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Stress and Child Development: A Review of the Family Stress Model

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### Abstract

In the present report, we provide an illustrative review of the Family Stress Model (FSM) framework<sup>1</sup> to understand how family stress influences children across development in physical, social-emotional, and cognitive domains. We note that the FSM as a theory has evolved through inspection of: (a) new explanatory pathways (mediators); (b) factors that moderate FSM pathways; and (c) joint tests of competing models. Also important, most researchers cited in this review used longitudinal designs to test the proposed causal ordering of FSM pathways, which replicated among a diverse set of families varied in structure, ethnic background, and geographic location. We encourage continued FSM scholarship with prevention and intervention efforts in mind.

### Stress and Child Development: A Review of the Family Stress Model

Acute and chronic stressors put parents and children at risk for experiencing psychological as well as relational problems. For instance, individuals report similar symptoms of distress (e.g., hopelessness; anxiety; frustration) in response to natural disasters<sup>2</sup>, caring for an aging parent or child with special needs<sup>3,4</sup>, neighborhood disorder<sup>5</sup>, and acculturative stress<sup>6</sup>, to name a few. Over time, personal distress may strain family relationships and disrupt parenting, eventually threatening the health and wellbeing of children living in the home. We consider the Family Stress Model (FSM)<sup>1,7,8,9</sup> as a useful framework for understanding the family stress process and its potential impact on children's lives. Although the FSM focuses on economic stress and family functioning, we suggest that it also applies to various environmental stressors.

As illustrated in Figure 1, the FSM outlines a theoretical process by which economic hardships and pressures (Boxes 1 and 2) exacerbate child and adolescent maladjustment (Box 5) primarily through parents' psychological distress (Box 3), interparental relationship problems (Box 4a), and disrupted parenting (Box 4b). Box 6 involves additional risk factors that may intensify and protective factors that may dampen the family stress process. Since proposed by Conger and his colleagues<sup>8,9</sup>, there have been at least three published reports that review systematically the extent of empirical support for the FSM<sup>1,7,10</sup>. At the time of publication (2002, 2008, and 2010), these reviews provided a good deal of evidence in support of the FSM; however, several new directions for inquiry were identified so that it could be expanded upon and improved as a heuristic framework.

Specifically, Barnett<sup>10</sup> urged that future researchers consider diversity in the definition of family to include ethnic minorities as well as family structures outside the nuclear, two-parent household. Motivated by a need to target earlier points of intervention and prevention, Barnett<sup>10</sup>

also encouraged empirical tests of the family stress process among families with younger children since at that time, most FSM replications involved families with older, adolescent children. Conger and his colleagues<sup>1</sup> also recommended that more longitudinal studies were necessary in order to evaluate the proposed temporal ordering of pathways in the FSM; indeed, most of the studies cited in the Conger et al. review relied on cross-sectional designs. They also encouraged elaboration and extension of the FSM to include joint tests of competing models (e.g., the Family Investment Model), new mediating or explanatory pathways, and new tests for moderation<sup>see also 7, 11</sup>. Simply put, the FSM as a framework necessitated further empirical inquiry. The purpose of this review is to highlight mounting empirical support for the FSM consistent with these recommended additional tests of the model.

To guide our efforts, we searched relevant key words in scholarly databases (e.g., PsycINFO) and due to space constraints, we limited our investigation to articles in peer-reviewed journals that were published after the 2010 Conger et al.<sup>1</sup> review. Indeed, a number of recently published reports involving diverse families replicate FSM predictions as shown in Figure 1. The FSM has also been expanded upon as a theory and elaborated in ways that consider new mediating and moderating variables specific to culture and context. Moreover, the FSM holds up in joint tests of competing models. In the following sections, we provide an illustrative review of this recent work by considering each step of the FSM process outlined in Figure 1.

### **From Economic Hardship to Economic Pressure (Box 1 → Box 2)**

The FSM begins with economic *hardships* (Box 1) which include low income or negative financial events (e.g., job loss). Economic hardship is hypothesized to generate economic *pressures* (Box 2), which represent the day-to-day strains and hassles that unstable economic conditions create for families such as difficulty paying bills or being unable to purchase basic

necessities due to financial need. Accordingly, economic pressures give psychological meaning to financial hardship.

In our search, we found that the hypothesized FSM pathway from economic hardship (Box 1) to economic pressure (Box 2) has been recently replicated in single-parent and two-parent families who were either married or cohabiting<sup>12, 13</sup> as well as in stepfamilies<sup>14</sup>. Moreover, this link appears relevant for European American, African American, Asian American and Hispanic families living in the U. S.<sup>12, 13, 15, 16</sup> as well as families living outside the U. S.<sup>17</sup>. In the next hypothesized step of the FSM, economic pressures that are generated by hardship cause psychological distress for parents (Box 3).

### **From Economic Hardship and Pressure to Parents' Psychological Distress (Box 1 → Box 2 → Box 3)**

According to the FSM, economic pressure (Box 2) helps to explain (i.e., mediates) the association between economic hardship (Box 1) and parents' psychological distress (Box 3). We found a handful of recent reports that support this proposition. For example, low income as well as negative financial events predicted economic pressure among African-American caregivers, which, in turn, predicted depressive symptoms, feelings of discouragement, and hopelessness<sup>12</sup>. Likewise, in a sample of European American and African American mothers living in rural poverty, low-income-to-needs predicted economic pressure, which subsequently led to more depression, somatization, anxiety, and hostility<sup>13</sup>. Similar indirect effects from economic hardship (Box 1) to parents' psychological distress (Box 3) through increases in economic pressure (Box 2) have been reported in multi-ethnic families representing various family structures<sup>15, 16, 18, 19</sup>. It is important to note that the majority of these studies were longitudinal with the correct temporal ordering between constructs. In the next steps of the FSM, parents'

psychological distress is expected to increase the likelihood that they will experience problems in the interparental or marital relationship.

#### **From Parents' Psychological Distress to Interparental Relationship Problems (Box 3→Box 4a)**

Several recent reports find support for the FSM hypothesis that psychological distress (Box 3) produced by economic hardship and pressure causes problems in the interparental or marital relationship (Box 4a). We found that economically-influenced parental distress marked by depression, anxiety, and/or hostility was associated with more conflict and less support in: (a) African American couples as well as caregivers who were not romantically involved<sup>12, 20</sup>; (b) European American couples<sup>16, 21</sup>; and (c) a nationally representative sample of retired couples<sup>22</sup>. In an extension of the FSM involving first-generation Mexican immigrant couples, Helms and her colleagues<sup>23</sup> found that depressive symptoms, as influenced by both economic pressure and acculturative stressors, predicted negative perceptions of the marriage as well as lower relationship satisfaction for both husbands and wives. These results highlight the importance of considering additional mediators specific to family culture and context. Next, the FSM proposes that parents' psychological distress (Box 3) tends to disrupt parenting of children (Box 4b).

#### **From Parents' Psychological Distress to Disrupted Parenting (Box 3→ Box 4b)**

A handful of recent reports indicate that depression and other forms of psychological distress (e.g., anxiety), as influenced by economic stress, are prospectively linked to: (a) insensitive and unsupportive parenting practices toward three-year-old children<sup>13</sup>; (b) reductions in both the quality and quantity of time spent interacting with two-year-old children<sup>15</sup>; (c) harsh parenting toward 6-to 10-year old children<sup>16</sup>; (d) less provision of social and cognitive enrichments for 5-year-old children<sup>24</sup>; (e) punitive and over-controlling behaviors toward 6-year-

old children<sup>25</sup>; and (f) heightened risk for child abuse and neglect in the preschool years<sup>26</sup>. Importantly, many of these studies involved parents of pre-adolescent children, addressing recommendations by Barnett<sup>10</sup> and Conger et al.<sup>1</sup> in their earlier reviews of the literature.

Also important, we found that these FSM pathways had been expanded to include new mediators and moderators. For example, Emmen and her colleagues<sup>25</sup> demonstrated that the association between low SES and disrupted parenting practices was not only mediated by maternal psychological distress, but also by acculturative stressors for ethnic minority mothers living in the Netherlands. In terms of moderation, Landers-Potts and her colleagues<sup>12</sup> found that economically-stressed parents were most likely to behave in a hostile fashion toward their adolescent when they were also experiencing high levels of caregiver conflict. In other words, conflict between parents exacerbated disruptions in parenting. The results of this study bring up an important question concerning the causal ordering between Boxes 4a and 4b.

In a few studies, we found that hostility in the caregiver relationship prospectively predicted hostile parenting behaviors toward adolescents over time<sup>12, 16, 19, 27</sup>; however, the reverse may also be true. That is, disruptions in parenting might influence the behavior between parents in their marital or caregiving relationship. Neppl and her colleagues<sup>16</sup> reported a concurrent correlation of .36 between couple conflict and harsh parenting but it is not known from this report or any others whether disruptions in parenting *precede* interparental relationship problems. To illustrate the possibility of spillover in disrupted parenting and interparental relationship problems, we place bi-directional arrows between Boxes 4a and 4b in Figure 1. In the next section, we discuss the remaining step in the family stress process from disrupted parenting (Box 4b) to child and adolescent maladjustment (Box 5).

### **From Disrupted Parenting to Child and Adolescent Maladjustment (Box 4b→5)**



The family stress process, as reviewed here, culminates with child and adolescent adjustment. When economic stress depletes the psychological and relational resources of adults with children, they may resort to inconsistent or harsh disciplinary practices, might monitor their children less frequently, or may withdraw their support and affection. Indeed, several recent studies provide support for the hypothesis that these kinds of parenting practices are prospectively linked to: (a) externalizing problems in early childhood<sup>16</sup> as well as adolescence<sup>19, 28</sup>; (b) adolescent drinking problems<sup>18</sup>; (c) increases in conduct disorders during childhood and adolescence<sup>27, 29</sup>; (d) problems with preschoolers' literacy and math performance<sup>15</sup>; (e) internalizing symptoms in early childhood<sup>30</sup>, middle childhood<sup>12</sup> as well as in adolescence<sup>28</sup>; and even (f) poor physical health<sup>31</sup>. Moreover, in joint statistical testing of the FSM and the Family Investment Model (FIM) e.g.,<sup>32</sup>, the FSM better captured the processes linking economic hardship to disruptions in parenting that led to increases in conduct problems among African-American adolescents<sup>27</sup> and to decreases in children's school readiness among European American, African American, and Hispanic families<sup>15</sup>.

Conversely, there is also support in the FSM literature that positive or adaptive parenting practices are linked to child wellbeing, even in the face of economic stress. For instance, parents who engaged in warm and supportive behaviors toward their child were more likely to have preschoolers who were securely attached and engaged in self-regulatory behaviors, which in turn, predicted better cognitive outcomes in first grade<sup>24</sup>. In brief, several researchers noted that positive parenting behaviors were associated with child and adolescent increases in mastery, prosocial behavior, optimism, and healthy eating behaviors<sup>21, 33, 34, 35</sup> as well as reductions in internalizing symptoms, delinquency, and risky health behaviors<sup>21, 34</sup>.

### **Box 6: Risk or Protective Factors that Moderate the Family Stress Process**

Box 6 contains individual, family, or community influences that may exacerbate the family stress process or, conversely, mitigate it. As such this box represents promotive variables that directly predict Boxes 1-5 (i.e., statistical main effects) or protective variables that interact with Boxes 1-5 to predict an outcome of interest (i.e., statistical interaction effects). In terms of main effects, McConnell, Breitzkreuz, and Savage<sup>36</sup> reported that parental social support was associated with less parenting stress, more effective parenting, and positive child outcomes. Similarly, effective coping strategies predicted fewer depressive symptoms over time for both mothers and fathers<sup>37, 38</sup>.

In terms of protective interaction effects, Mexican American mothers who maintained a sense of optimism reported fewer internalizing problems<sup>39</sup> and endorsement of familism values promoted parental warmth despite high levels of economic pressure<sup>28, 40, 41</sup>. Among European American couples who reported high levels of economic pressure, effective problem solving helped decrease hostile and angry behaviors toward one another over time<sup>42</sup>. Finally, Krishnakumar and colleagues<sup>17</sup> found that among African and West Indian families, neighborhood support helped reduce the association between harsh parenting and childrens' behavioral problems.

Box 6 also represents additional risk factors that exacerbate the stress process. Ponnet<sup>19</sup> reported that financial stress had the strongest impact on depressive symptoms in low-income families relative to middle-income families. Moreover, in a sample of Mexican-American families, neighborhood adversity coupled with harsh parenting predicted rank-order increases in adolescents' externalizing and internalizing symptoms<sup>28</sup>. Conger and his colleagues recommended a closer inspection of moderators in their 2010 review. Although some progress

has been made, we believe that this portion of the FSM requires additional theoretical development and empirical evaluation.

### **Summary**

At present, we find continued support for the family stress pathways outlined in Figure 1. New explanatory pathways and joint tests of competing models have arguably strengthened and expanded the FSM as a framework. Importantly, the majority of studies reviewed used longitudinal designs with the correct temporal ordering of events and participating families were diverse in terms of structure, geographic location, and ethnic background. Family stress researchers have paid increasing attention to development at earlier points in time, which may ultimately lead to earlier prevention efforts. Continued research of this kind has the potential to make a real and positive difference in the lives of parents and children.

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The full Family Stress Model as presented in Figure 1 was supported in a sample of 422 African American families with an adolescent child living in the home (two-parent, not necessarily married couple families) in a longitudinal, multi-method design. Marital or co-parent conflict exacerbated the association between: (a) economic pressure and hostile parenting practices; and between (b) economic pressure and adolescent internalizing problems.

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Using an actor-partner independence model, the authors found support for the full Family Stress Model (Figure 1) in a sample of 798 Belgian families with an adolescent child living in the home; however, the family stress process appeared to operate differently in low-income families relative to middle- and high-income families (e.g., higher levels of financial stress, more maternal depressive symptoms). Gender differences in the pathways for mothers and fathers were also found.

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Economic pressure and health and weight management behaviors in African American couples: A family stress perspective. *Journal of Health Psychology, 20*(5), 625-637.

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Using actor-partner independence models in a longitudinal design, the path from economic pressure → health and weight management behaviors was mediated by depressive symptoms and lowered spousal support for both husbands and wives ( $N = 506$  African American couples). Spousal support also buffered against poor health and weight management behaviors for husbands, but not for wives.

21. Lee, T. K., Wickrama, K. S., & Simons, L. G. (2013). Chronic family economic hardship, family processes and progression of mental and physical health symptoms in adolescence.

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This longitudinal study involved families from the National Institute of Child Health and Human Development's (NICHD) Study of Early Child Care and Youth Development ( $n = 1,023$ ). In structural equation models, low income and parental depression predicted less positive parenting behaviors, which then prospectively predicted child cognitive outcomes in 1<sup>st</sup> grade through child attachment and self-regulation in preschool.

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In an African American sample of families ( $N = 422$ ), authors examined longitudinal pathways from economic distress to adolescent conduct problems via a suite of mediating variables



(controlling for earlier levels of conduct problems) using two competing models: the Family Stress Model (FSM) and the Family Investment Model (FIM). Structural equation models identified the FSM as a better representation of the family stress process for these families.

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The authors incorporated culturally and contextually relevant variables in their tests of Family Stress Model pathways in a sample of Mexican American parent-child dyads ( $N = 749$  mother-child;  $N = 467$  father-child). Familism and neighborhood adversity moderated some of the stress pathways, but different effects emerged between dyads (mother-child vs. father-child) as well as by reporter (parent vs. child).

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In a longitudinal, multi-method study involving three generations of family members ( $N = 220$  families), results demonstrated considerable continuity in economic hardship, positivity (mastery, high self-esteem, and positive emotion), and positive parenting behaviors from one generation to the next. In support of the Family Stress model across generations, economic hardship predicted less positivity as well as less positive parenting behaviors.

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- Results from this longitudinal, multi-method study indicated that, consistent with the Family Stress Model, economic pressure predicted rank-order increases in hostile, contemptuous, and angry behaviors in two generations of couples ( $N = 367$  first-generation couples;  $N = 311$  second-generation couples). Couples who were effective problem solvers experienced no

increases in these hostile behaviors over time, thus highlighting one potential source of family resilience in the face of economic stress.

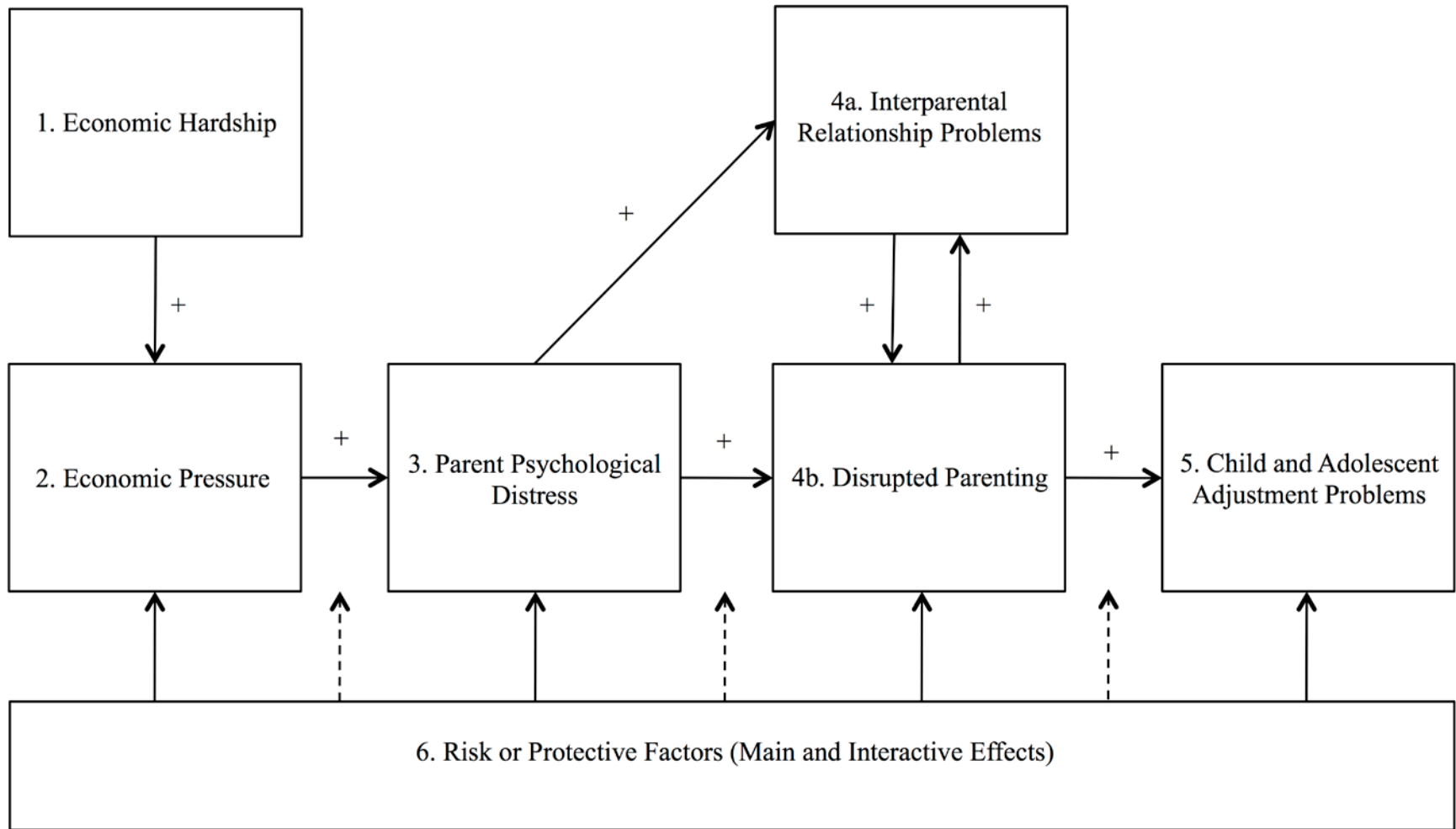


Figure 1. The Family Stress Model outlines a process in which economic stressors influence child and adolescent adjustment through various mediating pathways. Solid arrows stemming from Box 6 represent main effects whereas broken arrows represent interactive effects. Model adapted from Conger, Conger, and Martin (2010) and Conger and Conger (2002).