

# **Coping with Economic Stress: A Test of Deterioration and Stress-Suppressing Models**

**Suzanne Bartholomae, Ph.D.**

**Jonathan Fox, Ph.D.**

*Iowa State University*

*Economic stress exacts many social and psychological costs on the quality of individual and family life. This study examined the relationships between objective economic stressors, personal and social coping resources, and financial strain. Two waves of data from the National Survey of Families and Households (NSFH) were used to examine variations in the cultural utilization patterns of coping resources among whites (n=4,943), blacks (n=999), and Latinos (n=374). Structural equation modeling tested two competing models of the stress process from the life stress paradigm—the deterioration and stress-suppressing models. The stress-suppressing model was minimally supported; only one coping resource, self-efficacy, confirmed the hypothesized paths. The simultaneous paths hypothesized in the deterioration model were not supported; however, the model fit allowed group comparisons. Markedly different patterns emerged among the subsamples for personal (self-efficacy, savings behavior, bill management) and social (instrumental family support, expressive family support, and community integration) coping resources, and associations with economic stress and financial strain, providing implications for financial therapists and professionals.*

*Keywords: Economic stress; coping; minorities; self-efficacy; social support*

## **INTRODUCTION**

The negative role economic stress plays in the quality of individual, marital, and family well-being is well established (Fonseca, Cunha, Crespo, & Relvas, 2016; Helms et al., 2014; Zurlo, Yoon, & Kim, 2014). Economic stress is associated with feelings of scarcity or threat due to uncertainty or inability to meet basic needs, to satisfy wants and luxuries, and to provide security, flexibility in choices, and a safety net. Economic stress has been linked to individual distress, which can take the form of increased levels of anger, hostility, depression, anxiety, somatic complaints, poor physical health, and even suicide (Drentea & Reynolds, 2012; Mistry, Lowe, Benner, & Chien, 2008; Morrison Gutman, McLoyd, &

Tokoyawa, 2005; Nandi et al., 2012). Economic stress has been associated with diminished marital and parent-child relationships through strained interactions, disruptions and changes in social activities, support, and networks (Conger, Conger, & Martin, 2010; Dew & Xiao, 2013; Fonseca, Cunha, Crespo, & Relvas, 2016). Despite the evidence demonstrating its association with outcomes, few studies have documented which individual or family dimensions might ameliorate the effect of economic stress.

Individuals who actively engage in a range of coping mechanisms have been shown to have greater resilience (Okafor, Lucier-Greer, & Mancini, 2016; Tandon, Dariotis, Tucker, & Sonenstein, 2013), with evidence demonstrating that certain resources and strategies are more effective when coping with economic stress. For example, individual (e.g., problem solving), psychological (e.g., self-efficacy, optimism), social (e.g., social support), relational (e.g., marital relationship), and financial (e.g., savings) resources have been associated with better outcomes (Chen & Lim, 2012; Grezo & Sarmany-Schuller, 2015; Valentino, Moore, Cleveland, Greenberg, & Tan, 2014; Wadsworth & Compas, 2002). Furthermore, evidence demonstrates that certain interventions are more efficacious when treating economic stress. A recent meta-analysis of job search interventions suggested that interventions that encouraged individuals to enhance self-efficacy, enlist social support, set goals, be proactive, and develop relevant skills were associated with better outcomes (Liu, Huang, & Wang, 2014).

Recognizing that many American families suffer the consequence of economic stress, a primary aim of this study is to identify how coping resources utilized during the stress process ameliorate its impact. Increased attention has focused on the link of economic stress and various outcomes; however, more research is needed to understand the process by which resources and coping strategies can alleviate and negate the stress brought on by economic hardship (Gjesfjeld, Greeno, Kim, & Anderson, 2010; Falconier & Epstein, 2011; Okafor et al., 2016). The results have the potential to advance the work of financial professionals and therapists. Among clients in treatment for depression, almost 90% presented stress related to finances, work, and unemployment. The frequency of economic stress topics did not differ by low or middle socioeconomic clients (Falconier & Elkin, 2008). By addressing economic stress and identifying resources and coping strategies, professionals can provide practical encouragement to help guide clients as they enlist coping resources to reduce levels of economic stress and meet the challenge of financial problems.

Studies have found individual and family variability in the response to economic stress (Donnellan, Conger, McAdams, & Neppl, 2009; Fonesca et al., 2016) and the reaction or appraisal of stressful situations differs across ethnic minority groups (Heslin, Bell, & Fletcher, 2012; Tandon et al., 2013). The impact of ethnic minority group membership expresses itself through (a) the differential risk of stress, (b) the variation in the appraisal of stress, and (c) the effect of stress-mediating variables (Aranda & Knight, 1997). Ethnic minority populations are thought to be most affected by economic stress (Lo & Cheng, 2014; Zemore, Mulia, Jones-Webb, Liu, & Schmidt, 2013), largely because of the pronounced disparity in most socioeconomic indicators (e.g., income, net worth, asset ownership) between ethnic minority groups and the white majority. For example, the median household wealth of whites was 13 times black and 10 times Latino households in 2013 (Kochhar & Fry,

2014). Wealth disparities between whites and ethnic minorities have worsened in the past 30 years, with individuals and families of color disproportionately impacted by the most recent recession (McKernan, Ratcliffe, Steuerle, & Zhang, 2013).

Yet because ethnic minority groups have been more prone to economic adversity, they may possess coping resources, family structures, family dynamics, and value systems that have traditionally served as buffers of economic stress, but remain largely unstudied; therefore, much can be learned by studying utilization patterns (Dominguez & Watkins, 2003; Gomel, Tinsley, Parke, & Clark, 1998; O'Brien, 2012). There is a considerable gap in knowledge of cultural patterns of coping with economic stress (Okafor et al., 2016; Tandon et al., 2013). The little extant research on cultural variations and economic stress has focused on lower-income groups, such as those in poverty (Gomel et al., 1998). Thus, an additional aim of our study was to examine cultural variations in the utilization patterns of coping resources during economic stress.

### **Coping with Economic Stress: A Life Stress-Distress Perspective**

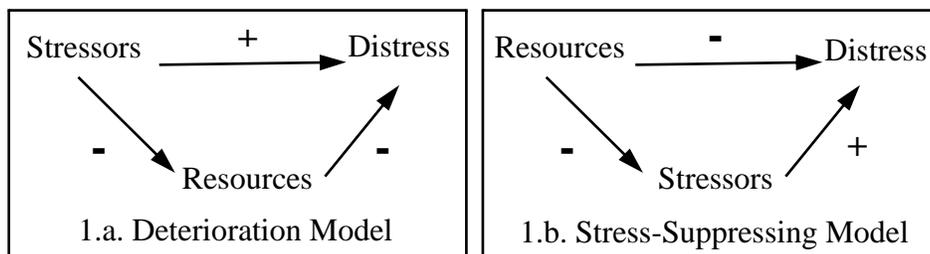
Life stress theory has been used to study stress and suggests a direct relationship between the number of stress events in a given time period-- major life events, daily hassles, and/or strains-- and a stress outcome (Ensel & Lin, 1991; Noh & Avison, 1996). More recently, research in this area has focused on psychosocial resources used by individuals to cope with stressors. Subsequently, through advances in research, the life stress paradigm has been expanded to an integrative model that proposes *coping* and *detering* models (Ensel & Lin, 1991). *Coping* models view psychosocial resources as reactive and mobilized to buffer the consequences of stress. In *detering* models, psychosocial resources are conceptualized as preventing or reducing the occurrence of stressful events. The life stress process uses stress and strain interchangeably; however, the key to distinguishing economic stress and financial strain, and as it is modeled in this study, is whether the stress is an objective or subjective evaluation. Financial strain refers to a person's cognitive evaluation of their financial situation and economic stress is a person's financial circumstance and their actual financial status.

Figure 1 displays two *coping* and *detering* models tested in this study: (1.a) the *deterioration* model and (1.b) *stress-suppressing* model (Ensel & Lin, 1991). The *deterioration* model hypothesizes a direct negative relationship between coping resources and financial strain (the outcome of interest in this study), whereas a direct positive relationship is hypothesized between economic stress and financial strain. An indirect relationship between economic stress and financial strain is also proposed, with economic stress hypothesized to deteriorate personal and social coping resources, depicted by an inverse relationship. The *stress-suppressing* model is a rearrangement of the deterioration model, with personal and social coping resources having a direct negative relationship with

economic stress. Economic stress is hypothesized to have a direct, positive relationship with financial strain, whereas personal and social coping resources have a direct negative relationship with financial strain. An indirect relationship is hypothesized between coping resources and financial strain, mediated by economic stress.

The *coping* and *detering* models devised by Ensel and Lin (1991) have undergone limited testing and only three to our knowledge have tested the models in the context of economic stress (Gjestjeld et al., 2010; Hobbs, 1997; Schulz et al., 2006). To date, five studies test these models with culturally specific samples (Coohey & Easton, 2016; Durr, La Fleur, & Dunlap, 2010; Hobbs, 1997; Noh & Avison, 1996; Schulz et al., 2006). This study tests the *deterioration* and *stress-suppressing* model by linking economic stress (an objective evaluation of a person’s financial circumstance) to financial strain (a subjective evaluation of a person’s financial circumstance), which is a unique contribution. Previous studies mostly examined depressive symptoms as an outcome; other studies examined health-related outcomes. Additionally, with few exceptions, previous empirical work test these models on cross-sectional data, and with clinical and/or low-income samples. This study contributes to the literature by studying the effects of economic stress on financial strain looking at the same families over a five-year period from a nationally representative panel dataset.

Figure 1. Coping and Detering Models from the Life Stress Paradigm (Ensil & Lin, 1991)



## METHOD

### Participants

The current study utilizes panel data from the first two waves of the National Survey of Families and Households (NSFH) because it allows us to test two conceptual life stress-distress models and to determine if a distinct pattern of resource utilization exists by ethnic minority group. The NSFH is a national probability sample of the United States that includes face-to-face interviews with one randomly selected adult per household with several portions of the survey being self-administered. During 1987-88 (W1: 1987-88), interviews were conducted with 13,005 respondents and during 1992-94 (W2: 1992-94) interviews were conducted with 10,005 respondents. On average, interviews lasted one hour and forty

minutes. Compared to other national, household-level surveys, the NSFH response rates are quite favorable in comparison (Musick & Bumpass, 2012). Among eligible households, the response rate was 75% at W1: 1987-88 (Sweet, Bumpass, & Call, 1988) and 82% ( $n=10,005$ ) at W2: 1992-94 (Sweet & Bumpass, 1996). A third wave of data was collected in 2001-2002.

Regrettably, of the main respondents previously interviewed, only a subset of older adults who had a child aged 5 years or older at W1: 1987-88 or were 45 or older at wave three were re-interviewed. The study's interest in economic stress among a general US population of adults precluded the use of wave three's restricted sample. Although the NSFH dataset is older, it is unique in being one of the few nationally representative longitudinal data sets with an oversampling of minorities, including African Americans, Puerto Ricans, and Mexican Americans. The NSFH dataset enables a race comparison - no other representative sample provides this key feature. In addition to the NSFH's strength in its use of longitudinal panels and its oversampling of ethnic minority groups, the NSFH is advantageous because it simultaneously provides a broad and unique array of objective and subjective economic stress measures, as well as measures representing personal and social coping resources.

### Sample Selection

The current analyses focused on respondents who completed interviews in both waves W1:1987-1988 and W2:1992 - 1994 ( $n=10,005$ ). Only three subgroups -whites, blacks, and Latinos—were represented given the sample size demands required by the primary data analysis strategy ( $n=9,808$ ). The sample excluded all cases with missing data on the dependent variable and the independent variables, except where treatment of missing data is noted. The final sample included 6,316 respondents broken down into three groups: white ( $n=4,943$ ), black ( $n=999$ ), and Latino ( $n=374$ ). The descriptive characteristics of the full sample and each subgroup are presented in Table 1.

More than half of the study sample consisted of females (61%), with larger proportions of black (68%) and Latino (66%) females. The median age of the sample was 46.26 at W2: 1992-94, with similar ages among white and black respondents, but a younger Latino sample (43.37). Over three quarters of the total respondents were below age 66, including the specific subgroups, with the majority of whites, blacks, and Latinos falling between the ages of 35 and 65 years at W1: 1987-88 (approximately 45%). Approximately 63% of all respondents were in an intimate relationships (married or cohabitating), compared to 68% of whites, 39% of blacks, and 55% of Latinos.

Table 1

*Demographic Characteristics and Descriptive Statistics of Key Variables by Full Sample and Subsamples*

Variables	Full Sample (N=6316)	White (N=4,943)	Black (N=999)	Latino (N=374)
Demographic characteristics at W2 <sup>+</sup>				
Female (%)	.61	.60	.68	.66
Age	46.26 (15.29)	46.49 (15.46)	46.11 (14.95)	43.37 (13.33)
Education	12.98 (3.91)	13.24 (2.67)	12.35 (6.21)	11.27 (7.51)
Household size	1.97 (1.56)	1.89 (1.47)	2.12 (1.75)	2.59(1.98)
Children in household	1.15 (1.33)	1.09 (1.27)	1.28 (1.47)	1.54 (1.56)
Married or cohabitating (%)	.63	.68	.39	.55
Household Income	\$44,580 (\$44,674)	\$48,498 (\$47,483)	\$29,712 (\$27,838)	\$29,714 (\$25,096)
Key model variables				
Financial Strain, W2	4.12 (2.10)	3.97 (2.07)	4.74 (2.10)	4.67 (2.01)
Bill management (hours), W2	1.78 (1.96)	1.67 (1.79)	2.24 (2.40)	2.22 (2.41)
Savings, W2	0.75 (0.43)	.81 (0.39)	.50 (0.50)	.58 (0.49)
Self-efficacy, W2	30.24 (4.73)	30.31 (4.71)	30.21 (4.79)	29.42 (4.71)
Community integration, W2	3.90 (3.37)	4.11 (3.35)	3.27 (3.67)	2.84 (3.31)
Instrumental Family Support, W2	2.13 (2.15)	2.06 (2.07)	2.29 (2.33)	2.51 (2.61)
Expressive Family Support, W2	2.10 (1.67)	2.08 (1.68)	1.82 (1.67)	1.81 (1.52)
Economic stress, W2	1.44 (1.20)	1.34 (1.16)	1.85 (1.34)	1.56 (1.14)
Bill management, W1 <sup>+</sup>	1.80 (2.04)	1.68 (1.82)	2.29 (2.75)	2.04 (2.29)
Savings, W1	0.70 (0.46)	.78 (0.42)	.44 (0.50)	.46 (0.50)
Self-efficacy, W1	3.54 (0.98)	3.56 (0.97)	3.51 (1.05)	3.55 (1.01)
Community integration, W1	5.18 (4.98)	5.33 (4.76)	4.79 (5.78)	4.09 (5.29)
Instrumental Family Support, W1	5.92 (2.31)	5.93 (2.30)	5.91 (2.42)	5.77 (2.16)
Expressive Family Support, W1	1.51 (1.63)	1.59 (1.66)	1.26 (1.49)	1.10 (1.39)
Economic stress, W1	1.41 (1.16)	1.37 (1.15)	1.60 (1.20)	1.43 (1.21)
<b>Note.</b> + W1: 1987-88; W2: 1992-1994				

**Measures**

**Financial strain.** Financial strain, the outcome of interest measured at W2: 1992-94, is based on two subjective items related to worrying about and satisfaction with one's

financial situation. The first question asked, “How often do you worry that your total family income will not be enough to meet your family’s expenses and bills? Would you say (1) “almost all of the time”; (2) “often”; (3) “once in a while”; (4) “hardly ever”; or (5) “never”. The second item, asked respondents how satisfied they were with their financial situation, ranging from “very dissatisfied” (1) to “very satisfied” (7). For both questions, the response categories were recoded and the two survey items were summed resulting in a range of “no financial strain” (0) to “great financial strain” (8). The internal reliability for this sample was  $\alpha = .73$  (Cronbach’s alpha).

**Economic stress.** Economic stress at W1: 1987-88 and W2: 1992-94 was based on nine yes/no questions related to the incidence of objective economic stress: unemployment, work limiting disability, employment instability, working more than one job, inadequate income (relied on public assistance), maintenance of consumer debt, personal loans owed to friends or relatives, maintenance of installment debt, and behind on bills. Respondents were assigned a (1) for each type of objective economic stress experienced, otherwise they were assigned a 0. A summed higher value indicates greater objective economic stress experienced by the individual. The correlation between economic stress at W1: 1987-88 and W2: 1992-94 was relatively strong  $r = .37$ .

**Bill management.** The number of hours respondents spent per week paying bills and keeping financial records was entered as a continuous variable. Respondents who indicated an unspecified amount of time (W1: 1987-88,  $n=208$ ) were assigned the mean number of hours for the sample. The identical question was asked at W2: 1992-94, and was treated similarly. The correlation between bill management behavior at W1: 1987-88 and W2: 1992-94 was moderate,  $r = .27$ .

**Savings behavior.** Saving behavior for respondents was based on several questions regarding holdings in different types of assets in both W1: 1987-88 and W2: 1992-94. Respondents were asked the dollar value held in savings and investments and were able to choose from (1) zero dollars saved; (2) \$1 to \$1,499; (3) \$1,500 to \$2,999; (4) \$3,000 to \$4,999; (5) \$5,000 to \$9,999; (6) \$10,000 to \$19,999; (7) \$20,000 to \$49,999; (8) \$50,000 to \$99,999; or (9) \$100,000 or more. The response categories potentially introduce the effect of income. To avoid an income effect and to focus strictly on the behavior of interest, respondents were coded (1) if they chose a dollar category (2 through 9) for savings; otherwise they were assigned (0). The correlation between savings behavior at W1: 1987-88 and W2: 1992-94 was strong,  $r = .48$ .

**Self-efficacy.** Self-efficacy at W1: 1987-88 was a single item from the University of Michigan’s Institute for Social Research: “I have always felt pretty sure that my life would work out the way I wanted it”, the response category was a 5-point scale from strongly agree (1) to strongly disagree (5). The item was reversed so a greater value reflected greater feelings of self-efficacy. Additional self-efficacy measures were added at W2: 1992-94 to

increase validity. Self-efficacy at W2: 1992-94 was composed of the W1: 1987-88 item plus four supplementary items added from (1) Pearlin's (1989) self-mastery scale (e.g., "I can do just about anything I really set my mind to do") and (2) three items from Ryff's (1989) well-being scales (e.g., "In general, I feel I am in charge of the situation in which I live"). Items were reversed where appropriate and summed so a greater value reflected greater feelings of self-efficacy. The internal consistency was .70, as measured by Cronbach's alpha. The correlation between self-efficacy at W1: 1987-88 and W2: 1992-94 was  $r = .33$ , indicating a moderate correlation between the two scales.

**Community integration.** Community integration was based on how often the respondent participated in organizations (e.g., fraternal, service, veterans, political, sports, hobby, nationality, literary or discussion groups), ranging from (0) never; (1) several times a year; (2) about once a month; (3) about once a week; to (4) several times a week. At W2: 1992-94, the community integration choice set was collapsed into three groups. Five of the organizations from W1: 1987-88 were omitted. Respondents were asked how often they spent a social evening at a bar or tavern or participated in a group recreational activity (e.g., bowling). Community integration included 16 items summed at W1: 1987-88 and five items summed at W2: 1992-94. The correlation between the W1: 1987-88 and W2: 1992-94 measures was  $r = .53$ , indicating a strong correlation.

**Instrumental and expressive family support.** Instrumental and expressive family support at W1: 1987-88 and W2: 1992-94 was based on a checklist of items related to help given and received during the past month. Family included relatives outside the respondent's household, including sons/daughters, parents, brothers/sisters, and other relatives. Instrumental family support included help with babysitting or child care, transportation, repairs to home or car, other kinds of work around the house, whereas expressive family support included advice, encouragement, moral, or social support. Respondents were coded (1) for each support item they confirmed on the checklist, otherwise they were coded (0). The items were summed with the larger value reflecting greater instrumental or expressive family support. Correlations between W1: 1987-88 and W2: 1992-94 expressive ( $r = .39$ ) and instrumental ( $r = .35$ ) family support was moderate.

**Demographic variables.** Age, sex, education, and relationship status were included in the analyses primarily as control variables. Respondent's age was a continuous variable. A dummy variable was created for sex, (1) female and (0) male. Based on educational attendance and degree history, the respondent's educational attainment was constructed at W1: 1987-88. Categories ranged from no formal education (0), first grade (1), high school degree (12), to doctorate or professional degree (20). Those not reporting education at W1: 1987-88 ( $n = 25$ ) were assigned W2: 1992-94 education. Subjects involved in an intimate relationship were coded (1), otherwise (0).

## Data Analysis

To address the first aim of the study that examines economic stress, coping resources, and financial strain as hypothesized in the deterioration and stress-suppressing models, structural equation modeling (SEM) using weighted least squares estimation was employed.

SEM models are most frequently tested using a Maximum likelihood (ML) estimator; however, the data used in this study violate the assumption that the observed variables are multivariate, normal, and measured continuously (Bollen & Long, 1993). ML can result in elevated chi-square scores and inflated parameter estimates (Joreskog & Sorbom, 1996), thus we estimated an asymptotic covariance matrix for the analyses.

To make ethnic minority group comparisons in SEM, the first estimation of the model allows relationships to vary freely across whites, blacks, and Latinos, with the same model estimated for each subgroup based on the subgroup's asymptotic covariance matrix. The structural parameters of the three groups can be compared directly. The next step is to estimate a more restrictive model with constrained parameters set to be equal. In place of examining the goodness of fit measures, a difference in chi-squares is evaluated. For readability, discussion of model results will only include observations of W2: 1992-94 paths (that control for W1: 1987-88) and will not include observations about exogenous control variables.

## RESULTS

Descriptive statistics (see Table 1) indicate a slight increase in economic stress between W1: 1987-88 and W2: 1992-94 among the full sample and subsamples. The entire sample indicated a level of financial strain that is fairly elevated; however, black and Latino respondents appear to be under greater financial strain. Respondents normally spend about two hours per week paying bills and keeping financial records. Three-quarters of the sample indicated they saved. A greater proportion of white respondents saved (81%) compared to blacks (50%) and Latinos (58%). There were significant differences by subgroups (significance tests not shown) on all model variables, with the exception of self-efficacy (W1) and instrumental family support (W1: 1987-88).

### Analyses of Deterioration Model

Based on the collective evaluation of global goodness-of-fit statistics (SRMR=0.11; RMSEA=0.05; CI=.90; CFI=0.99; IFI=0.99; GFI=0.98), the assumption of one form for all groups was supported for the deterioration model. Five of the six fit measures suggest the deterioration model provides a strong fit to the data; therefore, the second aim of the study, and the next step, was to make group comparisons. Model modifications are evaluated using a difference in chi-squares rather than goodness-of-fit indices. The  $\chi^2$  of the deterioration model with parameters freely estimated was  $\chi^2(255)=1549.00$  ( $p<0.00$ ). The  $\chi^2$  for the ( $H_{form}$ ) model with the parameters set to be invariant was  $\chi^2(375)=3289.8$  ( $p<0.00$ ). The difference in the two test statistics,  $\chi^2(120)=1740.88$  was statistically significant [critical  $\chi^2(100\text{ df}, p<0.05) = 77.93$ ] indicating that the parameters of the models differ by group. The WL estimates and Z-Values for the deterioration model are presented in Table 2 and Figure 2.

Table 2

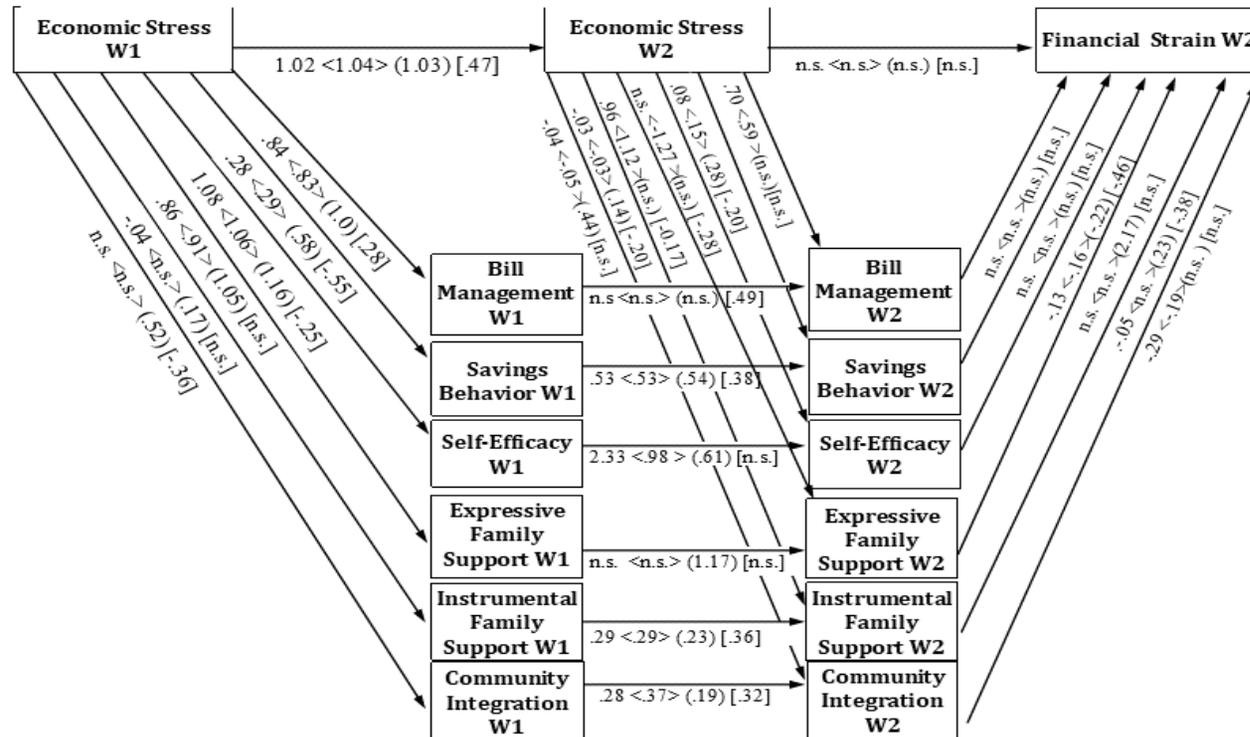
*Deterioration Model: Weighted Least Square Estimates and Z-Values for Paths in Model Based on Full Model and Group Comparisons*

Path	Full Sample ( <u>n</u> =6,316)	White ( <u>n</u> =4,943)	Black ( <u>n</u> =999)	Latino ( <u>n</u> =374)
Economic stress W1 → bill management W1 <sup>+</sup>	0.84*	0.83*	1.00*	0.28*
Economic stress W1 → savings behavior W1	0.28*	0.29*	0.58*	-0.55*
Economic stress W1 → self-efficacy W1	1.08*	1.06*	1.16*	-0.25*
Economic stress W1 → instrumental support W1	-0.04*	-0.01	0.17*	0.02
Economic stress W1 → expressive support W1	0.86*	0.91*	1.05*	0.11
Economic stress W1 → community integration W1	-0.01	0.01	0.52*	-0.36*
Economic stress W2 → financial strain W2	-10.80	4.63	-1.46	0.05
Economic stress W2 → bill management W2	0.70*	0.59*	0.42	0.08
Economic stress W2 → savings behavior W2	0.08*	0.15*	0.28*	-0.20*
Economic stress W2 → self-efficacy W2	-2.71	-1.27*	-0.54	-0.28*
Economic stress W2 → instrumental support W2	-0.03*	-0.03*	0.14*	-0.21*
Economic stress W2 → expressive support W2	0.96*	1.12*	-0.66	-0.17*
Economic stress W2 → community integration W2	-0.04*	-0.05*	0.44*	0.06
Bill management W2 → financial strain W2	0.03	-0.09	0.56	0.16
Savings behavior W2 → financial strain W2	-0.04	0.03	0.17	-0.32
Self-efficacy W2 → financial strain W2	-0.13*	-0.16*	-0.22*	-0.46*
Instrumental support W2 → financial strain W2	-0.05*	-0.05	0.23*	-0.38*
Expressive support W2 → financial strain W2	12.34	-3.16	2.17*	-0.15
Community integration W2 → financial strain W2	-0.29*	-0.19*	0.17	-0.10
Economic stress W1 → economic stress W2	1.02*	1.04*	1.03*	0.47*
Bill management W1 → bill management W2	0.18	0.27	1.00	0.49*
Savings behavior W1 → savings behavior W2	0.53*	0.53*	0.54*	0.38*
Self-efficacy W1 → self-efficacy W2	2.33	0.98*	0.61*	0.10
Instrumental support W1 → instrumental support W2	0.29*	0.29*	0.23*	0.36*
Expressive support W1 → expressive support W2	0.04	-0.15	1.71*	0.06
Community integration W1 → community integration W2	0.28*	.037*	0.19*	0.32*

Note: \* z value > 1.96; p<0.05; <sup>+</sup> W1: 1987-88; W2: 1992-94

Figure 2

Deterioration Model: Weighted Least Square Estimates and Z-Values for Full Sample and <White>, (Black), [Latino] Subgroup Comparisons



Note. W1: 1987-88; W2: 1992-94. Four standardized coefficients are listed to show results for each sample. The first value is for the full sample, followed by values for the <White>, (Black), and [Hispanic] subsamples. \* z value > 1.96 ; p<.05; n.s.=non-significant. For simplicity, the control variables (gender, education, age, and relationship status) are not shown.

For the deterioration model to be supported, the path between economic stress and coping resources must be negative, the direct path between economic stress and financial strain must be positive, and the path between resources and financial strain must be negative simultaneously. Based on this criterion, the deterioration model was not supported. Economic stress had no association with financial strain, nullifying the fully hypothesized model. However, several paths between economic stress and coping resources, and between coping resources and financial strain were significant and are discussed in the next section.

**Effect of economic stress on personal coping resources.** The deterioration model hypothesized greater levels of economic stress negatively impact personal coping resources (bill management, savings behavior, self-efficacy) demonstrating a deteriorating impact. Controlling coping resources and economic stress at W1: 1987-88, economic stress at W2: 1992-94 had a deteriorating (negative) association with two personal coping resources: self-efficacy and savings behavior. A negative path between economic stress and self-efficacy was found among white and Latino respondents, but no association was established in the full or black samples. Economic stress had a deteriorating effect on savings behavior only in the Latino sample. In contrast, economic stress had a positive effect on savings behavior among the full, white, and black samples, rather than a deteriorating impact. Similarly, economic stress had a positive effect on bill management among the full and white samples, but no effect for the black and Latino samples.

**Effect of economic stress on social coping resources.** The path between economic stress and social coping resources (expressive family support, instrumental family support, community integration) was not universally negative as hypothesized by the deterioration model. Economic stress was negatively associated with instrumental family support for the full, white, and Latino samples, but positive for the black sample. The relationship between economic stress and expressive family support behaved as theorized only for the Latino sample. In contrast, for the full and white samples, a positive association between economic stress and expressive family support was found, and there was no significant path for the black sample. Economic stress was associated with a negative, deteriorating effect on community integration for the full and white samples, but had a positive, mobilizing impact among black respondents, and no significance for Latino respondents.

**Effect of economic stress and coping resources on financial strain.** While the deterioration model hypothesized a positive relationship between economic stress and financial strain, a significant path was not found for the full sample or any of the subsamples. The deterioration model hypothesized a negative relationship between coping resources and financial strain. Among personal coping resources, bill management and savings behavior was not related to financial strain for any of the samples. The association of self-efficacy with financial strain was negative, as hypothesized, for the full sample and all of the subgroups; individuals with greater self-efficacy experienced lower financial strain. Of the social coping resources, instrumental family support was in the direction predicted by the deterioration model for the full and Latino sample, indicating greater instrumental family support reduced financial strain. Instrumental family support was positively associated with financial strain for the black sample but was not significant for the white sample. Expressive family support had no association with financial strain for the full, white, and Latino sample,

but greater expressive family support was associated with higher levels of financial strain among the black sample. For the full and white sample, greater community integration was associated with lower financial strain, but significant paths were not found in the black or Latino sample.

### **Stress Suppressing Model**

As with the deterioration model, the first approach in evaluating the stress-suppressing model was to fit the data by estimating the relationships using the asymptotic covariance matrix of the full sample. For the stress-suppressing model, the values of the RMR (0.28), RMSEA (0.10), and CI (0.64) indicate a suspect model. The comparative fit indices CFI (0.98), IFI (0.98), and the GFI (0.98) indicated a good fit of the model to the data. When the goodness of fit indices provide ambiguous results, it is recommended to examine the modification indices and the standardized residuals. Overall, and relative to the deterioration model, the modification indices and the standardized residuals further confirmed a suspect model fit. Consequently, the estimates for the paths in the stress-suppressing model are not shared and the analysis of group comparisons was not conducted.

## **DISCUSSION**

The current study was an empirical evaluation of (a) a *deterioration* model that hypothesizes that the effect of economic stressors on financial strain will be associated with the existence and strength of personal and social coping resources, with resources transmitting the effect of the stressors, and (b) a *stress-suppressing* model that essentially reverses the deterioration model with the paths flowing from coping resources toward economic stress. The study findings largely supported the deterioration model as a good fit to the data; the same did not hold for the stress-suppressing model.

Simultaneity of path associations are a criterion for both models. Unlike previous empirical tests of the deterioration model (Ensel & Lin, 1991; 1996; Gjesfjeld et al., 2010; Norris & Kaniasty, 1996), in the current study, paths did not occur in the simultaneous manner hypothesized. For example, in a test of the deterioration model among low-income mothers, Gjestjeld et al. (2010) found economic stress had a direct and positive association with depressive symptoms, a negative association with social support, and social support mediated the effect of economic stress on depression. Similarly, simultaneity of path associations is a criterion for the stress-suppressing model. Coping resources must be negatively related to economic stress and financial strain and a positive relationship must exist between economic stress and financial strain. The hypothesized paths for self-efficacy held when testing the stress-suppressing model; however, the lack of model fit did not allow group comparisons. The stress-suppressing model has not held up in previous empirical work (Ensel & Lin, 1991; Rowe, 1996). For example, in the context of chronic illness and hospital stays, Rowe's (1996) analyses did not support the deterioration or stress-suppressing models.

Of the six coping resources included in the current study, self-efficacy appears to have the most robust effect and greatest protective capacity given its negative association with both economic stress and financial strain. The importance of self-efficacy in this model corresponds to previous studies that demonstrate the salience of self-efficacy in the association between stress and personal well-being in the context of economic stress (Chen & Lim, 2012; Lim, Heckman, Montalto, & Letkiewicz, 2014; Liu et al., 2014). The findings indicate a similar pattern among whites, blacks, and Latinos with respect to self-efficacy and financial strain, the study's outcome measure. Regardless of cultural group, individuals with greater levels of self-efficacy experienced lower financial strain. These findings are consistent with previous research that has examined the relationship between self-efficacy and psychological outcomes, such as depression, anxiety, and somatic complaints and physical health (Drentea & Reynolds, 2012; Mistry et al., 2008; Morrison et al., 2005; Nandi et al., 2012).

Bandura (1989) defined self-efficacy as a person's belief "about their capabilities to exercise control over events that affect their lives" (p.1175). The definition does not refer to a particular set of skills, rather to one's judgment about their capabilities (Bandura, 1986). Therefore, self-efficacy, like financial strain, is a cognitive appraisal, and one that aligns with the general stress literature (Falconier & Epstein, 2011). Research related to self-efficacy has consistently found high self-efficacy to result in beneficial and therapeutic consequences for individuals, contributing to better coping, problem solving, and physical and mental health (Creed & Bartrum, 2008; for reviews Gecas, 1989; Hevey, Smith, & McGee., 1998; Ryan & Deci, 2000). Conversely, low self-efficacy has negative outcomes, with powerlessness associated with maladaptive coping and consequences (Creed & Bartrum, 2008; Gecas, 1989; Hevey et al., 1998).

Self-efficacy is important in the stress process because it has been identified as an effective moderator in the context of economic stress (Lui et al., 2014). Conceptually, a major component of economic stress is employment stressors (e.g., a lack of regular work and income) (Voydanoff & Donnelly, 1988), thus, techniques and interventions boosting self-efficacy in the area of unemployment might be aligned. In a meta-analysis of job search interventions, Liu et al. (2014) found the odds of obtaining employment increased with interventions that included a component that boosted self-efficacy. Lim et al. (2014) found that college students with high financial self-efficacy were more likely to seek help from professionals when they were experiencing financial stress. A recent review of interventions used to negate the harm of debt and job loss on mental health (see Moore et al., 2017 review a discussion of interventions) found mixed results.

Interventions that focused on cognitive behavior therapy, consisting of "cognitive restructuring, behavior modification, and homework assignments" (Moore et al., 2017, p. 1073) showed inconsistent results. Interventions that emphasized emotional competency training including techniques such as expressive writing, guided imagery about finding employment and relaxation strategies, and debt advice had no effect on depression. Interventions that featured "job-clubs", that provided skills for improving self-mastery, personal control, job search efficacy, problem solving, decision making processes, social support relations, and

included a trainer who provided positive regard, was effective in reducing depression among unemployed adults and improving employment. Another practical consideration for financial therapists regarding self-efficacy are the group differences in levels of self-efficacy. Latinos had the lowest reported feelings of self-efficacy. Greater gains in financial therapy may be made among individuals with lower feelings of self-efficacy, and measuring this resource at intake might be a worthwhile undertaking.

For practicing financial therapists, better outcomes might result for clients when therapists focus on self-efficacy in their sessions. However, self-efficacy is thought to be specific to certain situations and cannot be generalized from one domain to the other (Bandura, 1986). The effectiveness of self-efficacy intervention techniques in the context of economic stress needs further examination, both in practice and empirically, to determine what works and under what circumstance. In the absence of tools specific to financial circumstance, some clinicians suggest that therapists use a general tool to evaluate coping responses and strategies and instruct the client to complete it with financial strain in mind (Falconier & Epstein, 2011). For example, in the case of client financial strain and economic stress, the Coping Strategies Inventory (Tobin, Holroyd, Reynolds, & Wigal, 1989) was identified as a tool to provide a therapist with more details about “problem solving, cognitive restructuring, social support, emotional expression, problem avoidance, social withdrawal, and self-criticism” (Falconier & Epstein, 2011, p 310).

Our findings, along with those from previous studies, suggest that stress was impacted by the type of stressors and resources examined (Durr et al., 2010; Ensel & Lin, 1991; Schulz et al., 2006). For example, the adaptive requirements of the stress, the expectedness, controllability, and desirability of the stressful event, as manifested in the person’s definition of the situation, will determine the impact of stress on individual outcomes (Grezo & Sarmany-Schuller, 2015; Zemore et al., 2013). Appraisal of stress may depend on how disruptive it is perceived. For example, among Latino families, stress that is disruptive to family relationships may be more salient (Aranda & Knight, 1997). Economic stress may manifest itself at the family relationship level in a less overt manner than life events such as divorce or death. Consequently, the meaning of economic stress could be a salient issue for ethnic minority groups in the economic stress process. The economic stressors measured (e.g., unemployment, disability) in this study are largely out of the control of the individual, which may amplify the impact of this stress. Financial therapists can incorporate these findings into their work by encouraging their clients to consider how they respond to economic stress.

The stressor defined in the current study – economic stress--was strictly a measure of economic turmoil. Respondents could select up to nine economic stressors such as current unemployment, work limitation because of a disability, employment stability, and other objective measures. The measure highlights the expanse of potential economic stressors that clients potentially encounter. For financial therapists, it would be important to pinpoint the

specific circumstances in their client's lives that produce these stressors and influence the coping resources that clients access (Falconnier & Elkin, 2008). Additionally, financial therapists can take objective and subjective economic stress (identified as financial strain in this study) into account when treating a client. With subjective financial strain, some clients may have a distorted view, especially if suffering from depression or anxiety, and thus may evaluate their circumstances more negatively (Falconnier & Elkin, 2008). Whether objective or subjective, from the client's perspective economic stress is real. However, therapists can use both types to help sort out the client's perception from the client's objective circumstance. Financial therapists interested in resources and tools to help treat clients who are experiencing financial strain should consult Falconnier and Epstein's (2011) publication that offers treatment guidelines, alternative approaches for therapists to consider when responding to client financial strain, as well as specific tools that can be used to assess (a) financial roles, (b) the presence of financial strain, (c) the effects of financial strain, (d) individual and dyadic coping styles, (e) cognitions regarding finances, and (f) communication and problem-solving.

The current study showed a high correlation between economic stress at both waves of data collection, suggesting sustained economic stress. Previous work suggests that therapists may lack training or experience to be able to identify clients who experience chronic economic stress, particularly among low SES clients. Additionally, financial therapists trained in cognitive-behavioral or interpersonal psychotherapy may find their theoretical focus problematic in the treatment of chronic economic stress (Falconnier & Elkin, 2008). In one of the few treatment studies to conceptualize life stressors in economic terms, Falconnier and Elkin (2008) found that therapy focusing on economic topics (finances, work, unemployment) early and frequently in sessions had better outcomes, measured as depressive symptoms and general level of functioning.

The resources measured in the current analyses may not be the most important for a client experiencing economic stress. Perhaps, skills related to employability, education, or financial indicators are better dimensions of coping in the economic stress-financial distress process. Rowe's (1996) study of external (social ties) and internal resources (well-being) in the context of chronic illness found these resources had no impact on health status and hospital stays; previous studies found physiologic factors important determinants of chronic illness. Furthermore, internalized coping strategies (e.g., self-efficacy) are more difficult for financial therapists to identify compared to techniques that are external and overt (e.g. social support, community integration). Nevertheless, it is important for financial therapists to consider a client's coping resources given the empirical evidence supporting the notion that individuals who actively engage in a range of coping mechanisms have greater resilience (Okafar et al., 2016). A strength-based checklist might be a practical tool for financial therapy.

Just as ethnicity and culture predict the appraisal of other types of stress (e.g., caregiver stress), it is conceivable that ethnicity predicts the reaction to economic stress (Aranda & Knight, 1997; Fonesca et al., 2016; Zemore et al., 2013). Additionally, minority stress theory (Meyer, 2003) assumes that life stressors do not occur randomly; rather, difficulties in life are "systematically and disproportionately distributed across individuals and sociologically

definable groups” (Noh & Avisoin, 1996, p.194). Minority status conceptualized as a stressor stimuli describes “prejudice, discrimination, and attendant hostility from the social environment” (Moritsugu & Sue, 1983, p.164). From this viewpoint, members of ethnic minority groups are expected to experience greater financial strain. In line with this perspective, our study found greater financial strain among blacks (4.74) and Latinos (4.14), as compared to whites (3.97). Financial therapists who are sensitive to differences in stress exposure by group membership may be more effective in their treatment of economic stress and financial strain. Additionally, financial therapists might consider targeted and concerted outreach toward minority populations; whites have been more likely to seek help from financial professionals than blacks (Rubio, 2013). Future scholarship should continue to explore patterns of coping strategies by minority status (Okafar et al., 2016) since they have been found to differ (Tandon et al., 2013).

The findings from the current analyses demonstrate that coping behaviors specific to finances—savings behavior and time spent on financial management—appear to be more important to objective economic stress than the subjective measure of financial strain. Being under greater economic stress was associated with greater time spent in bill management for the full and white sample and greater savings behavior for the full, white, and black samples. With respect to savings, these findings are consistent with previous studies that have found attempts at savings to be associated with lower stress and the ability to save as a mediator between economic stress and individual and family outcomes (Dew, 2007; Rothwell & Han, 2010). Financial therapists should encourage clients to save money no matter how small the amount and regardless of the client’s income level; any amount of savings has been associated with reduced financial hardship (Levine, 2016). Interestingly, bill management and saving behavior had no association with subjective financial strain for the full sample or the three subsamples.

The opposite reaction occurred in Latino respondents’ savings behavior; greater economic stress was associated with lower savings. Previous studies have found savings to primarily be a function of income, wealth, and education (Turnham, 2010; Mauldin, Henager, Bowen, & Cheang, 2016). Latinos in this sample had lower levels of education and income, as well as a larger household size and number of children compared to white and black respondents. These factors may have contributed to the inability to save. For example, the greater number of household members and children may have undermined their ability to save by depleting the safety net of adequate savings that would have enabled them to combat economic stress. Indeed, under half of the Latinos in this sample indicated they had money saved; however, this is close to the norm of most American families. Fifty-three percent of American families reported saving over the past year in 2013 (Bricker et al., 2014). Many individuals don’t save because they do not have confidence in their ability and are pessimistic about their ability to save, blaming credit card debt and impulsive spending as barriers (Bricker, Kennickell, Moore, & Sabelhaus, 2012). However, the ability to save may be more difficult for ethnic minorities because of their social networks (O’Brien, 2012). An

evaluation of culturally specific financial educational materials concluded that along with important coursework content, programming should address social network members to help increase financial knowledge and management (Williams, Grizzell, & Burnell, 2011). Furthermore, evidence suggests that ethnic minority groups make a rational choice not to save, preferring instead to put disposable income toward other financial goals (Rubio, 2013).

Unlike savings, there was a positive path between economic stress and time spent on financial tasks, and it did not vary culturally, like savings behavior. Greater economic stress elicited more time spent in bill management for all subgroups at W1: 1987-88, but only among the full and white sample at W2: 1992-94. One explanation may be that when an individual is confronted with the management of limited resources they worry more, therefore, managing the budget leads to greater levels of stress. The lack of significance between economic stress and time spent in financial management among blacks and Latinos may be explained by the financial management measure. Previous studies have found different financial management practices between cultural groups. For example, blacks were found to be more likely to keep a written budget than whites or Mexican Americans, whereas a greater proportion of whites tracked their expenses (Schnittgrund & Baker, 1983). The current study includes only the number of hours spent managing bills; perhaps the limited nature of the measure does not capture the other financial strategies that may alleviate economic stress or how effectively their time is spent in financial management.

Previous research provided mixed findings with respect to the effect of social support in the life-stress distress process. Some studies indicate the ameliorative nature of social support during stressful situations (Ensil & Lin, 1991; Schulz et al., 2006; Taylor, Budescu, Gebre, & Hodzic, 2014), whereas other empirical evidence indicates social support augmenting levels of distress (Gjesfeld et al., 2010). Further, mixed evidence exists regarding the positive functions of social support among ethnic groups. Despite the importance ethnic groups placed on social networks and support, intense involvement has been found to be both functional and dysfunctional (Dominguez & Watkins, 2003). The findings from this analysis contribute to the mixed evidence regarding social support and ethnic supports. Furthermore, the inconsistent pattern in the effect of social support on financial strain highlights the importance of examining subgroups but also differentiating the effect of different types of social support. Examining the three subgroups, Latino respondents with greater instrumental support experienced lower financial strain. This finding supports evidence that strong familism (e.g., strong cohesiveness and traditional values) that characterizes Latino families is primarily associated with reduced stress and mental health problems (Vega & Rumbaut, 1991).

Alternatively, greater instrumental and expressive family support among black respondents resulted in greater financial strain. Extensive literature depicts the importance of extended kin, kinship networks, and kinship support among blacks (Hatchett & Jackson, 1993; McAdoo, 1992), and the importance of its consideration in a therapy setting (Boyd-Franklin, 2013). Economic benefits that result from extended kin family arrangements historically have managed to alleviate the marginalization experienced by blacks through the pooling of limited resources (Taylor, Chatters, Tucker, & Lewis, 1991). With regard to social

support and financial strain among blacks, the current findings are in contrast to previous findings depicting the functional aspect of extended family social support (Taylor et al., 2014) and is consistent with studies finding the dysfunctional nature of social support (Dominguez & Watkins, 2003). An ethnographic study of social support in a black and Latino sample identified physical proximity, reciprocity, and family tensions as being a positive or negative influence on their use of family social support (Dominguez & Watkins, 2003). Previous studies have shown SES differences in social support among blacks. Compared to their white counterparts, low-income blacks are more likely to ask for financial assistance and middle-income blacks are more likely to provide financial assistance (O'Brien, 2012). Our measure of social support does not include financial assistance, and alternative types of social support were not accounted for in this study. Future studies should consider friendships or institution-based social support.

Community integration, our third social support measure, recorded the intensity of organizational involvement. Community integration should facilitate the formation of networks and personal relationships, and through repeated interactions, it should create bonds that allows someone to access resources they may not otherwise. Socioeconomic status has been found to be an important variable in predicting participation in voluntary associations, with greater SES related to greater participation (Dotson, 1953; Williams, Babchuck, & Johnson, 1973). Positive relationships were found between education and community integration in the current study, with more highly educated blacks, whites, and Latinos demonstrating greater affiliations with community organizations. The current study found whites to have the greatest participation in community organizations, followed by black respondents. The findings are congruent with previous studies showing greater rates of participation among whites as compared to blacks (Hyman & Wright, 1971). Similar to the lower rates reported among Latinos in previous studies (Williams et al., 1973), the current study indicated Latinos had the lowest rates of community integration.

As can be seen in Figure 2, this analysis demonstrates the important race differences in the pathways between economic stress, coping resources, and financial strain, with paths varying by significance and direction (negative versus positive paths). The analysis suggests unique personal and social coping resource utilization patterns associated with financial strain and unique impacts of economic stress on coping resources utilization patterns. Assessing the six paths between coping resources and financial strain, only two of the six paths exhibited a similar pattern across all samples. Bill management as a resource was not important in combatting financial strain for any of the groups, whereas greater feelings of self-efficacy combatted financial strain for all for the groups. Examining the six paths between economic stress and coping resources, there was not a similar association among the three subgroups for any of the resources. Economic stress reduced utilization of instrumental support among the white and Latino sample, whereas it increased utilization of instrumental support among the black sample. Economic stress reduced utilization of community integration among the white sample; however, it increased utilization of

community integration among the black sample. At the same time, there was an absence of significance for either the instrumental support or community integration path among the Latino sample.

## **Limitations**

There are several limitations of the present analyses. To test the life stress-distress models, three data points are desirable, but the NSFH's third data collection included a restricted sample, preventing its use. The sample does not distinguish respondents who were immigrants and newly arrived to the US - unquestionably these groups have unique characteristics and patterns of resource utilization. A study strength is its longitudinal design; however, the dependent variable, financial strain, was only measured cross-sectionally during the second data collection (W2: 1992-94), not the first data collection (W1: 1987-88). The current study examines expressive and instrumental social support, but the analysis doesn't account for the quality of family relationships, the number of family relationships available to the individual, or the reciprocal relationship. The measure of financial management behavior—time spent in bill management—was measured as hours. The qualitative aspects of this behavior might strengthen future studies.

Social, human, and cultural capital allow individuals to marshal other resources (Valdivia & Gilles, 2001). Future studies should identify these types of variables, as well factors that might impact one's financial life and ultimately economic stress and/or financial strain. Undoubtedly, the study does not capture important cultural indicators and may have omitted the types of resources that increase a person's ability to maintain a stable financial life and to reduce economic stress. For example, Latinos who identified as church members were not only more often able to meet their basic needs compared to non-churchgoers, they were also better educated (Wirth, 2001). Future studies should identify important resources, like religiosity, social, and cultural capital.

## **CONCLUSION**

Economic stress exacts many social and psychological costs on the quality of individual and family life. This study attempted to address the relationships between economic stress and personal and social resources for coping with economic stress, and the manifestation of financial strain. The conceptualization of the stress process, based on the life stress-distress paradigm, begins with the experience of economic stress, which is appraised by the individual. The intensity of economic stress experienced is based on the individual as well as cultural group membership. The personal and social coping resources are mobilized by economic stress and will determine the impact that stress will have on the individual. Coping resources may be culturally prescribed, influencing the coping style of the individual (Rogler, Malgady, & Rodriguez, 1989). In this study, evidence of differences in coping strategies across ethnic minority groups is evident. Identifying personal or social resources that are vulnerable to economic stress, or those that can be mobilized, may offer a target for intervention. Members of the financial therapy profession can potentially make full use of these differences when prescribing change.

## REFERENCES

- Aranda, M. P., & Knight, B. G. (1997). The influence of ethnicity and culture on the caregiver stress and coping process: A socio-cultural review and analysis. *Gerontologist, 37*, 342-354. doi:10.1093/geront/37.3.342
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*(9), 1175. <http://dx.doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bollen, K. A., & Long, J. S. (Eds.). (1993). *Testing structural equation models*. Newbury Park: Sage Publications. doi.org/10.1093/sf/73.3.1161
- Boyd-Franklin, N. (2013). *Black families in therapy: Understanding the African American experience*. Guilford Publications.
- Bricker, J., Dettling, L. J., Henriques, A., Hsu, J. W., Moore, K. B., Sabelhaus, J., Thompson, J., & Windle, R. A. (2014). Changes in U.S. family finances from 2010 to 2013: Evidence from the survey of consumer finances. *Federal Reserve Bulletin, 100*(4), 1-41.
- Bricker, J., Kennickell, A. B., Moore, K. B., & Sabelhaus, J. (2012). Changes in U.S. family finances from 2007 to 2010: Evidence from the survey of consumer finances. *Federal Reserve Bulletin, 98*(2), 1-80.
- Chen, D. J. Q., & Lim, V. K. G. (2012). Strength in adversity: The influence of psychological capital on job search. *Journal of Organizational Behavior, 33*(6), 811-839. doi:10.1002/job.1814
- Coohy, C., & Easton, S. D. (2016). Distal stressors and depression among homeless men. *Health & social work, 41*(2), 111-119. <http://dx.doi.org/10.1093/hsw/hlw008>
- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family, 72*(3), 685-704. doi:10.1111/j.1741-3737.2010.00725.x
- Creed, P. A., & Bartrum, D. A. (2008). Personal control as a mediator and moderator between life stress and psychological well-being in the unemployed. *Journal of Applied Social Psychology, 38*, 460. DOI: 10.1111/j.1559-1816.2007.00313.x
- Dew, J. P., & Xiao, J. J. (2013). Financial Declines, financial behaviors, and relationship satisfaction during the recession. *Journal of Financial Therapy, 4*(1). Retrieved from <http://dx.doi.org/10.4148/jft.v4i1.1723>
- Dew, J. (2007). Two sides of the same coin? The differing roles of assets and consumer debt in marriage. *Journal of Family and Economic Issues, 28*, 89-104. doi:10.1007/s10834-006-9051-6
- Donnellan, M. B., Conger, K. J., McAdams, K. K., & Neppl, T. K. (2009). Personal characteristics and resilience to economic hardship and its consequences: Conceptual issues and empirical illustrations. *Journal of Personality, 77*(6), 1645-1676. doi:10.1111/j.1467-6494.2009.00596.x
- Dotson, F. (1953). A note on participation in voluntary associations in a Mexican city. *American Sociological Review, 18*, 380-386. doi:10.2307/2087550

- Drentea, P., & Reynolds, J. R. (2012). Neither a borrower nor a lender be: The relative importance of debt and SES for mental health among older adults. *Journal of Aging and Health, 24*(4), 673-695. doi:10.1177/08982643114313
- Durr, M., La Fleur, F., & Dunlap, E. (2010). Inner-city African-American women's adolescence as stressful life events: Understanding substance abusing behavior. *Journal of African American Studies, 14*(2), 202-219.
- Ensel, W.M., & Lin, N. (1996). Distal stressors and the life stress process. *Journal of Community Psychology, 24*, 66-82. doi: 10.1002/(sici)1520-6629(199601)24:1<66::aid-jcop5>3.0.co;2-1
- Ensel, W.M., & Lin, N. (1991). The life stress paradigm and psychological distress. *Journal of Health and Social Behavior, 32*, 321-341. doi:10.2307/2137101
- Falconier, M. K., & Epstein, N. B. (2011). Couples experiencing financial strain: What we know and what we can do. *Family Relations, 60*(3), 303-317. DOI:10.1111/j.1741-3729.2
- Falconnier, L., & Elkin, I. (2008). Addressing economic stress in the treatment of depression. *American Journal of Orthopsychiatry, 78*(1), 37. <http://dx.doi.org/10.1037/0002-9432.78.1.37>
- Fonseca, G., Cunha, D., Crespo, C., & Relvas, A. P. (2016). Families in the context of macroeconomic crises: A systematic review. *Journal of Family Psychology, 30*(6), 687. doi:10.1037/fam0000230
- Gecas, V. (1989). The social psychology of self-efficacy. *Annual Review of Sociology, 15*(1), 291-316. doi:0360-0572/8910815-0291\$02.00
- Gjesfeld, C. D., Greeno, C. G., Kim, K. H., & Anderson, C. M. (2010). Economic stress, social support, and maternal depression: Is social support deterioration occurring?. *Social Work Research, 34*(3), 135-143. doi:10.1093/swr/34.3.135
- Gomel, J.N., Tinsley, B.J., Parke, R.D., & Clark, K.M. (1998). The effects of economic hardship on family relationships among African American, Latino, and Euro-American families. *Journal of Family Issues, 19*, 436-467. doi:10.1177/019251398019004004
- Grezo, M., & Sarmany-Schuller, I. (2015). Coping with economic hardship: A broader look on the role of dispositional optimism. *Journal of Psychology, 2*(2), 6-14.
- Hatchett, S.J., & Jackson, J.S. (1993). African American extended kin systems: An assessment. In H.P. McAdoo (Ed.) *Family Ethnicity: Strength in Diversity* (pp. 90-108). Thousand Oaks, CA: Sage Publications.
- Helms, H. M., Supple, A. J., Su, J., Rodriguez, Y., Cavanaugh, A. M., & Hengstebeck, N. D. (2014). Economic pressure, cultural adaptation stress, and marital quality among Mexican-origin couples. *Journal of Family Psychology, 28*, 77-87. <http://dx.doi.org/10.1037/a0035738>
- Heslin, P. A., Bell, M. P., & Fletcher, P. O. (2012). The devil without and within: A conceptual model of social cognitive processes whereby discrimination leads stigmatized minorities to become discouraged workers. *Journal of Organizational Behavior, 33*(6), 840-862. doi:10.1002/job.1795
- Hevey, D., Smith, M., & McGee, H. M. (1998). Self-efficacy and health behaviour: A review. *Irish Journal of Psychology, 19*, 248-273. doi:10.1080/03033910.1998.10558189
- Hobbs, T.R. (1997). Depression in caregiving mothers of adult schizophrenics: A test of the resource deterioration model. *Community Mental Health Journal, 33*, 387-399. doi:10.1080/03033910.1998.10558189

- Hyman, H., & Wright, C. (1971). Trends in voluntary association memberships of American adults: Replication based on secondary analysis of national sample surveys. *American Sociological Review*, 36, 191-206. doi:10.2307/2094038
- Jöreskog, K.G., & Sörbom, D. (1996). *LISREL 8.0 User's Reference Guide*. Chicago: Scientific Software International. doi:10.1002/9781118445112.stat01649
- Kochhar, R., & Fry, R. (2014). Wealth inequality has widened along racial, ethnic lines since end of Great Recession. *Pew Research Center*, 12. <http://www.pewresearch.org/fact-tank/2014/12/12/racial-wealth-gaps-great-recession/>.
- Levine, N. (2016). Why cities should care about family financial security? DC: Urban Institute. Retrieved from [http://www.urban.org/features/why-cities-should-care-about-family-financialsecurity?utm\\_source=iContact&utm\\_medium=email&utm\\_campaign=Opportunity%20and%20Ownership%20Initiative&utm\\_content=Opportunity+and+Ownership+-+April+2016](http://www.urban.org/features/why-cities-should-care-about-family-financialsecurity?utm_source=iContact&utm_medium=email&utm_campaign=Opportunity%20and%20Ownership%20Initiative&utm_content=Opportunity+and+Ownership+-+April+2016)
- Lim, H., Heckman, S. J., Montalto, C. P., & Letkiewicz, J. (2014). Financial stress, self-efficacy, and financial help-seeking behavior of college students. *Journal of Financial Counseling and Planning*, 25(2), 148-160. doi:10.4148/1944-9771.1063
- Liu, S., Huang, J. L., & Wang, M. (2014). Effectiveness of job search interventions: A meta-analytic review. *Psychological Bulletin*, 140(4), 1009. doi:10.1037/a0035923
- Lo, C. C., & Cheng, T. C. (2014). Race, unemployment rate, and chronic mental illness: A 15-year trend analysis. *Social Psychiatry and Psychiatric Epidemiology*, 49(7), 1119-1128. doi:10.1007/s00127-014-0844-x
- Mauldin, T. A., Henager, R., Bowen, C. F., & Cheang, M. (2016). Barriers and facilitators to saving behavior in low-to moderate-income households. *Journal of Financial Counseling and Planning*, 27(2), 231-251. doi:10.1111/fcsr.12120
- McAdoo, H.P. (1992). Upward mobility and parenting in middle-income black families. In *African American Psychology: Theory, Research, and Practice* (pp.63-86). Thousand Oaks, CA: Sage Publications.
- McKernan, S. M., Ratcliffe, C., Steuerle, E., & Zhang, S. (2013). Less than equal: Racial disparities in wealth accumulation. *Washington, DC: Urban Institute*, 1-6. Retrieved from [https://www.nsu.edu/Assets/websites/CARPP/Race-and-Ethnicity/RaceEthnicitydoc2\(Article\).pdf](https://www.nsu.edu/Assets/websites/CARPP/Race-and-Ethnicity/RaceEthnicitydoc2(Article).pdf)
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129, 674-697. doi:10.1037/0033-2909.129.5.674
- Mistry, R. S., Lowe, E. D., Benner, A. D., & Chien, N. (2008). Expanding the family economic stress model: Insights from a mixed-methods approach. *Journal of Marriage and Family*, 70(1), 196-209. doi:10.1111/j.1741-3737.2007.00471.x
- Moore, T. H. M., Kapur, N., Hawton, K., Richards, A., Metcalfe, C., & Gunnell, D. (2017). Interventions to reduce the impact of unemployment and economic hardship on mental health in the general population: A systematic review. *Psychological Medicine*, 1-23. doi:10.1017/S0033291716002944

- Moritsugu, J. & Sue, S. (1983). Minority status as a stressor. In R.D. Felner, L.A. Jason, J.N. Moritsugu, and S.S. Farber (Eds.), *Preventive Psychology: Theory, Research and Practice* (pp. 162-174). New York: Pergamon Press.
- Morrison Gutman, L., McLoyd, V. C., & Tokoyawa, T. (2005). Financial strain, neighborhood stress, parenting behaviors, and adolescent adjustment in urban African American families. *Journal of Research on Adolescence, 15*(4), 425-449. doi:10.1111/j.1532-7795.2005.00106.x
- Musick, K., & Bumpass, L. (2012). Reexamining the case for marriage: Union formation and changes in well-being. *Journal of Marriage and Family, 74*(1), 1-18. doi:10.1111/j.1741-3737.2011.00873.x
- Noh, S., & Avison, W.R. (1996). Asian immigrants and the stress process: A study of Koreans in Canada. *Journal of Health and Social Behavior, 37*, 192-206. doi:10.2307/2137273
- Nandi, A., Prescott, M. R., Cerdá, M., Vlahov, D., Tardiff, K. J., & Galea, S. (2012). Economic conditions and suicide rates in New York City. *American Journal of Epidemiology, 175*(6), 527-535. doi:10.1093/aje/kwr355
- Norris, F.H. & Kaniasty, K. (1996). Received and perceived social support in times of stress: A test of social support deterioration deterrence model. *Journal of Personality and Social Psychology, 71*, 498-511. doi:10.1037/0022-3514.71.3.498
- O'Brien, R. L. (2012). Depleting capital? Race, wealth and informal financial assistance. *Social Forces, 91*, 375-396. doi:10.1093/sf/sos132
- Okafor, E., Lucier-Greer, M., & Mancini, J. A. (2016). Social stressors, coping behaviors, and depressive symptoms: A latent profile analysis of adolescents in military families. *Journal of Adolescence, 51*, 133-143. doi:10.1016/j.adolescence.2016.05.010
- Pearlin, L.E. (1989). The sociological study of stress. *Journal of Health and Social Behavior, 30*, 241-56. doi:10.2307/2136956
- Rogler, L.H., Malgady, R.G., & Rodriguez, O. (1989). *Hispanics and mental health: a framework for research*. Malabar, FL: R.E. Krieger Pub. Co.
- Rothwell, D. W., & Han, C. K. (2010). Exploring the relationship between assets and family stress among low-income families. *Family Relations, 59*, 396-407. doi:10.1111/j.1741-3729.2010.00611.x
- Rowe, M.A. (1996). The impact of internal and external resources on functional outcomes in chronic illness. *Research in Nursing and Health, 19*, 485-497. [https://doi.org/10.1002/\(sici\)1098-240x\(199612\)19:6<485::aid-nur4>3.3.co;2-q](https://doi.org/10.1002/(sici)1098-240x(199612)19:6<485::aid-nur4>3.3.co;2-q)
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68. <http://dx.doi.org/10.1037/0003-066X.55.1.68>
- Rubio, A. R. (2013). Understanding minority households as consumers of financial services. *Family and Consumer Sciences Research Journal, 42*(2), 150-161. doi:10.1111/fcsr.12049
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology, 57*, 1069. doi:10.1037/0022-3514.57.6.1069
- Schnittgrund, K.P., & Baker, G. (1983). Financial management of low income urban families. *Journal of Consumer Studies and Home Economics, 7*, 261-270. doi:10.1111/j.1470-6431.1983.tb00628.x

- Schulz, A. J., Israel, B. A., Zenk, S. N., Parker, E. A., Lichtenstein, R., Shellman-Weir, S., & AB, L. K. (2006). Psychosocial stress and social support as mediators of relationships between income, length of residence and depressive symptoms among African American women on Detroit's eastside. *Social Science & Medicine*, 62(2), 510-522. <https://doi.org/10.1016/j.socscimed.2005.06.028>
- Sweet, J. A., & Bumpass, L. L. (1996). *The National Survey of Families and Households waves 1 and 2: Data description and documentation*. Retrieved from <http://www.ssc.wisc.edu/nsfh/home.htm>.
- Sweet, J., Bumpass, L., & Call, V. (1988). The design and content of the National Survey of Families and Households (Working Paper No.1). Madison, WI: University of Wisconsin-Madison Center for Demography and Ecology. doi:10.1037/e386712004-001
- Tandon, S. D., Dariotis, J. K., Tucker, M. G., & Sonenstein, F. L. (2013). Coping, stress, and social support associations with internalizing and externalizing behavior among urban adolescents and young adults: Revelations from a cluster analysis. *Journal of Adolescent Health*, 52(5), 627-633. doi:10.1016/j.jadohealth.2012.10.001
- Taylor, R. D., Budescu, M., Gebre, A., & Hodzic, I. (2014). Family financial pressure and maternal and adolescent socioemotional adjustment: Moderating effects of kin social support in low income African American families. *Journal of Child and Family Studies*, 23(2), 242-254. doi:10.1007/s10826-012-9688-8
- Taylor, R.J., Chatters, L.M., Tucker, M.B., & Lewis, E. (1991). Developments in research on black families: A decade review. *Journal of Marriage and Family*, 52, 275-295. doi:10.2307/353315
- Tobin, D., Holroyd, K., Reynolds, R., & Wigal, J. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research*, 13, 343. DOI: 10.1007/BF01173478
- Turnham, J. (2010). Attitudes to saving and financial education among low-income populations: Findings from the financial literacy focus groups. Retrieved from [http://cfs.wisc.edu/Working\\_Papers/Attitudes\\_to\\_Saving\\_and\\_Financial\\_Education\\_Among\\_Low-Income\\_Populations.pdf](http://cfs.wisc.edu/Working_Papers/Attitudes_to_Saving_and_Financial_Education_Among_Low-Income_Populations.pdf)
- Vega, W. A., & Rumbaut, R. G. (1991). Ethnic minorities and mental health. *Annual Review of Sociology*, 17, 351-383. doi:10.1146/annurev.so.17.080191.002031
- Valdivia, C., & Gilles, J. (2001). Gender and resource management: Households and groups, strategies and transitions. *Agriculture and Human Values*, 18(1), 5-9. doi:10.1023/A:1007608717996
- Valentino, S. W., Moore, J. E., Cleveland, M. J., Greenberg, M. T., & Tan, X. (2014). Profiles of financial stress over time using subgroup analysis. *Journal of Family and Economic Issues*, 35, 51-64. doi: 10.1007/s10834-012-9345-9
- Voydanoff, P., & Donnelly, B. W. (1988). Economic distress, family coping, and quality of family life. In P. Voydanoff & L. C. Majka (Eds.), *Families and Economic Distress: Coping Strategies and Social Policies* (pp. 97-116). Beverly Hills, CA: Sage.

- Wadsworth, M. E., & Compas, B. E. (2002). Coping with family conflict and economic strain: The adolescent perspective. *Journal of Research on Adolescence, 12*, 243-274. doi:10.1111/1532-7795.00033
- Williams, J.A., Jr., Babchuck, N., & Johnson, D.R. (1973). Voluntary associations and minority status: A comparative analysis of Anglo, Black, and Mexican Americans. *American Sociological Review, 38*, 637-646. doi:10.2307/2094413
- Williams, D., Grizzell, B., & Burrell, D. N. (2011). An applied case study analysis of potential societal importance of financial literacy education for African-American and Latino American adolescents. *International Journal of Interdisciplinary Social Sciences, 6*(3). doi:10.18848/1833-1882/cgp/v06i03/52048
- Wirth, J. (2001). The story of Hispanic/Latino experience in Southwest Missouri: Survey of Latino adults, Latino youth, and non-Hispanic service providers/community residents. University of Missouri Outreach and Extension, Springfield, MO.
- Zemore, S. E., Mulia, N., Jones-Webb, R. J., Liu, H., & Schmidt, L. (2013). The 2008–2009 recession and alcohol outcomes: Differential exposure and vulnerability for black and Latino populations. *Journal of Studies on Alcohol and Drugs, 74*(1), 9-20. doi:10.15288/jsad.2013.74.9
- Zurlo, K. A., Yoon, W., & Kim, H. (2014). Unsecured consumer debt and mental health outcomes in middle-aged and older Americans. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 69*(3), 461–469. doi:10.1093/geronb/gbu02