

How Racial Identity Moderates the Impact of Financial Stress on Mental Health among African Americans

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Abstract

Financial stress, which is common among African Americans, has been linked to higher psychological distress. This study examines whether racial identity moderates the association of financial stress with depressive symptoms. If so, through what mechanisms does it operate? We investigated these questions in a moderated mediation analysis, using data from the National Survey of American Life ($N = 3,570$). Of the two racial identity dimensions examined, positive group evaluation but not closeness to other African Americans was associated with less adverse effects of financial stress on depressive symptoms. In addition, we tested two mechanisms that could explain the buffering effect. Psychological resources (self-esteem and, less consistently, mastery), explained 26% to 46% of the buffering effects of racial identity; family support explained 8%. That is, positive group evaluations fortify African Americans in the face of hard times. They do so primarily through their association with a greater sense of self-worth.

Keywords

race/ethnicity, mental health, economic strains, mastery, self-esteem

Financial stress is negatively associated with psychological well-being among African Americans (Lincoln 2007; Lincoln and Chae 2010). However, the path linking financial stress and mental health is not fully understood. In the stress process model, stressors undermine mental health by eroding protective psychological and social resources (Pearlin et al. 1981). Racial identity may help buffer these harmful effects, as some research shows that ethnic identity can buffer the effect of discrimination (Mossakowski 2003; Sellers and Shelton 2003; Neblett, Shelton, and Sellers 2004; Shelton et al. 2005), everyday stress (Kiang et al. 2006), and socioeconomic status (Sellers et al. 2003) on psychological well-being. In the present study, we examine whether and how racial

identity buffers the effect of financial stress on depressive symptoms. We propose that racial identity helps protect mental health from financial stress because it reduces the impact of financial stress on the psychological and social resources that are important determinants of good mental health.

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We examine two dimensions of racial identity, racial group identification and group evaluation, as potential moderators of the effect of financial stress on depressive symptoms, using data from a large population-based sample of African American adults. We go beyond most previous studies by testing two explanations for such moderation effects (see also Kiang et al. 2006) in a moderated mediation model (Hayes 2013). For one, racial identity may protect self-esteem and mastery from the deleterious effects of financial stress, so the indirect effect of financial stress on psychological well-being may be weaker in the presence of a strong racial identity. For another, racial identity may protect supportive social relationships from stress, thus weakening the indirect impact of financial stress on well-being through social relationships.

LITERATURE REVIEW

Financial Stress and Mental Health

It is well established that African Americans have diminished economic well-being because they experience high levels of race-based discrimination. In 2009, median household income for African Americans was \$38,409, as compared to \$62,455 for non-Hispanic whites (U.S. Census Bureau 2010). Compared to whites, African Americans are more likely to be unemployed and underemployed, to work in jobs with high lay-off potential and fewer opportunities for advancement, and, owing to residential segregation, to pay higher prices for necessities, such as food and housing (Pager and Shepherd 2008; Western et al. 2012). Consequently, African Americans disproportionately experience financial stress (Bauman 1998) in the form of economic hardship and difficulties in making ends meet (Lincoln and Chae 2010).

In accordance with the stress process model (Pearlin et al. 1981), we expect financial stress to be associated with elevated depressive symptoms. Financial stress is strongly related to poorer mental health in the general population (e.g., Ross and Huber 1985; Keith 1993; Mirowsky and Ross 2001; Pudrovska et al. 2005) and among African Americans (Lincoln 2007; Lincoln and Chae 2010; Szanton, Thorpe, and Whitfield 2010) and whites (Wickrama et al. 2012).

Racial Identity

Racial identity, like other social identities, involves an awareness of belonging to a social category or group, along with the value and emotional significance attached to that membership (Tajfel and Turner 1986). Like other social identities, racial identity is multidimensional (Ashmore, Deaux, and McLaughlin-Volpe 2004; Rowley et al. 1998). We focus here on two dimensions, racial group identification and in-group evaluation. Group identification involves attachment or closeness to a group (Ashmore et al. 2004). In research on racial identity, it has been measured as closeness to other African Americans (e.g., Broman, Neighbors, and Jackson 1988; Harris 1995; Brown, Sellers, and Gomez 2002; Ida and Christie-Mizell 2012). Closeness is higher among older people and people with less education and lower incomes (Broman et al. 1988; Harris 1995). The second dimension, group evaluation, refers to appraisals of one's group, which may be relatively positive or negative (Rowley et al. 1998; Ashmore et al. 2004). Younger and more educated African Americans evaluate African Americans as a group more positively (Hughes and Demo 1989; Brown et al. 2002).

Closeness to one's group is related to more positive group evaluation (Hughes and Demo 1989; Brown et al. 2002). In turn, these two identity dimensions are related to better mental health, including less negative affect and fewer depressive symptoms (Branscombe, Schmitt, and Harvey 1999; Ida and Christie-Mizell 2012), albeit modestly (Smith and Silva 2011). Racial identity is thought to protect mental health by boosting psychosocial resources. It connects people to others via meaningful social roles in their families and communities, and it enhances self-esteem and mastery (Hughes and Demo 1989; Phinney 1991; Brown et al. 2002).

Racial Identity as a Moderator of Stressors

We propose that racial identity buffers the adverse effects of financial stress on depressive symptoms. Stress process models, however, often view identity as potentially magnifying the effects of stressors. The "identity-relevant stress hypothesis"

predicts that when a stressor threatens or harms a valued identity, the stressor will affect mental health even more adversely (Thoits 2013:362). An identity also may influence stress appraisal. For example, a stronger, more positive racial identity tends to heighten awareness of discrimination (Sellers et al. 2003; Sellers and Shelton 2003), so it could magnify the harmful effects of discrimination on mental health.

Across numerous studies, however, empirical support for this prediction is thin (Brondolo et al. 2009; Pascoe and Richman 2009). In some studies, a stronger ethnic identity exacerbated the negative impact of discrimination (e.g., Noh et al. 1999; Sellers et al. 2006; Yoo and Lee 2008), at least among some age groups (Yip, Gee, and Takeuchi 2008). In other studies, identity buffered the negative effects of discrimination (Mossakowski 2003; Sellers and Shelton 2003; Neblett et al. 2004; Shelton et al. 2005). However, the most common pattern discovered in two reviews (Brondolo et al. 2009; Pascoe and Richman 2009) was that racial identity did not moderate the adverse impact of discrimination on mental health at all. When it did, it was about as likely to buffer as to exacerbate the impact.¹

Racial identity may better moderate stressors that are less identity relevant than discrimination is. Two studies found that ethnic identity mitigated the negative impact of daily stressors on well-being. A strong ethnic identity immunized Chinese high school students in New York from higher anxiety (reviewed by Shelton et al. 2005). Similarly, among adolescents from Mexican and Chinese backgrounds, high ethnic regard (positive feelings about their ethnic group) protected against assaults on psychological well-being from daily stressors (Kiang et al. 2006). And in their study of African American young adults, Sellers et al. (2003) found that racial centrality reduced the negative impact of lower socioeconomic status on distress.

In sum, the mixed findings concerning discrimination and the findings concerning less identity-relevant stressors suggest that a strong, positive racial identity can serve as a psychological resource that buffers the adverse impact of stressors on mental health.² However, the relevance of racial identity for understanding the specific impact of financial stress is unclear. African Americans with a strong racial identity may be more emotionally resilient to financial stress because

they understand and appreciate the group's struggles to overcome racial inequality. This understanding derives from knowledge of African American history in the United States, which is replete with traditions and actions undertaken to promote group advancement in the face of obstacles. Beginning with various forms of slave resistance and literacy efforts, African Americans have used many means to battle oppression, such as establishing civic and political organizations to defeat de jure segregation and fight for educational and occupational advancement (Franklin 1980).

Ethnographic studies of communities in both the South and the North documented the tentative beginnings and the slow but eventual expansion of the black middle class (Davis, Gardner, and Gardner 1941; Drake and Clayton, 1945; Frazier 1957). In *Black Metropolis*, Drake and Clayton (1945) noted that the upward mobility of some African Americans instilled hope for the promises of the American dream, both for those who had achieved middle class status and for those who had not. However, contemporary scholars have noted the precarious economic position of African Americans, even those who have achieved middle-class status. Bowser (2007) argues, for example, that each of the three incarnations of the African American middle class—Reconstruction, Jim Crow, and the current post-Jim Crow middle class—has been mostly first generation, with limited wealth accumulation and high dependence on employment in the public sector. African Americans have been the last hired and first fired when the economy contracts, and they have had fewer assets to fall back on. Efforts to curtail the growth of the African American middle class have been ongoing in history and continue today in the retreat from affirmative action, globalization of jobs and resulting high unemployment rates, and efforts to change federal tax policy (e.g., to eliminate home mortgage deductions) that supported expansion of the American middle class generally. Despite these threats, African Americans created a tradition of struggle by opposing racial oppression and working to protect social and economic gains, often while dealing with serious financial hardship along the way. Those who feel close to their group and take pride in their group and its history may thus be more confident that they can overcome present financial difficulties or find ways to manage them effectively (Brondolo et al. 2009).

Mechanisms by Which Racial Identity Moderates Financial Stress

If racial identity moderates the influence of financial stress on mental health, what are the specific mechanisms (that is, mediators) by which it does so? In the stress process model, psychological resources (self-esteem and mastery) and supportive social relationships protect mental health. These factors are undermined by financial stress, leading to greater vulnerability to depressive symptoms (Pearlin et al. 1981; Pudrovska et al. 2005; Kahn and Pearlin 2006; Wickrama et al. 2012). We argue that racial identity reduces the negative impact that financial stress has on these psychological and social resources that protect mental health.

Financial Stress and Psychological Resources. Financial stress can erode self-esteem, the sense of self-worth, via several pathways. People who experience financial difficulties may believe that others think less well of them (reflected appraisals), or they may compare themselves unfavorably with others (social comparisons). They also may evaluate themselves more harshly (self-evaluations), given the importance of success in U.S. society (Wickrama et al. 2012). Financial stress also can erode mastery, the sense that one can control one's environment and effect desired outcomes (Pearlin et al. 1981; Mirowsky and Ross 2001). Not being able to make ends meet creates anxiety and uncertainty.

Financial Stress and Social Resources. Similarly, financial stress can destabilize family relationships and other social relationships (Kahn and Pearlin 2006; Lincoln and Chae 2010). Financial problems are associated with less perceived social support and more negative interactions with friends and relatives, including perceptions that others are too demanding and critical of them (Lincoln, Chatters, and Taylor 2005; Lincoln 2007). People may withdraw from their social networks if they feel embarrassed or stigmatized for experiencing financial problems. Alternatively, network members may withdraw their support from people who frequently need financial assistance (Lincoln 2007). Even when other network members also experience financial problems, they may lack the psychic energy to provide needed social support.

Racial Identity, Psychological and Social Resources, and Financial Stress. Racial identity may help counteract the adverse effects of financial stress on psychological resources and social relationships simply because of its positive association with these resources. Racial identity is associated with higher self-esteem³ and sense of mastery (e.g., Hughes and Demo 1989; Phinney 1991; Brown et al. 2002; Kiang et al. 2006; Settles et al. 2010; Smith and Silva 2011). By being part of a group, people gain resources and increase their ability to control events (Wright, Aron, and Tropp 2002). Similarly, "positive racial group identity (i.e., closeness and positive group evaluation) connects individuals to meaningful roles and purpose inside their families and communities" (Ida and Christie-Mizell 2012). A shared identity also encourages supportive exchanges among group members (Haslam et al. 2005), thus strengthening social resources. These associations imply that racial identity and financial stress have additive effects on psychosocial resources.⁴

We propose, though, that racial identity interacts with financial stress. As noted above, identity is rooted in the African American experience, which provides an understanding of and a context for the experience of financial difficulties and emphasizes resilience in the face of difficulty (Kiecolt, Hughes, and Keith 2009). Our model (see Figure 1) predicts that financial stress will undermine psychological resources (self-esteem and mastery) less when racial identity is stronger. Similarly, financial stress may cause less deterioration in supportive social bonds because racial identity links people through their immediate social relationships to a wider community of perceived and actual support.

Financial Stress, Racial Identity, and Mental Health. Overall, then, we hypothesize that racial identity moderates the effect of financial stress on mental health by weakening its deleterious effects on psychological and social resources (Figure 1). That is, the mediation of financial stress on mental health via psychological and/or social resources (i.e., the indirect effect of financial stress) is moderated by racial identity. This process is termed *moderated mediation* (Muller, Judd, and Yzerbyt 2005; Hayes 2013). A moderated mediation model assesses how the indirect effect of an independent variable via

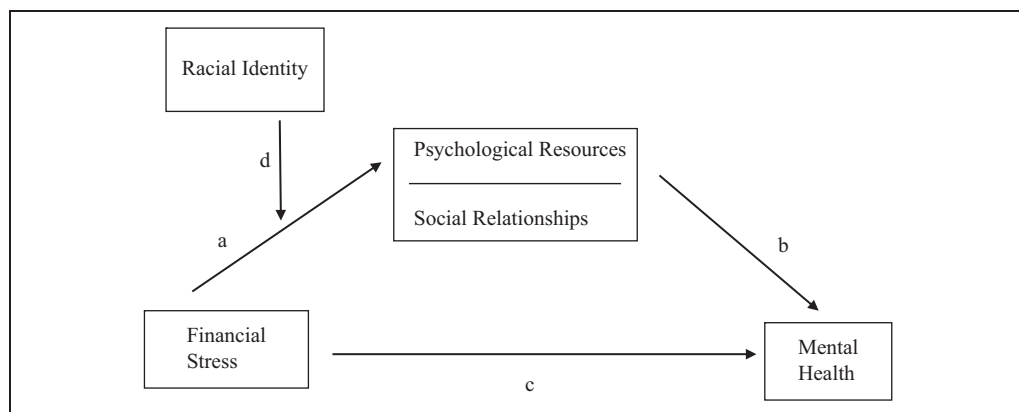


Figure 1. Model of how racial identity may buffer the effect of financial stress on mental health.

a mediating variable differs by the level of a moderating variable. Our model tests whether the indirect effect of financial stress on depressive symptoms via psychological and/or social resources varies because the effect of financial stress on these resources depends on the level of racial identity.

The Research Problem

In the analyses below, we examine two research questions:

1. Does racial identity reduce the influence of financial stress on the mental health of African American adults? We hypothesize that closeness to other group members or racial group evaluation or both will statistically interact with a financial stressor in predicting depressive symptoms.
2. What explains any moderating effects that we uncover? We posit two mechanisms: psychological resources and social relationships. First, we investigate whether self-esteem or mastery mediate any buffering effects of racial identity. If so, the findings would support the hypothesis that racial identity buffers financial stress because it protects psychological resources that contribute to mental health. Second, racial identity may buffer financial stress because it protects supportive social relationships

with group members that benefit mental health.

Control Variables

The analyses control for several other potential influences on well-being. Women tend to have higher distress (e.g., Kiecolt, Hughes, and Keith 2008) than men do. Age, education, and income are related to lower distress (Kiecolt et al. 2008; Ida and Christie-Mizell 2012). Being married or cohabiting is related to lower distress (e.g., Kiecolt et al. 2008).

METHOD

Data

Data for this study came from the National Survey of American Life (Jackson et al. 2006; Alegria et al. 2007), administered between 2001 and 2003 by the University of Michigan's Institute for Social Research Survey Research Center. The survey was a national multistage probability sample of 6,082 noninstitutionalized adults ages 18 and older in the continental United States. Data were collected using face-to-face computer-assisted interviews. The response rate was 72.3% overall and 70.7% for African Americans. The analysis used the 3,570 African American respondents in the sample. Data were weighted by using the sampling weights, which adjusted for differential probability of inclusion (Heeringa et al. 2006). We adjusted standard errors of test

statistics for survey design effects using Stata12 (StataCorp 2011).

Measures

Dependent Variable. The Center for Epidemiological Studies Depression Index (Radloff 1977) had 12 items that asked respondents how often they felt the following ways during the past week: (a) "I felt as good as other people," (b) "I had trouble keeping my mind on what I was doing," (c) "I felt depressed," (d) "I felt that everything I did was an effort," (e) "I felt hopeful," (f) "My sleep was restless," (g) "I felt happy," (h) "People were unfriendly," (i) "I enjoyed life," (j) "I had crying spells," (k) "I felt that people disliked me," and (l) "I could not get 'going.'" Responses ranged from 0 = *rarely or none of the time* to 3 = *most or all of the time*. Items were coded so that higher scores signified more depressive symptoms. The index ranged from 0 to 84 ($\alpha = .76$).

Financial Stress. We used two measures of financial stress. Having money problems in the past month was a dummy variable based on the question, "Next, I am going to read you a list of things that may have happened to you during the past month or so. Over the past month or so, have you . . . ?" Among the items listed was "money problems" (1 = yes, 0 = no).

Financial hardship in the past year was a dummy variable that indexed whether in the past year, the respondent had not had enough money to meet basic expenses, did not have enough money to pay full rent, was evicted because of nonpayment of rent, did not pay utilities in full, had utilities disconnected because of nonpayment, had a phone disconnected because of nonpayment, could not pay for day care or babysitting, or could not afford leisure activities (1 = yes to any item, 0 = no to all items).

These two measures of financial stress, money problems in the past month and financial hardship in the past year, are correlated ($r = .38, p < .001$), but most of the variance in each measure is independent of the other ($r^2 = .14$), indicating that the measures tap different facets of financial stress. Because we are interested in neither their independent effects nor their joint effect, we separately examined their impact on mental health outcomes.

Social Identity. We examined two aspects of social identity.⁵ Closeness to African Americans was a nine-item index ($\alpha = .87$). Respondents were asked, "How close do you feel in your ideas and feelings about things to . . . ?" Items were black people; black people who are poor; religious, church-going black people; young black people; upper-class black people; black elected officials; working-class black people; black doctors, lawyers, and other black professional people; and older black people. Response categories were *very close*, *fairly close*, *not too close*, or *not close at all*. As the latter two categories had only a small percentage of respondents, we recoded responses as 2 = *very close*, 1 = *fairly close*, and 0 = *not too close or not close at all*. The resulting index, which averaged scores on the items, ranged from 0 to 2.

A second dimension of racial identity, evaluation of African Americans as a group, was measured by a scale of positive and negative stereotypes held of African Americans. Respondents were asked, "How true do you think it is that most Black people . . . ?" Items were "are intelligent," "are hardworking," "are proud of themselves," "are lazy," "give up easily," and "are violent." Response categories ranged from 0 = *not at all true* to 3 = *very true*. Items were coded so that higher scores represented more favorable evaluations. The scale averaged scores on the items ($\alpha = .62$) and ranged from 0 to 3.

Psychological Resources. Self-esteem was measured by the 10-item Rosenberg Self-Esteem Scale (Rosenberg 1965). Example items were "I feel that I have a number of good qualities" and "I feel I do not have much to be proud of." Responses were *very true* (3), *somewhat true* (2), *a little true* (1), or *not true at all* (0). Items were coded so that higher values meant higher self-esteem, and scores were averaged. The scale ranged from 0 to 3 ($\alpha = .76$).

The Mastery Scale (Pearlin and Radabaugh 1976) had seven items ($\alpha = .72$). Example items were "There is really no way I can solve some of the problems I have" and "Sometimes I feel I'm being pushed around in life." Responses were 0 = *strongly agree*, 1 = *agree*, 2 = *disagree*, or 3 = *strongly disagree*. The items were coded so that higher values meant higher mastery, and scores were averaged. The scale ranged from 0 to 3.

Social Relationships. Four aspects of respondents' social relationships were examined. Family support was a three-item index ($\alpha = .72$) that averaged scores on how often respondents' families made them feel loved, listened to their problems, and expressed concern for their well-being (0 = *never* to 3 = *very often*). Family strain was a three-item index ($\alpha = .84$) that averaged scores on how often respondents' families made too many demands on them, criticized them, and took advantage of them (0 = *never* to 3 = *very often*). Closeness to church members was measured on a 4-point scale from 1 = *not close at all* to 4 = *very close*. Non-church attendees were coded 0. Friend support was a four-item index of how often respondents saw, wrote, or talked on the telephone with friends (1 = *never* to 7 = *nearly every day*), how often friends helped them out (1 = *never* to 4 = *very often*), how often respondents helped their friends out (1 = *never* to 4 = *very often*), and how close respondents felt to their friends (1 = *not close at all* to 4 = *very close*). The items were rescaled and scores averaged so that the scale ranged from 0 to 3 ($\alpha = .81$). Respondents without any friends were coded 0 on each item.

Social Characteristics. The analyses also included age, gender, education, income, and marital status. Measures were age in years, gender (0 = male, 1 = female), education (1 = less than high school, 2 = high school degree, 3 = some college, 4 = college degree), family income in thousands of dollars, and marital status (0 = previously married or never married and not cohabiting, 1 = married or cohabiting).

Analytic Strategy

We hypothesize that racial identity moderates the impact of financial stress on depressive symptoms because the indirect effect of financial stress on depressive symptoms that is mediated by psychological and/or social resources varies by the level of racial identity. This model, in which the indirect effect of X on Y through M is moderated by Z , is an example of moderated mediation (Muller et al. 2005; Hayes 2013).⁶ Moderated mediation, also termed *conditional process analysis* (Hayes 2013), includes numerous models of varying complexity. In the specific model that we evaluate (see Figure 1), racial identity protects mental health

from financial stress because it moderates the impact of financial stress on the psychological and social resources that are important determinants of good mental health.⁷

We first estimated a base model showing the additive effects of a financial stressor and racial identity on depressive symptoms, controlling for social characteristics.

$$\begin{aligned} \text{Depressive symptoms} &= b_{10} \\ &+ b_{11}(\text{financial stressor}) \\ &+ b_{12}(\text{racial identity}) \\ &+ \text{control variables} + \text{error}. \end{aligned} \quad (1)$$

In the analyses based on this equation, we examined each dimension of financial stress separately, along with the two measures of racial identity, closeness and group evaluation.

We then tested whether racial identity moderated the adverse effects of financial stress on depressive symptoms. The coefficients for interaction terms involving racial identity and a financial stressor show whether racial identity moderates the effect of the financial stressor on depressive symptoms.

$$\begin{aligned} \text{Depressive symptoms} &= b_{20} \\ &+ b_{21}(\text{financial stressor}) \\ &+ b_{22}(\text{racial identity}) \\ &+ \text{financial stressor} \times \text{racial identity} \\ &+ \text{control variables} + \text{error}. \end{aligned} \quad (2)$$

In analyses based on this equation, interactions of closeness and group evaluation with a financial stressor were evaluated separately. Only significant interaction terms involving closeness or group evaluation and a financial stressor are reported. If an interaction term based on Equation (2) was not significant, it was dropped from further analyses.

After determining that racial identity moderated the effect of financial stress on depressive symptoms, we regressed each potential mediating variable (the psychosocial resources of self-esteem, mastery, and the four social relationships variables) on financial stress, racial identity variables, the interaction of financial stressor $\times$ racial identity, and the control variables.

$$\begin{aligned} \text{Psychosocial resource} = & b_{30} + b_{31} \\ & (\text{financial stressor}) + b_{32}(\text{racial identity}) \\ & + b_{33}\text{financial stressor} \times \text{racial identity} \\ & + \text{control variables} + \text{error}. \end{aligned} \quad (3)$$

For moderated mediation to be established, the interaction term for the independent variable (financial stressor) $\times$ the moderator (racial identity) would have to be significant in predicting the mediator (psychosocial resource variable; Muller et al. 2005; Hayes 2013). Accordingly, if the interaction term for financial stressor $\times$ racial identity did not significantly predict a particular psychosocial resource, that variable was excluded from further analyses.

Finally, we estimated an equation similar to Equation (2) above but that also included a given psychosocial resource variable that was significant in analyses based on Equation (3). These analyses aimed to determine whether a psychosocial resource explained how racial identity moderated the impact of financial stress on depressive symptoms.

$$\begin{aligned} \text{Depressive symptoms} = & b_{40} \\ & + b_{41}(\text{financial stressor}) \\ & + b_{42}(\text{racial identity}) \\ & + b_{43}\text{financial stressor} \times \text{racial identity} \\ & + b_{44}(\text{psychological resource}) \\ & + \text{control variables} \\ & + \text{error}. \end{aligned} \quad (4)$$

How much the coefficient for the financial stressor $\times$ racial identity interaction term (b_{43}) in Equation (4) is reduced from that for b_{23} in Equation (2) indicates the degree to which psychological resources or social connections explain how racial identity buffers the effect of financial stress on depressive symptoms.

In addition, for each of the models in which we established that moderated mediation occurred, we estimated the size and significance of conditional indirect effects. We used a bootstrap method to test whether the indirect effect of financial stress on depressive symptoms via a given mediator differed from zero at particular values of racial identity (the moderator; Hayes 2013). Specifically, we generated 95 percent confidence intervals for the conditional indirect effect of financial stress at three levels of racial identity (-1 standard deviation, the mean, and $+1$ standard deviation) based

on 5,000 bootstrap estimates, using the *sureg* program in Stata (StataCorp 2011; UCLA Statistical Consulting Group n.d.). For all the models, we report two-tailed tests of predicted effects as significant at $p < .10$.

RESULTS

Table 1 shows descriptive statistics for study variables. The mean for depressive symptoms is in the lower end of the range, indicating that the sample is drawn from a relatively mentally healthy population. Slightly over half the sample (56%) reported money problems in the past month, and 39% experienced at least one of eight specific forms of serious financial hardship (e.g., evicted for nonpayment of rent, could not pay for utilities, could not pay for basic expenses, etc.) in the past year. On average, respondents were above the measure midpoints on the indices of closeness and group evaluation. Both self-esteem and mastery were relatively high. The levels of family support and friend support in the sample were high, and family stress was low. Respondents felt relatively close to fellow church members. The sample had more women (56%) than men. On average, respondents were middle-aged, and 42% of respondents were married. Respondents on average had slightly more than a high school education and family incomes in the mid-\$30,000s.

Does Racial Identity Moderate the Effect of Financial Stress on Depressive Symptoms?

We tested whether racial identity moderated the effect of financial stress on depressive symptoms by estimating ordinary least squares regression models that included a financial stressor (money problems or financial hardship), a dimension of racial identity (in-group closeness or positive group evaluation) and an interaction term of a financial stressor and a racial identity variable.

The left side of Table 2 shows the analyses for money problems. Model 1 indicates that controlling for racial identity variables and social characteristics, respondents with money problems in the past month had an average of 2.21 more depressive symptoms than those without money problems. Closeness had no significant impact on depressive symptoms, whereas a more positive group evaluation significantly reduced them

Table 1. Descriptive Statistics for Study Variables.

Variable	M	SD	Range
Depressive symptoms (CES-D)	6.71	5.71	0-33
Money problems in the past month (dummy variable)	0.56	0.50	0-1
Financial hardship in the past year (dummy variable)	0.39	0.49	0-1
Social identity measures			
Closeness to African Americans	1.28	0.48	0-2
Positive evaluation of African Americans	2.17	0.49	0-3
Psychological resources			
Self-esteem	2.62	0.42	0-3
Mastery	2.33	0.58	0-3
Social relationships			
Family support	2.23	0.73	0-3
Family stress	0.84	0.77	0-3
Closeness to church members	2.45	1.44	0-4
Friend support	1.91	0.74	0-3
Control variables			
Age, in years	42.33	16.23	18-93
Female (dummy variable)	0.56	0.50	0-1
Married or cohabiting (dummy variable)	0.42	0.49	0-1
Education (4 categories)	2.28	0.98	1-4
Family income (in \$1,000s)	36.12	31.59	0-200

CES-D = Center for Epidemiological Studies Depression Index (Radloff 1977).

($b = -2.21, p < .001$). Model 2 shows that as predicted, the interaction term for Group Evaluation $\times$ Money Problems was significant and negative ($b = -1.45, p < .001$). In support of the buffering hypothesis, money problems was less strongly related to depressive symptoms among those who evaluated their group more favorably than among those who evaluated it less favorably.

Table 2 also reports analyses for financial hardship in the past year. In Model 1, financial hardship increased depressive symptoms ($b = 2.54, p < .001$), more positive group evaluation reduced them ($b = -2.25, p < .001$), and closeness had no impact. In Model 2, the interaction of evaluation and financial hardship was statistically significant ($b = -1.09, p < .05$), indicating that a more positive group evaluation buffered the impact of financial hardship on depressive symptoms.

Do Psychological and Social Resources Explain the Moderating Effect of Racial Identity?

To evaluate whether psychological and/or social resources explain the moderating effect of racial identity, we first regressed each of these potential

mediators on a financial stressor, group evaluation, the interaction of a financial stressor and group evaluation, closeness, and the control variables. As Table 3 shows, the interaction term was significant in only four cases. The interaction of Group Evaluation $\times$ Money Problems was significantly related to self-esteem and to mastery. The interaction of Group Evaluation $\times$ Financial Hardship in the past year was related to self-esteem and to family support. Nonsignificant psychosocial resources were not included in any further analyses.

Returning to Table 2, in the analyses for money problems, Model 3 added self-esteem as a mediating variable to the equation predicting depressive symptoms. The coefficient for Group Evaluation $\times$ Money Problems was reduced by 30% from Model 2 ($-1.45, p < .01$, to $-1.01, p < .05$). Model 4 added mastery as the mediating variable predicting depressive symptoms. In this model, the coefficient for Group Evaluation $\times$ Money Problems was reduced by 26% from Model 2, from $-1.45 (p < .01)$ to $-1.08 (p < .05)$.

In the analyses for financial hardship in Table 2, adding self-esteem in Model 3 reduced the moderating effect of Group Evaluation $\times$ Financial Hardship on depressive symptoms by 46%, from

Table 2. Regression of Depressive Symptoms (CES-D) on Financial Stress Variables, Racial Identity, Social Characteristics, Interaction Terms, and Mediating Variables.

	Analyses for money problems				Analyses for financial hardship			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Money problems	2.21***	2.23***	1.49***	1.37***	2.54***	2.53***	1.67***	2.43***
Financial hardship								
Racial identity								
Closeness	-0.18	-0.21	0.24	0.01	-0.01	-0.02	0.35	0.16
Group evaluation	-2.21***	-1.36***	-.96**	-.93**	-2.25***	-1.83***	-1.36***	-1.80***
Social characteristics								
Age	-0.05***	-0.05***	-0.06***	-0.07***	-0.05***	-0.05***	-0.06***	-0.05***
Female	0.61**	0.63**	0.76***	0.54*	0.58**	0.59**	0.72***	0.68***
Married or cohabiting	-0.03	-0.02	0.26	0.13	0.06	0.05	0.30	0.02
Education (4 categories)	-0.86***	-0.87***	0.48***	-0.54***	-0.93***	-0.93***	-0.54***	-0.93***
Family income (\$1,000s)	-0.01**	-0.01**	-0.01^	-0.01^	-0.01*	-0.01*	-0.01	-0.01*
Group Evaluation × Money Problems	—	-1.45**	-1.01*	-1.08*	—	-1.09*	-0.59	1.00*
Group Evaluation × Financial Hardship	—	—	-6.01***	—	—	—	-5.91***	—
Self-esteem	—	—	—	-4.00***	—	—	—	—
Mastery	—	—	—	—	—	—	—	—
Family support	—	—	—	—	—	—	—	-0.74***
Constant	5.12***	5.07***	5.39***	5.54***	5.39**	5.38***	5.58***	5.38***
R ²	0.17***	0.18***	0.34***	0.32***	0.18***	0.19***	0.35***	0.19***
N	3,262	3,262	3,262	3,262	3,249	3,249	3,249	3,249

CES-D = Center for Epidemiological Studies Depression Index (Radloff 1977).
[^]p < .10. *p < .05. **p < .01. ***p < .001 (two-tailed tests).

Table 3. Regressions of Mediating Variables on Financial Stressor, Group Evaluation, and Significant Group Evaluation × Financial Stressor Interactions, Controlling for Closeness and Social Characteristics.

Mediator	Money problems	Group evaluation	Group Evaluation × Money Problems	R ²
Self-esteem	-.13***	.07**	.07*	.13
Mastery	-.21***	.11**	.09^	.14
Family support	-.11***	.07^	.02	.06
Family stress	.27***	-.18***	-.08	.10
Closeness to church members	-.15**	-.08	.02	.09
Friend support	-.04	.02	.04	.05

Mediator	Financial hardship	Group evaluation	Group Evaluation × Financial Hardship	R ²
Self-esteem	-.15***	.08***	.09*	.14
Mastery	-.19***	.14***	.08	.14
Family support	-.13***	.05	.13*	.06
Family stress	.25***	-.19***	-.07	.09
Closeness to church members	-.13^	-.11	.09	.09
Friend support	-.06	.04	-.02	.05

^p < .10. *p < .05. **p < .01. ***p < .001 (two-tailed tests).

–1.09 ($p < .05$) to 0.59, rendering it nonsignificant. Family support was a weaker mediator of the moderating effect, reducing it by only 8%, from –1.09 ($p < .05$) to 1.00 ($p < .05$).

Table 4 reports the size and significance of the indirect effects of the financial stressors on mental health via the mediators shown to be important in Table 3, conditional on the level of group evaluation (± 1 standard deviation or at the mean), using the bootstrap method (Hayes 2013; UCLA Statistical Consulting Group n.d.). Nearly all conditional indirect effects were significant. These analyses demonstrate that self-esteem, mastery, and family support are significant mediators of the impact of financial stress on depression and that the indirect effects vary in strength depending on the level of group evaluation. All four sets of effects showed the same pattern: They were smaller at successively higher levels of group evaluation. For example, in the analysis of how self-esteem mediates the effect of money problems on depressive symptoms, the indirect effect of money problems through self-esteem was 1.01 ($p < .001$) where group evaluation was low, 0.80 ($p < .001$) where it was moderate, and 0.58 ($p < .001$) where it was high. That is, in our moderated mediation model, having money problems was less strongly associated with elevated depressive symptoms when group evaluation was high.

Specifically, among respondents higher on group evaluation, money problems eroded self-esteem less, which in turn resulted in fewer depressive symptoms. For each mediator, at higher levels of group evaluation, financial stress was less strongly related to depressive symptoms because higher group evaluation helped protect a psychological or social resource. This same pattern held for money problems and depressive symptoms by way of mastery. Similarly, the more positive group evaluation was, the less financial hardship predicted self-esteem, so the less it exacerbated depressive symptoms. In contrast, consistent with the much weaker mediating effect of family support, when group evaluation was low, financial hardship had a weak, but significant, indirect effect on depressive symptoms (0.15, $p < .01$). Its indirect effect was smaller, but still significant, at moderate group evaluation and nonsignificant at a high level of group evaluation. Among respondents higher on group evaluation, financial hardship did not increase depressive symptoms by eroding family support.

Summary of Findings

In this study, we investigated whether and how African Americans’ racial identity moderated the relationship of financial stress to psychological

Table 4. Indirect Effects of Financial Stress on Depressive Symptoms, as Mediated by Self-Esteem, Mastery, or Family Support, at Low, Moderate, and High Levels of Group Evaluation.

Mediator	Conditional indirect effect on depressive symptoms of	BootstrapSE	z	p
Self-esteem				
Money problems				
Level of group evaluation				
Low (−1 SD [−0.49])	1.01	.16	6.44	<.001
Moderate (M [0.00])	0.80	.11	7.27	<.001
High (+ 1 SD [0.49])	0.58	.13	4.36	<.001
Mastery				
Money problems				
Level of group evaluation:				
Low (−1 SD [−0.49])	1.03	.15	6.87	<.001
Moderate (M [0.00])	0.85	.10	8.20	<.001
High (+ 1 SD [0.49])	0.67	.12	5.43	<.001
Self-esteem				
Financial hardship				
Level of Group evaluation:				
Low (−1 SD [−0.49])	1.11	.16	6.92	<.001
Moderate (Mean [0.00])	0.87	.12	7.47	<.001
High (+ 1 SD [0.49])	0.62	.15	4.05	<.001
Family support				
Financial hardship				
Level of group evaluation:				
Low (−1 SD [−0.49])	0.15	.05	3.23	<.01
Moderate (M [0.00])	0.10	.03	3.13	<.01
High (+ 1 SD [0.49])	0.05	.04	1.47	.15

well-being. Our research involved two aspects of racial identity, closeness to in-group members and group evaluation. We also examined two potential explanations for a moderating effect, psychological resources and social relationships. Our study has three primary findings.

First, we found that racial identity reduced the influence of financial stress on depressive symptoms, rather than exacerbating its influence. The racial identity dimension that has this buffering effect is positive group evaluation, not closeness to group members. The influence of financial stress was not eliminated among those who evaluated their group very positively, but at higher levels of positive group evaluation, financial stress exacerbated depressive symptoms less.

Second, racial identity chiefly buffers the effect of financial stress on depressive symptoms by protecting psychological resources, especially self-esteem, from financial stress. Analyses reported in Table 2 show that self-esteem and mastery separately explain from 26% to 46% of the buffering effect of racial identity. The interaction of Group Evaluation $\times$ Financial Hardship was no longer significant when self-esteem was added to the model, indicating that self-esteem explained

why group evaluation buffered the effect of financial hardship on depressive symptoms. Analyses in Table 4 based on our moderated mediation model show that the deleterious effects of financial stress that are mediated by self-esteem and mastery are weakest when group evaluations are most positive and strongest when they are relatively negative. This occurs because financial stress undermines self-esteem and mastery less when group evaluations are more positive.

Third, we find only weak evidence that racial identity buffers the impact of financial stress on depressive symptoms because it shields social relationships from deleterious effects of financial stress. Support from family members explained only a small portion (8%) of the buffering effect of racial identity in the face of financial hardship. Supportive relationships with friends and fellow church members did not explain any of the buffering effect. Table 4 shows that the indirect effects of financial stress on depressive symptoms that are mediated by supportive family relationships vary by the level of group evaluation, but these mediated effects are weak at all levels and nonsignificant among those with the most positive group evaluations. This is because family support

mediates only a small proportion of the effect of financial stress on depressive symptoms.

DISCUSSION

This study makes two contributions to the literature on stress, racial identity, and mental health. First, it demonstrates that racial identity is a resource that buffers the deleterious effect of financial stress on depressive symptoms among African Americans. Racial identity does not eliminate the influence of financial stress, but it does reduce it. Our findings add to findings that racial identity buffered the impact of daily stressors on distress among Chinese American students (Kiang et al. 2006), and racial centrality reduced the impact of lower socioeconomic status on distress among African American young adults (Sellers et al. 2003).

Our second contribution is to demonstrate that racial identity buffers the deleterious effect of financial stress on depressive symptoms by protecting psychosocial resources that help lessen depressive symptoms. The finding that group evaluation, and not closeness, is the dimension of racial identity that buffers the influence of financial stress on depressive symptoms suggests that racial identity ameliorates depressive symptoms by protecting and enhancing one's positive sense of self (Tajfel and Turner 1986), not because it links people to others who provide reassurance and social support. Supporting this conclusion is our finding that psychological resources, particularly, self-esteem, rather than social relationships better explain why and how group evaluation buffers the impact of financial stress on depressive symptoms.

The analyses indicated that self-esteem was more important than mastery in explaining the buffering effect of group evaluation. We should be cautious in making too much of this finding in view of the fact that self-esteem and mastery are highly correlated ($r = .63$, $p < .001$), and any differences in their effects may slight. Nevertheless, sense of self-worth seems to be more consistently important than self-efficacy (i.e., mastery). This finding strengthens the conclusion that the connection of positive group evaluation to self-esteem emphasized in social identity theory (Tajfel and Turner 1986) explains how racial identity helps protect mental health.

This study has some limitations that bear mentioning. First, the measures of financial stress

could have been more detailed. For example, the data did not contain measures of the severity of money problems in the past month. This limitation may have muted the negative effects of money problems. In addition, we could not determine the extent to which money problems and financial hardship during the past year were chronic strains. Second, because the study was cross-sectional, we could not fully establish causal order among the variables of interest. Hence, although it is likely that financial stress in the past month or year contributed to mental health at the time of the survey, mental health problems may have contributed to financial stress. Similarly, available evidence indicates that a more positive racial identity enhances self-esteem more than the reverse but does not rule out a reciprocal relationship between the two variables (Rubin and Hewstone 1998). It also is possible that some unobserved measure influences both racial identity and self-esteem. Finally, self-esteem and depressive symptoms influence each other over time (Wickrama et al. 2012). Nevertheless, our model parallels most stress process models.

Future research needs to investigate whether and how aspects of racial identity buffer different stressors. Closeness to one's group may buffer some stressors as much or more than group evaluation does. The mechanisms through which racial identity buffers stressors also may differ across stressors. Psychological resources may especially help explain how identity buffers the effects of identity-relevant stressors. Supportive social relationships may assume greater importance in connection with other stressors than they did for financial stress. Not just social support but also instrumental support from social relationships is a potential mechanism. Other types of mechanisms need to be explored as well. For example, racial identity may improve mental health by averting stress proliferation or promoting effective coping. In all cases, moderated mediation models hold promise for elucidating the protective effects of racial identity in the stress process.

AUTHORS' NOTE

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NOTES

1. Pascoe and Richman (2009) examined 68 interactions of racial/ethnic identity with discrimination from 12 different studies. Identity did not significantly interact with discrimination in 48 of the 68 effects, buffered the effect of discrimination in 12, and exacerbated the effect of discrimination in 8 (Pascoe and Richman 2009). Brondolo et al. (2009) reviewed 12 published studies of the impact of racial identity and discrimination on depressive symptoms or psychological distress. Six reported no moderating effects of racial identity, 4 reported exacerbating effects, and 2 reported buffering effects.
2. Three factors make it difficult to assess from previous evidence how well racial identity buffers stressors. First, studies have measured different dimensions of racial identity (Brondolo et al. 2009): self-identification with one's racial group, racial identity centrality, private regard (evaluations of one's racial group), public regard (perceptions of out-group members' evaluations of one's racial group), ethnic ideology (nationalism, separatism), and interest in and knowledge about the group (Phinney 1991; Sellers and Shelton 2003). Inconsistent findings may indicate that not all dimensions of identity moderate the effects of stressors. Second, much of the research on this question has used convenience samples of about 100 to 200 respondents. Only a few studies had probability samples of more than 1,000 respondents. Inconsistent findings and the paucity of significant results in past studies may reflect this variability in sample size and representativeness and in statistical power. Third, most convenience samples have been of high school or college students. Identity issues may be particularly salient for young adults' development (Phinney 2006), so findings concerning adolescents' racial identity may differ somewhat in studies of the larger adult population.
3. Available evidence indicates that a more positive racial identity enhances self-esteem more than the reverse (Rubin and Hewstone 1998).
4. In addition, racial identity may indirectly protect resources because, as shown by Sellers et al. (2003), it reduces the experience of stress, which erodes resources.
5. Racial identity has been measured in a variety of ways (Ashmore, Deaux, and McLaughlin-Volpe 2004). Several previous studies of racial identity have also measured closeness and group evaluation (Hughes and Demo 1989; Allen 2001; Brown, Sellers, and Gomez 2002; Ida and Christie-Mizell 2012), and other studies have used different measures. Two of these measures, racial centrality (Sellers et al 2003; Neblett, Shelton, and Sellers 2004) and racial regard (Kiang et al. 2006), have been shown to buffer the deleterious effect of stressful circumstances on well-being. Racial centrality

includes items that tap closeness, but it mostly measures how important being black is to one's self-concept. Racial regard indexes evaluative and affective judgments of one's race (Sellers et al. 1997). It differs from our group evaluation measure, in that some items tap people's feelings about being black, such as feeling happy that one is black. Another index, modeled on Phinney's (1992) multidimensional measure of ethnic identity, buffered the effect of discrimination on the mental health of Filipino Americans (Mossakowski 2003). Phinney's multidimensional scale includes measures of closeness, group evaluation, positive feelings, and ethnic behaviors.

6. Moderated mediation and mediated moderation are sometimes presented as different models. However, as Muller, Judd, and Yzerbyt (2005) and Hayes (2013) note, moderated mediation and mediated moderation are analytically identical and differ only in the facets of the analysis that a researcher wishes to emphasize. Following Hayes, we refer to the model we investigate as one of moderated mediation.
7. Moderated mediation may also work through another mechanism. It is possible for a moderator to lessen the effect of the independent variable on a dependent variable because it moderates the effect that a mediating variable has on the dependent variable (Muller et al. 2005; Hayes 2013). In this case, that would mean that racial identity enhances the positive impact that psychosocial resources have on mental health. In terms of the model in Figure 1, if this were true, racial identity would moderate Path b, from psychosocial resources to mental health. Ida and Christie-Mizell (2012) tested a model of this type—a protective-protective model (Hollister-Wagner, Foshee, and Jackson 2001)—which posits that a protective factor (e.g., racial identity) will magnify the effects of other protective factors. Contrary to that prediction, racial identity did not increase the extent to which self-esteem, mastery, or family support decreased depressive symptoms among African Americans. We replicated these findings using the data in the present study (the same data Ida and Christie-Mizell, 2012, used), and therefore, we do not pursue this possibility.

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