ARTICLE

EFFICACY AND SOCIAL SUPPORT AS PREDICTORS OF PARENTING STRESS AMONG FAMILIES IN POVERTY

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ABSTRACT: Using a sample of low-income mothers enrolled in Early Head Start (n = 65), this study tested the hypothesis that parenting stress is affected by social support and self-efficacy, in addition to family risk status and family income. Specifically, it was proposed that social support and self-efficacy are psychological resources that are associated with lower parenting stress levels, and would moderate the impact of family income on parenting stress. A significant proportion of variance in parenting stress was explained by self-efficacy, family risk, and the interaction of self-efficacy and family income; family income alone was not a significant predictor of parenting stress levels. Mothers higher in self-efficacy had lower levels of parenting stress, and income was less associated with parenting stress levels for mothers high in self-efficacy. Social support was not associated with lower parenting stress levels, nor did social support moderate the effect of income on parenting stress. Family risk was also a strong and reliable predictor of parenting stress, suggesting that family circumstances are perhaps better predictors of parenting stress levels than income alone. These findings suggest that parenting stress among low-income parents should be viewed as a function of psychological, as well as financial, resources.

RESUMEN: Usando un grupo muestra de madres de bajos recursos económicos matriculadas en el programa Early Head Start (Un comienzo temprano), (n=65), este estudio puso a prueba la hipótesis de que la tensión de la crianza se ve afectada por el apoyo social y la autoeficacia, en adición a las condiciones de riesgos familiares y entradas económicas de la familia. Se propuso específicamente que el apoyo social y la autoeficacia son recursos sicológicos que se asocian con niveles bajos de la tensión producida por la crianza, y por lo tanto moderarían el impacto que las entradas económicas familiares tienen sobre dicha tensión. Una proporción significativa de las variaciones en cuanto a la tensión producida por la crianza fue explicada por la autoeficacia, el riesgo familiar, así como por la interacción entre autoeficacia y las entradas económicas de la familia. Las entradas económicas solas no predijeron significativamente los niveles de tensión producidos por la crianza. Las madres con un más alto nivel de autoeficacia tenían niveles más bajos de tensión en la crianza, y las entradas económicas fueron menos asociadas con la tensión de la crianza en los casos de madres con un alto nivel de autoeficacia. No se asoció el apoyo social con los bajos niveles de tensión causada por la crianza, ni tampoco el apoyo social sirvió de moderador del efecto que las entradas económicas tienen en la tensión. El riesgo familiar fue también un fuerte factor de predicción de la tensión, lo cual sugiere que las circunstancias familiares quizás predicen mejor los niveles de tensión que las entradas económicas por sí solas. Estos resultados sugieren que la

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INFANT MENTAL HEALTH JOURNAL, Vol. 26(3), 177–190 (2005)

Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/imhj.20044

tensión causada por la crianza entre padres de bajos recursos económicos debe ser vista como una función de los recursos sicológicos tanto como de los recursos económicos.

RÉSUMÉ: Utilisant un échantillon de mères à revenus modestes inscrites dans un programme Early Head Start (programme américain d'aide aux familles à faibles revenus), cette étude a testé l'hypothèse selon laquelle le stress de parentage est affecté par le soutien social et l'auto-efficacité, en plus du statut de risque de la famille et du revenu familial. Plus spécifiquement, on a émis l'hypothèse que le soutien social et l'auto-efficacité sont des resources psychologiques qui sont liées à des niveaux de stress de parentage plus bas, et qui pourraient modérer l'impact du revenu familial sur le stress de parentage. Une proportion importante de variance dans le stress de parentage a été expliquée par l'auto-efficacité, le risque familial, et l'interaction entre l'auto-efficacité et le revenu familial. Le revenu familial à lui seul n'était pas un facteur de prédiction important pour les niveaux de stress de parentage. Les mères ayant plus d'auto-efficacité avaient des niveaux de stress de parentage moins élevés, et le revenu était moins lié avec les niveaux de stress de parentage pour les mères ayant une auto-efficacité élevée. Le soutien social n'était pas lié à des niveaux de stress de parentage plus bas, et le soutien social ne modérait pas l'effet du revenu sur le stress de parentage. Le risque familial était aussi un facteur de prédiction fort et fiable de stress de parentage, ce qui suggère que les circonstances familiales sont peut-être des meilleurs facteurs de prédiction de niveaux de stress de parentage que le revenu à lui seul. Ces résultats suggèrent que le stress de parentage chez les parents à revenus très modestes devrait être perçu comme une fonction de resources psychologiques et financières.

ZUSAMMENFASSUNG: Bei einer Stichprobe von Müttern mit niedrigem Einkommen aus dem US-amerikanischen Frühförderungsprogramm (n=65) testete diese Studie die Hypothese, dass die elterliche Belastung von der sozialen Unterstützung und dem Selbstbewusstsein, zusätzlich zu der Risikosituation der Familie und dem Familieneinkommen beeinflusst wird. Im Besonderen wurde angenommen, dass soziale Unterstützung und Selbstbewusstsein psychologische Ressourcen sind, die mit einer geringeren elterlichen Belastungen einhergehen und dass sie den Effekt des Familieneinkommens beeinflussen würden. Ein signifikanter Anteil der Varianz bezüglich elterlicher Belastung wurde durch Selbstbewusstsein, Familienrisiko und der Interaktion zwischen Selbstbewusstsein und Familieneinkommen erklärt; Familieneinkommen allein war kein signifikanter Vorhersagefaktor des Ausmaßes der elterlichen Belastung. Mütter mit höherem Selbstbewusstsein hatten eine geringere elterliche Belastung, wohingegen Einkommen bei Müttern mit hohem Selbstbewusstsein einen geringeren Einfluss auf die elterliche Belastung hatte. Soziale Unterstützung reduzierte die elterliche Belastung nicht, so wie soziale Unterstützung nicht den Effekt, den geringes Einkommen auf die elterliche Belastung hatte, verringerte. Familienprobleme waren auch ein starker und verlässlicher Voraussagefaktor elterlicher Belastung, wodurch ein Hinweis darauf gegeben wurde, dass Familiengegebenheiten vielleicht ein besserer Voraussagefaktor sind, als das Einkommen allein. Diese Ergebnisse weisen darauf hin, dass Belastungen bei armen Eltern als eine Funktion von Armut und familiären Gegebenheiten angesehen werden sollten.

抄録：早期スタートプログラム Early Head Start に登録した低所得の母親 (n=65) を対象として、この研究では、養育ストレスが、家族の危険度と家族の収入に加えて、社会的支援と自己効力感によっても影響を受けるという仮説を検証した。特に、社会的支援と自己効力感は、低い養育ストレス水準に伴う心理的資源であり、家族の収入が養育ストレスに与える影響を調節するだろうと、提案された。養育ストレスにおける分散の有意な割合が、自己効力感、家族の危険度、そして自己効力感と家族の収入との相互作用によって説明された。家族の収入だけでは、養育ストレス水準の有意な予測因子にならなかった。より高い自己効力感をもつ母親は、養育ストレスがより低かった。そして収入は、自己効力感が高い母親にとっては、養育ストレス水準との関連がより少なかった。社会的支援は、低い養育ストレス水準とは関連せず、社会的支援は収入が養育ストレスに与

える影響を調節もしなかった。家族のリスクもまた、強くて信頼できる養育ストレスの予測因子であり、家族の状況はおそらく収入だけよりも養育ストレスの予測因子として良いだろうと示唆される。これらの所見から、低所得の親の養育ストレスは、経済的資源と同様に心理的資源の関数としても見られる必要があることを示唆する。

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Substantial research has shown that living in poverty has a deleterious effect on parenting behaviors. Families living in poverty have been shown to have interactions that are more negative (Luthar, 1999); existing work indicates that negative interaction patterns stem from poor parental mental health and family economic pressures, which translate into high levels of parenting stress and family conflict, ultimately leading to less desirable outcomes for children (Duncan & Brooks-Gunn, 2000; McLoyd, 1990; Sameroff & Fiese, 2000). Accordingly, understanding the predictors of parenting stress among low-income parents takes on great importance.

There may be both psychological characteristics of parents and external supports that modify the relation between income and parenting stress. Focusing on elements of maternal psychological functioning, such as self-efficacy, and the availability of social-support resources may provide insight into the nature of parenting stress among low-income parents. Accordingly, this study proposes a model of parenting stress focusing on how social support and self-efficacy, in conjunction with family circumstances such as income and family risk, affect parenting stress in parents facing financial strain.

FINANCIAL STRAIN AND ITS IMPACT ON PARENTING

Previous work has demonstrated that financial stress can affect children because it increases parental emotional distress, which limits a parent's ability to respond sensitively and consistently to children's needs (Brody et al., 1994; Conger, Ge, Elder, Lorenz, & Simons, 1994; McLoyd, 1990; Taylor, 1997). More specifically, parental harshness, non-responsiveness, and inconsistency are parenting behaviors more commonly observed among low-income populations and are assumed to arise in part from the high levels of parental stress that accompany poverty (Aber, Jones, & Cohen, 2000; McLoyd, 1998). Low parental income has also been associated with diminished expression of affection and decreased responsiveness to the child's needs (McLoyd, 1990).

While it may seem intuitive to hypothesize that economic stress consistently leads to emotional distress, it is important to realize that economic hardship has been shown to increase reports of economic pressure, but does not necessarily lead directly to emotional distress (Elder, Eccles, Ardelt, & Lord, 1995). One reason this can occur is because of influences that buffer or moderate the effects of economic hardship on stress. Thus, although there is evidence that economic strain affects parenting behavior by increasing emotional distress, parental psychological resources, such as social support and self-efficacy, can buffer this impact. The failure to examine the psychological resources, such as self-efficacy, that may influence parental reactions to financial strain has been identified as a limitation of existing research (Brody et al., 1994). Simultaneously, the presence of social support, which may be considered another type of psychological resource, may also affect how a parent responds to situations of financial strain.

PSYCHOLOGICAL RESOURCES MAY BUFFER THE RELATION BETWEEN INCOME AND PARENTING STRESS

Self-efficacy, also referred to as mastery, is comprised of beliefs concerning one's ability to perform competently and effectively in a particular task or setting (Teti & Gelfand, 1991). Pearlin and Schooler (1978, p. 5) maintained that mastery "concerns the extent to which one regards one's life as being under one's own control in contrast to being fatalistically ruled"; mastery may lead one to perceive a given situation as less problematic because of faith that problems can be successfully solved. Self-efficacy is a dynamic system, and individuals create constructs of self-efficacy by combining an environmental context with personal beliefs regarding possibilities for success in difficult situations. It becomes an important resource for low-income parents because self-efficacy is responsive to environmental pressures, yet is also influenced by a personal belief system. Self-efficacy contains expectations for success, which may affect the amount of stress parents feel in association with economic strain.

Self-efficacy has been established as a construct of considerable importance for low-income populations in previous sociological work (Aneshensel, 1992; Turner & Lloyd, 1999). Overall, people facing financial hardship report lower levels of self-efficacy, and this variation is assumed to arise in part because of the economic and sociological conditions that characterize poverty. Pearlin, Lieberman, Menaghan, and Mullan (1981) explained the importance of self-efficacy for parents with limited financial resources by maintaining that "hardships are an enduring testimony to one's lack of success or to the inadequacy of one's efforts to avoid problems" (p. 345), and therefore, that self-efficacy is a construct that is vulnerable among low-income individuals, perhaps particularly those with high levels of responsibility for others, such as parents.

The reason for hypothesizing that self-efficacy would be important for low-income parents becomes clear when analyzing the life circumstances of impoverished families. Parents living in poverty are more likely to encounter frustrating and difficult situations, many of which are out of their control (Belle, 1990; Taylor, 1997), making efficacy a particularly salient construct among this population, and perhaps one that is difficult to achieve for many parents living in poverty. McLoyd and Flanagan (1990) emphasized the importance of viewing poverty's effects on the child by examining how the mother responds to the psychological stress associated with poverty. A mother who is high in self-efficacy may be able to maintain a sense of well-being and experience lower parenting stress despite low income levels, whereas a mother lower in self-efficacy may experience a sense of inadequacy and higher parenting stress in the context of financial strain.

There is substantial previous research demonstrating the importance of maternal self-efficacy in affecting parenting behaviors and emotions. Using a domain-specific measure of maternal efficacy, previous work has established that high maternal self-efficacy can positively affect children by leading to more positive maternal behaviors, including more responsive, stimulating, and non-punitive care-taking, attention to infant signals, parental acceptance, and more active and direct parenting interactions (Coleman & Karraker, 1997). Conversely, low maternal self-efficacy has been shown to predict maternal learned helplessness and excessive maternal control (Donovan, Leavitt & Walsh, 1990). Furthermore, maternal self-efficacy accounts for variance in maternal behavior previously attributed to depression, and it affects the relationship between parental emotional distress and parental responsiveness (Gondoli & Silverberg, 1997).

In addition to self-efficacy's globally positive effects on parenting behavior, it may moderate the impact of income on parenting stress. After reviewing available empirical evidence,

Coleman and Karraker (1997) concluded that mothers' self-efficacy may serve as a powerful protective factor for the psychological health of children living in poverty, and they proposed that the ability of parents to raise their children successfully in the context of limited financial resources and unsupportive communities is directly related to the amount of self-efficacy they feel.

Research using general measures of efficacy has found similar results. Jackson (1998) found that low-income mothers who were high in self-efficacy had lower levels of parenting stress and more positive parenting behaviors. Furthermore, Jackson found an interaction of self-efficacy and child behavior problems on parenting stress and concluded that mothers who are high in self-efficacy do not perceive their children's behavior problems to be inflexible, and instead, believe they are capable of changing their children's behavior. These findings support the hypothesis that self-efficacy may help parents deal with parenting stress, which is particularly important among low-income parents.

As stated earlier, the aforementioned work focused specifically on efficacy related to parenting based on the assumption that task-specific measures of self-efficacy have more predictive power than global constructs, yet this assumption has not been tested (Coleman & Karraker, 1997). While previous work has clearly shown the importance of parental efficacy in determining parenting behavior, there is also an indication that *global* measures of efficacy may influence parenting. Coleman and Karraker (2000) found that general self-efficacy was related more strongly to satisfaction with parenting than domain-specific measures of parenting efficacy, suggesting that general self-efficacy measures may be useful in explaining emotional responses to parenting. Furthermore, given the strong relation between low socioeconomic status and low levels of self-efficacy, low-income parents may be more likely to suffer insults to self-efficacy in many domains, not just in parenting. Accordingly, targeting general self-efficacy constructs may provide more complete information on how efficacy affects parenting. Because the model presented by this article tests whether self-efficacy, an environmentally sensitive construct, is related to parenting stress, use of the general construct is both more consistent with previous work linking efficacy and low income levels and may provide a more sensitive measure of how efficacy interacts with environmental conditions to produce stress.

In sum, previous research has indicated that self-efficacy has a positive effect on parenting behavior, and therefore may buffer the negative effects of financial strain on parenting. Based on previous evidence, we expect that self-efficacy will be negatively associated with levels of parenting stress, and furthermore, for parents who are high in self-efficacy, financial strain will not be as strongly associated with parenting stress. Diminished self-efficacy will be associated with higher parenting stress among families under financial pressure.

It is clear both intuitively and from previous research that parents living in poverty are affected by more than one type of resource. While financial strain may contribute to high levels of parenting stress, social support has also been shown to positively affect parenting behaviors among mothers across income levels. Parents who have reported higher levels of social support also have reported more positive feelings about parenting (Crnic & Greenberg, 1987), and have displayed more responsive and sensitive parenting behaviors (Cutrona, 1984). Social support has also been shown to improve parenting behaviors among parents enduring high amounts of stress (Burchinal, Follmer & Bryant, 1996; Thompson, 1995). Specifically regarding parenting stress, Ostberg and Hagekull (2000) found that parents high in social support experienced lower levels of parenting stress. Furthermore, social support also seems to provide specific benefits for low-income parents. Parents reporting higher levels of social support may have less psychological distress in conjunction with financial strain, which then leads to lower levels of parenting stress (McLoyd, 1990). Consistent with the formulation of the impacts of self-efficacy on parenting stress, previous research has suggested that social support would be associated

with lower parenting stress levels, and furthermore, that social support may moderate the impact of income on parenting stress. In other words, parents who are high in social support may feel less stress in association with low income than parents who are low in social support.

Together, social support and self-efficacy can be considered psychological resources that exert influences on parenting stress levels directly and may moderate the relation between income and parenting stress. While there is reason to believe that both self-efficacy and social support are linked to diminished parenting stress, previous work has not simultaneously examined self-efficacy and social support as predictors of parenting stress in low-income families while controlling for family income, nor has it examined the role that each may play in moderating the impact of income on parenting stress levels. Accordingly, the relations between social support, self-efficacy, and parenting stress were analyzed, with particular interest in understanding self-efficacy and social support as potential moderators of the relation between income and parenting stress. It was hypothesized that both social support and self-efficacy would account for unique variance in parenting stress levels after accounting for other family characteristics such as income and family risk. We also hypothesized that social support and self-efficacy would moderate the relation between income and parenting stress levels; specifically, that income would be a less powerful predictor of parenting stress for parents who are high in social support or high in self-efficacy.

METHOD

Participants

Participants were 65 mothers of children enrolled in an Early Head Start program in a mid-sized city in the Midwest. Mothers were contacted through the Early Head Start program and were given the option of participating in this study as a part of the Early Head Start evaluation project. Of 120 children enrolled in the program, 65 mothers responded by completing the self-report questionnaire, which took about 10 minutes to complete and was administered during a regularly scheduled home visit. Families enrolled in the program but not participating in this study either refused participation, were not reachable through family advocates, or did not speak English well enough to read and respond to survey questions.

Demographic information on the mothers and their children was available through existing program files. Average maternal education level was completion of high school, ranging from less than eight years of schooling to college graduation; 28.1% of the sample had not completed high school, and 12.5% had completed either an associate's degree or a bachelor's degree. Families were primarily of European American ($n = 32$), African American ($n = 16$), and Eastern European ($n = 11$) backgrounds. Six families were of Hispanic, Native American, or Asian descent. Children ranged in age from 2 months to 3 years when data were collected, and 34 of the children were male and 31 were female. Families had been enrolled in the program an average of two years (SD = 9 months).

Procedure

Attempts were made to collect data from families through written surveys three times over one year, once per quarter, excluding summer months. Home visitors took the surveys to the mothers and asked for their participation as a part of a regularly scheduled home visit. Surveys were filled out by mothers either during the home visit or during the week between home visits and were returned to evaluators through the home visitors. The majority of surveys were filled out

and returned within a one-month period, but there were additional surveys that were administered and returned within three to four months.

Measures

Parenting stress. The Parenting Distress Subscale of the Parenting Stress Index Short Form (Abidin, 1995) was used to determine the level of stress mothers felt in association with parenting. This scale is a direct derivative of the Parenting Stress Index (PSI), and items for the short form, which contains three subscales, were identified by factor analysis of the original PSI. Mothers rated twelve items on a 5-point Likert-type scale from strongly disagree (1) to strongly agree (5). The Parenting Distress Subscale has previously been shown to measure the distress experienced by parents as a function of personal factors that are directly related to parenting (Abidin, 1995). Items measure the degree to which parents are experiencing an impaired sense of parenting competence, stresses associated with restrictions on activities due to parenting, lack of social support, and presence of depression. Across the three time points, the average Cronbach α for this scale was 0.82. Only total scores based on all items on the scale were included in the analyses. Scores for the Parenting Stress Index were created by reverse-coding the items so that high item responses indicated high levels of stress; items were then summed to create a total score. Possible values ranged from 12 to 60; values within this sample ranged from 12 to 45.

During the course of a year, ten mothers completed the Parenting Stress Index three times (15.3%), 29 mothers completed it twice (44.6%), and 26 completed it once (40.0%). On average, parenting stress scores were correlated with one another over the three time points ($r = 0.35$, $p < 0.05$). In order to include data on the largest possible number of families, values were averaged across assessments for mothers who responded more than once.

Self-efficacy. The Pearlin Mastery Scale (Pearlin & Schooler, 1978) was used to measure self-efficacy, or the extent to which parents felt control over their lives and belief in their ability to change their lives (examples of items include, "There is really no way I can solve some of the problems in my life," and "I can do just about anything I set my mind to do"). The 7-item scale contains Likert-type questions ranging from 1 (strongly disagree) to 4 (strongly agree); some items were reverse-coded so that high values on items indicated high levels of self-efficacy. Across the three time points, the average Cronbach α for this scale was 0.72. Scores for the Pearlin Mastery Scale were computed by summing the responses and dividing by the total number of items; possible values ranged from 1 to 4, and scores within this sample ranged from 2.14 to 4.00. High scores indicated high levels of self-efficacy.

Like the Parenting Stress Index, the self-efficacy scale was administered three times over the course of a year, and 15 mothers, or 21.1%, responded three times, 33 mothers, or 45.5%, responded twice, and 17 mothers, or 32.4%, responded once. The same procedure for computing mean parenting stress scores was used for self-efficacy scores: values were averaged across assessments for mothers who responded more than once. Efficacy scores were highly correlated from one time to the next (on average, $r = 0.59$, $p < 0.05$, across the three time points).

Social support. Mothers completed the Dunst Family Resource Scale (Dunst & Leet, 1987), a 30-item Likert-type scale ranging from 1 (not at all) to 5 (almost always) to determine the adequacy of resources within the home. A subscale was created to gauge social-support resources, and items for the subscale were grouped and internal consistency was tested. The social-support subscale was comprised of five items such as having someone to talk to, having

TABLE 1. *Means and Standard Deviations for Self-Efficacy, Social Support, Family Income, Risk, and Parenting Stress (*N = *65)*

	Mean (Standard Deviation)	*Possible Range of Values*
Self-efficacy	3.14 (0.45)	1–4
Social support	16.09 (4.24)	5–25
Family income	$12,818 ($8784)	
Risk	2.18 (2.69)	1–12
Parenting stress	25.40 (8.00)	12–60

babysitting and childcare for children, and having time to spend with friends and significant others; scores were created by summing responses to individual items. The Cronbach α for this scale was 0.67 at both time points. The Dunst Family Resource Scale was administered twice during a year; scores were only slightly related to one another between the two time points ($r = 0.18$, NS). Again, scores used in the analyses reported below were created by averaging the responses of mothers who responded to the survey twice. Possible values ranged from 5 to 25; values within this sample ranged from 5 to 25.

Family risk. Information on family risk levels was also obtained from the Early Head Start program files. "Family risk" was defined as having a parent with any of the following circumstances: lack of a high school diploma, inability to speak English, presence of health problems, divorced within the past year, homeless or incarcerated, a child with a health or developmental concern, and presence of emotional problems (problems with anger control, alcohol or drug abuse, domestic violence, or parenting). While all parents enrolled in the Early Head Start program were low income, levels of family risk varied substantially between parents. Accordingly, the number of family risks was summed and this measure was included in all regression models in order to control for differences in family circumstances that could exert a strong effect on parenting stress. Thirty-five percent of the families reported no risks, and 10% of the sample reported six risks or more. The most common risks were the presence of emotional problems (47%), a divorce or separation in the past year (36%), and the lack of a high school diploma (28%). Possible values ranged from 0 to 12; values within this sample ranged from 0 to 10.

Family income. Information on family income was also obtained from program files. Self-reported annual income, verified by the program to determine program eligibility and verified again each time family circumstances changed, ranged from zero income to $37,200, with a mean of $12,818 (SD = $8,784); income per family member ranged from 0 to $10,518, with a mean of $3,443 (SD = $2,440).

Means for parenting stress, self-efficacy, social support, family risk, and income appear in Table 1.

RESULTS

Before conducting multivariate analyses, data were analyzed bivariately. Results indicated that parenting stress was not related to social support, contrary to expectations, but was significantly negatively related to self-efficacy and marginally negatively related to income; family risk was positively related to parenting stress. There were marginal relations between self-efficacy and

TABLE 2. *Bivariate Relationships Between Parenting Stress and Self-Efficacy, Social Support, Family Income, and Risk (*N = *65)*

	Self-Efficacy	*Social Support*	*Income*	*Risk*
Parenting stress	−0.32*	0.02	−0.22^{+}	0.28**
Self-Efficacy	–	−0.00	0.02	0.21^{+}
Social support	–	–	−0.13	−0.05
Income	–	–	–	−0.08

Note: $^{+}p < .10$, * $p < .05$, ** $p < .01$.

risk, indicating that mothers higher in self-efficacy were also higher in family risk. Results appear in Table 2. Child gender was also considered as a potential influence on levels of parenting stress, but no bivariate relation between gender and parenting stress was revealed ($r = 0.06$, $p > 0.05$), and so gender was not included in further analyses.

Because the goals of the study were to determine the unique contributions of both self-efficacy and social support to parenting stress, a hierarchical regression model was created that included family income and risk in the first block, self-efficacy and social support in the second block, and the hypothesized interactions in the third block. In order to control for the influence that the interaction terms would have on each other, two models were computed, one that included the interaction of self-efficacy and income in the third step of the model, and the other that included the interaction of social support and income in the third step of the model. The hierarchical method was used in order to determine the influence of psychological resources while controlling for family income and risk; furthermore, consistent with methods outlined by Holmbeck (1997), this method allowed us to determine the impact of the interactions after statistically controlling for the influence of the main effects. Holmbeck (1997) also recommended centering variables in order to reduce collinearity; therefore, family income, self-efficacy, and social support were centered, and then family income was multiplied by self-efficacy or social support to compute interaction terms.

In the first step of the model, family risk was a significant predictor of parenting stress, and income approached significance as a predictor of parenting stress. Mothers higher in risk were also higher in parenting stress, and mothers with higher income levels had lower levels of parenting stress. In the second step of the model, family risk and self-efficacy were significant predictors of parenting stress, and income approached significance as a predictor. Social support was not a significant predictor of parenting stress. Consistent with the hypothesis, mothers higher in self-efficacy were lower in parenting stress. The unique variance explained by both self-efficacy and social support was 14% (see Table 3). The full model, including family risk and income, accounted for 27% of the variance in parenting stress scores $F(4,65) = 5.49$, $p < 0.01$).

In the next step of the model, we tested the hypothesis that self-efficacy would moderate the impact of income on parenting stress. Results for all steps of this model appear in Table 3. Consistent with predictions, there was a significant statistical interaction between income and self-efficacy. When including the interaction term, both efficacy and family risk levels continued to provide a significant contribution to the model, but family income was no longer even marginally related to parenting stress levels. Further analyses of the interaction between income and efficacy indicated that the pattern of relationship between income and parenting stress differed based on self-efficacy, and post-hoc tests of the regression lines were conducted in accordance with standards outlined by Aiken and West (1991). First, initial tests indicated that the slope of the line for high-efficacy mothers differed significantly from that of low-efficacy

TABLE 3. *Summary of Hierarchical Regressions for Parenting Stress Scores, Including the Interaction Between Self-Efficacy and Income (*N = *65)*

Step One	B	SEB	ß
Family income	-1.85^{-04}	0.00	-0.20^{+}
Risk	0.79	0.35	0.27*
Step Two			
Family income	-1.71^{-04}	0.00	-0.19^{+}
Risk	1.04	0.34	0.35**
Self-efficacy	−6.86	1.99	−0.39**
Social support	0.02	0.21	0.01
Step Three			
Family income	-1.21^{-04}	0.00	−0.13
Risk	1.08	0.32	0.36**
Self-efficacy	−7.44	1.93	−0.42**
Social support	0.14	0.21	0.08
Self-efficacy × income	-5.50^{-04}	0.00	0.27*

Note: $R^2\ \Delta = 0.12$ ($p < 0.05$) for Step 1, $df = (2, 65)$; $R^2\ \Delta = 0.14$ ($p < 0.05$) for Step 2, $df = (4, 65)$; $R^2\ \Delta = 0.07$ ($p < 0.05$) for Step 3, $df = (5, 65)$. $^{+}\ p < 0.10$, * $p < .05$, ** $p < .01$.

mothers; neither line was significantly different from the line for mothers at the mean of efficacy. Second, we sought to determine if the slopes of the individual regression lines for mothers high and low in efficacy were significantly different from zero. For mothers with high levels of self-efficacy, income showed no relation with parenting stress: the slope was basically flat. This is contrary to previous reports, despite the fact that all of these mothers had low income. Conversely, for mothers low in self-efficacy, income showed a negative association with parenting stress. A display of the interaction between income and efficacy, as related to parenting stress levels, appears in Figure 1. The model including the interaction between self-efficacy and income accounted for 33% of the variance in parenting stress scores $F(5, 65) = 5.89$, $p < 0.001$) and including the interaction term accounted for a significant increase in variance ($R^2\ \Delta = 0.07$, $p < 0.05$).

Next, we tested the hypothesis that social support would moderate the effects of income on parenting stress by removing the interaction between self-efficacy and income and including the interaction between social support and income. Results appear in Table 4. Again, social support did not provide a significant contribution to the model, nor did the interaction between income and social support. The model including the interaction between social support and

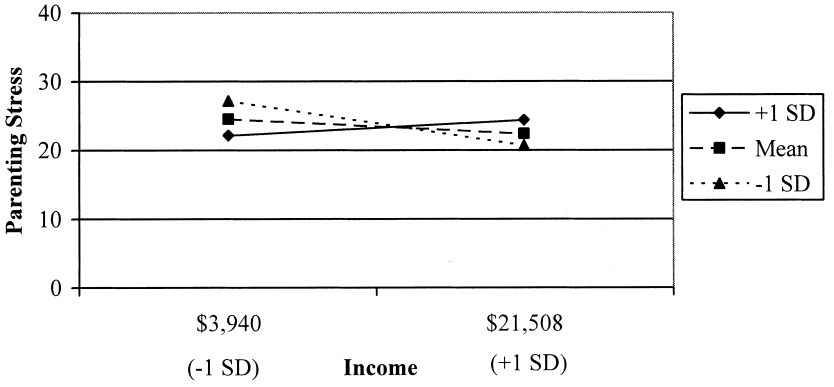

FIGURE 1. Relation between income and parenting stress as moderated by self-efficacy.

TABLE 4 *Summary of Hierarchical Regressions for Parenting Stress Scores, Including the Interaction Between Social Support and Income* (N = 65)

Step One	B	SEB	ß
Family income	-1.85^{-04}	0.00	-0.20^{+}
Risk	0.79	0.35	0.27*
Step Two			
Family income	-1.71^{-04}	0.00	-0.19^{+}
Risk	1.04	0.34	0.35**
Self-efficacy	−6.86	1.99	−0.39**
Social support	0.02	0.21	0.01
Step Three			
Family income	-1.75^{-04}	0.00	-0.19^{+}
Risk	0.98	0.34	0.33*
Self-efficacy	−6.31	2.07	−0.36*
Social Support	0.04	0.21	0.02
Social support × Income	2.78^{-05}	0.00	0.11

Note: $R^2\ \Delta = 0.12$ ($p < 0.05$) for Step 1, $df = (2, 65)$; $R^2\ \Delta = 0.14$ ($p < 0.05$) for Step 2, $df = (4, 65)$; $R^2\ \Delta = 0.01$ (NS) for Step 3, $df = (5, 65)$. $^{+}\ p < 0.10$, * $p < 0.05$, ** $p < .01$.

income did not account for additional variance over the model without the interaction ($R^2 = 0.28$, $F\ (5,65) = 4.58$, $p < 0.01$; $R^2\ \Delta = 0.01$).

DISCUSSION

While it is clear that financial hardship places unique stress on both children and parents, results from this research indicate that it is not family income alone that determines parenting stress. Instead, it appears that parenting stress may best be explained by considering how psychological resources, such as self-efficacy and social support, can modify the effect of low family income on parenting stress; furthermore, the strong and consistent findings regarding the importance of family risk demonstrate that income alone does not account for the impact of contextual factors on parenting stress. Three conclusions are suggested by the findings: first, self-efficacy is a reliable predictor of parenting stress levels; second, self-efficacy moderates the relation between parenting stress and income, and may be particularly important for families with very low income; and third, family risk levels are strong and reliable predictors of parenting stress levels.

First, consistent with the hypothesis, higher levels of self-efficacy were consistently associated with lower levels of parenting stress. Self-efficacy appears to provide parents with a unique set of psychological resources that may be helpful in reducing the stresses associated with parenting in poverty. While the mechanisms by which self-efficacy lowers parenting stress were not identified in the present study, it is possible that parents who feel efficacious in light of environmental strain feel more capable of dealing with the demands of parenting young children.

Second, consistent with the hypothesis, the significant statistical interaction between efficacy and income revealed that self-efficacy moderates the relation between income and parenting stress. As Figure 1 demonstrates, for mothers who are high in self-efficacy, income does not show the negative association with parenting stress reported in previous research (i.e., McLoyd, 1998). The slope of the regression line is essentially flat, demonstrating that self-efficacy buffers the relation between income and parenting stress. Yet, for mothers low in self-efficacy, income showed the predicted negative relation with parenting stress. Furthermore, also apparent in Figure 1, high-efficacy mothers with very low income had lower parenting stress than did low-efficacy mothers at the same income level.

Inspection of Figure 1 also reveals a somewhat counterintuitive finding: among mothers with higher incomes (i.e., incomes above the mean), mothers with higher self-efficacy also reported higher parenting stress than did mothers with lower self-efficacy. This may be due to a sense of frustration that socio-demographically at-risk mothers experience when their incomes rise. Despite their commitment to their goals, their achievement of basic self-sufficiency, and their belief in their ability to succeed, these mothers may discover that their lives remain quite difficult despite higher income, resulting in higher stress levels. Thus, the protective effects of self-efficacy on parenting stress may be apparent primarily for mothers with very low income. Nevertheless, the results of this study indicate that for very impoverished families, self-efficacy may enable parents to feel more in control of their lives, which mitigates some of the impact of low income on parenting stress levels. A belief in one's ability to succeed may be especially helpful in effectively managing parenting stress when dealing with substantial financial pressure.

Inconsistent with hypothesized relations and previously reported research, social support was not reliably related to parenting stress levels. There are several reasons why this might be true. First, social support may not be a positive influence in the lives of all mothers, as it may engender negative, as well as positive, interactions (Thompson, 1995). Because the measure of social support used in this study did not distinguish between the potentially positive and negative aspects of social support, it is not possible to determine whether women who were receiving high levels of social support were also experiencing negative psychological consequences in conjunction with social support, which may have had an impact on levels of parenting stress. Social networks can themselves be sources of social stress, as well as support, when, for example, friends and relatives provide criticism even as they offer assistance with parenting problems.

One explanation for the lack of significant relation between income and parenting stress is that all families in this sample were living in poverty, and therefore, small variations in family income may not significantly affect parenting stress levels—having some additional income may improve family circumstances, but not enough to appreciably decrease parenting stress levels. Furthermore, the presence of the significant statistical interaction between income and self-efficacy suggests that the influence of income on parenting stress is best understood within the context of self-efficacy. Across all mothers in this sample, income alone does not show a strong relation with mothers' reports of parenting stress. As the interaction between income and self-efficacy reveals, however, income is in fact associated with parenting stress for mothers who are low in efficacy. Accordingly, future research should attempt to expand knowledge of the potential interactions between income and other psychological and environmental factors that relate to parenting stress.

In contrast to income, family risk was a very strong predictor of parenting stress. Lower risk levels were associated with lower parenting stress levels; among low-income families, risk appears to be more salient for parenting stress than income alone. Furthermore, including self-efficacy and social support in regression models predicting parenting stress did not lessen the impact of risk as indexed by the bivariate relation, suggesting that there are some environmental stressors that require more than a belief in oneself and support from others to overcome. Future research on parenting stress levels among low-income populations should attempt to understand the role of risk, and perhaps types of risk, in creating high levels of parenting stress. For example, within this sample, some mothers were living in poverty because they were struggling with a violent relationship or drug addiction, whereas others were in poverty because they were recent immigrants. While all families had similar income levels, their circumstances and the corresponding emotional strains may differ substantially. It is likely that mothers have varied psychological responses to living in poverty depending on the factors that are associated with their poverty status.

Limitations of this study include the reliance on self-report measures of social support, self-efficacy, and parenting stress; moreover, by relying on statistical associations between self-report data and family characteristics, this study does not provide evidence that self-efficacy causes a reduction in parenting stress, or that by increasing self-efficacy, parenting stress will necessarily decrease, although the findings suggest that parenting stress is reliably related to self-efficacy. Future research should attempt to identify whether increasing self-efficacy among low-income parents leads to reductions in parenting stress levels. In addition, while it is clear that self-efficacy is associated with lower levels of parenting stress, this study does not provide insight into how self-efficacy is either created or diminished, an important element in determining how self-efficacy could be used to help low-income parents reduce parenting stress levels.

IMPLICATIONS

Perhaps most importantly, the findings demonstrate the significance of considering both environmental conditions and psychological states of mind as predictors of parenting stress among mothers living in poverty. This research builds upon previous work by delineating factors that contribute to mothers' parenting stress levels by establishing that self-efficacy can have an impact on levels of parenting stress among low-income parents, and by demonstrating that efficacy may moderate the previously reported relation between income and parenting stress levels. In addition, programs that provide family support services to low-income families may be able to decrease parenting stress by encouraging a sense of efficacy in parents. For instance, by helping parents identify how some of their problems can be solved, or by helping them feel in control of what happens to them, programs may be able to encourage feelings of efficacy. Because high levels of parenting stress can lead to negative outcomes for children, perhaps particularly for children who are living in high-risk environments, identifying predictors of parenting stress can enhance efforts to promote the well-being of children and families in poverty. In sum, results suggest that programs for low-income parents can potentially affect the relation between income and parenting stress by focusing on enhancing self-efficacy.

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