necessary for the parent to prepare for the child to leave after they graduate from high school. While it seems that since these two factors are related, they

could both just be a natural part of the parent/child relationship changing as the child develops and gets older. If this were the case, trying to alter either the parent or the child so that they did not experience this effect could actually be the wrong thing to do due to the possibility of affecting the aspects of healthy development in a child.

Possible Application of the Results

The results of this study indicate that middle adolescent children of LPC parents with a low ACF score are more likely to be stressed than children of parents who do not fall into this category. Stress related problems with adolescent children have been linked to a number of various negative outcomes in adult life. This link could be used to assess possible risk factors of middle adolescent children based off of evaluation of their parents. It could also be used in therapy with adolescent children exhibiting stress related mental illness. Treatment could be altered to include the parents of the child. This treatment could help to raise the ACF score of the parent so that they feel they have control over their child.

Possible Problems with this Study

There were many variables that could have affected the results of this experiment. First and foremost, the study design itself could have been problematic. The study design was that the middle school students would bring a manila folder home to their female parent or guardian to complete and then return the envelope completed and sealed at a later date. There was no benefit to the parent or child to participate. Many parents could have not taken the test seriously, answered differently to portray themselves in a better light, or simply answered every question

with the same numerical value to finish the measures quickly instead of answering every question the same because that is how they truthfully answered the question. Eighteen parents or guardians missed at least one question on some measure or survey provided in the manila envelopes, indicating that they possibly were not paying close attention to what they were completing, which could affect the data that they did provide.

Another problem with sending the manila envelopes home with the child to be returned later by a parent with whom the researchers have never met is that anyone could have completed the informed consent and measures. The adolescent could have personally completed the measures and forged their parent or guardian's signature so that they could participate later. The adolescent could have also given the envelope to someone other than the female parent or guardian who then completed the measures and informed consent. There was no way for the researchers to check that the contents of the envelope were actually completed by the adolescent's female parent or guardian, they simply had to take it on faith. Many of the teachers also offered their own incentives to the students to return the envelopes completed in the form of extra credit. While this incentive was not asked for by any of the researchers and was simply something done out of the teacher's own free will and desire to help the student alone, it could have caused some children to either fill out the form themselves or have someone other than their female parent or guardian complete the contents of the envelope if the female parent or guardian refused to do so.

A third, and quite large variable that could have affected the data, is that type of student who typically returned the forms. From the researchers speaking with the teachers within the classrooms and personally interacting with the students, it was found that many of the students

who returned the forms were possibly more intelligent or at least better students than those who did not participate. More than one teacher indicated that the classes of their which had a high return rate were on of their “honors” classes. Also, many classes which did not have a high return rate were not “honors” caliber and contained students who were seen to be more disruptive or less interested in pleasing the teacher than in the “honors” classes. This could have resulted in a large amount of the data provided being from more intelligent or well-behaved students, thus making the results not indicative of the overall population.

Finally, the sample size itself is a possible problem. While 198 participants is definitely a good, strong return rate, it might still be too small to indicate an effect for the general population, or even the population of that area alone. Implications that the results shown are indicative of the entire population can certainly be made, but the strength of this implication is questionable due to only a small percentage of the entire school participating and due to only one school being used for data collection.

Suggestions for Future Research

Much more research in this area is necessary for possible evaluation of a link between LPC parents with low ACF and their child’s level of perceived stress. Most importantly, this research was only evaluating if a link existed between parental perceived control and early adolescent stress. The research was not causal and does not indicate directionality of the effects found. It could be that the actions of low ACF parents are causing the increased stress in their child. It could just as likely be that the child being more stressed in causing the parent to feel that

they have less control over their child's actions, thus decreasing their ACF score. It is equally as likely that these areas are not directly related, but rather something else entirely is linking the two together, such as the aspects normal development simply being seen discussed earlier. Research that shows a causal effect would be very beneficial to understanding the effects shown in this research and determining whether alteration of this effect would be beneficial to either the parent or adolescent.

Other areas could be evaluated as well. One such area could be including male parents or guardians in the study to see if the effect is seen for both male and female parents or guardians, looking at male parents or guardians separately from female parents or guardians, or comparing and contrasting male and female parents or guardians to see if there is a difference. Longitudinal research should also be performed to determine if LPC can change over time. Previous research shows CCF is important earlier in life but this study found that CCF was unimportant and ACF was the factor which was related to an affect. The results of this study imply that LPC and the factors which make up LPC could change over time due to the relationship between child and parent changing over time. Another area that could be researched is effectiveness of including this research in current treatment of stress related illnesses in adolescents through family therapy. This research would have to be completed, obviously, after further research in this area is already completed to determine causal effects and better understand the effects shown.

Correction of the problems with this research is also needed. First, it would be better to offer incentives of some form to the parents or guardians and the students to increase return rates. Offering this incentive could also help to decrease the chance that only "honors" or

intelligence, well-behaved students returned the envelopes completed. This would make the results more indicative of the general population. It would also be beneficial if the parents or guardians completed the measures in person so it could be certain that the data collected was actually provided by the parent or guardian and not the child or some third party source. Finally, a larger sample size could be used to strengthen the data and make it more indicative of the general population. Multiple schools should be studied to encompass a better demographic and multiple visits for distribution and collection of materials should be made to increase return rates.

APPENDIX A: IRB APPROVAL LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Valerie Sims and Brendan Monaghan**

Date: **February 10, 2011**

Dear Researcher:

On February 10, 2011, the IRB approved the following modifications until 01/11/2012 inclusive:

Type of Review: IRB Addendum and Modification Request Form
Modification Type: Protocol modification
Project Title: Correlation between Parental Perceived Control and Early Adolescent Stress
Investigator: Valerie K. Sims
IRB Number: SBE-10-07119
Funding Agency: None

The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form cannot be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 01/11/2012, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 02/10/2011 03:37:55 PM EST

IRB Coordinator

**APPENDIX B: ORANGE COUNTY PUBLIC SCHOOL DISTRICT
APPROVAL LETTER**

Submit this form and a copy of your proposal to: Accountability, Research, and Assessment P.O. Box 271 Orlando, FL 32802-0271	Orange County Public Schools RESEARCH REQUEST FORM	Your research proposal should include: Project Title; Purpose and Research Problem; Instruments; Procedures and Proposed Data Analysis	
Requester's Name <u>Brendan Monaghan</u> Date <u>Sept. 13, 2010</u> Address: Home <u>P.O. Box 661524 Orlando, FL 32816</u> Phone <u>813-892-1605</u> Business <u>4000 Central Florida Blvd. Orlando, FL 32816</u> Phone <u>407-882-9408</u> Project Director or Advisor <u>Dr. Valerie Sims</u> Phone <u>407-823-0343</u> Address <u>4000 Central Florida Blvd. Orlando, FL 32816</u>			
Degree Sought: (check one) ☐ Associate ☒ Bachelor's ☐ Master's ☐ Specialist ☐ Doctorate ☐ None			
Project Title <u>A Correlational Study between Parental Perceived Control and Early Adolescent Stress</u>			
ESTIMATED INVOLVEMENT			
PERSONNEL/CENTERS	NUMBER	AMOUNT OF TIME (DAYS, HOURS, ETC.)	SPECIFY/DESCRIBE GRADES, SCHOOLS, SPECIAL NEEDS, ETC.
Students	100	3 days, 5 min. Each Day	Middle School Age (11-13)
Teachers	X	3 days, 5 min. Each Day	Teachers only need to allow class time
Administrators	—	—	—
Schools/Centers	1	3 days, 5 min. Each Day	Primarily Glen Ridge MS, but any will do
Others (specify)	—	—	—
Specify possible benefits to students/school system: <u>Further research in this field could lead to the mental health of students being improved, thus improving overall grades and effectiveness throughout life</u>			
ASSURANCE		RECEIVED SEP 14 2010	
Using the proposed procedures and instrument, I hereby agree to conduct research in accordance with the policies of the Orange County Public Schools. Deviations from the approved procedures shall be cleared through the Senior Director of Accountability, Research, and Assessment. Reports and materials shall be supplied as specified.			
Requester's Signature <u>[Signature]</u>			
Approval Granted: ☒ Yes ☐ No Date: <u>11-22-10</u>			
Signature of the Senior Director for Accountability, Research, and Assessment: <u>[Signature]</u>			

NOTE TO REQUESTER: When seeking approval at the school level, a copy of this form, signed by the Senior Director, Accountability, Research, and Assessment, should be shown to the school principal.

Reference School Board Policy GCS, p. 249

APPENDIX C: PARENT ATTRIBUTION TEST (PAT)

PAT

1. PARENT ATTRIBUTION TEST (parent form B - short)

Child Interaction Survey

In this questionnaire, we want to know how important you believe different factors might be as potential causes of successful and unsuccessful interaction with children. We are interested in discovering the way people think about children--there are no right or wrong answers.

Example: If you were teaching a child an outdoor game and he or she caught on very quickly, how important do you believe these possible causes would be?

- | | Not at all
important | Very
important |
|--|--|-------------------|
| a. how good he or she is in sports in general. | 1 2 3 4 5 6 7 | |
| | (Place a circle around a number. Pick one of the bigger numbers if you think this factor is important, and a smaller number if you think it is not important). | |
| b. how good a teacher you are. | 1 2 3 4 5 6 7 | |
| c. how easy the game is. | 1 2 3 4 5 6 7 | |

Answer the following questions by making ratings in the same way as shown above.

1. SUPPOSE YOU TOOK CARE OF A NEIGHBOR'S CHILD ONE AFTERNOON, AND THE TWO OF YOU HAD A REALLY GOOD TIME TOGETHER. HOW IMPORTANT DO YOU BELIEVE THE FOLLOWING FACTORS WOULD BE AS REASONS FOR SUCH AN EXPERIENCE?

a. whether or not this was a "good day" for the child, e.g., whether there was a TV show s/he particularly wanted to see (or some other special thing to do).	1 2 3 4 5 6 7
d. how lucky you were in just having everything work out well.	1 2 3 4 5 6 7
e. how much the child enjoys being with adults.	1 2 3 4 5 6 7
f. how pleasant a disposition the child had.	1 2 3 4 5 6 7
g. how well the neighbor had set things up for you in advance.	1 2 3 4 5 6 7
h. whether the child was rested.	1 2 3 4 5 6 7

The next question asks about BAD experiences with children. Reasons for good interactions are not necessarily the same as those for unsuccessful ones. So please think about this situation without regard for the way you answered the first question.

2. SUPPOSE YOU TOOK CARE OF A NEIGHBOR'S CHILD ONE AFTERNOON, AND THE TWO OF YOU

DID NOT GET ALONG WELL. HOW IMPORTANT DO YOU BELIEVE THE FOLLOWING FACTORS WOULD BE AS POSSIBLE REASONS FOR SUCH AN EXPERIENCE?

	Not at all important				Very important		
b. how unpleasant a disposition a disposition the child had.	1	2	3	4	5	6	7
c. whether the child was tired or not feeling well.	1	2	3	4	5	6	7
d. whether or not you really enjoy children that much.	1	2	3	4	5	6	7
f. whether or not this was a bad day for the child, e.g., whether there was nothing good on TV, whether it was raining and he or she couldn't go outside.	1	2	3	4	5	6	7
i. whether you used the wrong approach for this child.	1	2	3	4	5	6	7
j. the extent to which the child was stubborn and resisted your efforts.	1	2	3	4	5	6	7
k. how you get along with children in general.	1	2	3	4	5	6	7
m. what kind of mood you were in that day.	1	2	3	4	5	6	7
q. how hungry the child was.	1	2	3	4	5	6	7
t. how little effort the child made to take an interest in what you said or did.	1	2	3	4	5	6	7
u. the extent to which you were not feeling well that day.	1	2	3	4	5	6	7
z. whether or not this was a bad day for you in general.	1	2	3	4	5	6	7

APPENDIX D: PERCEIVED STRESS SCALE (PSS-14)

INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during THE LAST MONTH. In each case, you will be asked to indicate your response by placing an "X" over the circle representing HOW OFTEN you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

	Never 0	Almost Never 1	Sometimes 2	Fairly Often 3	Very Often 4
1. In the last month, how often have you been upset because of something that happened unexpectedly?	☐	☐	☐	☐	☐
2. In the last month, how often have you felt that you were unable to control the important things in your life?	☐	☐	☐	☐	☐
3. In the last month, how often have you felt nervous and "stressed"?	☐	☐	☐	☐	☐
4. In the last month, how often have you dealt successfully with day to day problems and annoyances?	☐	☐	☐	☐	☐
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?	☐	☐	☐	☐	☐
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	☐	☐	☐	☐	☐
7. In the last month, how often have you felt that things were going your way?	☐	☐	☐	☐	☐
8. In the last month, how often have you found that you could not cope with all the things that you had to do?	☐	☐	☐	☐	☐
9. In the last month, how often have you been able to control irritations in your life?	☐	☐	☐	☐	☐
10. In the last month, how often have you felt that you were on top of things?	☐	☐	☐	☐	☐

PSS-14

	Never	Almost Never	Sometimes	Fairly Often	Very Often
	0	1	2	3	4
11. In the last month, how often have you been angered because of things that happened that were outside of your control?	☐	☐	☐	☐	☐
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?	☐	☐	☐	☐	☐
13. In the last month, how often have you been able to control the way you spend your time?	☐	☐	☐	☐	☐
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	☐	☐	☐	☐	☐

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