Intergenerational continuity in economic hardship, parental positivity and positive parenting: the impact on child behavior

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Intergenerational continuity in economic hardship, parental positivity and positive parenting: The impact on child behavior

by

Shinyoung Jeon

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

MASTER OF SCIENCE

Major: Human Development and Family Studies

Program of Study Committee:
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2014

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ACKNOWLEDGEMENTS

This research is currently supported by grants from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute of Mental Health, and the American Recovery and Reinvestment Act (HD064687, HD051746, MH051361, and HD047573). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies. Support for earlier years of the study also came from multiple sources, including the National Institute of Mental Health (MH00567, MH19734, MH43270, MH59355, MH62989, and MH48165), the National Institute on Drug Abuse (DA05347), the National Institute of Child Health and Human Development (HD027724), the Bureau of Maternal and Child Health (MCJ-109572), and the MacArthur Foundation Research Network on Successful Adolescent Development Among Youth in High-Risk Setting.
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ABSTRACT

The current study examined intergenerational continuity in economic hardship, parental positivity, and positive parenting across generations based on both the Family Stress Model and the Family Resilience Framework. The study included 220 generation one (G1) parents, their target youth (generation two: G2) who participated from adolescence through adulthood, and their third generation child (G3). Results indicated intergenerational continuity of economic hardship, positivity and positive parenting from G1 to G2. In particular, G1 economic hardship influenced G1 positivity which, in turn, was related to G1 positive parenting. Similarly, G2 economic hardship was related to both G2 positivity and G2 positive parenting which, in turn, was associated with G3 positive behavior to G2. Results suggest that even in times of economic adversity, parental positivity and positive parenting were transmitted from G1 parents to their G2 youth during adulthood. Such continuity seems to influence positive behavior of the G3 children.
CHAPTER 1. INTRODUCTION

Economic deprivation, whether the result of chronic poverty (Duncan & Brooks-Gunn, 2000; Korenman, Miller, Sjaastad, 1995; McLoyd, 1998) or a sudden economic downturn (Elder, Conger, Foster, & Ardelt, 1992; Elder, Nguyen, & Caspi, 1985; McLoyd, 1990) can negatively impact individuals and their families. According to the Family Stress Model, economic pressure caused by economic hardship leads to emotional problems such as depression and anxiety, which can result in marital conflict, hostile parenting behaviors, and negative child outcomes (Conger & Conger, 2002; Conger, Conger, & Martin, 2010). That is, economic hardship is associated with diverse negative psychological and behavioral problems which disrupt family functioning and child development. More importantly, evidence suggests that economic adversity may impact subsequent generations. For example, a study by K. Conger et al. (2012) examined factors proposed to explain the connection between economic hardship and its consequences on development across generations. It was found that generation one (G1) economic hardship diminished generation two (G2) educational attainment and relationships with peers, as well as G1 parental investments in G2’s college. In addition, G1 economic hardship was associated with G2 high negative emotionality and low levels of conscientiousness. Moreover, K. Conger et al. (2012) found evidence that these associations were repeated for the third generation (G3) child.

While there is an association between economic adversity and negative family functioning (Brooks-Gunn & Duncan, 1997; Duncan & Brooks-Gunn, 2000; Elder, 1974; Elder, Nguyen, & Caspi, 1985), some families adapt and function well in spite of experiencing economic hardship. As such, researchers have begun to examine possible
reasons why some people may be more resilient to the effects of economic adversity (Bonanno, 2004; Conger & Conger, 2002; Masten, 2001, Walsh, 2012). For example, it may be that personal characteristics such as positivity and optimism help to facilitate resilience to the negative impact of economic hardship (Donnellan, Conger, McAdams, & Neppl, 2009; Taylor, Larsen-Rife, Conger, Widaman, & Cutrona, 2010). Indeed, Conger and Donnellan (2007) found transactional associations between economic conditions and personal characteristics. Despite this evidence, few studies have evaluated these relationships over time (Castro-Schilo, Taylor, Ferrer, Robins, Conger, & Widaman, 2013). Recently, Neppl, Jeon, Schofield, and Donnellan (2014) evaluated how parental positivity can be incorporated into the Family Stress Model to explain resilience to disrupted family processes in the face of economic distress. It was concluded that personal characteristics linked to a positive outlook may foster nurturant parenting, even in times of economic strain. Such parenting may positively influence adolescent development into emerging adulthood.

Thus, the current study expands the work of Neppl et al. (2014) by investigating the association between economic hardship, parental positivity, and positive parenting across three generations. That is, we contribute to this limited literature by examining the intergenerational transmission of economic hardship, parental positivity, and positive parenting from G1 during G2’s adolescence to G2 during adulthood. Furthermore, we examined how this continuity is associated with G3 child positive behavior to G2. This provides an important next step in understanding how positivity can be transmitted across generations to impact child development to those families affected by economic adversity.
CHAPTER 2. ECONOMIC HARDSHIP, POSITIVITY, AND POSITIVE PARENTING ACROSS GENERATIONS

Economic Hardship and the Family

There is evidence to suggest that generation one (G1) economic conditions experienced during generation two’s (G2) adolescence impacts G2 adult economic status. Research shows that financial behaviors and money management skills are transmitted across generations (Allen et al., 2007; Shim et al., 2009; Webley & Nyhus, 2006). According to Mazumder (2005), the intergenerational correlation of economic status from parent to offspring is .60. It is reasoned that parents transmit skills, knowledge, and character traits that help determine their child’s potential work earnings as an adult (Mayer & Lopoo, 2004). Indeed, earlier findings from the ongoing longitudinal study used for the present analyses demonstrated a direct association between G1 parental economic hardship and that of their G2 child grown to adulthood (K. Conger et al., 2012). Therefore, there is reason to believe that G2 adults who grew up in an economically disadvantaged household may face their own financial hardships as adults.

Economic hardship places families at risk for multiple disadvantages which can have profound effects on child and adolescent development (Conger, Conger, & Martin, 2010; Donnellan, Conger, McAdams, & Neppl, 2009; Brooks-Gunn & Duncan, 1997). According to the Family Stress Model (Conger & Conger, 2002), economic hardship is linked to economic pressure which, in turn, leads to an increased risk for parental distress. Parents who are distressed by their economic problems are unable to engage in supportive parenting practices such as being warm, supportive, and involved with their children. These impaired parenting behaviors, in turn, disrupt developmental outcomes
for children (Conger, Conger, & Martin, 2010). Santiago, Wadsworth, and Stump (2011) found that economic stress predicted psychological problems such as anxiety and depression, as well as relationship problems for both parents and children. Living under economic strain may also affect a child’s personality in that they may be more likely to be high on negative emotionality and low on conscientiousness (e.g., K. Conger et al., 2012; Kiernan & Mensah, 2009; Sektnan, McClelland, Acock, & Morrison, 2011). In addition, studies show that children growing up under conditions of economic hardship are at an increased risk of behavioral problems (Evans, 2002) and a decrease in psychosocial adjustment (Bolger, Patterson, Thompson, & Kupersmidt, 1995).

Nevertheless, families may vary in their response to economic hardship (Conger & Conger, 2002). Indeed, parents who are able to maintain their parenting skills, even in the face of hardship, may have children who are more resilient to the impacts of economic adversity. It may be that personal characteristics help foster supportive parenting. For example, Taylor, et al. (2012) found that mothers who were optimistic had fewer internalizing problems and were more nurturing parents, which in turn, led to positive changes in their child’s social development. Neppl et al. (2014) found that family economic pressure was indirectly associated with adolescent positivity through parenting and parental positivity. That is, economic pressure was negatively associated with parent positivity, parental positivity was associated with positive parenting, and both positivity and parenting during early adolescence were related to late adolescent positivity, as well as positivity during emerging adulthood. Taken together, there is evidence to suggest that positive parental disposition and positive parenting may influence similar positive dispositions in their children, even into adulthood.
The Role of Positivity and Positive Parenting

Personal traits and perspectives of self and others play an important role in the process of resilience to economic hardship (see Neppl et al., 2014; Taylor et al., 2012). Indeed, there are certain attributes found to be connected to the concept of resilience. Such attributes include a person’s high self-concept (i.e., self-esteem or self-efficacy), hope and optimism, and positive social skills (i.e., emotion regulation or effective communicative skill) (Wright, Masten, & Narayan, 2013). Having these attributes or personal characteristics has been associated with harmonious inter-parental relationships, close parent-child relationships, positive sibling relationships, and supportive connections with extended family (Wright et al., 2013). In addition, these positive perspectives may be important factors when considering how economic conditions are linked with individual development (Linver, Brooks-Gunn, & Kohen 2002; Caprara, Fagnani, Alessandri, Steca, Gigantesco, Sforza, Stazi, 2009; Conger, Conger, & Martin, 2010). There is evidence to suggest that children who have parents with a positive outlook on life may be more likely to develop a similar positive disposition themselves. This positivity may help children adapt to exposure to stressors and challenges in the future (Neppl, et al., 2014).

In the same way that positive characteristics may be transferred from parent to child, there is also evidence to suggest that positive parenting may be transmitted across generations. That is, those who experience positive parenting throughout childhood may be more likely to be positive during interactions with their own children (Belsky et al., 2005; Chen & Kaplan, 2001; Neppl et al., 2009). Similarly, children raised by positive parents may be more likely to demonstrate greater positive developmental outcomes. For
example, Brody, Murry, Kim, and Brown (2002) found an association between mothers who had a high self-esteem, an optimistic outlook, and competence-promoting parenting, with child cognitive and social competence. Indeed, there is ample evidence to suggest that positive parenting which includes parental warmth and positive expression has a long-term impact on child positive development (Booth, Rose-Krasnor, & Rubin, 1991; Eisenberg, Zhou, Spinrad, Valiente, Fabes, & Liew, 2005; Lengua, Honorado, & Bush, 2007).

While research has shown that economic hardship, positive characteristics, and positive parenting may be transmitted across generations, few studies have examined how these constructs impact the development of the G3 child. Indeed, there is limited research on how positivity may impact development across generations for those families who face economic hardship. Therefore, the current study contributes to this sparse literature by examining the continuity of economic hardship, parental positivity, and positive parenting across generations to assess the impact of these associations on child positive behavior.

**The Present Investigation**

The present investigation evaluated how economic hardship and positive characteristics may impact development across generations. We used data from a two-decade longitudinal study of a cohort of focal adolescents and their families followed from adolescence to adulthood. We measured G1 economic hardship, positivity, and observed positive parenting when G2 were adolescents. G2 economic hardship, positivity, and observed positive parenting were assessed during adulthood, and G3 positive behavior to G2 was assessed during the preschool years. This allows us to test
longitudinal relations between parenting and youth outcomes. This is an important feature of the current study as relatively few studies have tested how the continuity of economic hardship, positivity, and positive parenting impacts G3 child development.

Based on the conceptual model depicted in Figure 1, we tested the prediction that economic hardship, positivity as a personal characteristic, and positive parenting behavior will be transmitted from one generation to the next. We also tested the direct impact of G2 economic hardship, G2 positivity, and G2 positive parenting on G3 positive behavior to G2, while taking into account the continuity of such behavior from G1 to G2 (see Figure 1). We expected that G1 economic hardship, positivity, and positive parenting would be directly related to G2 economic hardship, positivity, and positive parenting to G3. We also expected that economic hardship would be negatively related to parental positivity and positive parenting for both G1 and G2. Finally, we predicted that positivity would be related to positive parenting, with G2 positive parenting being directly associated with G3 positive behavior to G2.

To provide a more rigorous test, the present investigation also controlled for parent education level, age for both parent and child, and gender for parent and child. Previous research shows that these control variables may be related to parenting behaviors. For example, parent education is related to both harsh and positive parenting (Conger & Donnellan, 2007; Davis-Kean, 2005; Fox, Platx, & Bentley, 1995), and younger mothers have an increased chance of negative life outcomes (Pogarsky, Thornberry, & Lizotte, 2006). In terms of child age, mothers with older compared to younger children showed less effective parenting and older sons showed an increase in antisocial behavior (Bank, Forgatch, Patterson, & Fetrow, 1993).
CHAPTER 3. METHODOLOGY

Participants

The present study used data from the Family Transitions Project (FTP) which is a longitudinal study of 559 target youth and their families. The FTP includes two earlier studies: The Iowa Youth and Families Project (IYFP) and the Iowa Single Parent Project (ISPP). In the IYFP, data was collected annually from 451 two-parent families living in 8 rural counties in Iowa from 1989 to 1992. Participants included the target adolescent (G2), their parents (G1), and a sibling within 4 years of age of the target youth. When interviewed in 1989, the G2 target adolescent was in seventh grade (M age = 12.7 years; 236 females, 215 males). Due to the rural nature of the sample, all participants were Caucasian and were primarily lower middle- or middle-class. G1 parents averaged 13 years of schooling and had a median family income of $33,700. Families ranged in size from four to thirteen members, with an average size of 4.94 members. Fathers’ average age was 40, while mothers’ was 38. The ISPP began in 1991 when the target adolescent was in 9th grade which is the same year of school for the IYFP cohort. Participants from each family consisted of a target adolescent child (G2), their single-parent mother (G1), and a sibling within 4 years of age of the target adolescent (N=108). Telephone screeners identified families headed by single mothers who had divorced within 2 years prior to the start of the study. All but three eligible families agreed to participate. The participants were Caucasian, and lower middle- or middle-class, single-parent mother families that lived in the same general geographic area as the IYFP families. Measures and procedures for the ISPP were identical with IYFP; however, ISPP fathers did not participate in the

In 1994, the families from the ISPP and IYFP were combined to create the FTP. At that time, target adolescents from both studies were in 12th grade and participated in the study with their parents as they had during the earlier years of adolescence. Beginning in 1995, the G2 target youth (1 year after completing high school) participated in data collection with their romantic partner or friend. In 1997, the study extended to the first born children (G3) of the target adolescents, now young adults. The G3 children were eligible to participate when they were 18 months of age. By 2005, G3 children in the FTP ranged in age from 18 months to 13 years. Thus, the FTP has followed the G2 target youth from as early as 1989 through 2005.

The present study includes 220 G2 target young adults (M age = 26.31 years; N=220; 60% female) who participated from adolescence through adulthood and who had an eligible child participating in the study by 2005. The data were analyzed using two developmental time periods. The first period includes the G1 parents and G2 target as an adolescent (age 15 and 16). The second period occurs when the G2 target is a parent and includes data when the G3 child was between the ages of 3 and 5 years old (M child age = 3.2 years; boys = 102). Since the same child could participate at age 3-5, we include data only from the first time a child was assessed during that time period to assure that the same child is not counted within that age range multiple times. A total of 186 3-year-olds, 25 4-year-olds, and 9 5-year-olds participated. The means, standard deviations, and factor loadings for all study variables are provided in Table 1.
Procedure

During 1991 and 1992 when the target adolescents were in 9th and 10th grades, all families were visited twice in their homes by a trained interviewer. During the first visit, each family member (mother, father, target adolescent and sibling within 4 years of age) completed questionnaires that included questions about family economics and personality characteristics. During the second visit which occurred within two weeks from the first visit, each family member participated in videotaped structured interaction tasks that were designed to examine family interaction styles. In the present analyses, observer ratings from the discussion task were used. This task involved the G2 target adolescent along with his or her G1 parents engaging in conversation on topics such as chores, family rules, and problems. The task lasted 30 minutes and the quality of the interactions was coded by trained observers using the Iowa Family Interaction Rating Scales (Melby et al., 1998) which has been shown to demonstrate adequate reliability and validity (Melby & Conger 2001).

Beginning in 1997, the G2 target youth, now adults, participated in data collection with their romantic partner and first born child (G3). Each G2 target parent and his or her child were visited once each year in their home by trained interviewers. During these visits, the G2 target parents completed a series of questionnaires which included questions about family economics, personality characteristics, and child behavior. In addition, G2 target parents and their G3 child participated in videotaped structured interaction tasks that included a 5 minute puzzle completion task. This puzzle task was adjusted to be challenging and slightly stressful for the child’s age in order to provoke a stressful situation that would help elicit how well the parent handled the stressful
environment. It was expected that positive and nurturing parents would remain supportive toward the child throughout the task. Trained observers rated the quality of the interactions using the Iowa Family Interaction Rating Scales (Melby et al., 1998).

**Measures**

**G1 and G2 Family Economic Hardship**

Economic hardship for G1 (1991-1992) and G2 (1997-2005 when the G3 child was between three and five years of age) was measured as a latent construct with two indicators: low income-to-needs and the number of years poor during G2’s adolescence, as well as in adulthood (see K. Conger et al., 2012). Low income-to-needs ratio for both G1 and G2 was calculated for each family by dividing total family income by the poverty level for a family of a given size (see U.S. Bureau of the Census, 1989), and then multiplied by -1 so that a high score reflects a low income level. For the number of years poor, a dichotomous variable was created for G1 indicating whether the family was at or below 150% of the poverty level (1 = at or below 150% of poverty level), and was averaged across the two years. For G2, a dichotomous variable was created that assessed whether the family was at or below 150% of the poverty level or not. All items were coded to indicate high levels of economic hardship.

**G1 and G2 Parental Positivity**

G1 Parental positivity was measured as a latent construct that included three indicators: mastery, self-esteem, and positive emotion (see Neppl et al., 2014). G1 positivity was collected from both the mother and father in 1991-1992 during the target’s adolescence, while G2 positivity was collected from the target parent during adulthood when their G3 child was first assessed between three and five years of age (1997-2005).
The scale of mastery (Perlin, Lieberman, Menaghan, & Mullan, 1981) included seven statements to which G1 parents responded on a 5-point Likert scale. Parents were asked to report on how strongly they agreed with statements such as “I can do just about anything I really set my mind to”, “I often feel helpless in dealing with the problems in my life”, and “sometimes I feel that I am being pushed around in life”. All items were averaged for each parent, then averaged across mother and father responses and coded to indicate high levels of mastery. Scores were internally consistent for both mothers (alpha = .91) and fathers (alpha = .87).

The second indicator for G1 positivity was self-esteem (Rosenberg, 1965) which included 10 questions such as: “All in all, I am inclined to feel that I am a failure”, “I take a positive attitude toward myself”, “I certainly feel useless at times”, and “At times I think I am no good at all.” Responses ranged from 1=strongly agree to 5=strongly disagree. A total of 10 self-reported items were combined for mothers (alpha = .95) and fathers (alpha = .91). All items were averaged and coded in order to reflect a high level of self-esteem.

The last indicator for G1 positivity was the positive emotion scale from the NEO Personality Inventory (Costa & McCrae, 1985). This scale included 10 questions such as: “I have never literally jumped up for joy”, “I am not a cheerful optimist”, and “Sometimes I bubble with happiness, I am cheerful, high-spirited person.” All items ranged from 1 = strongly agree to 5 = strongly disagree and were averaged and coded to indicate high levels of positive emotions. Scores were internally consistent for both mothers (alpha = .91) and fathers (alpha = .90).

G2 parental positivity was measured with three indicators: Self-mastery, positive
affection, and coping skills (see Neppl et al., 2014). The scale of G2 self-mastery was the same as what was used for G1 parents. G2 self-mastery (Perlin, et al., 1981) was assessed with seven items measured on a five point scale ranging from strongly agree to strongly disagree. Item responses were averaged (alpha = .76). G2 parents completed an assessment of positive affect (Rand Health Science Program, 1986). This scale included six questions such as: Responses ranged from 1 = strongly agree to 5 = strongly disagree. A total of 6 items were averaged together (alpha = .87). Coping (Conger, 1993) consisted of four items asking the G2 parent when he/she has a problem, how much does he/she try to figure out the cause and do something about it, try to forget about it, try to do things that will keep him/her from thinking about it, and try to talk to other people about it. Each item ranged from 1 = strongly disagree to 5 = strongly agree. All items were coded to indicate high levels of coping and averaged (alpha = .56).

**G1 and G2 Positive Parenting**

Observer ratings were used to assess both G1 behavior to the G2 target during adolescence (1991, 1992), as well as G2 parent behavior toward their G3 child (1997-2005). All behaviors were measured by a 9-point scale, ranging from low (no evidence of the behavior) to high (the behavior is highly characteristic of the parent) and coded by a trained observer. Positive parenting was assessed by parental warmth, communication, listener responsiveness, assertiveness, and prosocial behavior toward their child. Warmth measures praise, care, and concern for the child. Communication involves the use of reason and explanation of the child’s point of view. Listener responsiveness entails attending to and validating child verbalizations through nonverbal and verbal assents. Assertiveness is the manner and style of confident and positive expression while
exhibiting patience with the responses of the child. Prosocial behavior measures the parental effective relationship with their child. Such behavior includes cooperation, sensitivity, helpfulness, and willingness.

During the G1 parent to G2 adolescent family discussion task, parents and their children discussed questions written on a series of cards which included items about school activities, family rules, and parental discipline. First, the person who read the card was instructed to read each question and answer first, then, the other family members answered next. Finally, everyone talked together about the answers that had been given. Families were instructed to go on to the next card once they felt as though they had said everything they wanted to about each question. During the G2 parent to G3 puzzle completion task, parents were asked to let the child independently solve the puzzle on their own, but the parent could offer any assistance they felt was necessary. For G1 positive parenting, maternal and paternal scores were averaged together and were internally consistent (alpha=.89). For G2 positive parenting, G2 target positive parenting scores were averaged and were internally consistent (alpha=.87).

**G3 Positive Behavior to G2**

Observational data collected during the same G3 puzzle completion task was utilized to assess G3 positive behavior toward the G2 parent. All behaviors were measured on a 9-point scale, ranging from low (no evidence of the behavior) to high (the behavior is highly characteristic of the parent) and coded by a trained observer. G3 positive behavior to G2 was also measured as a manifest variable including the same five positive scales used for G2 parenting: warmth, communication, listener responsiveness, assertiveness, and prosocial behavior. Warmth includes expressions of care, concern,
support, or encouragement toward the parent. Communication measures the child’s ability to positively express his/her own point of view, needs, and wants. Listener responsiveness entails attending to and validating parent verbalizations through nonverbal and verbal assents. Assertiveness measures the child’s ability, when speaking, to express him/herself through clear, appropriate, neutral and positive avenues using an open, straightforward, self-confident, non-threatening and non-defensive style. Prosocial behavior includes cooperation, sensitivity, sympathy, and respectfulness toward the parent in an age-appropriate manner. G3 positive behavior to G2 scores were averaged and were internally consistent (alpha=.68).

Control Variables

The control variables included G1 (0 = kindergarten to 20 = education beyond a master’s degree) and G2 education (1 = less than high school to 8 = Ph.D. or professional degree), G2 gender (0 = male, 1 = female), age at the time their G3 child participated in this study, as well as G3 gender and age
CHAPTER 4: RESULTS

Correlations Among Constructs

Table 2 shows the zero-order correlations among theoretical constructs. Consistent with theoretical predictions, G1 economic hardship was significantly correlated with G2 economic hardship ($r = .31, p < .01$), G1 parental positivity was significantly correlated with G2 parental positivity ($r = .35, p < .000$), and G1 positive parenting was significantly correlated with G2 positive parenting ($r = .23, p < .01$). In addition, G1 economic hardship was negatively correlated with G1 positivity ($r = -.31, p < .000$) and G1 positive parenting ($r = -.17, p < .05$), and G1 parental positivity was positively correlated with G1 positive parenting ($r = .28, p < .000$). In a similar pattern, G2 economic hardship was negatively correlated with G2 positivity ($r = -.32, p < .01$) and G2 positive parenting ($r = -.43, p < .000$), and G2 parental positivity was positively correlated with G2 positive parenting ($r = .28, p < .000$). Finally, G2 positivity and G2 positive parenting were both positively correlated with G3 positive behavior to G2 ($r = .17, p < .05$; $r = .40, p < .000$ respectively).

Structural Equation Models

Structural equation modeling was analyzed using Mplus Version 7 (Muthén & Muthén, 2012) with standard coefficients used for all paths in the model, as several variables have different ranges in measuring. Any missing data from the present investigation were handled by Full Information Maximum Likelihood (FIML; Muthén & Muthén, 2012). FIML is widely used and recommended for dealing with missing data in a longitudinal research study. The SEMs were estimated based on our hypotheses which include all of the control variables in the analyses: parents’ and target’s education levels,
age, and gender for both target parent and child. Final model tested whether the paths differ in significance between G1 and G2 family context. That is, parallel paths between G1 and G2 were equated in the final model. For example, the regression weight of the paths from G1 economic hardship to G1 positive parenting was equated to the same value as the regression weights associated with the paths from G2 economic hardship to G2 positive parenting. According to chi-square difference test, the final model was not significantly different with the previous model which was not equated.

Several types of indicators were used when evaluating the fit of the structural model to the data. First, the standard chi–square index of statistical fit that is routinely provided under maximum likelihood estimation of parameters was evaluated. Two indices of practical fit, the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993) and the comparative fit index (CFI; Hu & Bentler, 1999) were also used. RMSEA values under .05 indicate close fit to the data, and values between .05 and .08 represent reasonable fit (Hu & Bentler, 1999). For the CFI, fit index values should be greater than .90, and preferably greater than .95, to consider the fit of a model to the data to be acceptable. This model showed a good fit, $\chi^2 = 164.949$, $df = 133$, $p = .031$, CFI = .954, TLI=.946, RMSEA = .033, and was the model used for our primary analyses. G1 and G2 economic hardship had standardized loadings of .53 or higher. Parental positivity had standardized loadings of .62 or higher. Standardized coefficients from the final model which reached statistical significance are presented in Figure 2.

Consistent with theoretical predictions, there was intergenerational continuity of economic hardship, positivity, and positive parenting across G1 and G2. That is, G1 economic hardship was significantly associated with G2 economic hardship when G2
targets were parents ($\beta = 36^{**}$, SE=.12). Similarly, G1 positivity predicted G2 positivity ($\beta = 30^{***}$, SE=.08) and G1 positive parenting was significantly related to G2 positive parenting ($\beta = .13^*$, SE=.06). Results also indicated that G1 economic hardship was negatively associated with G1 positivity ($\beta = -.31^{***}$, SE=.07) which, in turn, was associated with G1 positive parenting ($\beta = .21^{***}$, SE=.06). G2 economic hardship was negatively associated with G2 positivity ($\beta = -.27^{***}$, SE=.07) which, in turn, was related to G2 positive parenting ($\beta = .19^{***}$, SE=.05). Furthermore, G1 economic hardship was related to G1 positive parenting ($\beta = -.16^*$, SE=.07), and G2 economic hardship was also related to G2 positive parenting ($\beta = -.13^*$, SE=.07). Finally, G2 positive parenting was significantly associated with G3 positive behavior to G2 ($\beta = .51^{***}$, SE=.06). In terms of the control variables, G1 positive parenting was related to G1 parental education ($\beta = .16^*$, SE=.07) and G2 positive parenting was related to G2 education level ($\beta = .20^{**}$, SE=.07) as well as G2 target age ($\beta = .24^{***}$, SE=.07).
CHAPTER 5: DISCUSSION

The present investigation applied aspects of the Family Stress Model using a family resilience framework to examine the intergenerational continuity of economic hardship, positivity, and positive parenting across generations. Furthermore, we examined how this continuity is associated with positive behavior of the third generation child. Therefore, the current study contributes to this sparse literature by clarifying the relationship among economic hardship, positive family processes, and child outcomes over time.

As hypothesized, G1 economic hardship during G2 adolescence was associated with G2 economic hardship during adulthood. This is consistent with prior research that demonstrates the transmission of poverty and low SES from parents to their children (Mazumder, 2005; Conger et al, 2012). The analyses also revealed continuity between G1 and G2 positivity. This extends the work of Neppl et al., (2014) which showed that G1 parental positivity during G2’s early adolescence was associated with G2’s positivity from late adolescence (18 years) to emerging adulthood (21 years). The unique contribution of the present study is that it extends G2 positivity into later adulthood (\(M\) age = 26.31 years) That is, the present study supports the notion that a positive disposition may be transmitted from one generation to the next which can extend from adolescence into the later adulthood years.

In a similar pattern, the present study shows that positive parenting was transmitted from G1 to G2. This result confirms previous research which suggests that individuals who experience positive parenting when they are younger are more likely to show positive parenting to their own children (Belsky et al, 2005; Chen & Kaplan, 2001;
Neppl et al, 2009). Furthermore, G1 and G2 positivity was associated with positive parenting styles even in the face of economic hardship. The results replicate and extend many studies examining how positive parental disposition is related to positive behaviors which, in turn, influence their children’s development (Brody et al., 2002; Castro-Schilo et al., 2013; Taylor et al., 2010; Taylor et al., 2012). Most importantly, the results show that G3 child positive behavior to G2 can be explained, at least in part, by G2 positive parenting, while taking into account the continuity of positivity and positive parenting from G1 to G2. It is noteworthy that within the context of economic hardship, the more parents maintained positivity and the more parents positively behaved toward their children, the more likely the G3 child was to display positive behavior toward their parents.

Altogether, the results provide evidence that G1 positivity and positive parenting can be transmitted to their G2 children. Likewise, G2 positivity and positive parenting was associated with G3 positive child development. These findings contribute to the overall literature of positive psychology. That is, in spite of economic hardship, some families are more likely to maintain their positive dispositional traits which can provide advantages to not only their emotional and psychological well-being, but also have subsequent advantages across generations.

We should also consider other alternative explanations for some of the present findings. For example, our findings show that both G1 and G2 parental positivity were negatively associated with economic hardship. What is not clear, however, is the extent to which these findings may be related to hereditary factors. It may be that genetic factors help to explain this association. Thus, future research should examine interactions
between genetic and environmental factors in relation to personality traits, and also investigate how these interactions might be related to the intergenerational continuity of personality characteristics. Furthermore, future research could investigate how positivity is associated with economic hardship over time. Growth curve modeling would be effective in identifying the pathways from positivity to economic hardship based on Social Selection Theory which maintains that individual characteristics may be reciprocally related to their economic conditions (Conger and Donnellan, 2007). That is, as an individual characteristic such as having a positive personality might influence economic hardship across time.

There are limitations worth noting. First, parental positivity and adolescent positivity were measured with slightly different scales. Since some scales, such as self-esteem and positive emotion were not available in certain waves, we utilized scales based on previous literature (Caprara et al., 2012; Neppl et al, 2014), which measure positive characteristics. Second, our sample comes from the Midwest which is mainly white. This lack of racial, ethnic, and geographic diversity may limit the generalizability of results, and other researchers may wish to use data with greater diversity if possible. Nevertheless, previous research using data from the Family Transitions Project (FTP) has shown evidence of human developmental pathways, marital relationships, and relationships between parents and children in the family context (Conger & Conger, 2002; Conger, Conger, & Martin, 2010; Donnellan, Conger, McAdams, & Neppl, 2009; K. Conger et al, 2012). Furthermore, the Family Stress Model which was developed with this sample (Conger & Conger, 2002) has been extended to other studies using diverse ethnic groups.
(Taylor, et al., 2010; Taylor, et al, 2012) with consistent findings across the various studies.

In closing, the current results suggest that parental positive characteristics and positive parenting practices may contribute to a child’s positive characteristics and their later parenting practices across generations. This is an important finding with potential applied implications. In practical counseling settings, clinicians have tried to relieve negative feelings such as depression and anxiety of people experiencing economic hardship. The current findings can motivate policy makers and clinicians to use positive approaches to encourage positivity for people facing economic difficulties. That is, educational and preventive interventions could be designed to promote positive personal traits and positive parenting. Current positive psychotherapy has utilized the perspective of positive psychology (Seligman, Rashid, & Parks, 2006). For example, positive psychologists teach college students to encourage positive emotions every morning by taking memos regarding positive experiences. This simple technique increased positive emotion in daily life. In a similar way, researchers could apply positive education curricula with preschoolers. For instance, positive storytelling using picture books and educational materials might help children foster their positive thinking processes. Moreover, in order to promote parental positivity, teachers could emphasize to parents how parental positivity and positive parenting affects their children’s positive behavior. In addition, researchers can develop parental education programs which promote parental positivity and positive parenting. The present findings suggest that such intervention efforts could help parents increase their resiliency and parent their children in positive ways which can affect a young child’s holistic development.
APPENDIX. INSTITUTIONAL REVIEW BOARD APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515-294-4560
FAX 515-294-4207

Date: 8/1/2013
To: Dr. Tricia Neppl
2358 Palmer

From: Office for Responsible Research
Title: Family Transitions Project, FTP
IRB ID: 12-000

Approval Date: 8/1/2013
Date for Continuing Review: 2/2/2014
Submission Type: Modification
Review Type: Expedited

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- Use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.
- Retain signed informed consent documents for 3 years after the close of the study, when documented consent is required.
- Obtain IRB approval prior to implementing any changes to the study by submitting a Modification Form for Non-Exempt Research or Amendment for Personnel Changes form, as necessary.
- Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.
- Stop all research activity if IRB approval lapses, unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.
- Complete a new continuing review form at least three to four weeks prior to the date for continuing review as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. Approval from other entities may also be needed. For example, access to data from phate records (e.g., student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. IRB approval in no way implies or guarantees that permission from these other entities will be granted.

Upon completion of the project, please submit a Project Closure Form to the Office for Responsible Research, 1138 Pearson Hall, to officially close the project.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4560 or IRB@astats.edu.
INSTITUTIONAL REVIEW BOARD (IRB)
Amendment for Personnel Changes

Title of Project: Family Transitions Project, FTF

Principal Investigator (PI): Tricia Neppi
University ID: 29167966245
Phone: 294-4502, 233-4064
Email Address: tsnehpl@iastate.edu

Degrees: PhD

FOR STUDENT PROJECTS (Required when the principal investigator is a student.)
Name of Major Professor/Supervising Faculty:
University ID:
Phone:
Email Address: @iastate.edu

JUL 29 2013

Changes in Key Personnel:
Key personnel includes any individuals who will have contact with the participants or the participants' data (e.g., interviewers, transcribers, coders, etc.). This information is intended to inform the committee of the training and background related to the specific procedures that each person will perform on the project. For more information, please see Human Subjects - Persons Required to Obtain IRB Training. Personnel who will have contact with human blood, specimens, or other biohazardous materials must also complete Bloodborne Pathogens Training. If the principal investigator has or will change, a complete new IRB application is required.

List any individuals to be removed from the study staff: Kelsey Horstman

Complete the following table to list any new key personnel:

<table>
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<tr>
<th>NAME</th>
<th>Interpersonal contact with subjects, or access to subjects' identifiable data?</th>
<th>Involved in the consent process?</th>
<th>Contact with human blood specimens, or other biohazardous materials?</th>
<th>Other Roles in Research</th>
<th>Qualifications (i.e., special training, degrees, certifications, coursework, etc.)</th>
<th>Human Subjects Training Date</th>
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<td>Shiryung Jean</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
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FOR IRB USE ONLY
☑ All human subjects training requirements have been met.

IRB Reviewer Signature: [Signature]
Date: [Date]

Office for Responsible Research: 08/26/11
Table 1

Descriptive Statistics for Study Variables (N = 220)

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<th>Variables</th>
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<td>Low income-to needs</td>
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<td>State of poverty</td>
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<td>Self-mastery</td>
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<td><strong>G2 Economic Hardship</strong></td>
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### Table 2

*Correlations between the Variables Used in Analyses*

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<td>.23**</td>
<td>-.43***</td>
<td>.28***</td>
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<td>.17*</td>
<td>.40***</td>
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<td>8. G1 Education Level</td>
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<td>9. G2 Education Level</td>
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<td>-.41***</td>
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<td>-.01</td>
<td>-.12†</td>
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<td>12. G3 Age</td>
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*Note.* †p < .10, *p < .05, **p < .01, ***p < .001,
Figure 1. Conceptual Model
Figure 2. Structure Equation Model

Time 1
G2 Adolescence

Time 2
G2 Adulthood

*p < .05, **p < .01, ***p < .001, Model fit: $\chi^2 = 164.949, df = 133, p = .031, CFI = .954, TLI = .946, RMSEA = .033
REFERENCES


