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Parent and Adolescent Responses to Poverty-Related Stress: Tests of Mediated and Moderated Coping Models

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We tested several models of the associations among economic strain, life stress, coping, involuntary stress responses, and psychological symptoms in a sample of 57 parent-adolescent dyads from rural, lower-income families. Economic strain and life stress predicted symptoms for both parents and adolescents. Stressor-symptom specificity was found for parents, such that economic strain uniquely predicted depression, whereas negative life events predicted hostility. Involuntary stress responses were associated with higher levels of symptoms for both parents and the adolescent children. Secondary control coping was associated with fewer symptoms for both parents and adolescents. Results support a mediational role of coping and responses to stress during adolescence, with a shift to moderational status in adulthood. Implications of these results are discussed with regard to developmental coping theory and potential interventions with at-risk families.

KEY WORDS: adolescents; coping; parents; poverty; stress.

Living with chronic financial difficulties is highly stressful for children and adults, but poverty is not just another general stressor (Ennis, Hobfoll, & Schröder, 2000). In addition to serving as a constant source of frustration and demoralization, chronic stress appears to take an undue toll on individuals by making them vulnerable to additional stressors and by creating circumstances in which additional

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everyday stressors are more likely to occur (e.g., Attar, Guerra, & Tolan, 1994). In turn, this increase in stressful life events, such as accidents and illnesses, tends to deplete an individual's capacity to cope with chronic strains, making one more vulnerable to their insidious effects (e.g., DuBois, Felner, Meares, & Krier, 1994). As McLoyd (1990) points out, stressful life events are more likely to be overwhelming when they occur in the context of chronically stressful life conditions that have already taxed emotional, social, and financial resources. Therefore, chronic financial strain not only places a burden on an individual, but appears to take away resources for coping with all of life's other "slings and arrows."

Economic strains such as not having enough money to pay the bills and lacking basic necessities contribute to psychological problems in parents (Conger, Ge, Elder, Lorenz, & Simons, 1994) and emotional and behavioral problems in adolescents (Felner et al., 1995). In turn, these psychological problems constitute additional sources of stress for family members (e.g., Seginer, Vermulst, & Gerris, 2002). Chronic parenting stress for example, as defined by high levels of child behavioral problems and low maternal perceptions of parenting competence, predicts parental symptoms of anxiety and depression (Quittner, Glueckauf, & Jackson, 1990). Similarly, parental psychological problems are related to psychological problems in adolescents. Parental depression, for example, is sometimes conceptualized as constituting a significant stressor for children and adolescents (e.g., Langrock, Compas, Keller, Merchant, & Copeland, 2002). Hammen (2002) noted that parental depression often creates a "context of stress," which includes an increase in both chronic and episodic financial, occupational, and relational stressors. Therefore, the current study includes parental symptoms as a potential stressor for adolescents and includes adolescent symptoms as a potential stressor for parents. The current study examines associations among stress, coping, involuntary stress responses, and psychological symptoms in a sample of low-income parent-adolescent dyads, and assesses the mediating or moderating role of coping and involuntary stress responses.

Our research was guided by the Responses to Stress Model (Compas, Connor, Harding, Saltzman, & Wadsworth, 1999; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000), a five-factor model of stress responses that encompasses both effortful coping and automatic cognitive, affective, behavioral, and physiological reactions to stress. The three coping dimensions include *primary control coping* (problem solving, emotional expression, and emotional regulation), *secondary control coping* (acceptance, cognitive restructuring, distraction, and positive thinking), and *disengagement coping* (avoidance, denial, and wishful thinking). The two involuntary dimensions include *involuntary engagement* (emotional and physiological arousal, rumination, intrusive thoughts, and impulsive action) and *involuntary disengagement* (cognitive interference, escape, emotional numbing, and inaction).

Poverty increases psychological vulnerability to chronic and discrete stressors in part by decreasing coping resources and reducing the availability of social

support (e.g., McLoyd & Wilson, 1994). However, only a few studies to date have examined how adolescents and/or adults cope with or respond involuntarily to these kinds of economic stresses (e.g., Ennis et al., 2000). Nevertheless, the available research indicates that engaging in active primary and secondary control coping is associated with fewer internalizing and externalizing problems for adolescents (Wadsworth & Compas, 2002) and adults (Vinokur, Price, & Schuul, 1995) in poverty. Disengagement coping, such as avoidance, on the other hand, is associated with more symptoms in low-income samples (e.g., Banyard & Graham-Bermann, 1998), suggesting that trying to forget about problems and avoiding potential resources and sources of support can be detrimental for individuals struggling with chronic economic problems. Finally, involuntary engagement and disengagement responses are positively associated with emotional and behavioral problems in adolescents coping with financial stress (Connor-Smith et al., 2000). Thus, these preliminary studies suggest that how individuals respond to financial stress may play a role in their psychological functioning.

Coping is often described as a buffer or moderator of the stress-psychopathology relationship (Hewitt & Flett, 1996). Conceptually, moderator variables represent "preexisting characteristics of an individual that increase or decrease the likelihood that stress will lead to psychopathology" (Grant, Finkelstein, and Lyons, 2003). Mediators are distinct from moderator variables, as they specify the mechanism through which stress affects psychopathology (Holmbeck, 1997). Thus, considering coping as a moderator assumes coping is a relatively stable characteristic of an individual, such that the association between stress and psychopathology depends on what type of coping you tend to enact. Mediation, on the other hand, assumes that coping is affected by stressful conditions, such that stress determines which strategies are enacted, and the use of those strategies accounts for the relation between stress and psychopathology. Children acquire the ability to use various types of coping at different ages (Campos, Campos, & Barrett, 1989); thus their coping is subject to some degree of change and influence. On the other hand, the coping of adults appears to be more stable and trait-like (Hewitt & Flett, 1996), suggesting that individuals acquire relatively stable coping profiles as they age. Thus, we propose that coping is likely to serve as a mediator of stress in childhood, whereas it is likely to serve as a moderator in adulthood (Wadsworth et al., 2004).

We tested several models predicting psychopathology using data from both parents and adolescents. First, we tested whether family economic strain, adolescent emotional and behavioral problems, parental life stress, and parental coping and involuntary stress responses predicted parental symptoms of depression and hostility. Second, we tested whether adolescent economic strain, adolescent life stress, parental depression and hostility, and adolescent coping and involuntary stress responses predicted adolescent internalizing and externalizing. Third, we tested the developmental model of coping and stress responses described above by examining whether responses to stress act as mediators or moderators of the

relation between economic stress and psychological symptoms for both parents and adolescents.

METHOD

Participants

Participants were 57 parent and adolescent dyads who took part in a larger study of families adapting to economic stress in a poor rural county in Vermont–in the larger study, 76 parents and 364 adolescents were recruited. The median income for a family of four in this town was $19,390, just above the federal poverty line of $17,184 in 1998 (U.S. Census Bureau, 1999). The mean parental occupational status on Hollingshead's 9-point employment scale was 3.8 (Hollingshead, 1975), which corresponds roughly to a store clerk or prison guard. These indicators suggest that the parents in this study and in the community likely represent the working class and the working poor of the rural northeast. Fifty-three of the parents were female, and four were male. Of their children, 61% were female. The average age of parents was 38.3 ($SD = 6.9$) and of adolescents was 14.5 ($SD = 1.7$). Consistent with the ethnic breakdown found in this region of the U.S., 97% of the respondents were White.

Procedure

Surveys and study descriptions were mailed to all of the parents of adolescents attending the junior-senior high school that serves the selected county. Parents signed and returned written consent forms to participate. Researchers explained the study to the adolescents and obtained written assent. Participating parents received $10.00. Adolescents received gift certificates.

Measures

Life Stress

A 9-item Life Stress Questionnaire (LSQ) was employed to assess the number of stressful life events experienced by parents and adolescents and their perceptions of the severity of these stressors. Items were culled from two existing life stress measures, the Life Events Questionnaire (LEQ; Garmezy, Masten, & Tellegren, 1984) and the Adolescent Perceived Events Scale (APES; Compas, Davis, Forsythe, & Wagner, 1987). The LSQ includes nine stressful life events such as: *Death of someone close to you; Health problems*. For each item endorsed, participants were asked to appraise the degree of stress it caused on a four-point

scale (1 = not at all stressful to 4 = very stressful). Total severity of life stress was included in analyses for both parents and adolescents.

Economic Strain

Parents completed a questionnaire that assessed the number of constraints the family felt as a result of economic hardship and the adjustments they have had to make in order to make ends meet (Conger et al., 1994). Questions were completed on a 5-point scale indicating how often each of 5 items were true for them in the last 6 months. Sample items include: *It has been difficult to pay all of our bills; Our family has the money needed for basic necessities*. Adolescents completed a similar measure of economic strain, tailored to the adolescent experience. Each of 8 items were rated on a 4-point scale indicating how often each economic problem happened in the last six months. Sample items include: *My parents didn't have enough money to pay the bills; We didn't have enough money for new clothes*. In previous research with a low-income, rural sample, this measure was significantly correlated with measures of socioeconomic status such as parental occupation and maternal education (Wadsworth & Compas, 2002). Cronbach's alpha showed adequate internal consistency for both parent and adolescent measures of economic strain ($\alpha = .84$ and $\alpha = .89$, respectively).

Responses to Stress

Parents and adolescents completed the Responses to Stress Questionnaire (RSQ; Connor-Smith, et al., 2000), a 57-item measure that assesses how a person responds to a stressful domain. For this study, the domain was economic strain. Parents reported on both their own coping and on that of their children. The RSQ has demonstrated strong reliability and validity in multiple samples, including low-income and minority samples (e.g., Wadsworth, Rieckmann, Benson, & Compas, 2004). With this sample of adults and adolescents respectively, internal consistencies were: α (primary control) = .76/.86, α (secondary control) = .83/.82, α (disengagement coping) = .72/.81, α (involuntary engagement) = .66/.85, α (involuntary disengagement) = .75/.90. As recommended by Connor-Smith and colleagues, factor scores on the RSQ were computed as proportions of the total score for all responses (i.e., sum of scores on primary control items/sum of all items) to control for overall responding biases.

Psychological Symptoms

Parents completed the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983), a 54-item questionnaire that assesses a range of psychopathology. The BSI has good concurrent validity and adequate internal consistency. The

current study utilized the depression and hostility scales. Sample depression items include: *Feeling blue; Feeling hopeless about the future*. Sample hostility items include: *Feeling easily annoyed or irritated; Temper outbursts that you could not control*. Internal consistency was adequate: $\alpha = .90$ (depression) and $\alpha = .76$ (hostility).

Parents completed the Child Behavior Checklist (CBCL; Achenbach 1991a) and adolescents completed the Youth Self Report (YSR; Achenbach, 1991b). Both are inventories of child competencies and emotional and behavioral problems that consist of 112 items. Excellent validity and reliability has been established for the CBCL and the YSR. YSR Total Problems was used as an index of parenting stress in predicting parental symptoms. Composite scores for internalizing and externalizing were created by summing the standardized z-scores from the CBCL and YSR. These composite scores were used as criterion variables for the adolescents.

RESULTS

Means and standard deviations of parent variables are provided in Table I. On average, parents in this study experienced moderate difficulty paying all of their bills on time ($X = 2.61$, $SD = 1.06$) and many had to cut back on spending in the previous 6 months ($X = 2.80$, $SD = 1.03$). Respondents in general did not have to borrow money to pay the bills very often ($X = 1.42$, $SD = 0.80$), but also rarely had any money left over at the end of the month for savings or recreation ($X = 1.63, SD = 0.70$). Most respondents indicated that they usually have enough money for the basic necessities of food, shelter, and clothing ($X = 3.34$, $SD = 0.79$). Adolescents' mean reported level of economic strain was 5.6 ($SD = 5.0$), indicating that they either experienced many of the economic problems listed at least once in the past six months, or they experienced one or two of them quite frequently in the last six months. Parent and adolescent reports of adolescent internalizing (CBCL T-score: $X = 52.80, SD = 11.00$; YSR T-score: $X = 48.56$, $SD = 10.48$) and externalizing (CBCL T-score: $X = 51.84$, $SD = 11.67$ YSR T-score: $X = 51.86$, $SD = 12.91$) symptoms were highly similar.

Tables I and II contain correlations among key study variables: economic strain, life stress, responses to stress, and psychopathology for parents (Table I) and adolescents (Table II). After correcting for the number of comparisons (Sakoda, Cohen, & Beall, 1954), 27 out of the 32 significant comparisons in Table I and 18 of 23 comparisons in Table II remain statistically significant. In general, stress (economic strain, severity of stressful life events, and others' psychological problems) was significantly correlated with psychopathology. Primary and secondary control coping were associated with less psychopathology, whereas the involuntary responses to stress were associated with more. Parent and adolescent reports of internalizing ($r = .40$, $p < .01$) and externalizing ($r = .62$, $p < .001$) were also correlated. Cross-informant correlations among the coping and involuntary

Table I. Means, Standard Deviations, and Correlations Among the Predictors of Parental Depression and Hostility

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	Mean	*SD*
1. Depression (P)	—										0.67	0.76
2. Hostility (P)	.70***	—									0.51	0.52
3. Econ. Strain (P)	.42***	.24	—								11.78	3.81
4. Stress Events (P)	.30*	.39**	.33*	—							2.64	0.56
5. YSR Tot. Pr. (A)	.45***	.47***	.16	.17	—						50.07	11.4
6. Prim. Control (P)	−.46***	−.33**	−.24	−.11	−.30*	—					0.20	0.04
7. Sec. Control (P)	−.55***	−.52***	−.28*	−.45***	−.35**	.29*	—				0.26	0.05
8. Disengage. (P)	.37**	.21	.14	.09	.32*	−.70***	−.31*	—			0.17	0.03
9. Inv. Engage. (P)	.42***	.44***	.32*	.36**	.28*	−.35**	−.81***	.07	—		0.24	0.05
10. Inv. Diseng. (P)	.56***	.40**	.11	.13	.18	−.61***	−.27*	.49***	−.01	—	0.14	0.03

Note. "Econ. Strain" = Economic Strain. "YSR Tot. Pr." = YSR Total Problems. "Prim. Control" = Primary Control Coping. "Sec. Control" = Secondary Control Coping. "Disengage." = Disengagement Coping. "Inv. Engage." = Involuntary Engagement. "Inv. Diseng." = Involuntary Disengagement. "A" = Adolescent report. "P" = parent self-report.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Table II. Correlations between Adolescents' Self-reported Stress and Composite Symptom and Responses to Stress Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Econ. Strain (A)	—										
2. Life Stress (A)	.11	—									
3. Depression (P)	.47***	.04	—								
4. Hostility (P)	.32*	.13	.70***	—							
5. Internalizing (C)	.41**	.34*	.57***	.51***	—						
6. Externalizing (C)	.48***	.38**	.54***	.59***	.61***	—					
7. Prim. Control (C)	−.32*	−.21	−.23	−.24	−.38**	−.46***	—				
8. Sec. Control (C)	−.37**	−.40**	−.17	−.19	−.48***	−.52***	.29*	—			
9. Disengage. (C)	.36**	.25	.24	.25	.38**	.35**	−.60***	−.63***	—		
10. Inv. Engage. (C)	.44***	.34*	.16	.10	.44***	.57***	−.74***	−.64***	.53***	—	
11. Inv. Diseng. (C)	.14	.35*	.07	.17	.34*	.44***	−.46***	−.65***	.19	.45***	—

Note. "Econ. Strain" = Economic Strain. "Prim. Control" = Primary Control Coping. "Sec. Control" = Secondary Control Coping. "Disengage." = Disengagement Coping. "Inv. Engage." = Involuntary Engagement. "Inv. Diseng." = Involuntary Disengagement. "A" = adolescent self report. "P" = parent self-report. "C" = composite variable.
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

responses to stress were previously reported in the RSQ measurement development article (Connor-Smith et al., 2000).

Separate hierarchical regressions were conducted for both measures of parental psychological adjustment. For each regression, the predictors were: (a) family economic strain; (b) parent's life stress; (c) YSR total problems; and (d) parent's self-reported coping or involuntary responses to stress. Models were run separately for coping and involuntary stress responses due to the small sample size and the dependency of proportional scores.

Economic strain contributed significantly to the prediction of parental depression ($\beta = .39$, $p < .01$) but not hostility ($\beta = .20$, ns). On the other hand, life stress explained a significant amount of variance in parental hostility ($\beta = .31$, $p < .05$), but not depression ($\beta = .20$, ns). Adolescent-reported total problems added a significant increment to the prediction of both depression ($\beta = .38$, $p < .01$) and hostility ($\beta = .43$, $p < .01$). Finally, coping contributed significantly to the prediction of parental depression and hostility. Specifically, higher levels of secondary control coping were associated with less depression ($\beta = -.34$, $p < .01$) and hostility ($\beta = -.33$, $p < .05$). Overall, these models explained 48% of the variance in parental depression and 41% of the variance in parental hostility. In the involuntary models, involuntary engagement was positively associated with both depression ($\beta = .26$, $p < .05$) and hostility ($\beta = .28$, $p < .05$), as was involuntary disengagement ($\beta = .49$, $p < .001$; $\beta = .33$, $p < .01$). Involuntary models explained 59% of the variance in depression and 45% of the variance in hostility.

In order to reduce the number of predictors in the adolescent regression models, we combined parent and adolescent reports of responses to stress and internalizing and externalizing symptoms. Composite scores were created by summing the standardized z-scores of parent and adolescent reports. Separate hierarchical regressions were conducted for composite internalizing and externalizing symptoms. For each regression, the predictors were: (a) adolescent-reported economic strain; (b) adolescent life stress; (c) parent report of parental symptoms of depression and hostility; (d) composite coping or involuntary responses to stress.

Patterns of results were similar across the two types of symptoms. Economic strain predicted both internalizing ($\beta = .43$, $p < .01$) and externalizing ($\beta = .50$, $p < .001$) as did life stress ($\beta = .27$, $p < .05$; $\beta = .35$, $p < .01$). Combined reports of coping predicted both types of symptoms, with primary control coping predicting both internalizing ($\beta = -.33$, $p < .05$) and externalizing ($\beta = -.34$, $p < .01$), and secondary control coping predicting internalizing ($\beta = -.41$, $p < .01$) and externalizing ($\beta = -.38$, $p < .01$). Overall, economic strain, stressful life events, parental symptoms, and coping explained 58% of the variance in adolescent internalizing and 69% of the variance in externalizing. The pattern for the involuntary models was similar to the coping models. Involuntary engagement responses predicted higher internalizing ($\beta = .28$, $p < .05$) and externalizing ($\beta = .32$, $p < .01$). The involuntary models explained 55% of the variance in internalizing and 68% of the variance in externalizing.

While patterns of correlations suggested that secondary control coping and involuntary engagement mediated the association between life stress and depression for parents, Sobel (1982) tests showed that the effect did not reach statistical significance. Correlations also suggested that these two types of stress responses mediate the association between life stress and hostility for parents. Sobel tests confirmed that secondary control coping significantly mediated the association between life stress and hostility ($z = 2.44$, $p < .05$), but involuntary engagement did not. For adolescents, the pattern of correlations suggested that primary control coping, secondary control coping, disengagement coping, and involuntary engagement mediate the association between economic strain and internalizing and externalizing. Sobel tests indicated that secondary control coping mediated the association between economic strain and both internalizing ($z = 2.09$, $p < .05$) and externalizing ($z = 2.18$, $p < .05$). Sobel tests also showed that involuntary engagement mediated the association between economic strain and externalizing ($z = 2.51$, $p < .05$), and approached significance for internalizing ($z = 1.92$, $p < .055$).

Separate multiple regression analyses were run, containing stress, one type of stress response, and their interaction to test whether responses to stress moderated the association between stress and symptoms. Interactions were computed using centered variables. For parents, we used economic strain to predict depression and life stress to predict hostility. We found significant interactions between primary control coping ($\beta = -.24$, $p < .05$) and economic strain and between disengagement coping ($\beta = .26$, $p < .05$) and economic strain in predicting depression. The negative β for primary control coping suggests that this type of coping serves a buffering role for parents, such that the association between economic strain and depression exists primarily for those low in primary control coping. The positive β for disengagement coping suggests the reverse; that this type of coping accentuates the effect of economic strain on depression. None of the interactions between life stress and hostility were significant. For adolescents, none of the five responses to stress interacted with economic strain in predicting either internalizing or externalizing.

DISCUSSION

We tested several models of the associations among family economic problems, stressful life events and psychological problems in 57 parent and adolescent dyads. Between 41 and 59% of the variance in parental depression and hostility was explained by models containing chronic economic strain, stressful life events, adolescent symptoms, and parental responses to stress. Between 55 and 69% of the variance in parent- and adolescent-reported internalizing and externalizing symptoms was explained by models containing economic strain, stressful life events, parental depression and hostility, and adolescent responses to stress.

The relations between stress and psychological symptoms showed stressor-symptom specificity for parents, but not for adolescents. For parents, economic strain uniquely predicted depressive symptoms while stressful life events predicted only hostility. These results build on prior work showing that the chronic press of poverty contributes to individual differences in depression and anxiety (Bruce, Takeuchi, & Leaf, 1991). On the other hand, our findings regarding life stress support Berkowitz's (1989) reformulated frustration-aggression hypothesis, which suggests that events that serve to thwart one's routine activities or disrupt an ongoing or planned activity can lead to frustration, anger, and aggression. This is the first study to explicitly compare the types of stress, and our resulting stressor-symptom specificity complements this large body of research.

In contrast to the stressor-specificity found for parents, economic strain was a robust predictor of *both* internalizing and externalizing behaviors for adolescents, with the strength of the association between economic strain and adolescent internalizing symptoms demonstrating similar magnitude to that between economic strain and parental depression. Similarly, stressful life events added a significant increment to the prediction of both internalizing and externalizing problems for adolescents, above and beyond the contribution made by chronic economic strain. As hypothesized, stressful life events may serve to exacerbate the effects of chronic stressors such as economic strain for adolescents. Our results are consistent with the literature showing interactive and cyclical effects of the disproportionate accumulation of stressors among disadvantaged families (e.g., Dubois et al., 1994; McLoyd, 1990).

In addition to documenting the destructive effects of chronic economic stress and life stress on the psychological functioning of adults and adolescents, this study examined another important source of chronic stress: the stress of living with someone who demonstrates symptoms of psychopathology. Prior research has shown that parenting a difficult child is a significant source of parenting stress (Seginer et al., 2002). Our study showed that adolescent-reported psychological problems accounted for as much or more variance in parental symptoms of depression and hostility as did economic strain and other stressful life events. Clearly, in addition to the chronic stress of living in poverty, many of these parents also have to contend with adolescents who are difficult to parent.

Conversely, parental symptoms of psychopathology seem to serve as another source of chronic stress for adolescents. Of course, children's psychopathology could mirror parental psychopathology due to factors such as genetic risk or modeling of maladaptive behavior. In addition, however, adolescents who face chronic poverty-related stress may find their coping resources depleted by the enduring crush of living with less than they need, leaving little left over to deal with the negative life events and parental psychological symptoms that financial stress tends to bring along.

Despite the damaging effects of stress in the lives of poor families, we found that certain types of coping may act as protective factors. The pattern of association between coping and symptoms was similar for parents and adolescents, with secondary control coping being associated with lower levels of symptoms for both parents and adolescents. Secondary control strategies, such as cognitive restructuring and acceptance, are thought to be optimal responses to uncontrollable stressors that require adapting oneself to the situation, rather than trying to directly alter the situation. While parents are obviously responsible for the economic circumstances of their family, the structural barriers associated with poverty often contribute to feelings of powerlessness and a lack of control (Belle & Doucet, 2003) and individuals cannot control broader societal factors, such as the economy and job availability.

On the other hand, involuntary engagement responses were associated with higher levels of symptoms for both parents and adolescents. Involuntary responses to stress such as rumination and intrusive thoughts are common correlates of depression. That these responses are associated with internalizing and externalizing symptoms in our sample is therefore not surprising. Compas et al. (1999) have proposed that involuntary stress responses that are either innate or overlearned are likely the individual's first response to a stressful situation, and probably serve as the body's warning system that a threat or challenge has been encountered. Identification of these involuntary warning signals may be an important component of coping-focused interventions for at-risk adolescents. For parents, involuntary disengagement responses were also positively associated with symptoms, and determining the degree to which engagement versus disengagement responses are associated with economic strain in particular will aid in crafting interventions that target relevant problematic responses.

Based on the bivariate associations, the relation between responses to stress and psychopathology was similar for parents and adolescents. However, responses to stress appear to serve as a mediator of the association between stress and symptoms primarily for adolescents, while stress responses served a moderating function only for the adults. This is one of the first studies to examine two theoretical models of how responses to financial stress operate in the lives of adolescent children and their parents. Although coping theorists have highlighted the importance of a process-oriented approach to coping that takes into account the influence of situational factors on coping, coping style has often been conceptualized as being relatively stable (for reviews see Hewitt & Flett, 1996; Stone, Greenberg, Kennedy-Moore, & Newman, 1991). A rich literature has linked coping to personality, suggesting that many aspects of coping are likely to be stable across time and situations in adults. A previous study of college students coping with social stress, for example, demonstrated that coping did not mediate relations between vulnerability to social stress and internalizing problems, but did serve as a moderator (Connor-Smith & Compas, 2002).

We propose that whether a stress response serves as a mediator or moderator of stress depends on at least two factors. The first factor is the type of stress being studied. For stress responses to be modified by stress, the stressor may have to be sufficiently powerful. Thus we propose that mediation may be specific to powerful or chronic stressors, such as enduring poverty, that have the potential to affect resources and frustrate coping efforts over time. The second factor believed to affect the role of stress responses is developmental level. Cognitive processes such as those involved in stress appraisal and coping are less stable in childhood than adulthood and appear to result in part from interactions with stressful and other environmental events and conditions (Cole & Turner, 1993). Thus, we propose that coping is somewhat malleable during childhood, becoming more stable in adulthood. Coping should therefore serve as a mediator in childhood and adolescence and become more trait-like over time culminating as a moderator in adulthood, as these data suggest.

An additional factor that may affect the role of stress responses is the outcome variable, as we found moderation in the adult sample, but only for depression. Our moderators may all be particularly salient for depressive symptoms, as several of the involuntary responses are common correlates of depression. In addition, secondary control coping is likely to be particularly effective for ameliorating depressive symptoms, as cognitive restructuring, positive thinking, and distraction are common elements in cognitive behavioral treatment of depression (e.g., Beck, 1995). Conversely, types of coping not measured by the RSQ, such as drug and alcohol use may be especially relevant for hostility, as substance use is strongly linked with antisocial behavior (Fuller et al., 2003).

Our study has several limitations that should be addressed. First, because of the cross-sectional nature of the analyses, we cannot evaluate the directionality of the effects. However, as this is one of the first studies to systematically examine the relations between economic stress and responses to stress, and to evaluate explicit theoretical models, this is an important step in mapping the pathways to individual differences in adaptation to economic problems in families. A next step should involve testing these associations prospectively. Second, although the data in this study were obtained from both adolescents and their parents, shared method variance may have served to inflate some of the associations among variables, especially in the parent models. Third, the sample used in this study is rural and almost exclusively Caucasian, limiting generalizability. As there have been few studies to address the role of stress responses in rural families adapting to economic hardship, we believe that these data are informative and begin to fill in some gaps in the literature. However, it is crucial that future studies also examine similarities and differences in adaptation to economic strain among families of different racial and geographical origin.

Living with economic hardship is stressful; we found strong associations between three types of stress and psychological problems among poor adolescents

and parents. While the resulting picture may appear grim, the findings regarding coping provide a degree of hope. Primary control and especially secondary control coping predicted fewer psychological problems for adolescents and their parents. These types of coping strategies can be and often are taught in intervention programs. The mediational analyses provide especially useful information for developing interventions for children and adolescents from low-income families. It appears that, in the face of poverty-related stress, adolescents find it difficult to use primary and secondary control coping and tend to opt for disengagement coping. However, these results confirm what other studies have found: when used, primary and secondary control coping are associated with better functioning concurrently and prospectively, whereas disengagement coping is not. Thus, effective programming may need to address the tendency to disengage and aim to teach flexibility in coping. For example, adolescents could be taught first to recognize and address involuntary responses; second to disengage from the stressor temporarily; and third to return to the situation cognitively or behaviorally and make more active attempts to cope. Even if effective coping does not lead to meaningful changes in a family's economic situation, there is the possibility that coping can help prevent or minimize psychological problems in the face of poverty. We believe this is a worthwhile proposition, given that psychological problems constitute yet another burden to be overcome by these already heavily burdened families.

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