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Family Economic Stress and Academic Well-Being Among Chinese-American Youth: The Influence of Adolescents' Perceptions of Economic Strain

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This study examined the pathways by which family economic stress influenced youth's educational outcomes in a sample of 444 Chinese American adolescents (M_{ages} = 13.0, 17.1 years at waves 1 and 2, respectively). Using latent variable structural equation modeling, results across two waves of data, spanning early to late adolescence, demonstrated that the influence of parent report of economic stress on youth academic achievement (i.e., GPA), school engagement, and positive attitudes about education was mediated through youth's perceptions of family economic strain and self-reports of depressive symptoms. These relationships were observed to remain significant after accounting for selection bias using individual fixed-effects models. Finally, youth's perceptions of family economic strain were found to more strongly predict depressive symptoms during later, as compared to earlier, adolescence; all other modeled relationships were equivalent across the two time periods. Implications for expanding theoretical tenets of the Family Economic Stress Model are discussed.

Keywords: family economic stress, immigrant families, Chinese American adolescents, educational outcomes

As the U.S. population becomes increasingly diverse, understanding youth development within the context of a diversified and stratified society is becoming increasingly more important (Parke & Buriel, 2006; Quintana et al., 2006). Immigrant children—defined as those who are foreign-born or have at least one foreign-born parent—are key contributors to the increased diversification of the United States population, accounting for approximately 20% of the U.S. child population (Hernandez, Denton, & Macartney, 2008). Children from immigrant families are also increasingly making their presence felt in the U.S. educational system; whereas they currently comprise 19% of the school-based population, these numbers are projected to increase to 30% by the year 2015 (Capps et al., 2004). Although as a group, immigrant children are highly diverse with respect to migration experiences, country of origin, culture, race/ethnicity, and socioeconomic status, most are U.S.-born children of foreign-born parents (i.e., second generation immigrants) from Latin American and Asian countries, especially Mexico and China. Immigrant families are also more likely to be represented among the poor population in the United States (21% of immigrant children currently live in poverty compared to 14% of children in native families; Hernandez, 2004). Despite increased awareness of the greater socioeconomic risk facing immigrant families and more than ample evidence of the adverse effects of poverty on children's development (McLoyd, 1998), little is known about the developmental consequences of immigrant children's experiences of economic hardship.

In this study, we focus on a sample of Chinese American youth, a majority of whom are U.S.-born but whose parents were foreign-born. We do so given the increasing representation of Asian Americans generally and Chinese Americans in particular in U.S. society. Indeed, Asians represent the fastest growing ethnic minority group in the U.S. (currently approximately 10 million Asians reside in the U.S.), and these numbers are expected to increase dramatically over the next two decades (Barnes & Bennett, 2002; Parke & Buriel, 2006). Chinese Americans (mainly from China, Hong Kong, and Taiwan) comprise the largest Asian sub-

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population. Reflective of the recency of their immigration history, the majority of Chinese American adults were born in a foreign country (61%; Reeves & Bennett, 2004).

Despite their increasing presence in U.S. society, research on Asian American families and youth remains limited, especially for those from lower socioeconomic families (Yeh, Kim, Pituc, & Atkins, 2008). This is despite the fact that sizable numbers of Asian youth experience poverty each year (10%), an estimate comparable to the percentages of White children (10%), but substantially lower than rates among African American (24%) and Hispanic (21%) children (DeNavas-Walt, Proctor, & Smith, 2007). And while the rates of post-secondary education are highest among Asian youth (67%) as compared to white (47%), African American (42%) and Hispanic (36%) youth, there remains nevertheless significant variability in the post-secondary access and attainment among Asian youth (Shin, 2005). By not attending to the variation that exists among Asian children and adolescents, there is a risk of further perpetuating the widely popular model minority stereotype of all Asian youth as excelling in schooling and professional careers (Kao, 1995; Yeh et al., 2008).

Recent work by Yeh and colleagues (2008) dispels some of the myths concerning the well-being of Chinese youth. Using a qualitative (focus group) approach, Yeh and colleagues explored the challenges facing a sample of low-income Chinese immigrant youth adjusting to life in the United States. A salient theme that emerged was the extent to which living in poverty affected both the daily life and school related experiences of youth as well their more long term educational aspirations and prospects. The findings are consistent with the volumes of research documenting the pernicious effects of income poverty across all domains of child and family functioning for children from diverse race/ethnic and immigrant backgrounds (see McLoyd, 1998 for review).

In this study, we focus on understanding variation among a sample of Chinese American adolescents from a range of socioeconomic status (SES) backgrounds. One interesting line of inquiry, which to date has been neglected in the existing research, is the extent to which economic hardship and its ensuing consequences for family functioning account for differences in Asian American adolescents' academic and socioemotional well-being (for exception, see Fuligni, 1998). Developmental scientists have long recognized the importance of understanding the mechanisms by which income affects family and child outcomes, but until recently, much of this scholarship has focused on European American families. To address this gap, this study draws upon tenets of the Family Economic Stress Model (Conger & Elder, 1994; McLoyd, 1990) and tests the links between economic hardship and developmental outcomes among a sample of Chinese American youth.

Family Economic Stress Model

The Family Economic Stress Model posits that families' economic hardship influences children and adolescents' developmental outcomes indirectly through a series of mediating family processes, including perceived economic pressure, emotional distress, marital relations, and parenting practices (see Conger & Donnellan, 2007 for review). Disrupted parenting practices in turn are hypothesized as directly affecting children and adolescents' developmental outcomes. Empirical tests of the family stress model across a variety of contexts have demonstrated its utility in modeling the mediated relationship of income and hardship to family and child well-being (Conger et al., 2002; Mistry, Vandewater, Huston, & McLoyd, 2002). A recent study by Benner and Kim (in press) replicated basic tenets of the Family Economic Stress Model for a sample of Chinese American families and youth.

In the current study, we build upon these findings by hypothesizing and testing additional pathways through which economic hardship influences Chinese youth's developmental outcomes. Specifically, we investigate the extent to which youth themselves are aware of their families' financial constraints and hardships and whether such awareness explains in part the association between family experiences of hardship and adolescent developmental outcomes. Theories of human development stress human agency as critical for healthy development (Bronfenbrenner & Morris, 1998; Elder, 1999), including the active role that children play in family and community processes and their own development (Bell, 1968; Scarr & McCartney, 1983). Despite this, and the fact that scholars have for some time now called for more research investigating children's subjective experiences of poverty and hardship (McLoyd, 1990), few studies have incorporated youth perspectives into models of economic hardship and child well-being. McLoyd and Wilson (1990) observed in their sample of low-income African American families that adolescent girls whose mothers more frequently discussed financial difficulties exhibited higher levels of anxiety than girls whose mothers discussed such matters less frequently. Clark-Lempers, Lempers, and Netusil (1990) reported moderate associations between parent and youth reports of financial stress. And, recent work by Shek (2003; 2008), with Chinese adolescents living in Hong Kong, finds a link between perceptions of economic stress and indicators of emotional well-being and problem behaviors.

Collectively, these studies are important initial steps in articulating additional mechanisms through which family economic hardship influence youth development. *Feelings of economic stress* may have demonstrable influences on child well-being, both contemporaneously and long-term, including physical and mental health as well as educational and occupational aspirations and prospects. With the exception of the studies by Shek (2003, 2008), we know of no prior research that has sought to model the associations between family economic hardship, youth perceptions of hardship, and youth developmental outcomes, especially their educational outcomes. Shek studied families residing in Hong Kong. Therefore, it is unclear whether his findings would generalize to samples of Asian American youth, many of whom are second-generation. For American adolescents from immigrant families, economic strain may serve as a particularly potent source of family conflict and stress. Whereas research has examined issues of language and acculturation as sources of stress between immigrant

youth and their parents, including among Asian families (Zhou, 1997), few studies have examined relations among economic hardship, family dynamics, and youth outcomes among immigrant families (for exception see Parke et al.'s 2004 study with Mexican American families). And, no studies that we are aware of have incorporated immigrant youth's perceptions of hardship into the analysis. Economic conflict may be particularly salient among those immigrant families who experience a decline in their SES and standard of living as a consequence of their migration experience (Yeh et al., 2008). Furthermore, for school-age youth, exposure to the consumer-driven culture of the United States and American peers may increase their desire for material possessions and participation in activities deemed normative among their peers which, in turn, may fuel greater conflict with parents over discretionary income (Park, 2005).

Consistent with the Family Economic Stress Model, we expected that for youth (as demonstrated with adults), exposure to economic hardship and conflicts about money would be associated with elevated levels of emotional distress which, in turn, would affect youth's academic achievement. The link between emotional distress (i.e., depressive symptoms) and adolescent academic outcomes is well established in the scientific literature (Fauber, Forehand, Long, Burke, & Faust, 1987). Adolescents with depressive symptoms receive poorer academic grades and rate themselves as less competent in social and cognitive functioning than do their non-depressed peers. Such findings are also corroborated in Asian youth; a longitudinal study of Chinese adolescents (in China) found that adolescents' depressed mood significantly predicted poorer school performance and teacher ratings of learning problems (Chen & Li, 2000).

Overview of the Present Study

In this study, we used a structural equation modeling (SEM) strategy to examine relations among family economic stress, youth perceptions of family economic strain, depressive symptoms, and educational outcomes for a sample of Chinese American families and adolescents. We sought to contribute to the extant literature by testing three hypotheses:

Hypothesis 1: Chinese American adolescents in families experiencing greater levels of economic stress would report higher levels of perceived economic strain than adolescents in families experiencing lower levels of economic stress.

Hypothesis 2: Consistent with the Family Economic Stress Model findings with adults, Chinese American adolescents reporting higher levels of family economic strain would, in turn, report higher levels of depressive symptoms which, in turn, would be related to lower levels of academic achievement and feelings about and engagement in school.

Hypothesis 3: Consistent with findings of differential effects of poverty on child outcomes across developmental epochs (Duncan, Yeung, Brooks-Gunn, & Smith, 1998) and of poverty experienced during adolescence than earlier for achievement-related outcomes (Guo, 1998), associations among the study variables were hypothesized to be stronger during later adolescence as compared to during early adolescence.

Method

Participants

Participants were 444 Chinese American families participating in a short-term longitudinal study. Adolescents were initially recruited from seven middle schools in northern California. At wave 1, most adolescents resided in two-parent homes (86%). Slightly more than half of the adolescent sample (54%) were female (M age = 13.0 years, SD = 0.73 at wave 1 and 17.1 years, SD = 0.80 at wave 2). The average age of the parent sample was 47.9 year for fathers (SD = 6.2) and 44.0 years for mothers (SD = 4.8). Few adolescent participants were foreign-born (25% first generation). Most were born in the U.S. (75%) and had parents who were foreign-born (87% of fathers, 90% of mothers); that is, a majority of the sample was at least second-generation immigrant youth. Most of the foreign-born parents hailed from Hong Kong and the Guandong province of Southern China. Length of time in the U.S. was an average of 17.5 years (SD = 9.7) for fathers and 15.7 years (SD = 8.4) for mothers. The median annual family income range, at wave 1, was $30,001 – $45,000, although the income distribution exhibited considerable variability, with 11% reporting less than $15,000 and 9% reporting more than $105,000. Although only 7% of families reported receiving financial assistance from the government (e.g., food stamps, welfare), 54% reported their children received Free or Reduced Price Lunch at wave 1.

Procedure

Middle schools with a substantive population of Asian American students (at least 20% of student body) were selected from consenting school districts in northern California, resulting in seven eligible schools. Chinese American families were then identified by school administrators, using district self-report data in which students were asked to identify the race/ethnic group with which they most strongly identified. In total, 47% of those families identified by school administrators consented to participate in the study. Verification of students' self-identification as being of Chinese origin was confirmed by asking them, as part of the survey, if both of their parents were Chinese and by also asking the parents about their race/ethnic background. Of the families who received questionnaire packets at wave 1, 76% completed the surveys, with response rates differing across the two regions where data were collected (82% vs. 59%). Four years later families were approached to participate in the second data collection wave. In total, 79% of wave 1 participating families completed wave 2 questionnaires. During both waves of data collection, families received nominal compensation for their participation.

Both English and Chinese version questionnaires were available to participants at both data collection waves. In order to ensure comparability of the two versions, questionnaires were translated into Chinese and then back-translated into English. Inconsistencies were resolved by two bilingual research assistants, with careful consideration of items' culturally appropriate meaning. The majority of adolescents used the English version questionnaires (85%), while more than 70% of fathers and mothers completed the Chinese version questionnaires.

Attrition analyses examining families who participated in both data collection waves and those who attrited at wave 2 revealed no significant differences between groups on key demographic variables (i.e., parental education, family income, parent and child immigration status, child age, parent marital status, parental age) with one exception—boys were more likely to have attrited than girls, $\chi^2(1) = 16.1$, $p < .001$; adolescent gender is included as a covariate for all analyses. Attrition analyses of the wave 1 indicators also revealed few differences across the groups. Those who had attrited had lower GPAs ($M = 9.76$, $SD = 1.99$) as compared to those who were retained across waves ($M = 10.69$, $SD = 1.63$) and reported lower levels of school engagement ($M = 3.91$, $SD = 0.72$, and $M = 4.23$, $SD = 0.59$ for attrited and retained students, respectively).

Measures

All measures were assessed at two time points, once in middle school (w1) and once in high school (w2). Table 1 displays descriptive statistics for each measure by wave.

Family economic stress. We included three measures of families' economic stress. Mothers' and fathers' reports of *financial difficulties* were assessed with one item: "Think back over the past 3 months, how much difficulty did you have with paying your bills?" drawn from the Iowa Youth and Families Project (Conger, Patterson, & Ge, 1995; Ge, Best, Conger, & Simons, 1996). Responses ranged from 1 (*none at all*) to 5 (*a great deal*), with higher scores reflecting greater financial difficulties (range: 1 to 5). Second, families were asked about their *financial strain* using a single item: "Think back over the past 3 months. Generally, at the end of each month, how much money did you end up with?" (Conger et al., 1995; Ge et al., 1996). Ratings ranged from 1 (*more than enough*) to 5 (*very short*), and the entire response range was used at both waves by both parents. Finally, families' *financial adjustments* were assessed with nine dichotomous items that asked whether families had, in the past three months, made certain adjustments based on financial need (Conger et al., 2002). A sample item is "sold some possessions because you needed the money." Items were summed to create a composite family adjustments measure. Although mean reports of adjustments were somewhat low, the sample included a great deal of variability (range: 0 to 8 at w1 and 0 to 7 at w2).

Adolescent perceptions of family economic stress. Three measures assessed adolescents' perceptions of their families' economic stress (Elder, 1999). First, teens responded to one item related to *family financial difficulties*: "In the past 3 months, how much of a problem did your family have because your parents did not have enough money to buy things your family needs or wants?" Adolescents rated the item on a 5-point scale from 1 (*very serious*) to 5 (*not at all*), with a reported range of 1 to 5 at w1 and 1 to 4 at w2. Second, adolescents' perceptions of their

Table 1
Descriptive Statistics of Sample

	Wave 1			Wave 2			
	N	*M*	*SD*	*N*	*M*	*SD*	*t*
Parent Report of Family Economic Stress							
Financial difficulties (M)	403	1.81	1.03	319	1.69	0.89	−1.87
Financial difficulties (F)	376	1.81	0.99	292	1.72	0.86	−2.00*
Financial strain (M)	404	2.68	1.00	317	2.77	1.00	1.31
Financial strain (F)	376	2.67	0.97	293	2.84	0.98	1.98*
Financial adjustments (M)	407	1.30	1.56	330	1.24	1.54	−0.21
Financial adjustments (F)	381	1.30	1.58	299	1.27	1.62	−0.78
Adolescent Perceptions of Family Economic Stress							
Financial difficulties	435	1.69	0.93	339	1.68	0.81	−0.31
Financial worry	434	1.60	0.93	337	1.72	0.94	1.85
Conflict over money	436	1.63	0.72	341	1.94	0.83	6.55***
Adolescent Perceptions of Financial Constraints							
Financial needs	439	2.14	1.03	344	2.23	0.98	1.80
Financial wants	438	2.42	1.18	344	2.26	1.01	−2.11*
Adolescent Depressive Symptoms	444	1.64	0.42	348	1.71	0.46	3.28***
Adolescent Academic Outcomes							
Grades	436	10.50	1.75	344	9.59	2.02	−10.12***
School engagement	439	4.16	0.63	344	3.89	0.73	−8.86***
Positive attitudes about school	439	3.50	0.82	343	3.48	0.74	−0.44

Note. M = mother report; F = father report. Wave 1 maximum $N = 444$. Wave 2 maximum $N = 348$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

parents' *financial worry* was assessed with one item: "In the past 3 months, how upset or worried were your parents because they did not have enough money to pay for things?" Responses ranged from 1 (*very*) to 5 (*not at all*), with the entire response scale used at both waves. Responses to these two items were reverse-coded such that higher scores indicated greater financial difficulties and worry. Third, adolescents answered three questions regarding their families' *conflict over money* during the past three months: "Did your parents argue about not having enough money," "Did you argue with your parents about not having enough money," and "Did you and your parents disagree or get upset about money?" Responses ranged from 1 (*never*) to 5 (*always*). Items were averaged, and higher scores indicated greater family conflict over money (range: 1 to 5 at w1, 1 to 4.7 at w2; $\alpha = 0.76$ and 0.84 for w1 and w2, respectively).

Adolescents' perceptions of financial constraints. Two questions queried adolescents' perceptions of their own financial constraints (Elder, 1999). For both, adolescents were asked to think about the past three months and identify how often they had enough money "for things like clothes, school activities, or things you need" and "for doing things you and your friends like to do, such as going to movies, eating pizza, etc." Adolescents responded using a 5-point scale ranging from 1 (*never*) to 5 (*always*); items were reverse-coded to reflect greater constraints (range: 1 to 5 for both items for both waves; $r = 0.70$ and 0.81 at w1 and w2, respectively).

Adolescent depressive symptoms. We measured adolescents' depressive symptomology using the 20-item CES-D Scale (Radloff, 1977). Adolescents reported whether they experienced each symptom during the past week using a 3-point scale ranging from 1 (*rarely or none of the time [less than 1 day]*) to 4 (*most or all of the time [5-7 days]*). A sample item is "I was bothered by things that don't usually bother me." Higher mean scores reflected greater depressive symptoms (range: 1.0 to 3.7 at w1 and 1 to 3.4 at w2; α's = 0.87 and 0.90 at w1 and w2, respectively).

Academic outcomes. We relied on three measures of adolescents' academic outcomes—grades, school engagement, and positive attitudes about education. First, adolescents identified their grades on a 13-point scale ranging from 1 (*F*) to 13 (*A+*), with a range of 4 to 13 at w1 and 2 to 13 at w2. Second, adolescents' engagement in school was based on five items adapted from the Iowa Youth and Families Project (Conger & Elder Jr, 1994). A sample item is "I usually finish my homework." Ratings ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher mean ratings reflected greater school engagement (range: 1.4 to 5.0 at w1 and w2; $\alpha = 0.79$ and 0.85 at w1 and w2, respectively). Finally, we used four items to assess adolescents' concrete attitudes about the future payoff of getting an education, with items drawn from a larger scale created by Mickelson (1990). Sample items are "Studying in school rarely pays off later with good jobs" and "My parents say people like us are not always paid/get a raise/promoted according to our education." Items were rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*) and were reverse-coded so that higher mean scores reflected more positive attitudes about education (range: 1.5 to 5.0 at w1 and 1.2 to 5.0 at w2; $\alpha = 0.66$ and 0.72 at w1 and w2, respectively).

Covariates. All analyses included a standard set of covariates. The only adolescent-reported covariate was adolescent gender (1 = female, 0 = male). Additionally, we included several parent-reported covariates, all measured at w1: employment (1 = both parents have full-time employment, 0 = at least one parent without full-time employment), education (1 = both parents are high school graduates or more, 0 = at least one parent did not graduate high school), household size, and two-parent household status. Additionally, mothers and fathers self-reported their w1 income using an equal interval 12-point scale, ranging from 1 (*$15,000 or under*) to 12 (*more than $165,000*), based on recommendations by Barrera and colleagues (Barrera, Caples, & Tein, 2001) for use with ethnic minority and urban samples. Because mother and father reports of family income were highly correlated ($r = 0.91$), they were subsequently averaged into a single mean score. Parents' depressive symptomology was assessed with the CES-D (Radloff, 1977). Higher mean scores reflected greater depressive symptoms ($\alpha = 0.88$ for both mothers and fathers). Finally, we included a dichotomous covariate to control for possible effects of regional location, as our sample was drawn from two different metropolitan areas in California which differed in survey response rates. The two regions were selected to represent the settlement of Chinese immigrants, including a traditional immigrant gateway city for Asian immigrants as well as another major city in the metropolitan area of Northern California.

Results

Data Analytic Strategy

Structural equation modeling (SEM) was used to test relations among the study constructs. All analyses were conducted using the SEM software M*plus* 4.2 (Muthen & Muthen, 2006), including the M*plus* estimation procedure to handle missing data through full information maximum likelihood (FIML) imputation, enabling us to include all available data. FIML does not estimate the missing data, as is the case with mean- or regression-based imputation techniques. Rather, it fits the covariance structure model directly to the observed (and available) raw data for each participant.

All inferences for the indirect effects in the current investigation were based on the M*plus* estimation of indirect effects, which estimates indirect effects with delta method standard errors (Muthen & Muthen, 2006). Analyses were conducted using robust maximum likelihood estimators to account for and correct standard errors for potential nonnormality.

We conducted a series of models to examine the relationships among family economic stress and adolescent perceptions of economic stress and financial constraints, depressive symptoms and academic outcomes (see conceptual model in Figure 1). First, we examined relationships among study constructs cross-sectionally, at waves 1 and 2. Next, we tested an individual fixed-effects model

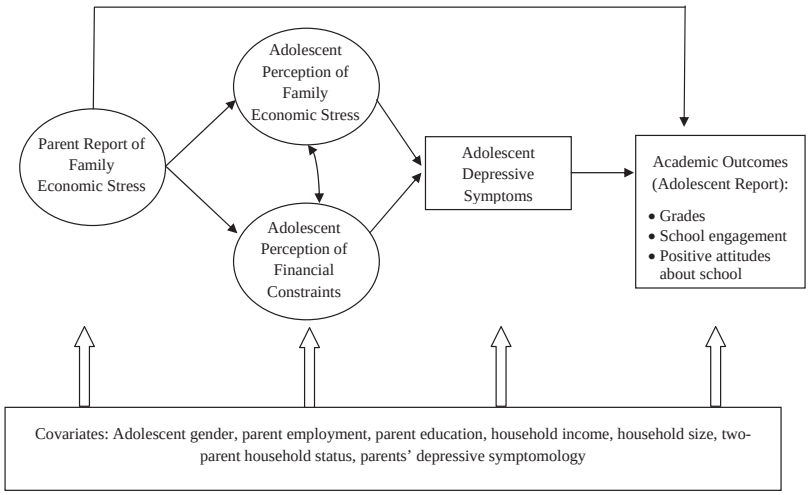


Figure 1. Conceptual model of the influence of family economic stress and adolescents' perceptions of family economic stress and financial constraints on adolescent depressive symptoms and academic outcomes.

(Duncan, Magnuson, & Ludwig, 2004) that explored model relationships at wave 2, controlling for constructs measured at wave 1 to account for unobserved error bias. Finally, we conducted invariance modeling analyses to examine whether the strength of relationships among study constructs differed across waves 1 and 2. Models 1 and 2 allowed us to test the veracity of hypotheses 1 and 2; Model 3 is a test of hypothesis 3.

Formation of Latent Variables

We created latent factors in order to investigate parents' and adolescents' perceptions of family economic stress as well as adolescents' perceptions of financial constraints. For all three latent factors, individual loadings across time were comparable, and all were statistically significant at a minimum probability level of .001 (see Figure 2).

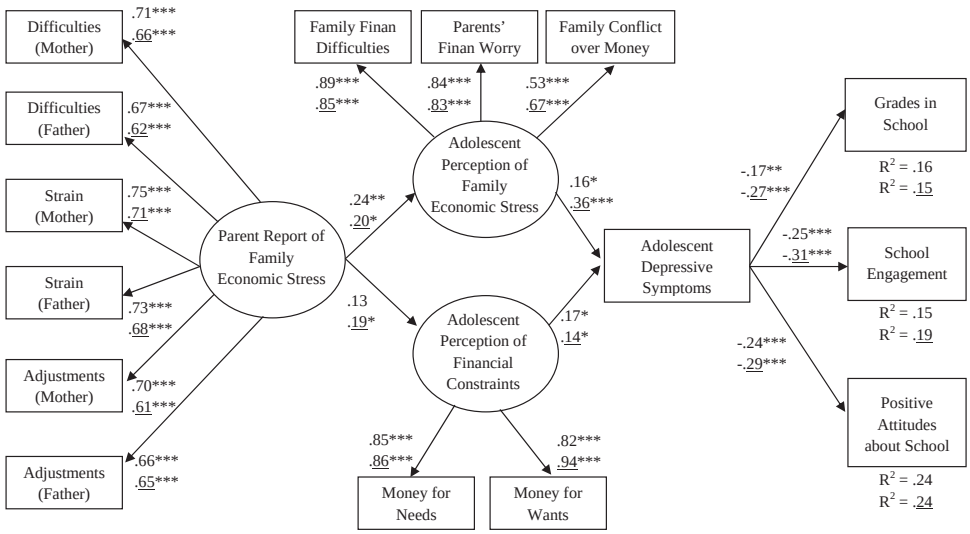


Figure 2. Standardized coefficients for wave 1 and wave 2 models of influence of family economic stress and adolescents' perceptions of family economic stress and financial constraints on adolescent depressive symptoms and academic outcomes. Note: Wave 2 coefficients appear in model with *underlined* coefficients. Model fit statistics for wave 1 model: $\chi^2(152, N = 444) = 318.9$, $p < .001$, CFI = 0.92; RMSEA = 0.050; SRMR = 0.037. Model fit statistics for wave 2 model $\chi^2(152, N = 444) = 367.6$, $p < .001$, CFI = 0.88; RMSEA = 0.057; SRMR = 0.046. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Modeling Direct and Indirect Effects (Tests of Hypotheses 1 & 2)

In the first set of analyses, we examined the modeled relationships depicted in Figure 1 at two time points—when adolescents were in middle school (wave 1) and again, four years later when they were in high school (wave 2).

Wave 1. Results for the wave 1 model are depicted in Figure 2 as top coefficients in the model. The overall model fit was good ($\chi^2(152, N = 444) = 318.9$, $p < .001$, CFI = 0.92; RMSEA = 0.050; SRMR = 0.037), and the results were in the expected direction. Parent reports of family economic stress were significantly associated with adolescents' perception of their families' economic stress but were unrelated to adolescents' perceptions of their own financial constraints. Adolescents' perceptions of family stress and their own financial constraints were related to their depressive symptoms. These depressive symptoms were negatively related to all three academic outcomes. After accounting for all modeled relationships and net the influence of covariates, the direct relationship between parent report of family economic stress and the three academic outcomes was non-significant. Furthermore, as shown in the top panel of Table 2, adolescents' perceptions of family economic stress (through depressive symptoms) mediated (albeit at a trend level) the relationship between parent report of economic stress and adolescents' grades and school engagement.

Wave 2. Results for the wave 2 model are presented in Figure 2 as bottom coefficients in the model. Overall model fit was adequate ($\chi^2(152, N = 444) = 367.6$, $p < .001$, CFI = 0.88; RMSEA = 0.057; SRMR = 0.046), and the pattern of findings was comparable to those observed for wave 1. Parent reports of family economic stress predicted both adolescents' perceptions of family economic stress and of their own financial constraints, which in turn predicted adolescents' depressive symptoms and all three academic outcomes, net the effect of covariates and all other modeled relationships. As with the wave 1 analyses, we observed significant evidence of mediation of the link between parents' reports of family economic stress and adolescents' academic outcomes through adolescents' perceptions of family economic stress and depression (see bottom panel of Table 2).

Supplemental Individual Fixed-Effect Analyses to Address Issues of Endogeneity

A strength of the current investigation is its longitudinal design, which afforded greater flexibility in dealing with issues of selection bias. In the next set of analyses we used individual fixed-effects techniques within a SEM framework to deal with issues of endogeneity inherent in analyses based on cross-sectional survey data; that is, "unobserved" variables correlated with the predictor variables which result in biased estimates of the effects of the predictor variables on the dependent variables (Duncan et al., 2004). To adjust for time invariant parent- and child-level unmeasured variables from both predictors and dependent variables, we auto-regressed wave 2 scores on wave 1 scores (Duncan et al., 2004; Singer & Willett, 2003).

Model fit for the individual fixed-effects model was acceptable ($\chi^2(515, N = 444) = 1046.7$, $p < .001$, CFI = 0.88; RMSEA = 0.048; SRMR = 0.050). As seen in Figure 3, the results, adjusting for prior scores on all modeled constructs, are similar to those observed in the model that included only wave 2 measures (see Figure 2). These results lend greater support to the hypothesized causal relations depicted in Figure 1 between

Table 2
Tests of Mediation for Path Analysis Model for Wave 1 and Wave 2 (N = 444)

Path	Total	Direct	Indirect
Wave 1			
Parent Economic Stress → Grades in School	−0.034	−0.024	−0.010^{+}
Parent econ stress → adol perception of econ stress → depression → grades			−0.006^{+}
Parent econ stress → adol financial constraints → depression → grades			−0.004
Parent Economic Stress → School Engagement	−0.091	−0.075	−0.015*
Parent econ stress → adol perception of econ stress → depression → engage			−0.009^{+}
Parent econ stress → adol financial constraints → depression → engage			−0.005
Parent Economic Stress → Positive Attitudes about School	−0.101	−0.087	−0.014^{+}
Parent econ stress → adol perception of econ stress → depression → attitudes			−0.009
Parent econ stress → adol financial constraints → depression → attitudes			−0.005
Wave 2			
Parent Economic Stress → Grades in School	−0.076	−0.049	−0.027*
Parent econ stress → adol perception of econ stress → depression → grades			−0.020*
Parent econ stress → adol financial constraints → depression → grades			−0.007
Parent Economic Stress → School Engagement	−0.058	−0.027	−0.030*
Parent econ stress → adol perception of econ stress → depression → engage			−0.023*
Parent econ stress → adol financial constraints → depression → engage			−0.008
Parent Economic Stress → Positive Attitudes about School	0.010	0.039	−0.029*
Parent econ stress → adol perception of econ stress → depression → attitudes			−0.022*
Parent econ stress → adol financial constraints → depression → attitudes			−0.008

Note. Wave 1 = middle school; Wave 2 = high school; Econ = economic; Adol = adolescent.
$^{+}$ $p < .10$. * $p < .05$.

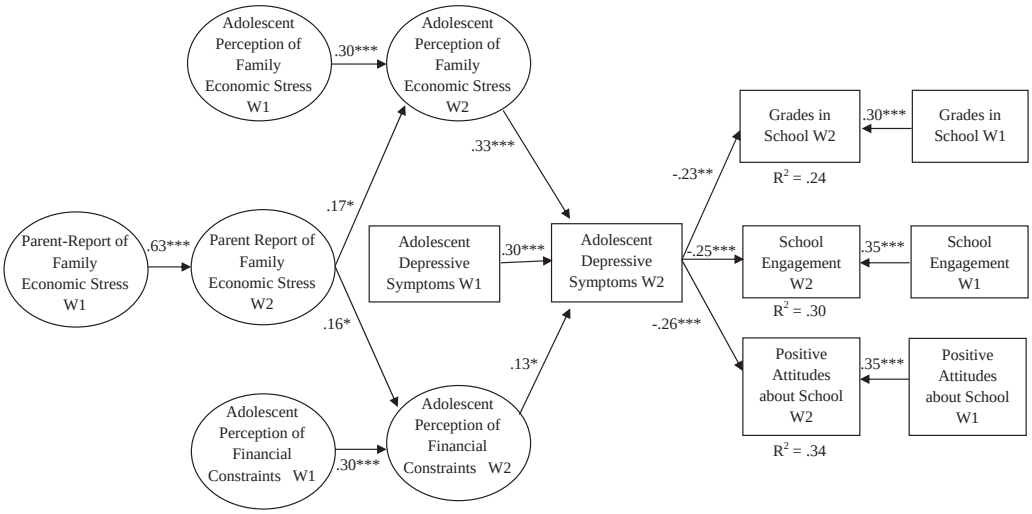


Figure 3. Standardized coefficients for wave 2 model of influence of family economic stress and adolescents' perceptions of family economic stress and financial constraints on adolescent depressive symptoms and academic outcomes, controlling for wave 1 measures. Note: Model fit statistics, $\chi^2(515, N = 444) = 1046.7$, $p < .001$, CFI = 0.88; RMSEA = 0.048; SRMR = 0.050. * $p < .05$. ** $p < .01$. *** $p < .001$. Measurement model loadings were nearly identical to those presented in Figure 3.

family experiences of economic stress and adolescents' academic outcomes.

Invariance Modeling: A Test of the Strength of the Modeled Relations by Developmental Status (Test of Hypothesis 3)

The final set of analyses permitted a test of the strength of the associations among study constructs as a function of developmental status (Hypothesis 3). That is, whether the set of tested relations were stronger, weaker, or equivalent across early (i.e., during middle school) versus later adolescence (i.e., during high school). Our strategy is similar to that employed in the testing of moderation within a SEM framework using multiple group analyses (Bollen, 1989; Kenny, 2005); however, instead of using timing of data collection as the grouping variable, we instead modeled the two waves of data collection within the same covariance matrix to account for the dependence of wave 1 and wave 2 variables. More specifically, we examined both measurement and structural invariance among the constructs and determined whether the latent variable loadings and strength of modeled relationships were similar across waves. We used a stepwise process whereby we initially estimated a base model that included the wave 1 and wave 2 model relationships (configural model) with all model parameters freely estimated; we then included a series of increasingly restrictive constraints on the model parameters and observed whether or not doing so led to a significant decrease in the overall model fit (Millsap & Kwok, 2004; Reise, Widaman, & Pugh, 1993). Omnibus tests (e.g., chi-square difference tests and comparisons of CFI values) were relied upon to determine whether introduction of an additional set of parameter constraints resulted in a significant decrease in the model fit. Should the imposition of additional constraints result in a significant decrease in overall model fit, it would suggest that the more restrictive model does not fit the data as well compared to the less restrictive model and, as such, that there are meaningful differences across waves 1 and 2 in terms of the factor loadings or pattern of associations among the sets of covariance. If invariance was not tenable for an invariance path under consideration (i.e., if we observed a significant decrease in model fit), we allowed for partial invariance by modeling those parameters to be freely estimated in the model (Byme, Shavelson, & Muthen, 1989). In this manner, invariance analyses allow one to test whether and where precisely in a complex, multi-mediated model differences lie. Model fit statistics are presented in Table 3.

Invariance analyses identified differences across waves for several of the modeled relationships. First, in relation to invariance in the *measurement model*, we observed differences in factor loadings for two of our latent variables. For parent-reported family economic stress, factor loadings were higher at wave 1 than wave 2 for all six factor loadings; all factor loadings were, however, significant across each wave separately (see Figure 2). In contrast, for adolescent perceptions of family economic stress, of the three factor loadings tested, two remained relatively stable over measurement points (loadings for family financial difficulties and perceptions of parents' financial worry), whereas the loading for adolescents' perceptions of family conflict over money increased from wave 1 to wave 2. We observed no invariance in factor loadings for adolescent perceptions of financial constraints. Allowing for partial invariance in the measurement model (that is, not constrain-

Table 3
Model Invariance Tests Across Wave 1 (Middle School) and Wave 2 (High School)

	χ^2 (*df*)	$\Delta\chi^2$ (Δdf)	*p*-value	CFI	RMSEA	SRMR
1. Configural invariance model	1043.0 (511)	—	—	.89	.05	.06
2. Measurement invariance	1105.9 (519)	62.9 (8)	<.001	.88	.05	.07
a. Parent-report family economic stress only (6 factor loadings tested)	1086.2 (516)	43.2 (5)	<.001	.88	.05	.06
b. Adol-report family economic stress only (3 factor loadings tested)	1059.6 (513)	16.6 (2)	<.001	.89	.05	.06
c. Adol financial constraints (2 factor loadings tested)	1046.1 (512)	3.1 (1)	*ns*	.89	.05	.06
3. Structural invariance						
a. Predictors to mediators	1060.0 (516)	13.9 (2)	<.01	.89	.05	.06
b1. Parents economic stress to adol economic stress and financial constraints	1047.1 (514)	3.1 (1)	*ns*	.89	.05	.06
b2. Adol financial constraints to depress	1047.2 (515)	0.1 (1)	*ns*	.89	.05	.06
b3. Adol-report family economic stress to depress	1060.0 (516)	12.8 (1)	<.001	.89	.05	.06
c. Depress to outcomes	1053.3 (521)	6.1 (6)	*ns*	.89	.05	.06

ing the measurement parameters to be equal across time when invariance was identified), we next examined structural invariance in our model relationships. As seen in Table 3, the only difference emerged in the relationship between adolescent perceptions of family economic stress and adolescents' depressive symptoms. This relationship was twice as strong at wave 2 as compared to wave 1 ($\beta = .16$ vs. .37, for wave 1 and 2, respectively), suggesting that adolescent perceptions of family economic stress are a significantly stronger predictor of their depressive symptoms during later adolescence as compared to earlier.

Discussion

The dawn of the 21st century brought with it a new surge in U.S. immigration rates. Although this latest cohort of immigrants is diverse, in some key ways they are also remarkably similar. Newcomer immigrants are most often from Latin American (especially Mexico) and Asian countries and are, in comparison to previous cohorts of immigrants, more likely to have lower levels of human and financial capital (Hernandez et al., 2008). In response to the changing demographics of the U.S. population, research on ethnic minority, immigrant families is increasing rapidly, especially with respect to Latino (Mexican) families (Arditti, 2006; Cabrera, Shannon, West, & Brooks-Gunn, 2006; Crosnoe, 2006; Parke et al., 2004) and Asian families and children (Costigan & Dokis, 2006; Fuligni, 2001; Zhou & Xiong, 2005).

In this study, we sought to contribute to the growing knowledge base on Asian families by testing the applicability of the Family Economic Stress Model to a sample of Chinese American parents and adolescents. Of particular interest was the degree to which variation in Chinese American families' experiences of economic hardship accounted for differences in adolescents' educational outcomes across two distinct points in adolescence—during middle school and high school. The aim was to shed light on the socioeconomic variation among Asian families and to document how such variation, particularly for those with less, matters for adolescents' educational outcomes. As an extension of the Family Economic Stress Model, we also incorporated youth perceptions of family economic stress and financial constraints as mediators of the links between economic hardship and youth outcomes.

Overall, the pattern of results was in line with our expectations. Among a sample of Chinese American adolescents, we observed that: (a) youth perceptions of family economic strain and personal financial constraints (for older adolescents only) were systematically related to parents' reports of family level experiences of financial difficulties, adjustments (cutting back), and stress (Hypothesis 1); (b) youth perceptions of economic stress and financial constraints predicted adolescents' level of emotional distress and educational outcomes (Hypothesis 2); and, (c) the strength of relations among the study variables were roughly equivalent across the early and later adolescence. The one exception was the link between adolescent perceptions of family economic strain and depressive symptoms, which was stronger during later as compared to earlier adolescence (Hypothesis 3).

These findings add to the small body of research examining youth's perceptions of economic hardship. The current study is the first to examine these relationships among a sample of Asian American adolescents from immigrant families, to explore whether such perceptions mediate the effects of family level economic stress (as reported by parents) on youth emotional distress and educational outcomes, and further to test the equivalence of such relationships across two developmental periods.

The findings extend theoretical tests of the Family Economic Stress Model by articulating additional mechanisms through which economic hardship influences children's developmental outcomes. Whereas tests of the Family Economic Stress Model have demonstrated its generalizability across diverse family forms (see Conger & Donellan, 2007 for review), existing studies have examined only *adult* psychological stressors associated with hardship and poverty. Findings from the present study highlight that among adolescents, awareness of family conflicts about money translate into expressed worry and anxiety about money which, in turn, contribute to disruptions in their ability to focus on their

school work, leaving them feeling disengaged at school and having less positive attitudes about the role of education in their future. For some youth, this pattern of findings may be the consequence of factors beyond their control. For example, youth may be required to take on part-time work in order to help ease some of their families' financial burden. Besides reducing the amount of time youth have to concentrate on their studies, working part-time may heighten a child's awareness of his or her family's economic struggles causing him or her, in turn, to worry more about their family's future. Immigrant youth from lower SES backgrounds may feel a greater obligation to comply with their parents requests than might immigrant youth from higher SES families (Yeh et al., 2008). Whereas research has documented the role of family obligations in determining Asian youth's academic motivation (Fuligni, 2001), the degree to which such constructs may also explain associations among family economic hardship and adolescents' academic achievement remains under-investigated.

In the current study, we observed less consistent evidence that the influence of parent reports of family economic stress on youth educational outcomes was mediated through adolescent reports of not having enough money to spend on things they needed or wanted. Results from a recent mixed-methods investigation shed some light on this pattern of null findings, from mothers' perspectives. Drawing upon ethnographic and survey data for a sample of low-income native (i.e., U.S. born) mothers, Mistry and colleagues (Mistry, Lowe, Benner, & Chien, 2008) reported that these mothers were acutely aware of the social exclusion that their children sometimes experienced in terms of participating in normal childhood activities (e.g., birthday parties, school field trips) due to limited resources. This led them to go to considerable lengths to shield their children from feelings of economic deprivation whenever possible. Therefore, it may be the case, for the adolescents in the current study, that whereas youth expressed awareness of their families' financial struggles overall, they may have been somewhat protected by their parents from experiencing some of the effects of such hardship with respect to their own needs and wants. It is also plausible that for youth who work, a majority of their earnings are spent on meeting their own needs and wants, offsetting some of the pressure placed on youth to ask their parents for money and for parents to feel a need to provide such items for their children.

Strengths, Caveats, and Extensions

As with any study, it is important to acknowledge the current study's strengths and limitations. First, the sample for the current investigation is noteworthy. In so much as a majority of the current study sample consisted of foreign-born parents of native born children, it is representative of the newer wave of Chinese immigrant families in the United States (Reeves & Bennett, 2004). At the same time, the findings may be limited to the experience of Chinese American families residing in traditional gateway, ethnically diverse metropolitan regions of the country with a sizable Asian population, and it thus may not generalize to Chinese American families residing in less urban and ethnically diverse communities across the United States.

Second, the socioeconomic diversity of the current sample was crucial to our ability to further test the applicability and generalizability of the Family Economic Stress Model. In particular, the demographic comparability between this study's sample of Chinese American families and U.S. Chinese is worth noting. Specifically, the families participating in the study had, on average, lower household incomes (median household family income at wave 1 was between $30,001-$45,000) relative to Census Bureau estimates of household income for U.S. Chinese ($60,058; Reeves & Bennett, 2004).

Despite the lower than national average level of SES, the mean reports of financial difficulties, strain, and economic adjustments by both parents and youth in this study were low overall. It is possible that the Chinese American families in this study may have been less inclined than other families to report financial difficulties and to disclose such matters in a survey format. This is however unlikely in so much as we observed sufficient variability in the range of responses provided across all of the study measures to proceed with the main study analyses, and furthermore, that observed associations among the study constructs were consistent with the tenets of the Family Economic Stress Model. Another possibility is that the lower levels of reported financial difficulties, strain, and economic adjustments were indicative of what Parke and his colleagues discuss as dual frames of reference among ethnic minority, immigrant families (Parke & Buriel, 2006; Parke et al., 2004). That is, for many immigrant families, evaluation of their current economic position is almost always in relation to the economic position held in the country of origin. To the extent that family members, especially parents, perceive themselves to be better off relative to where they were in their native country, they may not evaluate their current economic circumstances as severely as later generations of immigrants in the U.S. or native families.

Several design features of the current study contributed to its overall strength and the conclusions drawn. First, our measurement model of family level economic stress included data from both parents, allowing us to account for issues of respondent bias. Second, our methodological approach was sophisticated and permitted testing of model inequivalence, both with respect to measurement inequivalence and as a test of developmental status differences. Tests of measurement inequivalence are essential for assessing whether or not measured variables operate similarly across groups, or in our case, across time (Raver, Gershoff, & Aber, 2007). A novel feature of this study was the use of multiple group analyses to test for age interaction effects. That we found only limited evidence of age-related differences supports applicability of the Family Economic Stress Model across developmental epochs. Finally, inclusion of repeated measures across time allowed us to specify a fixed-effects model and test the modeled relations in a more refined, conservative manner. With correlational data we are never in a position to talk conclusively about causal events. The methodological approaches used in the current

investigation—dealing with issues of endogeneity and using SEM techniques which do permit a test of a causal theory—bolster confidence that the results are not due to spurious relations among study constructs.

Although we believe that the current study makes a meaningful contribution to the literature, we acknowledge caveats that limit the conclusions drawn and speak to the need for additional research on this topic. In particular, assessments of a family's migration history, including parents' SES, occupation, and education levels in the country of origin, should be better incorporated into future investigations of the Family Economic Stress Model with immigrant families. As Fuligni and Yoshikawa (2003) state, studies based only on post-migration SES information may in fact underestimate the effects of SES and related constructs on child and family well-being.

Given the paucity of research incorporating youth perspectives in studies of poverty and economic hardship, we identify this as a pressing need for future research. There is clear void in our understanding of how children process information about their families' economic status and how such knowledge relates to their academic and socioemotional well-being. Further, we advocate that studies, conducted both within and outside of a Family Economic Stress framework, include youth from diverse socioeconomic, racial/ethnic, *and* immigrant backgrounds. Only through systematic evaluation of the model's processes can we more fully understand the ways in which SES influences development in diverse families.

References

Arditti, J. A. (Ed.). (2006). Latino Families [Special Issue]. *Family Relations, 55*(3).

Barnes, J. S., & Bennett, C. E. (2002). The Asian population: 2000. *Census 2000 Brief.* Washington D. C.: United States Census Bureau.

Barrera, M., Jr., Caples, H., & Tein, J. -Y. (2001). The psychological sense of economic hardship: Measurement models, validity, and cross-ethnic equivalence for urban families. *American Journal of Community Psychology, 29,* 493–517.

Bell, R. Q. (1968). A reinterpretation of the direction of effects in studies of socialization. *Psychological Review, 75,* 81–95.

Benner, A. D. & Kim, S. Y. (in press). Understanding Chinese American adolescents' developmental outcomes: Insights from the Family Stress Model. *Journal of Research on Adolescence.*

Bollen, K. A. (1989). Structural equations with latent variables. *Wiley series in probability and mathematical statistics. Applied probability and statistics section.* Oxford, England: John Wiley & Sons.

Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. Lerner (Eds.), *Handbook of child psychology* (Vol. 1, pp. 993–1028). Hoboken, NJ: John Wiley & Sons, Inc.

Byme, B. M., Shavelson, R. J., & Muthen, B. (1989). Testing for equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin, 105,* 456–466.

Cabrera, N. J., Shannon, J. D., West, J., & Brooks-Gunn, J. (2006). Parental interactions with Latino infants: Variation by country of origin and English proficiency. *Child Development, 77,* 1190–1207.

Capps, R., Fix, M., Murray, J., Ost, J., Passel, J. S., & Herwantoro, S. (2004). *The new demography of America's schools: Immigration and the No Child Left Behind act.* Washington, DC: Urban Institute.

Chen, X., & Li, B-S. (2000). Depressed mood in Chinese children: Development significance for social and school adjustment. *International Journal of Behavioral Development, 24,* 472–479.

Clark-Lempers, D. S., Lempers, J. D., & Netusil, A. J. (1990). Family financial stress, parental support, and young adolescents' academic achievement and depressive symptoms. *Journal of Early Adolescence, 10,* 21–36.

Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology, 58,* 175–199.

Conger, R. D., & Elder Jr., G. H. (1994). *Families in troubled times: Adapting to change in rural America.* New York: Aldine De Gruyter.

Conger, R. D., Patterson, G. R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66,* 80–97.

Conger, R. D., Wallace, L. E., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology, 38,* 179–193.

Costigan, C. L., & Dokis, D. P. (2006). Relations between parent-child acculturation differences and adjustment within immigrant Chinese families. *Child Development, 77,* 1252–1267.

Crosnoe, R. (2006). *Mexican roots, American schools: Helping Mexican immigrant children succeed.* Stanford: Stanford University Press.

DeNavas-Walt, C., Proctor, B. D., & Smith, J. (2007). Income, poverty, and health insurance coverage in the United States: 2006. *Current Population Reports.* Washington D. C.: United States Census Bureau.

Duncan, G. J., Magnuson, K. A., & Ludwig, J. (2004). The endogeneity problem in developmental studies. *Research in Human Development, 1,* 59–80.

Duncan, G. J., Yeung, W. J., Brooks-Gunn, J., & Smith, J. R. (1998). How much does childhood poverty affect the life chances of children? *American Sociological Review, 63,* 406–423.

Elder, G. H., Jr. (1999). *Children of the great depression: Social change in life experience* (25th anniversary ed.). Boulder, Colorado: Westview Press.

Fauber, R., Forehand, R., Long, N., Burke, M., & Faust, J. (1987). The relationship of young adolescent Children's Depression Inventory (CDI) scores to their social and cognitive functioning. *Journal of Psychopathology and Behavioral Assessment, 9,* 161–172.

Fuligni, A. J. (1998). The adjustment of children from immigrant families. *Current Directions in Psychological Science, 7,* 99–103.

Fuligni, A. J. (2001). Family obligation and the academic motivation of adolescents from Asian, Latin American, and European backgrounds. In A. J. Fuligni (Ed.) *New directions for child and adolescent development, family obligation and assistance during adolescence: Contextual variations and developmental implications.* San Francisco, CA: Jossey-Bass.

Fuligni, A. J., & Yoshikawa, H. (2003). Investments in children among immigrant families. In A. Kalil & T. De Leire (Eds.) *Family investment in children: Resources and behaviors that promote success.* Mahwah, NJ: Erlbaum.

Ge, X., Best, K. M., Conger, R. D., & Simons, R. L. (1996). Parenting behaviors and the occurrence and co-occurrence of

adolescent depressive symptoms and conduct problems. *Developmental Psychology, 32,* 717–731.
Guo, G. (1998). The timing of the influences of culmulative poverty on children's cognitive ability and achievement. *Social Forces, 77,* 257–287.
Hernandez, D. J. (2004). Demographic change and the life circumstances of immigrant families. *The Future of Children, 14,* 17–47.
Hernandez, D. J., Denton, N. A., & Macartney, S. E. (2008). Children in Immigrant Families: Looking to America's Future. *Social Policy Report, XXII(3*). Ann Arbor, MI: Society for Research in Child Development.
Kao, G. (1995). Asian-Americans as model minorities? A look at their academic performance. *American Journal of Education, 103,* 121–159.
Kenny, D. A. (2005). Statistical models. In B. S. Everitt & D. C. Howell (Eds.), *Encyclopedia of statistics in behavioral science* (Vol. 5, pp. 1895–1897). New York: Wiley.
McLoyd, V. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61,* 311–346.
McLoyd, V. (1998). Children in poverty: Development, public policy, and practice. In I. E. Sigel, K. A. Renninger, & W. Damon (Eds.), *Handbook of child psychology: Child psychology in practice* (5th ed., Vol. 4, pp. 135–210).
McLoyd, V. C., & Wilson, L. (1990). Maternal behavior, social support, and economic conditions as predictors of distress in children. *New Directions for Child Development, 46,* 49–69.
Mickelson, R. A. (1990). The attitude-achievement paradox among Black adolescents. *Sociology of Education, 63,* 44–61.
Millsap, R. E., & Kwok, O. M. (2004). Evaluating the impact of partial factorial invariance on selection in two populations. *Psychological Methods, 9,* 93–115.
Mistry, R. S., Lowe, E., Benner, A. D., & Chien, N. (2008). Expanding the family economic stress model: Insights from a mixed methods approach. *Journal of Marriage and Family, 70,* 196–209.
Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73,* 935–951.
Muthen, L. K., & Muthen, B. O. (1998–2006). *Mplus user's guide. Fourth edition.* Los Angeles, CA: Muthen & Muthen.
Park, L. S. H. (2005). *Consuming citizenship: Children of Asian immigrant entrepreneurs.* Stanford: Stanford University Press.
Parke, R. D., & Buriel, R. (2006). Socialization in the family: Ethnic and ecological perspectives. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.) *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, pp. 429–504). New Jersey: John Wiley & Sons.
Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., et al. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development, 75,* 1632–1656.
Quintana, S. M., Aboud, F. E., Chao, R. K., Contreras-Grau, J., Cross, W. E., Hudley, C., et al. (2006). Race, ethnicity, and culture in child development: Contemporary research and future directions. *Child Development, 77,* 1129–1141.
Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385–401.
Raver, C. C., Gershoff, E. T., & Aber, J. L. (2007). Testing equivalence of mediating models of income, parenting, and school readiness for White, Black, and Hispanic children in a national sample. *Child Development, 78,* 96–115.
Reeves, T. J., & Bennett, C. (2004). We the people: Asians in the United States. *Census 2000 Special Reports.* Washington D. C.: United States Census Bureau.
Reise, S. P., Widaman, K. F., & Pugh, R. H. (1993). Confirmatory factor analysis and item response theory: Two approaches for exploring measurement invariance. *Psychological Bulletin, 114,* 552–566.
Scarr, S., & McCartney, K. (1983). How people make their own environments: A theory of genotype-environment effects. *Child Development, 54,* 424–435.
Shek, D. T. L. (2003). Economic stress, psychological well-being and problem behavior in Chinese adolescents with economic disadvantage. *Journal of Youth and Adolescence, 32,* 259–266.
Shek, D. T. L. (2008). Economic disadvantage, perceived family life quality, and emotional well-being in Chinese adolescents: A longitudinal study. *Social Indicators Research, 85,* 169–189.
Shin, H. B. (2005). School enrollment—Social and economic characteristics of students: October 2003. *Current Population Reports.* Washington D. C.: United States Census Bureau.
Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence.* New York, NY: Oxford University.
Yeh, C. J., Kim, A. B., Pituc, S. T., & Atkins, M. (2008). Poverty, loss, and resilience: The story of Chinese Immigrant Youth. *Journal of Counseling Psychology, 55,* 34–48.
Zhou, M. (1997). Growing up American: The challenge confronting immigrant children and children of immigrants. *Annual Review of Sociology, 23,* 63–95.
Zhou, M., & Xiong, Y. S. (2005). The multi-faceted American experiences of the children of Asian immigrants: Lessons for segmented assimilation. *Ethnic and Racial Studies, 6,* 1119–1152.

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