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Poverty is a community stressor that disproportionately affects ethnic minority families. One aspect of programmatic research on poverty focuses on the psychological sense of economic hardship. In a study of 319 African American, European American, and Mexican American urban families, parents completed objective measures of economic status and scales of perceived economic hardship that were adapted from previous research. Measurement models identified a coherent construct of psychological sense of economic hardship that was essentially equivalent for mothers and fathers, English- and Spanish-speaking Mexican Americans, and the 3 ethnic groups. In support of the validity of this construct, relations between objective indicators of economic status and perceived economic hardship showed equivalence across these same groups.

KEY WORDS: economic hardship; ethnic minorities; assessment.

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INTRODUCTION

Poverty is a community stressor that disproportionately affects ethnic minority families. In an overview of contemporary research on children and poverty, Huston, McLoyd, and Coll (1994) discussed the well-known discrepancy between the prevalence of poverty for majority and minority children. Although the overall prevalence of poverty for the nation's children was 22% in 1991, it was 46% for African American children and 40% for Hispanic children. There is a need for community researchers to conduct studies on the experience of poverty for children and families in settings that are ethnically diverse and use research instruments that are appropriate for all participants.

In community research on poverty, objective indicators of economic resources have tremendous value for quantifying the supplies of income, work, and material goods. There is appeal in indicators such as “total family income” which, on the surface, measure economic resources in units that appear to be meaningful across contexts. On closer inspection, however, it is readily apparent that objective indicators require various adjustments because dollar amounts do not capture adequately the conditions of economic deprivation and need. We recognize that the purchasing power of a given unit of money changes over time, varies by geographic setting, and depends on the number of family members who are supported by the income. With this recognition, researchers routinely adjust for factors such as inflation when making comparisons across time periods or adjust family income by family size when making comparisons across family units (e.g., Hashima & Amato, 1994). These common modifications are inadequate, however, for capturing the value of resources that depend on specific life circumstances that are not easily adjusted by numerical algorithms.

Subjective measures of economic hardship complement or serve as alternatives to objective indicators of economic resources. The value of subjective measures is that they go to the heart of the question underlying much of the interest in economic conditions: Do individuals and families experience stress because their appraised needs are not met by available resources? Rather than trying to quantify the relevant dimensions of needs and resources objectively, subjective measures attempt to assess the psychological sense of disparity between needs and resources, what some would regard as the essence of stress (Lazarus & Folkman, 1984).

Conceptual Considerations

With the exception of the work by Conger and Elder (1994), there have not been deliberate attempts to define the concept of economic hardship.
Our survey of the literature reveals a concept that has a prominent cognitive component with less emphasis on the behaviors and affect that may contribute to this multidimensional construct. Specifically, a content analysis of this concept would include the cognitive appraisal that income is insufficient to provide necessities for living, behaviors that reflect efforts to adjust to inadequate income, and affect that takes the form of despair and hopelessness that one's economic future will be bright.

Cognitive components have been reflected in scales that assess parents' perceived inability to make ends meet and the sense of not having enough for necessities (Conger & Elder, 1994; Elder, Eccles, Ardelt, & Lord, 1995; McLoed, Jayaratne, Ceballo, & Borquez, 1994; Pearlin, Menaghan, Lieberman, & Mullan, 1981). The perceived gap between needs and resources is arguably the most frequently measured feature of subjective economic hardship.

An awareness of insufficient financial resources is often accompanied with behavioral acts to cope with these demands. Principally, individuals cope by conserving existing resources (e.g., cutting back on expenditures) or attempting to expand income (e.g., selling belongings, finding additional employment). The behavioral components have also appeared in some assessment strategies (Conger & Elder, 1994; Elders et al., 1995; Lempers, Clark-Lempers, & Simons, 1989; McLoed et al., 1994).

Finally, the construct of psychological sense of economic hardship could include affective components such as discouragement and the loss of hope that one's future financial condition will improve. This component is seldom assessed, but was included in research by Vinokur, Price, and Caplan (1996) who studied the effects of what they termed "financial strain" on couples' depression and relationship satisfaction. In Vinokur et al.'s study (Vinokur et al., 1996), financial strain was significantly related to objective indicators of economic resources such as total family income. Furthermore, the measure of financial strain fit the authors' hypothesized path model in which financial strain contributed to the depression of job seekers and their partners, the partners' provisions of support and criticism, and the subsequent depression and relationship dissatisfaction of the job seeker. The concept of anticipated financial strain appears to be a potentially useful addition to the behavioral and cognitive components of the psychological sense of economic hardship.

**Approaches to Assessing Economic Hardship: Content Validity Considerations**

Several researchers have conducted studies that included measures of subjective economic hardship or as often referred to as economic distress.
or economic pressure. These measures showed some common elements of economic hardship that help to define the larger content of this construct. A study of 241 single, African American mothers and their seventh- and eighth-grade children included measures of both adolescents’ and parents’ sense of economic hardship (McLoyd et al., 1994). Adolescents’ perceptions of economic hardship were assessed with one item: “How often does your family have problems paying for basic necessities like food, clothing, and rent?” For the mothers, financial hardship was measured with three items that assessed (a) borrowing money to make ends meet, (b) deciding not to buy something for themselves or their children, and (c) finding it difficult to pay family bills. Conceptually, these items assessed behavioral adjustments mothers made to cope with a shortage of income and the cognitive sense of difficulty in meeting financial obligations. The internal consistency of this 3-item scale was .62. Two objective economic variables were also assessed in this study: an interruption in work for at least 2 months (yes, no) and employment (yes, no). These indicators were both correlated (.19) with mothers’ ratings of financial hardship. This approach to measuring financial hardship helped to define the construct, but it left room for improving the psychometric properties of the specific scale.

Lempers et al. (1989) assessed economic hardship with 12 items, 10 of which assessed adjusting lifestyle choices or cutting back on consumption to stay within means. The other two items referred to increases or decreases in the family’s income during the past 6 months and the extent of the family’s current financial problems. Similar to McLoyd et al., adjustments to cope with inadequate financial resources and the sense of difficulty in meeting financial demands were part of the construct. This scale was administered to 622 adolescents who were enrolled in 9th through 12th grades in a rural Midwestern community. The internal consistency reliability of the measure was .86 for this sample of adolescents. Objective indicators of financial hardship were not used in this report.

In their well-known research on farm families, Conger, Elder, and their colleagues in the Iowa Youth and Families Project developed measurement models of what they termed “economic pressure” to assess the psychological consequences of the farm crisis that affected rural America in the 1980s (Conger & Elder, 1994). Their construct of economic pressure had three components, which were based on multi-item scales administered to mothers and fathers: (a) perceived inability to make ends meet, (b) the sense of not having enough money for necessities, and (c) reports of economic adjustments that were made in reaction to insufficient resources. These three components are comprehensive in that they incorporate the cognitive and behavioral concepts assessed in McLoyd et al. (1994) and Lempers et al. (1989).
The measurement modeling by Conger and Elder (1994) showed that these three components contributed to a good-fitting model of economic pressure. For farm families, the economic pressure construct was validated in other models that showed its relation to objective indicators such as debt-to-asset ratio on family farms, income-to-needs ratio, which expressed family income and family size in relation to the poverty line, and farm value. Similar objective indicators were used for nonfarm families that substituted a measure of unstable work for farm value. The development of this construct from multiple indicators of economic pressure and validation against objective measures of economic status were critical steps in their program of research. This construct was later applied to research that identified the consequences and mediators of economic pressure (e.g., Conger, Conger, & Elder, 1997).

Despite the availability of some measures of economic hardship, there is still the need to develop and validate practical methods for assessing this construct. Some existing measures fall short of assessing the full construct as we have conceptualized it, others lack validity data, and almost all have not been evaluated for equivalence across diverse ethnic groups.

Cross-Ethnic Group Equivalence of Economic Hardship

Establishing equivalence of psychological measures is a fundamental step in conducting cross-ethnic group research (Knight & Hill, 1998). In this study, the primary interest was in two central types of ethnic equivalence: (a) equivalence in the internal structure of economic hardship and (b) equivalence in the way objective indicators are related to it (i.e., validity). The first kind of equivalence is what Hui and Triandis (1985) labeled “internal structure congruence.” This is based on the rationale “that if a construct is the same across cultures, it should have the same components (or internal structures) and the same relations among components across cultures” (p. 141). Hui and Triandis described a number of data analytic techniques that included variations of factor analyses, multidimensional scaling, and methods for comparing correlation matrices. Since 1985 new data analytic techniques have been developed to estimate the internal structure of constructs and to evaluate equivalence across diverse groups. In this study, these data analytic methods evaluated the extent to which there were similarities in the way items contributed to scales of economic hardship, and, in turn, similarities in the way these scales were related to the larger construct. These analyses provided a basis for determining if the psychological sense of economic hardship meant the same thing for different ethnic groups (i.e., had the same internal structure).
The second kind of equivalence, equivalence of validity, is based on the argument that "if a construct has the same meaning cross-culturally, it should also enter into the same empirical relationships" (Hui & Triandis, 1985, p. 145). Hui and Triandis discussed equivalence of validity in the context of defining "functional equivalence" (when a construct has the same precursors, consequents, and correlates) and "validation by nomological network," which included demonstrating the equivalence of a construct's relationships with several external criteria. The failure to find equivalence at this stage might suggest differences in the social and psychological processes that contribute to subjective economic hardship when families face adverse financial conditions. This would occur, for example, if family income was not equally influential in determining subjective sense of hardship for various ethnic groups.

Presently, there are not extensive data on the measurement equivalence of economic hardship scales for different ethnic groups because most of the relevant studies were conducted with all European American (Conger & Elder, 1994; Lempers et al., 1989) or all African American samples (McLoyd et al., 1994). An important exception to this was research done with 286 African American and 134 European American parents in Philadelphia (Elder et al., 1995). Parents completed two subjective economic hardship scales that were highly similar to two of the scales used by Conger and Elder (1994): (a) a measure of "felt constraint" that assessed difficulties in meeting necessities and (b) economic adjustments or cutbacks that individuals make to extend their economic resources. These two scales were used as indicators of economic hardship in a larger model that linked economic hardship with parental depression and parenting efficacy. The authors found that for African American parents, economic hardship was more highly related to felt constraints than to economic adjustments. For European American parents, these two indicators showed equal relations to the latent construct of economic hardship. Because the researchers could not show racial equivalence of the construct, they conducted separate analyses for African American and European American families. In this instance, there were racial differences in the relations between the concepts that comprised the larger construct of economic hardship.

The present research parallels the measurement modeling of Conger and Elder (1994) and extends it to the study of urban families from three ethnic groups: African Americans, European Americans, and Mexican Americans. The extension to ethnic minority groups is highly relevant because of high rates of urban poverty and the high prevalence of poor African Americans and Mexican Americans in urban centers of the United States. This study estimates a measurement model of subjective economic hardship, tests the relation of various objective indicators of economic status to the
economic hardship construct, and evaluates the equivalence of this model for the three ethnic groups. The hypothesized model of economic hardship included the three concepts that appeared in Conger and Elder's research, but these concepts were supplemented with the concept of anticipated hardship that Vinokur et al. (1996) studied. From a theoretical perspective, it would be valuable to determine if the conceptual components of economic hardship do, in fact, represent a coherent psychological construct. Theoretically, it is also valuable to determine if this construct has the same meaning across diverse ethnic groups. From a practical standpoint, researchers need concise, well-validated measures of economic hardship that can be used with ethnic minority families. This study sought to address these questions that had both theoretical and practical importance.

**METHOD**

**Participants**

Participants were the parents of 319 seventh or eighth graders who ranged in age from 11 to 15 (mean age of 12.9 years). Parents included 194 fathers or male parenting figures and 319 mothers or female parenting figures. The 319 families included 67 European American (EA), 67 African American (AA), and 185 Mexican American (MA) mothers. Fathers included 17 AA, 49 EA, 124 MA, and 4 men who could not be classified in one of the three ethnic groups. In the MA group, 74 mothers completed the assessment in English and 111 in Spanish. For MA fathers, 38 completed the assessment in English and 86 in Spanish.

Only families in which the mother and adolescent reported the same ethnicity were recruited to participate in interviews. When a father or father-figure was present in the household, mother, father, and adolescent had to agree to be interviewed for that family to be included in the study. Thus, there were 194 two-parent families and 125 single-mother families. A parent-figure was defined as a person taking primary responsibility for the care of the child and with whom the child had lived for at least the past 4 months. Parent-figures included 14 grandmothers, 3 grandfathers, 4 adoptive mothers, 6 adoptive fathers, 11 female relatives (e.g., aunts), and 6 male relatives (e.g., uncles).

In the European American subsample, two adolescents reported a different ethnic identity during the interview than they had in the telephone screening. In these cases, the mother and adolescent did not match on ethnic identity. Because adolescent reports were not used in this study, these two mothers were retained in the sample.
The three ethnic groups were compared on several background variables. There was a significant ethnic group difference in the representation of two-parent families, $\chi^2(2) = 41.90, p < .001$ — AA (26.9%), EA (74.6%), and MA (68.1%); mothers’ years of education, $F(2, 313) = 55.52, p < .01$ — AA (12.7), EA (12.6), and MA (9.0); fathers’ years of education, $F(2, 188) = 35.51, p < .01$ — AA (13.1), EA (12.8), and MA (8.9); and per capita income, $F(2, 298) = 18.00, p < .001$. The groups did not differ on mothers’ and fathers’ employment status or age.

Because we planned analyses that distinguished Mexican American families in which mothers completed interviews in English (MA-EI; $n = 74$) and those in which mothers completed them in Spanish (MA-SI; $n = 111$), we compared these two subsamples on several background variables. Both MA-EI mothers and fathers had lived in the United States significantly longer, $t(182) = 22.33, p < .001, t(121) = 10.96, p < .001$, had completed more years of education, $t(187) = 11.01, p < .001, t(126) = 6.27, p < .001$, and had higher per capita incomes, $t(171) = 6.45, p < .001, t(126) = 8.06, p < .001$, than MA-SI mothers and fathers, respectively. MA-SI families were more likely to contain two parents (77.5%) than did the MA-EI families (54.1%), $\chi^2(1) = 11.22, p < .001$. They did not differ significantly on age or a family-level measure of parental employment status.

### Procedures

Families were recruited from the seventh- and eighth-grade school rosters of two cooperating urban school districts. Using data from 1996–97 (the year of data collection), one of the school districts had an ethnic makeup of 80.6% Hispanic, 8.4% African American, 7.1% non-Hispanic Caucasian, 3.3% American Indian, and less than 1% Asian American (1996–97). The other school district had an ethnic makeup of 71.0% Hispanic, 21.2% African American, 6.7% non-Hispanic Caucasian, 0.9% American Indian, and 0.2% Asian American.

4The means for the three groups were AA (1.3), EA (1.5), and MA (0.9). Family income was measured on a 13-point scale where each scale point represented $5,000 intervals. For example, 1 = less than or equal to $5,000, 2 = $5,001–$10,000, 12 = $55,001–$60,000, and 13 = greater than $60,000. Per capita income was calculated by dividing the scale score for mothers’ reports of total family income by the number of people in the household. The exact wording of the family income item was as follows: “Think about all the sources of income that members of your family household had before taxes during the past year. Consider all kinds of income including wages earned from jobs, alimony, unemployment compensation, government assistance, or other types of income that came to you or a member of your household. What was your family’s income from all sources before taxes during the past year?”
Our sampling plan called for a target recruitment of 70 AA, 70 EA, and 180 MA families in which there would be some balance in the numbers of MA parents and adolescents who spoke primarily Spanish or English. This latter consideration was important because one aim of the larger research project was to validate several measures that had been translated into Spanish. Because school roster data contained information on student ethnicity and home language, we could select on these two criteria in our initial recruitment contacts. Families were recruited with telephone calls and with letters (for those who lacked telephones). Families were eligible if they were AA, EA, or MA, and if mothers and adolescents in the same family reported the same ethnicity. Families were successfully recruited when a mother and adolescent agreed to be interviewed in single-mother families and a mother, father, and adolescent agreed to be interviewed in two-parent families.

There were 1,568 families that were randomly selected for recruitment from the original school rosters (about 32% of the 4,942 seventh and eighth graders available in the two districts). Of the families selected for recruitment, 527 (33.6%) could not be located, 261 (16.6%) refused participation, 183 (11.6%) were ineligible, 87 (5.5%) could not be recruited after multiple contacts or failure to fully determine eligibility, 58 (3.7%) were not recruited, 34 (2.2%) had an unknown status (because of insufficient recruitment notations), and 21 (1.3%) were put on a waiting list because of extenuating circumstances (e.g., moved out of the school district). An additional 76 (4.8%) were eligible and agreed to be interviewed, but they did not complete an interview because of relocation, multiple cancellations, or other factors. The 319 families that were successfully interviewed represent 74.3% of the 429 families who were eligible for the study.

All data were collected in home interviews by professional interviewers who used laptop computers to administer closed-ended items. Participants were assessed in individual interviews that lasted approximately 2 hr. Families with one participating parent and an adolescent were paid $30; families with two participating parents and an adolescent were paid $45. Interviewers had at least a bachelor’s degree or 2 years of experience in public relations, school programs, or community organization work. Previous interviewing experience was also required. Interviewers completed a training program prior to their interviews and participated in weekly meetings during the course of data collection. To monitor the quality of interviews, 10% of the interviews were either observed in the home or evaluated in telephone surveys in which independent research assistants asked family members structured questions about their satisfaction with the interview.
Measures

Psychological Sense of Economic Hardship

Four separate scales were considered for developing the construct. The first three (Economic Adjustments and Cutbacks, Not Enough Money for Necessities, and Inability to Make Ends Meet) were based on scales used in the Iowa Youth and Families Project (Conger & Elder, 1994). The fourth scale, a measure of Financial Strain, was adapted from a scale used by the University of Michigan’s Preventive Intervention Research Center in their research on unemployed adults (e.g., Vinokur et al., 1996). Table 1 shows the means, standard deviations, and internal consistency reliabilities of the scales that were obtained in this study.

Economic Adjustments and Cutbacks were assessed with nine items such as added another job, received government assistance, and sold possessions because money was needed. Parents indicated whether these events had occurred in the past 3 months. Similar to the scoring of stressful life event scales, this measure produced a single score that was the total number of events that occurred (0–9). The Kuder–Richardson reliabilities were .70 and .73 for mothers and fathers, respectively.

<table>
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<th>Mean</th>
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<th>Cronbach’s alpha</th>
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<td>.99</td>
<td>.75</td>
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<tr>
<td>Financial strain (fathers’ reports)</td>
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<td>.71</td>
<td>.73</td>
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<tr>
<td>Inability to make ends meet (fathers’ reports)</td>
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<td>.70</td>
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<tr>
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<td>.93</td>
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<td>.72</td>
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<tr>
<td>Per capita income (mothers’ reports)</td>
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<td>Number of hours parents worked per week</td>
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Note: *Loss of Work or Wages was a count of the occurrence of these events; thus, scores ranged from 0–5. Income was measured on a 5-point scale where each scale point represented $5,000 intervals. For example, 1 = less than or equal to $5,000, 2 = $5,001–$10,000, 3 = $15,001–$20,000, and 4 = greater than $60,000. These scale points were divided by the total number of people in the household to determine the per capita income. Number of Hours worked was the sum of the number of hours each parent worked in a typical week. This sum was divided by 40.

Reliability estimates for Economic Adjustments are Kuder–Richardson coefficients rather than Cronbach’s alpha coefficients.

* A copy of the items that were used to assess financial hardship also can be obtained from Dr. Barrera.
Not Enough Money for Necessities was assessed with seven items. Parents were asked how much they agreed or disagreed with items such as whether they felt they had enough money for housing, clothing, home furnishings, and a car over the past 3 months. Participants used 5-point scales to express the severity of their money shortage. Conger and Elder (1994) had adapted their scale from the one developed by Pearlin et al. (1981). Internal consistency reliabilities (Cronbach's alpha) were .85 and .88 for mothers and fathers, respectively.

Inability to Make Ends Meet included two items (difficulty paying bills and having money left over at the end of the month). Each item was rated on a 5-point scale that reflected the difficulty in meeting financial demands. The correlation between these two items was .77 for mothers and .71 for fathers.

Financial Strain consisted of two items concerned with anticipation of future hardships and reductions in the family's standard of living over the coming 3 months. These items were adapted from items used in a study by Vinokur et al. (1996). Participants made their ratings on 5-point scales that ranged from almost never (1) to almost always (5). In the present study the correlation between the two items was .74 for mothers and .72 for fathers.

Objective Indicators of Economic Status

Three relatively objective indicators of economic status were used as validity criteria: (a) per capita family income, (b) total number of hours parents worked on average each week over the past 3 months, and (c) occurrence of three events that signaled loss of work or wages during previous year (laid off or fired, stopped working for a long period of time—not because of retirement, and experienced a cut in wages or salary).5

Per capita family income was calculated by dividing mother's report of total family income by the number of people in the household. Although father's reports of income were also available, we chose maternal reports because there were 125 single-mother families. We asked participants to include all forms of income from all family members in their reports of total family income. Rather than requiring participants to report exact amounts, that we asked them to tell us if their total family income fell within $5,000 intervals that ranged from “under $5,000” (1) to “over $60,000” (13). Per capita income was then calculated by dividing these rating scale values by total

Hours worked was assessed with the following item: “Over the past 3 months, how many total hours did you work each week on the average?” Loss of Work or Wages was assessed with the following question: “Indicate which events happened to you (or your spouse/partner) during the past 12 months. During the past 12 months you (or your spouse/partner) lost a job, stopped working for a long period of time (not because of retirement), had a cut in wages or salary.” The exact wording of the family income item is given in footnote 4.
household size. The correlation between mothers’ and fathers’ report of per capita income was .90.

Like per capita income, Hours Worked was a family-level variable. Mothers and fathers indicated how many hours they had worked on average each week over the past 3 months. In two-parent families, reports from mothers and fathers were added; in single-mother families, mother’s reports was the only information used.

Loss of Work or Wages was also a family-level variable. Originally, five items from Conger and Elder’s unstable work income scale (Conger & Elder, 1994) were administered to mothers and fathers. The items are life-event questions that ask respondents to indicate if the event occurred to either husband or wife during the past 12 months. Because these items were intended to be objective indicators of economic status, they were required to show interrater agreement. Chi-square tests were done first to determine if mothers’ and fathers’ reports were not independent of each other. Two items, “had trouble getting enough work,” $\chi^2(1) = 1.70$, ns, and “got demoted,” $\chi^2(1) = 3.60$, ns, had nonsignificant chi-square values, indicating that mothers’ and fathers’ responses were not related to each other. These two items were dropped subsequently to leave three items: “lost a job,” “stopped working for a long period of time (not because of retirement),” and “had a cut in wages or salary.” All three items showed significant chi-square values. Second, percentage of agreement between mothers’ and fathers’ responses were calculated for those three items. Percentages of agreement ranged from 79% to 82% for the three items. We renamed this scale “loss of work or wages” to more accurately describe the contents of the remaining items.

RESULTS

The results are presented in two major sections. First, confirmatory factor analyses utilizing maximum likelihood estimation were performed to determine the factor structure of subjective economic hardship and to test whether the construct was the same across gender and across ethnic groups. Second, structural equation modeling was used to test a model of relations between subjective economic hardship and “objective” measures of economic status. The equivalence of this model across gender and ethnic groups was also tested.

Construct of Economic Hardship

Economic hardship was represented by a second-order factor model with four latent constructs: financial strain, inability to make ends meet,
not enough money for necessities, and economic adjustments. Each of the latent constructs was estimated originally by 2, 2, 7, and 1 measurement variables, respectively. A single-indicator "count" scale score was used to represent the nine economic adjustment items in the model because of their life-events nature.

Before the test of the second-order factor model, a measurement model of the four economic constructs (i.e., with no second-order factor) was estimated to determine whether the 12 observed variables were good measures of the four subcategories of the subjective economic hardship construct. The model was tested first with mothers’ reports only (n = 292) and showed an adequate fit to the data, χ²(49) = 151.01, p < .01 (Bentler, 1990, Comparative Fit Index [CFI] = .94; Bentler and Bonett, 1980, Normed Fit Index [NFI] = .92; Tanaka & Huba, 1985, Goodness-of-fit Index [GFI] = .92). However, a detailed examination of individual parameter fits showed that two items concerning food and leisure activities from the Not Enough Money for Necessities scale did not differentiate well among the four subjective economic hardship constructs. When the two items were omitted, the model improved significantly, χ²(30) = 58.35, p < .01 (Δχ² = 92.66; Δdf = 19, p < .01) and showed good fit indices (GFI = .96, NFI = .96, CFI = .98).

The original measurement model with 12 observed variables was then tested using only fathers’ reports (n = 179), with χ²(49) = 106.12, p < .001 (GFI = .91; NFI = .91; CFI = .95). Examination of individual parameter fits for this model indicated that one of the two items identified for mothers (leisure activities) also failed to differentiate well among the four economic hardship constructs in the fathers’ model. This item, along with the second item identified earlier ("We had enough money to afford the kind of food we should have") was omitted from fathers' report in order to parallel the changes made to the mothers’ model. With these two items omitted, the fathers’ model showed adequate goodness of fit to the data, χ²(30) = 62.91, p < .001 (GFI = .94, NFI = .93, CFI = .96).

To test whether the four latent constructs were good and equal conceptions of a "global" factor representing economic hardship, a second-order model (with the 10 remaining observed variables) built on the measurement model was then tested for both mothers’ and fathers’ reports. This second-order model fit the data well for mothers’ reports, χ²(32) = 61.46, p < .01 (GFI = .96, NFI = .96, CFI = .98) and fathers’ reports, χ²(32) = 63.89, p < .001 (GFI = .94, NFI = .93, CFI = .96). The results indicate that a global perception of economic hardship can be well represented by financial strain, inability to make ends meet, not enough money for necessities, and economic adjustments. However, a review of factor loadings suggests that the four latent constructs did not contribute equally to the overall construct of economic hardship. With mothers’ reports, Inability to Make Ends Meet
had a higher loading (.95) compared to the other three scales (.73-.76). Furthermore, when the path coefficients from the latent economic hardship construct to the four subcategories were constrained to be equal, the model fit significantly worse than the model without constraints: for mothers, $\Delta \chi^2 = 73.40, \Delta df = 3, p < .001$; for fathers, $\Delta \chi^2 = 34.09, \Delta df = 3, p < .001$.

Across-Group Comparison of Perceived Economic Hardship

Multisample analyses were conducted to test whether the second-order economic hardship models were equal for both mothers’ and fathers’ reports, and among people with different ethnic and language backgrounds. Invariance of the covariance structure across groups was tested through sequential steps (see also Alwin & Jackson, 1981; Joreskog & Sorbom, 1985; Widaman and Reise, 1997). First, a baseline model was established to demonstrate that the models across groups had similar patterns of relationships between the measurement and latent variables. Second, the equality of factor loadings from the four subcategories of economic hardship to the item measurement variables (i.e., $\lambda$) was tested. This was done by comparing the baseline model to a model in which the factor loadings were constrained to be the same in all groups. If the two models did not differ from each other, the factor loadings from the four latent constructs to the observed variables were assumed to be equal. Third, if factor loadings were invariant across groups, the equality of the path coefficients from the global perception of economic hardship to the four subcategories of economic hardship (i.e., $\gamma$) was tested. This was accomplished by comparing the model in Step 2 to a model in which the path coefficients were additionally constrained to be the same across groups. Again, a nonsignificant difference between the two models indicated additional equivalence of path coefficients from the second-order factor to the four first-order factors. Steps 1 through 3 are considered to be of primary importance in establishing the equivalence of the covariance structure (Widaman & Reise, 1997).

A multisample analysis of the covariance structures was done first in comparing the model with 10 observed variables (discussed earlier) across samples of mothers and fathers. A baseline comparison in Step 1 indicated that the model with 10 observed variables had similar patterns of relationships between the measurement and the latent variables across mothers and fathers, $\chi^2(64) = 125.35, p < .001$; GFI = .94, NFI = .95; CFI = .97. For Step 2, we compared this baseline model to a model in which the factor loadings from the four latent subcategories of economic hardship to their individual item constructs were constrained to be the same for mothers and fathers,
$\chi^2(70) = 137.53$, $p < .001$; CFI = .97. The two models were marginally different from one another, $\Delta \chi^2(6) = 12.18$, $p < .10$. One of the items from the Not Enough Money for Necessities scale concerned with "medical care" did not have the same factor loading for mothers and fathers. This difference between groups was explored by constraining all of the factor loadings in the analysis comparing mothers' and fathers' reports to one another to be equal, except for the factor loading for the item in question. The chi-square from this constrained analysis was compared to the chi-square from the baseline model in Step 1. The difference of the two chi-square was not significant, $\Delta \chi^2(5) = 7.96$, ns, indicating that mothers and fathers have equivalent factor loadings when this item is not included.

As a result, the medical care item was deleted from mothers' and fathers' models (leaving a model with nine measurement variables, with four items remaining on the Not Enough Money scale). In sum, 3 items out of the original 20 were deleted in all. The two items on the Financial Strain scale, the two items on the Inability to Make Ends Meet scale, and the nine items on the Economic Adjustments scale remained intact (although the nine items on the Economic Adjustments scale are represented by a single indicator in the model). Of the original seven items on the Not Enough Money for Necessities scale, two items relating to food and leisure activities were omitted because they did not differentiate well among the four subjective economic hardship constructs. An additional item relating to medical care was deleted because analyses suggested that this item loaded differently for mothers and fathers. Thus, three items from the Not Enough Money for Necessities scale were deleted in all, leaving 17 of the original 20 items intact.

Using the trimmed model with nine observed variables (seen in Fig. 1), covariance-structure equivalence across mothers' and fathers' reports was tested once more (Steps 1 through 3). The results show that the two groups have a similar factorial structure (Step 1), $\chi^2(48) = 76.44$, $p < .01$ (GFI = .95, NFI = .96, CFI = .99); equivalent factor loadings from the four subcategories of economic hardship to their respective item variables (Step 2), $\chi^2(53) = 82.66$, $p < .01$ (GFI = .95, NFI = .96, CFI = .99); and equivalent path coefficients from the global perception of economic hardship to the four subcategories of economic hardship (Step 3), $\chi^2(56) = 83.64$, $p < .01$ (GFI = .95, NFI = .96, CFI = .99); Figure 1 shows the trimmed second-order model for mothers' reports.

Following the decision to utilize a trimmed second-order model for economic hardship, new measurement models were also derived for individual ethnic subsamples (MA, EA, and AA), as well as for language subsamples (MA-EI and MA-SI). See Table II for goodness-of-fit information for each of these models. The second-order model with nine observed variables fits well with each of the subsamples.
Fig. 1. Second-order factor model for economic hardship: mothers' sample. N = 202, χ²(24) = 38.02, p = .05, CFI = .99. X₁₁ and X₁₂ represent the two items on the financial strain scale. Similarly, X₁₂ and X₁₃ represent the two items on the inability to make ends meet scale, and X₁₃ and X₁₄ represent the four items remaining on the not enough money scale. A count of the nine yes/no items on the economic adjustments scale was used as a single indicator (X₁₅) to represent this factor. Reported weights are unstandardized factor loadings and path coefficients. Error variances appear in small circles.

As shown in Table III, multisample analyses were also completed comparing the covariance structure of economic hardship (using second-order models with nine observed variables) across language preference within the Mexican American sample (MA-EI and MA-SI subsamples) and across ethnicity in the full sample (MA, AA, and EA groups). Model comparisons across language preference or ethnicity were performed only for mothers' reports; fathers' reports were not compared across language or ethnicity because the models for mothers and fathers were equivalent, and there were too few fathers for these analyses. The use of mothers' reports allowed for a greater sample size than did the use of fathers' reports. Overall, results...
Psychological Sense of Economic Hardship

Table II. Goodness-of-Fit Information for Economic Hardship Measurement Models

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>χ²</th>
<th>df</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mothers</td>
<td>292</td>
<td>38.42</td>
<td>24</td>
<td>.97</td>
<td>.95</td>
<td>.99</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Fathers</td>
<td>179</td>
<td>28.02</td>
<td>24</td>
<td>.98</td>
<td>.98</td>
<td>.98</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>European Americans</td>
<td>66</td>
<td>20.06</td>
<td>24</td>
<td>.94</td>
<td>.94</td>
<td>.99</td>
<td>ns</td>
</tr>
<tr>
<td>African Americans</td>
<td>59</td>
<td>22.08</td>
<td>24</td>
<td>.94</td>
<td>.94</td>
<td>1.00</td>
<td>ns</td>
</tr>
<tr>
<td>Mexican Americans</td>
<td>167</td>
<td>32.99</td>
<td>24</td>
<td>.96</td>
<td>.95</td>
<td>.99</td>
<td>ns</td>
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<tr>
<td>(all languages)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA-EI</td>
<td>73</td>
<td>27.23</td>
<td>24</td>
<td>.92</td>
<td>.92</td>
<td>.99</td>
<td>ns</td>
</tr>
<tr>
<td>MA-SI</td>
<td>94</td>
<td>28.43</td>
<td>24</td>
<td>.95</td>
<td>.92</td>
<td>.99</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: Ethnic subsamples consist of mothers only due to sample size limitations. MA-EI and MA-SI refer to Mexican American mothers who chose to be interviewed in English and Spanish, respectively.

indicated that the pattern of relationships between measurement and latent variables (Step 1), the magnitude of the factor loadings from the four subcategories of economic hardship to their item indicators (Step 2), and the path coefficients from the global perception of economic hardship to the four subcategories of economic hardship (Step 3) were equivalent for both MA-EI and MA-SI samples, and for all three ethnic groups (see Table III).

Validating the Economic Hardship Construct With Objective Indicators

To test the validity of the subjective economic-hardship construct, a model of relations between objective indicators of economic status and the

Table III. Multisample Comparison for Economic Hardship Measurement Model

<table>
<thead>
<tr>
<th></th>
<th>χ²</th>
<th>df</th>
<th>CFI</th>
<th>Δχ²</th>
<th>Δdf</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Mothers vs. Fathers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Constraint of factor loadings</td>
<td>76.04</td>
<td>48</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>82.66</td>
<td>52</td>
<td>.99</td>
<td>6.22</td>
<td>5</td>
<td>ns</td>
</tr>
<tr>
<td>B. MA-EI vs. MA-SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Constraint of factor loadings</td>
<td>32.64</td>
<td>46</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>37.71</td>
<td>53</td>
<td>.99</td>
<td>4.82</td>
<td>5</td>
<td>ns</td>
</tr>
<tr>
<td>C. EA vs. AA vs. MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
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<tr>
<td>2. Constraint of factor loadings</td>
<td>85.04</td>
<td>72</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>92.34</td>
<td>82</td>
<td>.99</td>
<td>7.30</td>
<td>10</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: These analyses involved sequential tests of the equality of the baseline model, the equality of the factor loadings from the four latent subcategories of economic hardship to their nine observed indicators, and the equality of the path coefficients from the global economic hardship factor to the four subcategories of economic hardship across samples. Equality was established for mothers and fathers, for Mexican American interviewed in English (MA-EI) and Spanish (MA-SI), and across ethnicities: European Americans (EA), African Americans (AA), and Mexican-American (MA).
subjective economic-hardship construct was estimated. Because of the limited sample size, the number of parameters was reduced by creating factor scores for each of the three economic hardship scales that had multiple indicators (Financial Strain, Inability to Make Ends Meet, and Not Enough Money for Necessities). Each of the three factor scores were created by taking the mean of the items for the respective scale. Economic Adjustments, as in the previous analyses, was represented by a fourth factor score created by taking a count of the nine yes/no items on that scale. Objective indicators of economic status were per capita family income, number of hours parents worked per week, and experience of loss of work or wages. The error for each indicator was fixed by the reliability as $e = (1 - \alpha) \times$ variance of the indicator scale. Table IV shows the model fit for mothers’ and fathers’ reports, as well as for subsamples of mothers who varied by ethnicity and language preference. The results show that the model fits well with individual subsamples. Figure 2 illustrates the model for mothers’ reports. In this model, the three objective indicators accounted for 66% of the variance in the latent economic-hardship factor. However, economic hardship showed stronger relations to per capita income and loss of work or wages than to the number of hours that parents worked each week.

As with the original measurement model for economic hardship, multi-sample analyses were conducted comparing the equivalence of the structural model across groups. First, the equivalence of the pattern of relations between variables in the model was tested (Step 1). Next, we were interested in establishing the equivalence of factor loadings from the global economic hardship factor to the four subjective economic hardship constructs across samples (Step 2). Third, we wanted to establish the equivalence of the path

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Chi-square</th>
<th>df</th>
<th>GFI</th>
<th>NFI</th>
<th>CFI</th>
<th>p-Value</th>
</tr>
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<tbody>
<tr>
<td>Mothers</td>
<td>286</td>
<td>21.70</td>
<td>8</td>
<td>.96</td>
<td>.96</td>
<td>.96</td>
<td>.04</td>
</tr>
<tr>
<td>Fathers</td>
<td>193</td>
<td>24.41</td>
<td>11</td>
<td>.95</td>
<td>.95</td>
<td>.95</td>
<td>.05</td>
</tr>
<tr>
<td>European Americans</td>
<td>66</td>
<td>11.59</td>
<td>11</td>
<td>.95</td>
<td>.95</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>African Americans</td>
<td>61</td>
<td>18.38</td>
<td>11</td>
<td>.92</td>
<td>.87</td>
<td>.94</td>
<td>.00</td>
</tr>
<tr>
<td>Mexican Americans (all languages)</td>
<td>259</td>
<td>9.94</td>
<td>12</td>
<td>.98</td>
<td>.96</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>MA-EL</td>
<td>72</td>
<td>7.24</td>
<td>11</td>
<td>.97</td>
<td>.95</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>MA-SI</td>
<td>87</td>
<td>22.28</td>
<td>11</td>
<td>.95</td>
<td>.91</td>
<td>.98</td>
<td>.00</td>
</tr>
<tr>
<td>All English-interviewed (EA, AA, MA)</td>
<td>399</td>
<td>20.24</td>
<td>11</td>
<td>.95</td>
<td>.96</td>
<td>.98</td>
<td>p &lt; .005</td>
</tr>
</tbody>
</table>

Note: Ethnic and language subsamples include mothers only due to sample limitations. MA-EL and MA-SI refer to Mexican American mothers who chose to be interviewed in English or Spanish, respectively.
Fig. 2. Validation of the subjective economic hardship measure using objective indicators of economic status; mothers = sample; N = 250; χ² (10) = 22.870, p = .05, CFI = .98. Reported weights are completely standardized solution weights. The error for each indicator was fixed by the reliability and = (1 – ω) x variance of indicator scale. Error variances appear in small circles.

coefficients from the three objective indicators to the latent economic hardship factor across samples (Step 3).

The first series of multisample comparisons examined the equivalence of the model for mothers and fathers. Steps 1–3 for the model comparisons were completed (see Table V) and results suggested that the models for mothers and fathers were invariant. Additional multisample analyses were completed examining the equivalence of this model across language for mothers' reports within the Mexican American subsample (MA-EI vs. MA-SI). Results (see Table V) indicated that there was no significant difference between the two groups. This result indicates that factor loadings from the latent economic hardship factor to the four subjective economic hardship constructs were equivalent across these groups; relations between the three objective indicators of economic status and the global economic hardship factor were invariant across the two groups as well. Lastly, a cross-ethnic analysis was done comparing the model for MA, EA, and AA subsamples of mothers. Results of this multisample analysis indicated that this model also met criteria for equivalence across the three ethnic samples (see Steps 1–3 in Table V).
Table V. Multiaxle Comparison for Objective/Subjective Validity Model

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Mothers vs fathers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
<td>47.11</td>
<td>22</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Constraint of factor loadings</td>
<td>49.04</td>
<td>25</td>
<td>.97</td>
<td>1.93</td>
<td>3</td>
<td>ns</td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>54.71</td>
<td>28</td>
<td>.97</td>
<td>5.67</td>
<td>3</td>
<td>ns</td>
</tr>
<tr>
<td>B. MA-El vs MA-SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
<td>28.79</td>
<td>22</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Constraint of factor loadings</td>
<td>32.92</td>
<td>25</td>
<td>.96</td>
<td>3.13</td>
<td>3</td>
<td>ns</td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>35.36</td>
<td>28</td>
<td>.98</td>
<td>6.46</td>
<td>3</td>
<td>ns</td>
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<tr>
<td>C. EA vs. AA vs MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Baseline model</td>
<td>39.51</td>
<td>33</td>
<td>.99</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Constraint of factor loadings</td>
<td>48.40</td>
<td>39</td>
<td>.98</td>
<td>8.89</td>
<td>6</td>
<td>ns</td>
</tr>
<tr>
<td>3. Additional constraint of path coefficients</td>
<td>56.22</td>
<td>45</td>
<td>.98</td>
<td>7.82</td>
<td>6</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: These analyses involved sequential tests of the equality of the baseline model, the equality of the factor loadings from the global economic hardship factor to the four subjective economic hardship constructs, and the equality of the latent factors from the three objective indicators of the latent economic hardship factor across samples. Equality was established for mothers and fathers, for Mexican Americans interviewed in English (MA-El) and Spanish (MA-SI), and across ethnicity: European Americans (EA), African Americans (AA), and Mexican Americans (MA).

DISCUSSION

Financial hardship is a stressor that is prevalent among ethnic minority families who live in urban areas of the United States. To contribute to research on this topic, the overall goal of this study was to develop an approach to assess the psychological sense of economic hardship that would be appropriate for research with urban ethnic groups. The measurement strategy produced a composite scale of perceived economic hardship that had a meaningful factor structure and validity in its relations with objective indicators of economic status. Furthermore, the most critical aspects of the measurement and validation models showed equivalence for men and women, Mexican American English- and Spanish-speakers, and adults from three ethnic groups. This provides good evidence that the scales constitute a viable approach for assessing economic hardship that can be used in studies of urban families from several ethnic groups.

This research began with evaluations of measurement models to determine if the content of the four scales constituted a coherent construct of subjective economic hardship. By design, the construct's content was highly similar to that used by Conger and Elder (1994), but it was supplemented by a brief scale of anticipated economic hardship that was adapted from Vinokur et al. (1996). This addition appears to be justified based on its relations to the other scales and the latent construct. Thus, this version of perceived economic hardship includes the immediate struggle to meet living...
expenses, but it also includes the despair that extends to one’s view of future difficulties. In the end, we arrive at a construct that defines the content of perceived economic hardship as (a) the inability to afford specific necessities for living, (b) a general sense that financial obligations outstrip the family’s ability to meet them, (c) behavioral attempts to reduce expenses or generate more income to meet obligations, and (d) hopelessness that the future will bring a brighter financial outlook. There is a potential temporal sequence to these four components (in the order listed) that was not addressed in this cross-sectional research, but could be studied in future longitudinal research.

Three of the items contained in Conger and Elder’s original scales (Conger & Elder, 1994) were eliminated in steps of measurement modeling and equivalence testing performed in this study. Items concerning the adequacy of money for food, and for leisure and recreational activities were eliminated because they were associated with several of the economic hardship scales and not just one. One other item concerning the adequacy of money for medical care did not function the same for men and women in equivalence testing. Because the original scales were used in a measurement model that was estimated for families living in Iowa farming communities, it is reasonable to expect some differences with a sample of southwestern urban families. However, it is not possible to determine if the factors that led to the trimming of three items were idiosyncratic to our sample or if they are characteristic of urban families in general.

After testing the structure of the construct, the construct was validated against more objective indicators of economic status. Validity indicators were not identical to those used by Conger and his colleagues in the Iowa Youth and Families Project (e.g., Conger et al., 1993; Conger & Elder, 1994), but they appeared to be applicable to urban families. For farm families in the Iowa study who often had sizeable assets of land and equipment, but who also needed to borrow substantial amounts to sustain the operation of their businesses, debt-to-asset ratio was a meaningful objective indicator (Conger et al., 1993). For our urban families, per capita income and events that involved the loss of work or wages were related to subjective economic hardship. Because we obtained reports from fathers and mothers in all of our two-parent families, we have some confidence in the accuracy of these two objective indicators. There might be other objective indicators of economic status that would fit the unique circumstances of some urban centers, but these two appeared to be effective in capturing the salient features in the community where the participants lived.

A central objective of this research was to identify an approach for assessing perceived economic hardship that would be equivalent for several
ethnic groups who reside in urban centers. For the most part, there was
good evidence that the measures assessed a construct that had comparable
meaning for African American, European American, and Mexican Amer-
ican parents. The equivalence for Mexican American mothers who com-
pleted the assessments in English and Spanish is also noteworthy because
these comparisons not only tested the language comparability of the scales,
but also comparability across two groups who differed in their time of res-
idence in the United States. Specifically, equivalence in the measurement
model was shown for the relation of items to scales, and the relation of
scales to the global construct of perceived economic hardship. In the valid-
ity models, there was ethnic group equivalence in the relations of the ob-
jective indicators of economic status and the subjective economic hardship
construct.

This study fills a gap in a research literature that with the exception of
Elder et al. (1995), has not evaluated ethnic group differences and similar-
ities in perceived economic hardship. McLoyd (1998) noted that “despite
high rates of poverty among certain groups of Latinos, Native Americans,
and Asian Americans, it remains unclear whether many of the findings of
recent studies are generalizable to these groups” (p. 189). This observation
was not directed at research that has used subjective economic hardship,
but it is applicable to this topic as well as research on the effects of objec-
tive indicators of poverty. Although this research was modeled after many
features of Conger and Elder’s measurement approach, it was not clear if
their models based on rural samples would generalize to an urban sample
of African American, European American, and Mexican American par-
ents (Conger & Elder, 1994). Despite sizeable ethnic group differences in
poverty, educational attainment, marriage, and other factors that might in-
fluence perceived economic hardship, the construct’s structure and validity
were remarkably similar across the ethnic and language groups who partici-
ipated in this study.

There are several limitations to this study. First, the subsamples of
African American and European American parents were not large and,
therefore, did not provide for high power tests of possible subgroup differ-
ences. In the chi-square difference tests, the limited sample sizes led to a bias
toward accepting the null hypothesis regarding the lack of ethnic group dif-
ferences, and to some extent, language group differences. However, even if
we disregard the multisample analyses, the findings still show that the mod-
els fit the data from an ethnically heterogeneous sample that is quite distinct
from other studies on this topic.

A second limitation is the lack of longitudinal data. Usually the lack of
longitudinal data is a limitation for the interpretation of relations between
predictors and criteria because temporal precedence cannot be established.
Psychological Sense of Economic Hardship

In this study, the lack of longitudinal data precluded analyses that could have taken into consideration the duration of poverty (cf. Corcoran & Adams, 1997) or various courses of objective economic conditions such as chronic poverty, episodic poverty, or recent poverty following a history of financial stability. It is not clear if changes in perceived economic hardship would simply parallel changes in our objective economic indicators or if changes between objective and subjective hardship are related to each other in more complex ways.

In hindsight, an additional feature would have increased the practical contribution of this research. Two of our scales (Inability to Make Ends Meet and Financial Strain) contained only two items each, which allowed little margin for error in applications to other samples. In this study, these brief scales were not problematic because the items for each scale were highly correlated (above .7). In household surveys that are designed to assess a large number of variables, there are benefits to having brief scales such as those used here. For other applications, researchers might want to supplement the two-item scales with additional items to increase the content coverage of scales and to increase their reliability as stand-alone measures.

For many, the beginning steps in developing interventions for preventing the adverse consequences of stress is to evaluate conceptual models of the explanatory pathways (Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). The goal of these models is to identify modifiable mediators (i.e., factors that can be changed in active interventions) of the stressor's relationship to outcomes of interest. To build on this study, the most important directions for future research include studies that are designed to understand perceived economic hardship's potential role as a mediator of the relation between objective economic conditions and a variety of outcomes that would include health, quality of life, illegal behavior, and traditional mental health measures. Objective economic indicators are thought to be imprecise in capturing a family's true financial need and inadequate in explaining how low levels of economic resources can contribute to adverse outcomes. In some conceptual models, the psychological sense of economic hardship is more proximal to other factors that more readily account for effects on parents' psychological distress or adolescents' socioemotional functioning (e.g., Conger, Ge, Elder, Lorenz, & Simons, 1994; McLoyd et al., 1994). With the availability of financial hardship measures that show cross-ethnic group equivalence, similar research can proceed with African Americans, European Americans, and English- and Spanish-speaking Mexican Americans either comparatively (in the same study) or separately. The concise measurement of economic hardship used in this study has practical significance for addressing these research questions and others.
REFERENCES


