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# Links between High Economic Distress and School Engagement as Mediated through Negative Marital Interaction and Parental Involvement

Lauren Alyssa Bone Barnes  
*Brigham Young University - Provo*

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Links Between High Economic Distress and School Engagement  
as Mediated Through Negative Marital Interaction  
and Parental Involvement

Lauren A. Barnes

A dissertation submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy

James M. Harper, Chair  
Roy A. Bean  
Jeremy B. Yorgason  
Laura Padilla-Walker  
Leslie L. Feinauer

School of Family Life  
Brigham Young University

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## ABSTRACT

### Links Between High Economic Distress and School Engagement as Mediated Through Negative Marital Interaction and Parental Involvement

Lauren A. Barnes  
School of Family Life, BYU  
Doctor of Philosophy

A review of research on family economic distress and its association with teen well-being shows a clear need to expand our knowledge about the connections between economic distress and key teen outcomes. Economic distress can act as an unexpected negative shock to the family system and can influence parent relationship quality, functioning, and involvement in children's lives. In turn, changes in systemic quality, functioning, and involvement can impact adolescents positively or negatively. Using observational coding and questionnaire self-report, this study examined the relationship between economic distress and negative marital interaction and the impact this has on parental involvement as a predictor of child school engagement while controlling for gender of the child. A structural equation model analysis was fit to data from 323 two-parent families. The average age of children for the study was 14.31 years of age. Results showed that economic distress is associated with marital relationship interactions, as well as parental involvement, which also impacts school engagement. Therapists should be mindful of and address current economic distress which their clients are experiencing and be aware of the possible associations with all parts of the family system. Possible interventions in the parent-couple system and increasing both mother and father involvement are suggested.

Keywords: economic distress, school engagement, marital interaction, parental involvement

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## Introduction

A review of research on family economic distress and its effects on child well-being shows a clear need to expand our knowledge about the connections between economic distress and key child outcomes. Economic distress can act as an unexpected negative shock to the family system and can influence parent relationship quality, functioning, and involvement in their children's lives. In turn, changes in systemic quality, functioning, and involvement can impact adolescents positively or negatively. The purpose of this study was to examine the relationship between economic distress and negative marital interaction, and the impact these factors have on parental involvement as a predictor of child school engagement. This study expands upon previous research because it utilizes an urban setting and includes data from multiple family members as well as observational data and uses an Actor-Partner Independence Model (APIM)

The family stress interactionist model, as proposed by Conger (1994), suggests that economic stress negatively influences both parents and children (See Figure 1). Within this model there are both indirect and direct pathways from stressors to outcomes suggesting that events and situations such as economic strain can directly and indirectly impact marital and parent-child relationships which, in turn, negatively impacts children. An ecological life course framework suggests that, throughout the life course, individuals may influence and interact with each other in ways that aid or obstruct growth (Bronfenbrenner, 1979). This systemic lens allows one to evaluate and possibly even manage the predicting stressors. As suggested by the family interactionist model (Conger, 1994), family dynamics-especially during times of stress- may also impact the emergence of positive outcomes in adolescents. Within this framework, interactions between family members, such as marital interaction, have great power in influencing their children's outcomes either positively or negatively.

The most recent economic recession in the United States (Gore, 2010) became a topic discussed often in the media and news and caused some panic and worry among citizens. It is possible that the panic and fear that arises from an economic recession may actually feed into another economic recession in a cyclical manner due to the systemic effects within a family and then within the larger society.

Economic stress has adverse effects on psychological well-being and quality of family relationships (Conger, McCarty, Yang, Lahey, & Kropp, 1984; Conger et al., 1990, 1991, 1992, 1993; Elder, 1974; Elder & Caspi, 1988; Elder, Conger, Foster, Ardel, 1992; Liker & Elder, 1983; McLoyd, 1989). As indicated by previous research, it is possible that the impact of economic stress on adolescents may be mediated by disruptions in parent-child relations (Flanagan, 1990; Lempers, Clark-Lempers, & Simons 1989; McLoyd & Wilson, 1990, 1991). Thus, parental behavior may be one of the processes through which economic stress has its impact on children's outcomes (See Figure 2).

In terms of outcomes in teens, extensive research has examined negative teen outcomes and relatively few studies have examined the dynamics that help children have positive outcomes. Moore and Lippman (2005) have indicated that studying personal characteristics is beneficial and found that when a child feels a sense of well-being and 'well-becoming' he or she becomes a better citizen, more self-sufficient, responsible, reports higher earnings, and is able to attain better success in family life in general. School outcomes and achievement have been noted as predictors of positive outcomes (Iyer et al. 2010; Elmore & Huebner, 2010, Archambault et al, 2008, Kalil & Ziol-Guets, 2005).

## Literature Review

### Theoretical Background

Conger and Donnellan (2007) have suggested that a linkage among general stress, economic distress and adolescent child well-being is best framed within an interactionist model. This model incorporates both a social causation approach, as well as, a social selection perspective. This allows for differences between individuals, while also allowing for social circumstances to impact individuals and families. This theory suggests that stressor events such as economic events have a direct and adverse effect on parents' emotions, their marital interaction and levels of parent-child involvement. Further research has shown a linkage between economic distress and parental depression and other mental health problems (Carlo, Padilla-Walker & Day, 2011; Conger & Conger, 2002; Conger & Donnellan, 2007; Elder & Conger, 2000; McLoyd, 1998). According to theorists, depression can lead to frustration, anger, and anxiety which can disrupt the marital and parent-child relationship by distracting them from their children's needs, and also by exhausting the resources and coping mechanisms of parents (Conger et al., 2002; Margolin, Christensen, & John, 1996; Parke et al., 2004). It was found that economic distress, mediated through parents' mental health, negatively affected the parent-child interaction (Carlo, Padilla-Walker & Day, 2011). Carlo et. al. (2011) found that economic strain was positively associated with parental depression, which in turn, was negatively associated with parent-youth connectedness. Therefore, within this study, increases in economic distress are hypothesized to directly and indirectly affect child's well-being through the behaviors and attitudes of the parents.

## **Child School Engagement**

Children's engagement in school is a rarely studied child outcome. However, researchers have indicated that school engagement may be a protective factor which aids students in developing socially and mentally appropriate expectations and relationships (Hawkins et al, 1992; Catalano & Hawkins, 1996; Morrison, 2002). School engagement has also been found to be a solution for children feeling alienated (Fredricks, Blumenfeld & Paris, 2004). When children feel alienated, they are less likely to develop prosocial behaviors which may result in engaging in more risky behaviors (Fredricks, Blumenfeld & Paris, 2004). Successful school performance as a child is related to success in adolescent and adult roles (Grolnick, et al., 1999).

Parents have the ability to aid their children in their school engagement and success. Chen and Gregory (2010) found that the children of parents who had higher expectations about grades and attainment for their children had higher grade point averages and were rated as more academically engaged by their teachers. Other studies have found similar results with parental involvement being associated to better outcomes of children in school (Hill & Tyson, 2009; Izzo et al., 1999) Parental involvement and encouragement are likely predictors of school engagement.

Fredricks et al. (2004) defines school engagement as having three separate elements: behavioral, emotional and cognitive engagement. Behavioral engagement includes active participation in academic, social and extracurricular activities, and is related to positive academic outcomes. Emotional engagement is the positive or negative emotional reaction toward fellow students, teachers, academics and school in general. Cognitive engagement measures the level of effort students exert in order to learn academic material. One of the strengths of this study is that measures of all three forms of school engagement will be included and multiple respondents (child, mother, and father) will be used. Both behavioral and emotional school engagement have

been linked to more positive developmental outcomes for adolescents and are protective risk factors (Li & Lerner, 2011). It has been found that low success in behavioral and emotional areas leads to varying trajectories of behaviors with increases in risky behaviors such as substance abuse, depression, poor grades, drop out and delinquency.

It should be noted that there seems to be a gender effect with girls tending to be more engaged in school than boys. One study found that secondary school girls outperform boys in almost every academic area (Crosnoe, Riegle-Crumb, Field, Frank, and Muller, 2008). Crosnoe et al. suggest that girls are more easily engaged in academia than boys, making it easier for them to be ahead at the adolescent stage of development.

Low-wages were also found to be a possible contributor to less successful trajectories as youth from less-advantaged families have repeatedly been found to engage in risky behavior (Kalil & Ziol-Guets, 2005). It is possible that low income and economic stress may be mediated by the quality of the parents' relationship and their interaction with each other and with the larger system of the family, but this has not yet been analyzed. Research has also found that youth who perform well in school seem to have better peer and parent relationships, yet it is unknown which is the cause and which is the effect (Iyer et al. 2010; Elmore & Huebner, 2010).

### **Economic Stress**

Little research has looked at the parental factors that are associated with school engagement, and even less research has been done on how economic strain might influence parent-child interaction which, in turn, might influence school engagement. Money issues are often stated as a cause or contributor to marital discord; specifically, financial difficulties or economic stress is associated with higher levels of marital conflict (Conger et al., 1990). Money conflicts may also be more threatening and stressful than non-money conflicts as they tend to

remain unresolved and are repeatedly discussed throughout the duration of marriages (Papp, Cummings, & Goeke-Morey, 2009).

Economic pressure puts individuals at increased risk for emotional distress which, in a couple's relationship, may lead to more marital conflict and marital distress. Elder (1983) studied a sample from the Depression era and found that economic stress was related to spousal conflict over finances. Conger, Rueter & Elder (1999), using a sample of 400 families, found that couples with low spousal support in their marriage were not as easily able to buffer the negative effects of economic distress as couples who felt more support from their spouse. Poor economic circumstances were found to be related to economic strain, psychological distress and negative marital adjustment (Kinnunen & Feldt, 2004). It was also noted that an individual's experiences had some spillover onto their partner's experience of economic strain (Kinnunen & Feldt, 2004). More recent research has found that spouses have the ability to buffer the effects of stress spillover to marriage satisfaction by providing social support to each other in ways such as discussing their daily activities and offering encouragement (Brock & Lawrence, 2008). However, no studies could be found which used observation of actual marital interaction to examine the effects of economic stress on actual interactional behavior; given that all previous studies have relied on self-report data. One of the strengths of this study is that it will utilize coding of actual couple interaction during a discussion task. Many studies utilize self-report measures which are not always the most reliable in depicting actual behavior (Stone et al., 2000; Bouchard, 1976; LaPiere, 1934)

### **Negative Marital Interaction**

Couple interactions impact many aspects of family systems. Popular media tends to cite money issues as a cause of much of the distress couples face and even blames economic trouble

as reason for divorce (Betcher & Macauley, 1990; Bodnar & Cliff, 1991; Chatzky, 2007, Englander, 1998). Scholarly research has also found money concerns to be a contributor to the relational stress faced by couples and have linked this to marriage dissolution (Amato & Rogers, 1997).

Researchers found that marital conflicts about money were more likely to remain unresolved despite increased attempts at problem solving, and that the interaction occurring during a financial argument was more negative, and included both more depressive and angry symptoms than with other argument topics (Papp, Cummings, & Goeke-Morey, 2009). Therefore, it appears that marital behaviors such as verbal attack, contempt and hostility are more likely to occur when partners are under economic distress.

Having a negative couple relationship likely impacts and leads to a negative parent-child relationship due to the perceived and real tension throughout the family system (Grych & Fincham, 2001). It has been found that adolescents whose parents report high quality marital relationship *and* who have a good parent-adolescent relationship with both parents consistently have the best outcomes in a variety of areas compared to children who do not have these high quality relationships (Hair et al., 2009). This research implies that adolescents who are not in a system where their parents have a positive marital relationship would be at risk for more negative outcomes than their counterparts.

### **Parental Involvement**

Conger (1999) showed that economic stress also affects parents' involvement with their children. If the stress is also related to negative marital interaction, then children might experience an additive effect, the stress of living with interparental conflict combined with having less involved parents.

Parental involvement is, in many ways, a protective factor for children (Chen & Gregory, 2009; McBride et al, 2009; Jeynes, 2008; Yang, 2006; Simons-Morton & Crump, 2003). For example, Chen and Gregory (2009) examined direct participation, academic encouragement, and expectations for grades and attainment from parents toward their children. They also found that children who have parents that are actively involved in their lives are more likely to excel in school, be less involved in risky behaviors, and are more likely to be accepted by their peers and are not at risk of being bullied (Chen & Gregory, 2009; McBride, et al., 2009; Jeynes, 2008; Wong, 2008; Yang et al., 2006; Simons-Morton & Crump, 2003). Children who have parents that are sufficiently involved in their activities and lives report feeling more individuated, yet still safe in their families (Anderson & Fleming, 1986). This individuation felt by the children serves as a protective factor by promoting confidence within the children (Anderson & Fleming, 1986).

Day and Padilla-Walker (2009) examined mothers' and fathers' connectedness and involvement with their children. Both maternal and paternal connectedness and involvement impacted their children, but in different ways. Father connectedness and involvement were negatively related to adolescents' internalizing and externalizing behaviors, whereas mother connectedness and involvement were positively related to adolescents' prosocial behaviors and hope. They also found that when one parent's involvement was low, the other parent's involvement made a significant and important contribution to the child's well-being, particularly in the area of internalizing behaviors. This further emphasizes the importance of examining the relationship between parents and children for both parents, and highlights differences as a function of gender of the parent.



Research has also consistently shown that, when parents are involved, students have higher grades and graduation rates, lower rates of suspension, decreased substance abuse, less delinquency, as well as, increased motivation and self-esteem (Iyer et al. 2010; Elmore & Huebner, 2010, Archambault et al, 2008, Kalil & Ziol-Guets, 2005). Even parental involvement unrelated to school work can improve school engagement and the risk of potential harmful behaviors (Fan & Chen, 2009). As shown in Figure 2, one of the strengths of this study is that it examines both mother involvement and father involvement in the same model.

### **Purpose Statement**

As stated earlier, the purpose of this study was to examine the relationship between economic distress and negative marital interaction and the impact these factors have on parental involvement as predictors of child school engagement (See Figure 2). It was hypothesized that high economic distress would be associated with lower school engagement in children. High economic distress was hypothesized to, also, be mediated through negative marital interaction and less parental involvement, and be related to lower school engagement in children. It was also hypothesized that fathers' scores on economic distress, marital interaction and parental involvement will not be as strong of predictors as mothers' scores. Child's age, gender, race, parent's education, and household income were used as control variables (See Figure 2).

## **Method**

### **Participants**

The participants for this study were taken from the third wave of data of *Flourishing Families Project* (FFP). The FFP is an ongoing, longitudinal study of inner family life involving families with children between the ages of 10 and 14 at Time 1. At Time 1, this study consisted of 500 families (163 single-parent, 337 two-parent) with a child between the ages of 11 and 14

(*M* age of child = 11.49; 51% male). Ninety-six percent of the families from Time 1 participated at Time 3. Table 1 contains detailed demographic information in regard to ethnicity, income, number of children, and parent education. Time 3 data is used in this model because researchers wanted to assess families after the start of the economic slump which occurred in late 2008 (Gore, 2010).

Families were interviewed in their homes, with each interview consisting of a one-hour video and a one-and-one half hour self-administered questionnaire for each family member. The one-hour video was coded using the *Iowa Family Interaction Rating Scales (IFIRS)*. For this study, survey data, as well as, observational coding data were utilized as provided by all family members (child, mother, and father).

Time 3 data from this study consisted of 323 two-parent families. Forty-nine percent of the children from two-parent families were female. For two-parent families, 82% of mothers, 86% of fathers, and 70% of children were European American; 4% of mothers, 5% of fathers, and 13% of children were African American; 4% of mothers, 2% of fathers, and 5% of children were Asian American; 3% of mothers, 1% of fathers, and 2% of children were Hispanic; and 5% of mothers and fathers and 11% of children indicated that they were “mixed/biracial” or of another ethnicity. Seven percent of families reported an income less than \$25,000 per year, 15% made between \$25,000 and \$50,000 a year, and 78% made more than \$50,000 per year. In terms of education, 71% of mothers and 68% of fathers reported having a bachelor’s degree or higher. Table 1 displays the demographic characteristics of this sample compared to the US National population.

This sample had a high percentage of employed individuals with only 9 parents (2.5%) being full-time stay-at-home parents. This is similar to the current national average of 4.2% of families having one full-time stay-at-home parent (Bureau of Labor Statistics, 2009).

### **Procedure**

Participant families for the FFP were selected from a large northwestern city and were interviewed during the first eight months of 2007 and approximately one year later for Wave 2 (2008) and another year later (2009) for Wave 3. Only Wave 3 data is used in this study. Families were primarily recruited using a purchased national telephone survey database (Polk Directories/InfoUSA). This database claimed to contain 82 million households across the United States and had detailed information about each household, including presence and age of children. Families identified using the Polk Directory were randomly selected from targeted census tracts that mirrored the socio-economic and racial stratification of reports of local school districts. All families with a child between the ages of 10 and 14 living within target census tracts were deemed eligible to participate in the FFP. Of the 692 eligible families contacted, 423 agreed to participate, resulting in a 61% response rate for the first wave. However, the Polk Directory national database was generated using telephone, magazine, and internet subscription reports. Such resources historically underrepresent people of lower socio-economic status. Therefore, in an attempt to more closely mirror the demographics of the local area, a limited number of families were recruited into the study through other means (e.g., referrals, fliers;  $n = 77$ , 15%). By broadening the approach, the social-economic and ethnic diversity of the sample increased significantly.

All families were contacted directly using a multi-stage recruitment protocol. Furthermore, all the waves of the study have IRB approval in regards to protection of human

subjects. First, a letter of introduction was sent to potentially eligible families (this step was skipped for the 15 families who responded to fliers). Second, interviewers made home visits and phone calls to confirm eligibility and willingness to participate in the study. Once eligibility and consent were established, interviewers made an appointment to come to the family's home to conduct an assessment interview that included video-taped interactions (not used in current study), as well as, questionnaires that were completed in the home. The most frequent reasons cited by families for not wanting to participate in the study were lack of time and concerns about privacy. It is important to note that there were very little missing data. As interviewers collected each segment of the in-home interview, questionnaires were screened for missing answers and double marking.

### **Measures**

**School engagement.** School engagement was assessed using Fredericks, Blemenfield, & Paris' School Engagement Scale (2004) which includes cognitive, behavioral and emotional subscales. At Time 3, child, mother, and father report were collected. Respondents were asked the extent to which they agreed/disagreed with items such as "pays attention in class", "feels happy at school", and "feels support from his or her teachers at school." Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores reflecting greater ability to engage in prosocial behavior and focus at school.

The overall reliability in the Fredericks' et al. study was .75 and the alpha coefficients for this sample were .82 at Time 3 for children. For mothers, reliability coefficients were .88 at Time 3. For fathers, the coefficients were .86 at Time 3. A latent variable of school engagement at Time 3 was created with the mean score of the child's, mother's, and father's report as three indicators.

**Economic stress.** Five financial stress items from Umberson, Williams, Powers, Liu, & Needham's Chronic Stress Questionnaire (2005) were used to measure economic stress at Time 3. Both parents' responses were recorded on a Likert scale ranging from 0 (*Did not occur*) to 5 (*Occurred, extremely severely*) with higher scores indicating higher economic stress. Sample items included, "Difficulty meeting monthly payments on bills", "Not enough money for housing" and "Debt problems - concerns about owing money". Reliability coefficients for financial stressor items were .73 to .80 for the original measure (Umberson et al., 2005). The reliability coefficients for the scale were .84 for mothers and .83 for fathers. The latent variables for mother perceived economic stress and father perceived economic stress were created by using the husband's and wife's answers to individual items as the five indicators for each variable.

**Negative marital interaction.** A latent variable called Negative Marital Interaction was created using 5 codes from behavioral observation at Time 3, in which the Iowa Family Interaction Rating Scales, (IFIRS) was used to code marital behaviors (Melby & Conger, 1998) (See Appendix C). At Time 3, the task assignment was for the parents to spend 5 minutes discussing something that they would like to teach their child. The IFIRS coding system is a global or macro-level observational coding system meaning that the focals (or the primary person of interest in the video task) are coded according to their overall characteristics. This coding system measures behavioral and emotional characteristics of individuals, as well as, relationship processes in both discussion-based and activity-based interactions. Behaviors are coded at the following two levels: Individual Characteristics Scales and Dyadic Interaction Scales. The Iowa Family Interaction Rating Scales were initially developed to code behavioral processes in discussion and problem-solving interactions in families with adolescents (Lorenz & Melby, 1994). This system has been used extensively to score interaction in young-adult dyads

and was recently adapted for scoring behaviors of parents and young children (2-8 years of age) engaged in activity-based interactions (Melby & Conger, 1998). This coding system has also been used successfully when scoring interactions in Native-American and African-American families (Melby & Conger, 1998).

Flourishing Families coders were trained to provide a macro level rating from 1 to 9 on each behavior scale. The coders received over 90 hours of training which included tests over content of scales, as well as, practice coding couples and families with feedback from certified coders. Coders had to code at least one criterion couple task that had also been coded by certified coders at the Iowa Behavioral and Social Science Research Institute, and reach a minimum of 80% inter-rater agreement in order to become a certified coder. The coding manual provided extensive descriptions of each scale, as well as, examples and non-examples of the codes. Once a coder became certified, 25% of their coded tasks were then blindly assigned to a second coder. Assignments for reliability coding were made in such a way that coders were unaware which of their tasks would be coded by two people.

Negative Marital Interaction was created using the sum totals of the following dyadic scales for the husband and wife: Hostility, Contempt, Angry Coercion, Escalate Hostile, and Antisocial.

Hostility was defined, according to the Iowa Family Interaction Rating Scale, as the extent to which hostile, angry, critical, disapproving, rejecting or contemptuous behavior is directed toward the other interactors- in this case, the spouse's behavior, appearance or personal characteristics. Coders are asked to take the following behaviors into account: nonverbal communication, emotional expression, and content. Nonverbal communication includes angry or contemptuous facial expressions and menacing/threatening body posture. Hostile emotional expression could include irritable, sarcastic, or curt tones of voice or shouting. It may also

manifest as rejection such as actively ignoring the other, showing contempt or disgust for the other or the other's behavior, or denying the other's needs. Content of the statements themselves, such as complaints about the other or denigrating or critical remarks, e.g., "You don't know anything" or "You could never manage that." were also evaluated. It is important to remember that people can disagree without being hostile. To be hostile, disagreements must include some element of negative affect such as derogation, disapproval, blame, ridicule, etc. Hostility is an overarching global scale that also includes Verbal Attack, Physical Attack, Contempt, Angry Coercion, Escalate Hostile, and Reciprocate Hostile in determining the final rating given (Melby & Conger, 1998).

Contempt assesses the amount of disgust, disdain, derision, and scorn shown toward another interactor. The content generally includes personally derogatory adjectives, mocking statements, criticisms of the other person, comments that put down and demean another's personal characteristics, and sarcasm directed toward the other person as a person. Coders are asked to listen for a superior, condescending, distant, cool, cold, or icy tone. At higher levels, an individual's voice reflects being fed-up, sickened, or repulsed. At lower levels the affective tone may be neutral, but the voice reflects patronization and superiority. In either case, the feeling conveyed is that the other person is not valued or is incompetent. Nonverbal behaviors such as rolling the eyes, short exasperated sighs, or other indications of disgust are included (Melby & Conger, 1998).

Angry Coercion assesses the degree to which the focal achieves goals, attempts to control or change the behavior or opinions of another interactor, or attempts in a hostile manner to get another interactor to do what the focal wants. This would include power plays, demands, hostile commands, stubbornness, resistance, obstinence, contingent physical or verbal threats, refusals,

prohibitions, forcing own opinions on the other, angry whining, angry blaming, contemptuous mocking, derogatory insistence, etc. The focal's change attempts must demonstrate hostile, contemptuous, or sarcastic affect, as opposed to depressed affect in order to score on this scale (Melby & Conger, 1998).

Escalate Hostile assesses the focal's tendency to escalate his/her own hostile behaviors directed toward another interactor, using Hostility, Verbal Attack, Physical Attack, Contempt, and/or Angry Coercion. This is coded when one interactor follows one hostile behavior with another hostile behavior, thus increasing the affect (Melby & Conger, 1998).

Antisocial is an over-arching scale that measures the degree to which the focal demonstrates socially irresponsible or age inappropriate behaviors. It includes when a focal resists, defies, or is inconsiderate of others by being noncompliant, insensitive, or obnoxious, as well as, when the focal is uncooperative and unsociable. The antisocial person is characteristically self-centered, egocentric, tends to behave in inappropriate ways, or in some other way demonstrates lack of age-appropriate behaviors. This scale includes both immaturity conveyed as acting out behavior and as withdrawn behavior (Melby & Conger, 1998).

**Parental involvement.** Two latent variables, mother involvement and father involvement, were created using self and other-report from mother, father and child collected at Time 3 of the Flourishing Families Project (See Appendices F and G). Mothers and Fathers responded to 16 questions based on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Eight questions were regarding the respondent, and the other eight were questions regarding the respondent's partner. Sample questions include, "Help your child with homework?" and "Read books or magazines with your child?" A higher score indicates a greater degree of mother or father involvement in the child's life. Children's reports were attained using an 8-item modified



version of Inventory for Father Involvement (Hawkins, Bradford, Palkovitz, Day, Christiansen, & Call, 2002). Responses ranged from 1 (*never*) to 5 (*very often*) with sample items such as “give you encouragement” and “act as a friend to you”. Children answered items for each parent respectively. Higher scores indicate higher level of parental involvement. The latent variables of mother and father involvement were created using the mean score of the items on the scale from mother, father and child reports.

### **Analysis**

AMOS 20 (2012) was used to analyze the structural equation model shown in Figure 2. The variables of father and mother economic stress/negative marital interaction as measured by coding of the behaviors in the observed task, and parental influence were predictors in the model. An Actor-Partner Independence Model (APIM) (Kenny & Kashy, 2008) was used which allowed for examination of both actor effects (e.g. the effect of mother’s economic stress on her marital interaction on her parental influence) and partner effects (e.g. the effect of mother economic stress on father’s marital interaction and the effect of his marital interaction on the mother’s parental influence and so on). Means and standard deviations for all measured variables were calculated. Correlations between measured variables were also analyzed, particularly looking at correlations between husband and wife economic distress, husband and wife negative marital interaction and father and mother involvement to determine whether there are multicollinearity problems and it was determined that these variables could be used separately in the model.

The first step of the analysis was to conduct a factor analysis to determine how well the indicators of each latent variable load. Measurement invariance was analyzed before assessing structural invariance. Finally, both unstandardized and standardized betas were examined to determine the strength of the relationships among the variables, and fit indices including Chi

Square  $p > 0.05$ ,  $CFI \geq 0.95$ ,  $RMSEA < .07$ , and  $SRMR < .08$  were used to determine model fit (See Figure 3).

## Results

Means and standard deviations for all measured variables were calculated (see Table 2). Correlations between measured variables were also computed to examine possibilities of multicollinearity, particularly looking at correlations between father and mother reports of economic distress, father and mother negative marital interaction, and father and mother parental involvement (see Table 3). It was determined that all of these factors should remain separate.

The first step was to determine how well the measured indicators loaded on their respective latent variables. As seen on Table 5, the factor loadings for each of the indicators on their respective latent variables were above .45 and deemed acceptable. Indicators for economic distress had factor loadings between .63 and .80. The four indicators for negative marital interaction loaded with a range from .76 - .93 for mothers and fathers. The indicators for parental involvement also had acceptable loadings between .47 and .81. School engagement factor loadings had a range of .45 - .70.

As seen in Table 2, mothers as a group reported slightly more economic distress than did fathers (Mothers:  $\bar{X} = 4.33$ ,  $SD = .76$ ; Fathers:  $\bar{X} = 3.60$ ,  $SD = .73$ ), and a paired t-test showed that this difference was statistically significant ( $t = 2.86$ ,  $df = 223$ ,  $p < .01$ ). The means for mother and fathers' negative marital interaction were similar (Mothers:  $\bar{X} = 4.71$ ,  $SD = 1.87$ ; Fathers:  $\bar{X} = 4.26$ ,  $SD = .99$ ) and not significantly different based on a paired t-test. This sample appears to be experiencing economic stress at the time of data collection as the possible range of scores was 0 (*did not occur*) to 5 (*occurred, extremely severe*) and both mothers and fathers reported means that were roughly 4. All three respondents reported that mothers as a

group were more involved with their children than fathers (Mother Self-report:  $\bar{X} = 3.99$ ,  $SD = .43$ ; Father's report on mother:  $\bar{X} = 4.00$ ,  $SD = .50$ ; Child's report on mother:  $\bar{X} = 3.84$ ,  $SD = .64$ ; Fathers self-report:  $\bar{X} = 3.79$ ,  $SD = .48$ ; Mother's report on father:  $\bar{X} = 3.72$ ,  $SD = .61$ ; Child's report on father:  $\bar{X} = 3.75$ ,  $SD = .66$ ), and a repeated measures ANOVA showed that there were significant differences with mothers higher for all three respondents ( $F = 5.94$ ,  $df = 2,322$ ,  $p < .01$ ). The mean scores of the three groups of respondents for child engagement were not significantly different from each other (Mother:  $\bar{X} = 3.63$ ,  $SD = .64$ ; Father:  $\bar{X} = 3.77$ ,  $SD = .68$ ; Child:  $\bar{X} = 3.75$ ,  $SD = .65$ ).

As presented in Table 3, correlations among latent variables between mothers' and fathers' reports of economic strain were not high enough that they presented multicollinearity problems ( $r = .62$ ,  $p < .001$ ). As such, they were treated as separate variables in the model. Both parents' reports of their economic distress were significantly correlated with observations of their negative dyadic behaviors toward each other (Mothers:  $r = .47$ ,  $p < .001$ ; Fathers:  $r = .39$ ,  $p < .001$ ), and each partner's report of economic distress was positively correlated with observations of the negative marital interaction exhibited by their partner (Mothers:  $r = .41$ ,  $p < .001$ ; Fathers:  $r = .27$ ,  $p < .001$ ). Fathers', but not mothers', economic distress was found to be correlated with their parental involvement (Fathers:  $r = -.34$ ,  $p < .001$ ; Mothers:  $r = -.11$ ). Parental Involvement was found to be correlated for school engagement for both mothers and fathers (Mothers:  $r = .23$ ,  $p < .01$ ; Fathers:  $r = .22$ ,  $p < .01$ ). Mothers' and fathers' economic distress were also correlated with school engagement (Mothers:  $r = -.18$ ,  $p < .05$ ; Fathers:  $r = -.17$ ,  $p < .05$ ). Child gender was significantly correlated with school engagement ( $r = .23$ ,  $p < .01$ ) with female children exhibiting more school engagement than male children. However, gender was not significantly correlated with either mother or father involvement. None of the other control variables (age,

race, family size, and household income) were significantly correlated with school engagement or with mother and father involvement.

Structural Equation Modeling was conducted to examine the structural model proposed in Figure 2. The model fit (see Figure 3) was good in that the chi square was not significant ( $X^2 = 360.25$ ,  $df = 320$ ,  $p < .06$ ), the *CFI* was .971, the *RMSEA* was .04, and the *SRMR* was .043.

### **SEM Results**

Figure 3 shows the significant pathways in the Structural Equation Model. The first hypothesis regarding actor effects, that economic distress would be positively related to negative marital interactions for both fathers and mothers, was supported (Mothers:  $\beta = .46$ ,  $p < .001$ ; Fathers:  $\beta = .35$ ,  $p < .001$ ). The second hypothesis, that the negative marital interaction of each partner would be negatively related to their respective parental involvement, was also supported (Mothers:  $\beta = -.22$ ,  $p < .01$ ; Fathers:  $\beta = -.18$ ,  $p < .05$ ). Both mother and father involvement was positively related to the child's school engagement (Mothers:  $\beta = .24$ ,  $p < .01$ ; Fathers:  $\beta = .21$ ,  $p < .01$ ). Mother's economic distress was found to be directly related to parental involvement for mothers only (Mothers:  $\beta = -.19$ ,  $p < .01$ ).

In terms of partner effects, mothers economic distress was related to husbands' negative marital interaction ( $\beta = .56$ ,  $p < .001$ ), and father economic distress was related to wives' negative marital interaction ( $\beta = .21$ ,  $p < .01$ ). Mothers' negative marital interaction was also negatively related to father involvement ( $\beta = -.19$ ,  $p < .05$ ), but fathers' negative marital interaction was not associated with reduced mother involvement. Child gender (boys coded 1 and girls 2) was positively related to child school engagement ( $\beta = .29$ ,  $p < .001$ ), but gender was not related to either mother or father involvement, and none of the other control variables were related to parental involvement or school engagement.

Following Macho and Ledermann's (2011) suggestions, maximum likelihood Monte Carlo bootstrapping was used to extract 2,000 bootstrap samples to obtain the bias corrected significant levels for the indirect, direct, and total effects. As can be seen in Table 4, there were significant indirect effects for father and mother economic distress, and father and mother observed negative marital interaction on child engagement.

### **Discussion**

Results showed that economic distress was related to increased negative couple interaction which was in turn related to decreased involvement with the adolescent for both mothers and fathers. This supports previous research that economic distress impacts a variety of interactions within a family system (Conger, 1994). This is noteworthy because the large sample was primarily rural families whereas this sample was composed of urban and suburban families. As proposed by the family interactionist model, this analysis also shows that family dynamics during times of stress- in this case an economic recession- may impact the emergence of engagement of children and teenagers in their schooling (Conger, McCarty, Yang, Lahey, & Kropp, 1984; Conger et al., 1990, 1991, 1992, 1993; Elder, 1974; Elder & Caspi, 1988; Elder, Conger, Foster, Ardel, 1992; Liker & Elder, 1983; McLoyd, 1989).. The decrease in school engagement indicates that children are possibly feeling the stress and struggles in their parents and particularly their mothers since she is often more strained by economics, and also more likely to be involved with her child's life as indicated by these data (Iyer et al. 2010; Elmore & Huebner, 2010, Archambault et al, 2008, Kalil & Ziol-Guets, 2005)..

Mothers' negative marital interaction was associated with father involvement, whereas, fathers' marital interaction was not associated with mothers' involvement. Women may tend to expect father involvement with their children as a mediating factor in her views toward her

husband. Since men tend to be more easily flooded by hard emotions, they may have difficulty tending to their children and other tasks when they have other stressful life events such as economic distress or negative marital interaction (Umberson et. al, 1996; Gottman, 1993). For Dad's, their involvement only suffers if their marriage is impacted according to these data. It is also possible that fathers may be influenced more greatly by the emotional stress that arises from having an unhappy marital relationship than their wives, and are less able to function in their relationship with their children because of this stress whereas women are better able to buffer these negative feelings when interacting with their children (Umberson et. al, 1996; Gottman, 1993). Within this study, it appears that when dads are stressed they are less involved with kids whereas mothers continue to be involved with kids regardless of stress.

Previous research regarding parental involvement in schooling is also supported by this study in that maternal and paternal involvement are both predictive of their children's school engagement. It is important for parents to remain involved in their children's lives to help foster positive characteristics and attributes. While school engagement may not necessarily be a direct predictor of engaging in risky behaviors in life, it has been noted that school outcomes and achievement are often predictors of positive outcomes (Iyer et al. 2010; Elmore & Huebner, 2010, Archambault et al, 2008, Kalil & Ziol-Guets, 2005). Both parents' involvement in their children's lives was related to school engagement, and fathers' involvement was still an important predictor of school engagement even after controlling for mother's involvement.

This study built on previous studies in several ways. Negative marital interaction was coded using observational data. Most studies simply ask partners, sometimes only one of the partners, to rate their relationship quality on questionnaires. Another way this study is different is in its use of multiple respondents and the use of actor-partner variables for the parents. Children

and both parents completed measures of mother and father involvement, as well as, school engagement. The actor effects from perceived economic distress to negative marital interaction and the partner effects from perceived economic distress to the other partner's negative marital interaction add a unique twist that has not been reported in previous studies.

### **Implications for Therapy**

Marriage and family therapists (MFTs) should be mindful of and address current economic distress occurring in their clients' lives and be aware of the possible effects on *all* members of the family system and not just the providers and caregivers within the family. Since mothers tended to be slightly more affected by economic strain, it would be especially important to monitor their well-being. Mothers may tend to be more prone to depression and other mental health issues due to their increased stress. Spillover effects and systemic interactions show that children may potentially be impacted indirectly by economic distress as well meaning the entire family unit has the potential for increased mental health and behavior issues. Both parents should be involved in child-care, playful and daily tasks with their child to increase involvement. This would help alleviate some of the tension and remind children that the family is still important and that each child still deserves attention even among difficult financial circumstances. Even seemingly unrelated tasks such as regular family dinner are still helpful in helping children feel secure attachment which may help them be more confident and successful socially, as well as, academically. Fathers in particular should be asked about their involvement with children and their willingness to participate in activities with their children. It would also be beneficial for therapists to teach basic stress reduction techniques to family members.

Marriage and family therapists are trained with a systemic lens to understand the complex interaction between social factors such as economic stress and the impact this has on individuals

within and the family as a system. Marriage and family therapists are trained to work with the entire family system in the room which can allow for each individual to share their worries and hopes and be validated by each member of their family. All perspectives may be spoken and validated within the safe space provided by the therapist. Some potential areas that may need to be addressed are discussing the meaning of money, grieving potential loss, confronting unrealistic expectations, money management, stress management, children's well-being and parenting skills. MFTs can work with the family system to improve communication, restore trust and increase satisfaction in their couple, sibling and parent-child relationships in regard to their current economic distress while addressing the many interactions occurring within the family.

### **Limitations**

This study had a few limitations. The sample used in this study was cross-sectional and the demographics of the sample are, for the most part, generalizable to the population of the United States, except that Latinos are not well represented in this sample. The findings would likely fit best with European Americans. Based on the age of the children in this study and their preadolescent phase, it is possible that they were simply becoming more autonomous regarding their activities and schoolwork which may be affecting parental involvement scores and significance. Also, economic strain was shown recently to be linked with more parental depression which was predictive of less parent-child connectedness (Carlo, Padilla-Walker, & Day, 2011). It is possible that depression links found in the Carlo et al. (2011) study are acting as mediators to the other effects and outcomes within this study as well as the possibility that there may be other mediators such as child self-regulation contributing to these findings.



## **Future Research**

Future research should address the limitations acknowledged within this study. A more generalizable sample would be beneficial to more parents and families. It would also be helpful to determine the level of autonomy acquired by teenagers over this period of the life course. The findings of this study also leave many questions for future studies. It would be interesting to examine why mother's scores consistently appear more significant and also more directly and indirectly affective of other interactions within the system; this is especially interesting since most of the families have dual-income homes. It is possible that mothers were unaware of exactly how much economic distress actually existed and just realizes things were more difficult. It would be interesting to address whether findings would be different for women who were more involved in financial planning and those who were more removed from financial situations. It would also be beneficial to address potential mediators between economic distress and other family processes (e.g. marital interaction, parental involvement, child self-regulation).

## **Conclusion**

It appears that economic distress has influence on marital relationship interactions, as well as parent-child relationships. Mother's and father's negative marital interaction indirectly affected all areas while mother's negative marital interaction directly affected school engagement. Mothers, but not fathers, economic strain was directly related to child's school engagement as well. Parents should be especially mindful of their stressors and be able to negotiate better ways of managing stress to continue interactions with their children that foster growth, love and success.

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Table 1

*Demographic Characteristics of Sample at Time 3 (N = 323 Families) and US demographics*

Demographic Characteristic (based on 2000 Census)	FF Mother (%)	FF Father (%)	U.S. (%)
Race: White	75.8	86.3	75.1
Race: Black or African American	13.4	6.1	12.3
Race: Other	10.8	7.6	12.6
Average Household size	4.1		2.6
Families with own children (under 18)	500		n/a
Married couples with own children (under 18)	336 (67.2)		n/a
Female householders with own children (under 18)	163 (32.6)		n/a
Median Family income (income response categories were presented to respondents in terms of income ranges, e.g., between \$80,001 and \$90,000. . . per year)	At least \$80,000		\$58,526*
Families below the poverty level*	14 (2.8)		9.8
Education: High School graduate or higher	96.6	99.4	80.4
Education: Bachelor's degree or higher	59.6	69.2	24.4

Note: In terms of the census bureau data, the cutoff for a family of 4 in 2008 dollars is \$22,200. Given that our sample was asked to respond in income ranges (i.e., between \$20,001 and \$30,000), the associated percentage is representative of those total families who reported making less than \$30,000 (in 2009 dollars).

Table 2

*Means, Standard Deviations, and Ranges for All Measured Variables\**

Variables	Mothers	Fathers	Child
	X (SD) Range	X (SD) Range	X (SD) Range
Economic Distress	4.33 (.76) 0-5	3.60 (.73) 0-5	N/A
Negative Marital Interaction	4.71 (1.87) 1-9	4.266 (1.69) 1-9	N/A
Parental Involvement			
Mother Report	3.99 (.43) 1-5	3.79 (.48) 1-5	N/A
Father Report	4.00 (.50) 1-5	3.72 (.61) 1-5	N/A
Child Report	3.84 (.64) 1-5	3.75 (.66) 1-5	N/A
School Engagement	3.63 (.64) 1-5	3.77 (.68) 1-5	3.75 (.65) 1-5

\*Note: These were calculated from the created scale variables and not the latent variables used in the model

Table 3

*Correlation Matrix for All Latent Variables*

Variables	1	2	3	4	5	6	7
1.Mother Economic Distress	1.0						
2.Father Economic Distress	.62***	1.0					
3.Mother Negative Marital Interaction	.47***	.27***	1.0				
4.Father Negative Marital Interaction	.41***	.39***	.21**	1.0			
5.Mother Parental Involvement	-.11	.12	-.18*	-.11	1.0		
6.Father Parental Involvement	-.06	-.34***	-.17*	-.21*	.14	1.0	
7. Child School Engagement	-.18*	-.17*	-.14	-.10	.22**	.22**	1.0

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

Table 4

*Decomposition of Effects from Structural Equation Model on Child School Engagement*

	Indirect effects	Direct effects	Total effects
Father Economic Distress	-.53***	-.15*	-.68***
Mother Economic Distress	-.38***	-.13*	-.52***
Father Observed Negative Marital Interaction	-.20**	-.13*	-.33***
Mother Observed Negative Marital Interaction	-.22**	-.06	-.28**
Father Involvement	-----	.26**	.26**
Mother Involvement	-----	.24***	.24***
Child gender	-----	.29***	.29***

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

Table 5

*Factor Loadings*

Variables	Factor Loading
<b>Economic Distress</b>	
Difficulty Meeting Monthly Payments on Bills	.841
Having enough money at the end of the month after bills are paid	.805
Feeling stressed by work	.419
Health Problems or Concerns	.632
Not enough money for housing	.801
Feeling stressed caring for disabled relative or friend	.612
Not getting enough sleep	.559
Debt problems- concerns about owing money	.829
Not enough Money for health care	.739
<b>Negative Marital Interaction</b>	
Mother's Hostility	.924
Mother's Verbal Attack	.687
Mother's Physical Attack	.350
Mother's Contempt	.883
Mother's Angry Coercion	.803
Mother's Escalate Hostile	.806
Mother's Reciprocate Hostile	.627
Mother's Antisocial	.838
Father's Hostility	.899
Father's Verbal Attack	.702
Father's Physical Attack	.933
Father's Contempt	.867
Father's Angry Coercion	.813
Father's Escalate Hostile	.866
Father's Reciprocate Hostile	.746
Father's Antisocial	.781
<b>School Engagement</b>	
I pay attention in class	.559
I complete my homework on time	.469
I follow the rules at school	.572
I feel happy in school	.660
I feel excited by the work in school	.694
I am interested in the work at school	.691
I study at home even when I do not have a test	.610
I talk with people outside of school about what I am learning in class	.545
I check my schoolwork for mistakes	.654
If I do not know what a word means when I am reading, I do something to figure it out	.588
I read extra books to learn more about things we do in school	.570
If I do not understand what I read I go back and read it over again	.452
I feel support from my teachers at school	.532

## Figure Captions

*Figure 1.* The Family Stress Interactionist Model (Conceptual Model)

*Figure 2.* Proposed Structural Equation Model with Measurement and Hypothesized Paths

*Figure 3.* Structural Equation Model with Statistically Significant Pathways

Figure 1

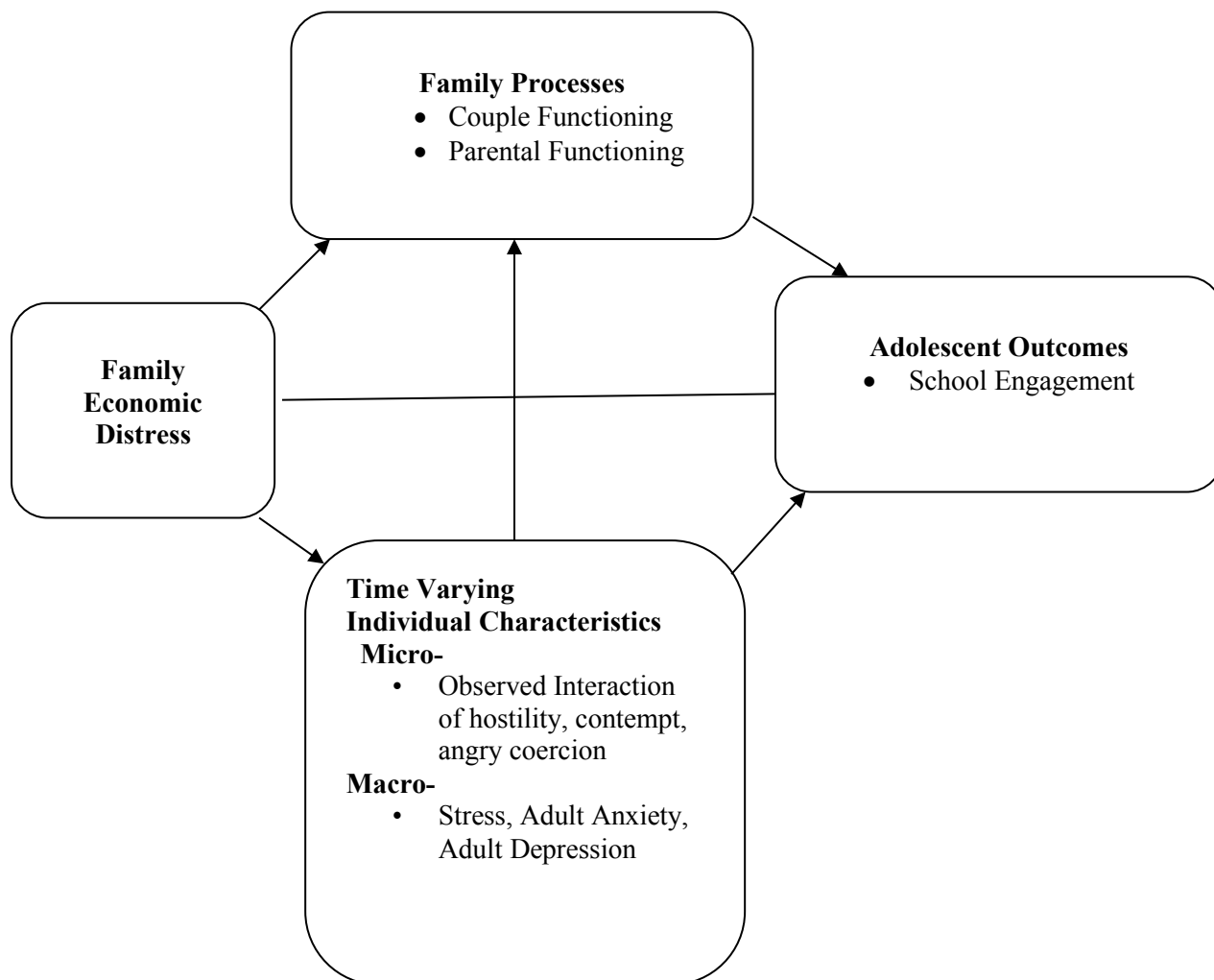


Figure 2

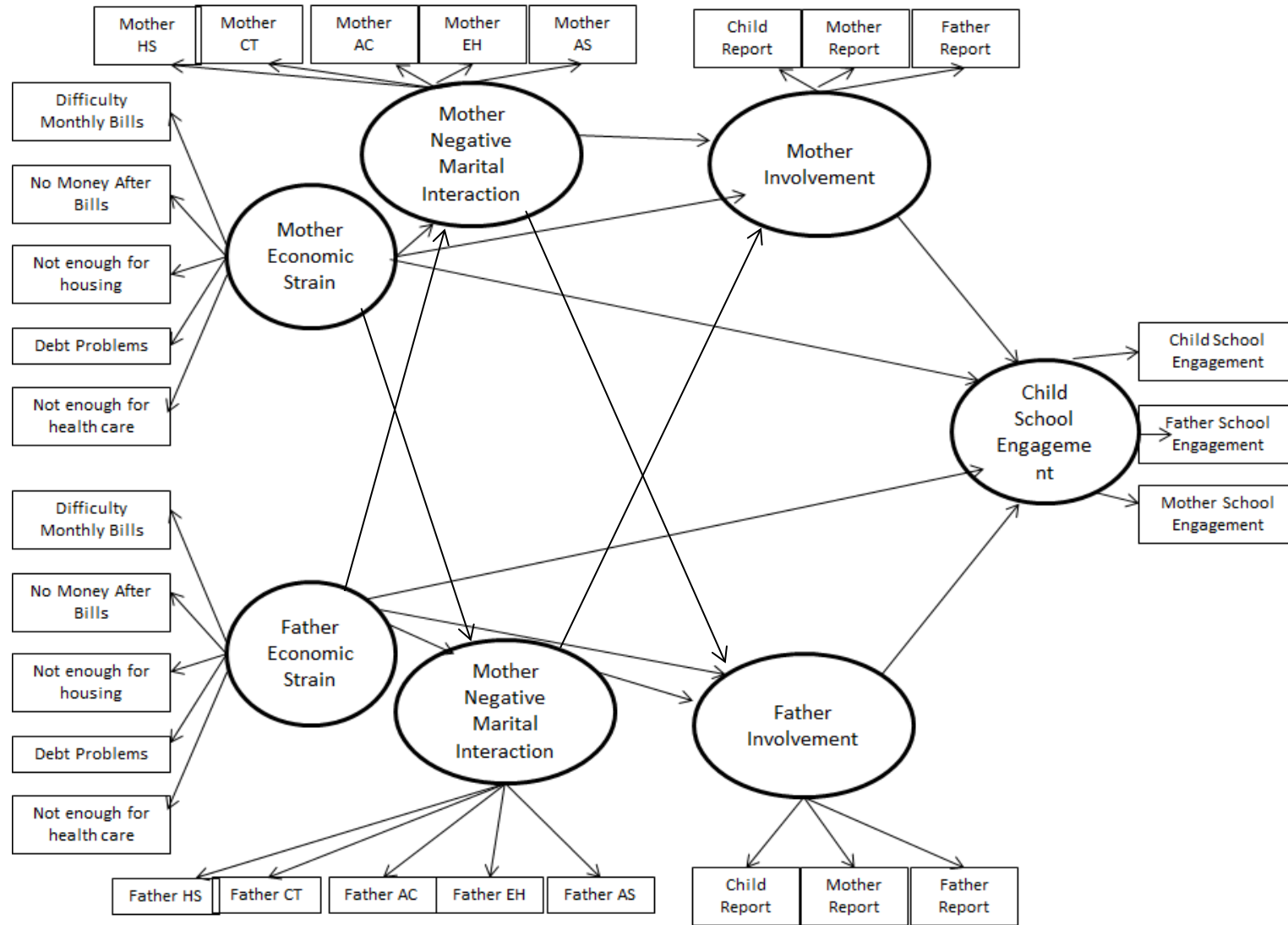
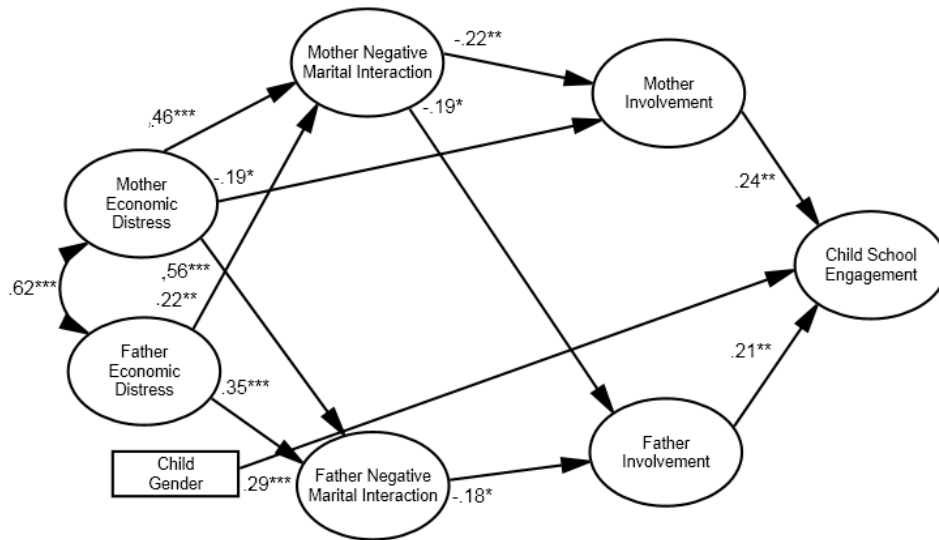




Figure 3



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

$X^2 = 360.25$ ,  $df = 320$ ,  $p = .06$

$CFI = .970$ ,  $RMSEA = .040$ ,  $SRMR = .043$

NOTE: Only statistically significant paths are shown in the model. Control variables included child gender, child age, child race, parents' education, and household income. Of these, only child gender was statistically significant.

## Appendix A

## School Engagement (Parent Report)

Rate the questions using the following scale:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

1. My child pays attention in class.
2. My child completes homework on time.
3. My child follows the rules at school.
4. My child gets in trouble at school.
5. My child feels happy in school.
6. My child feels bored in school.
7. My child feels excited by the work in school.
8. My child is interested in the work at school.
9. My child feels support from his or her teachers at school.

Reliability (School Engagement) – Child Self-Report (Fredericks, Blumenfeld, & Paris, 2005):

Behavioral: .72 to .77

Emotional: .83 to .86

Cognitive: .82

Reliability – School Engagement (Flourishing Families, Wave 3):

Overall: P1 = .876 (P2 = .858)

Behavioral: P1 = .824 (P2 = .817)

Emotional: P1 = .822 (P2 = .785)

Cognitive: Not Applicable

Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59-109.

Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2005). School Engagement. In K. A. Moore & L. H. Lippman (Eds.). *What do children need to flourish? Conceptualizing and measuring indicators of positive development*. New York: Springer Science.

## Appendix B

### School Engagement (Child Report)

Rate the questions using the following scale:

1 = Strongly disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly agree

1. I pay attention in class.
2. I complete my homework on time.
3. I follow the rules at school.
4. I get in trouble at school.
5. I feel happy in school.
6. I feel bored in school.
7. I feel excited by the work in school.
8. I am interested in the work at school.
9. I feel support from my teachers at school.

Reliability (School Engagement) – Child Self-Report (Fredericks, Blumenfeld, & Paris, 2005):

Behavioral: .72 to .77

Emotional: .83 to .86

Cognitive: .82

Reliability – School Engagement (Flourishing Families, Wave 3):

Overall: Child = .820

Behavioral: Child = .733

Emotional: Child = .827

Cognitive: Not Applicable

Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59-109.

Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2005). School Engagement. In K. A. Moore & L. H. Lippman (Eds.). *What do children need to flourish? Conceptualizing and measuring indicators of positive development*. New York: Springer Science.

## Appendix C

## Chronic Stressors Questionnaire (Original)

*Instructions:*

Rate these questions using the following scale:

0 = Did not occur

1 = Occurred, not severe

2 = Occurred, somewhat severe

3 = Occurred, moderately severe

4 = Occurred, very severe

5 = Occurred, extremely severe

*Because of financial need, during the past 12 months have you...*

1. Difficulty meeting monthly payments on bills.
2. Having enough money at the end of the month after bills are paid.
3. Feeling stressed by work.
4. Health problems or concerns.
5. Not enough money for housing.
6. Feeling stressed caring for disabled relative or friend.
7. Not getting enough sleep
8. Debt problems - concerns about owing money
9. Not enough money for health care
10. Feeling stressed as a parent

Reliability (Flourishing Families)

P1 = .838 (P2 = .826)

Reliability (Umberson et al., 2005): reliability on the full 10-item measure not reported,

reliability coefficients for financial stressor items (1, 2, 5, 8, 9) ranged from .73 to .80

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2005). Stress in childhood and adulthood: Effects on marital quality over time. *Journal of Marriage and Family*, 67, 1332-1347.

## Appendix D

## Chronic Stressors (Financial Subscale Only)

*Instructions:*

Rate these questions using the following scale:

0 = Did not occur

1 = Occurred, not severe

2 = Occurred, somewhat severe

3 = Occurred, moderately severe

4 = Occurred, very severe

5 = Occurred, extremely severe

*Because of financial need, during the past 12 months have you...*

1. Difficulty meeting monthly payments on bills.
2. Having enough money at the end of the month after bills are paid.
3. Feeling stressed by work.
4. Health problems or concerns.
5. Not enough money for housing.
6. Feeling stressed caring for disabled relative or friend.
7. Not getting enough sleep
8. Debt problems - concerns about owing money
9. Not enough money for health care
10. Feeling stressed as a parent



Reliability (Flourishing Families)

$$P1 = .838 \text{ (} P2 = .826 \text{)}$$

Reliability (Umberson et al., 2005): reliability on the full 10-item measure not reported,

reliability coefficients for financial stressor items (1, 2, 5, 8, 9) ranged from .73 to .80

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2005). Stress in childhood and adulthood: Effects on marital quality over time. *Journal of Marriage and Family*, 67, 1332-1347.

## Appendix E

### Negative Marital Interaction

#### Iowa Family Interaction Rating Scales

**Hostility (HS):** the extent to which hostile, angry, critical, disapproving rejecting or contemptuous behavior is directed toward another interactor's behavior (actions), appearance, or personal characteristics. Also includes VA, AT, CT, AC, EH, & RH.

**Verbal Attack (VA):** personalized and unqualified disapproval of another interactor's personal characteristics; criticism of a global and enduring nature.

**Physical Attack (AT):** aversive physical contact, including hitting, pinching, grabbing, etc.

**Contempt (CT):** a specific form of hostility characterized by disgust, disdain, or scorn of another interactor.

**Angry Coercion (AC):** control attempts that include hostile, contemptuous, threatening, or blaming behavior.

**Escalate Hostile (EH):** building onto one's own hostile behaviors toward another interactor.

**Reciprocate Hostile (RH):** extent to which the focal reciprocates in like manner the hostility of another interactor.

**Antisocial (AN):** demonstrations of self-centered, egocentric, acting out, and out-of-control behavior that show defiance, active resistance, insensitivity toward others, or lack of constraint. Reflects immaturity and age-inappropriate behaviors.

**Relationship Quality (RQ):** the observer's evaluation of the quality of the dyad's relationship from poor ('1') to good ('9').

## Interrater Reliabilities for the Codes

Code	Mothers	Fathers
HS	.82	.83
CT	.83	.84
AC	.80	.83
EH	.88	.89
AN	.81	.82

Melby, J.N. et al. (1998). The Iowa Family Interaction Rating Scales (fifth edition). Iowa State University, Institute for Social and Behavioral Research, Ames.

## Appendix F

## Parent Involvement (Parent Version)

Rate the questions using the following scale:

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

5 = Very Often

1. Attend your child's activities (like a soccer game or something he/she is doing at school)?
2. Read books or magazines with your child?
3. Give encouragement to your child?
4. Take care of your child (like fix him/her food or pick him/her up from school)?
5. Act as a friend to your child?
6. Work hard to pay for things your child needs?
7. Help your child with homework?
8. Make it easy for your child to talk to you?

## Reliability (Flourishing Families)

Overall:

P1 on P1 = .644 (P1 on P2 = .763) (P2 on P2 = .757) (P2 on P1 = .663)

Attentiveness (1, 4):

P1 on P1 = .560 (P1 on P2 = .474) (P2 on P2 = .533) (P2 on P1 = .588)

Reading and HW support (2, 7):

P1 on P1 = .558 (P1 on P2 = .536) (P2 on P2 = .541) (P2 on P1 = .630)

Praise and Affection (3):

P1 on P1 = NA (P1 on P2 = NA) (P2 on P2 = NA) (P2 on P1 = NA)

Time and Talking Together (5, 8):

P1 on P1 = .414 (P1 on P2 = .642) (P2 on P2 = .724) (P2 on P1 = .651)

Providing (6):

P1 on P1 = NA (P1 on P2 = NA) (P2 on P2 = NA) (P2 on P1 = NA)

Reliability (Hawkins et al., 2002):

Attentiveness (Items 1, 4): .69

Reading and HW support (2, 7): .83

Praise and Affection (3): .79

Time and Talking Together (5, 8): .80

Providing (6): .69

Hawkins, A. J., Bradford, K.P., Palkovitz, R. Day, R.D., Christiansen, S.L., & Call, V.C. (2002).

The inventory of father involvement: A pilot study of a new measure of father involvement. *Journal of Men's Studies*, 10, 183-196.

## Appendix G

## Parent Involvement (Child Version)

Rate the questions using the following scale:

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

5 = Very Often

*How often does your parent...*

1. Attend your activities (like a soccer game or something you do at school)?
2. Read books or magazines with you?
3. Give you encouragement?
4. Take care of you (like fix you food or pick you up from school)?
5. Act as a friend to you?
6. Work hard to pay for things you need?
7. Help you with homework?
8. Make it easy to talk to him/her?

Reliability (Flourishing Families)

Overall:

P1 on P1 = .644 (P1 on P2 = .763) (P2 on P2 = .757) (P2 on P1 = .663)

Attentiveness (1, 4):

P1 on P1 = .560 (P1 on P2 = .474) (P2 on P2 = .533) (P2 on P1 = .588)

Reading and HW support (2, 7):

P1 on P1 = .558 (P1 on P2 = .536) (P2 on P2 = .541) (P2 on P1 = .630)

Praise and Affection (3):

P1 on P1 = NA (P1 on P2 = NA) (P2 on P2 = NA) (P2 on P1 = NA)

Time and Talking Together (5, 8):

P1 on P1 = .414 (P1 on P2 = .642) (P2 on P2 = .724) (P2 on P1 = .651)

Providing (6):

P1 on P1 = NA (P1 on P2 = NA) (P2 on P2 = NA) (P2 on P1 = NA)

Reliability (Hawkins et al., 2002):

Attentiveness (Items 1, 4): .69

Reading and HW support (2, 7): .83

Praise and Affection (3): .79

Time and Talking Together (5, 8): .80

Providing (6): .69

Hawkins, A. J., Bradford, K.P., Palkovitz, R. Day, R.D., Christiansen, S.L., & Call, V.C. (2002).

The inventory of father involvement: A pilot study of a new measure of father involvement. *Journal of Men's Studies*, 10, 183-196.