

Explaining Religious Effects on Distress Among African Americans

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This study applies Smith's (2003a) theory of religious effects to account for the link between religiosity and distress. Using a latent-variable structural equation modeling approach, we analyze survey data from a nationally representative sample of African-American adults and find empirical support for our hypotheses. In terms of anger, depression, and anxiety, religiously committed African Americans exhibit lower levels of distress than their less religious or nonreligious counterparts. Highly religious African Americans report higher levels of sense of control and social support, which consequently reduces distress. We also find that the indirect and salutary effects of religiosity via social support are due to support from family and friends as well as from other religious people.

Previous research on mental health tends to find that people who are actively involved in religion or tend to be religiously committed are less distressed than those who are nominally religious or not religious at all (Mirowsky and Ross 1989; Sherkat and Ellison 1999). This general finding is consistent with the sociological proposition that a person's institutional affiliation, including religious affiliation, affects the levels of an individual's psychological distress. For example, it has been suggested that religious effects on distress are explained by causal mechanisms of social support or sense of control: that is, religiosity increases social support or one's sense of control, which in turn decreases distress (Aneshensel 1992; Mirowsky and Ross 1986; Pearlin 1989). However, few empirical studies have examined how these concepts are related to religious effects. This absence of research is partly due to the lack of theoretical development on religion's largely positive relationship to beneficial physical and mental health outcomes.

Smith (2003a), however, has recently proposed three key dimensions of religious influence ("moral order," "learned competence," and "social and organizational ties") that consist of nine key explanatory factors. Since this provides a larger, coherent theoretical framework for explaining religious effects, we conduct an initial test of Smith's theory by applying it to explain the effects of religiosity on distress. Specifically, we focus on two of the three dimensions of religious influence, learned competence and social and organizational ties, which are most directly relevant to the two key explanatory concepts of religious effects on distress—sense of control and social support.

To address this issue, we analyze data from a national survey of African-American adults; a population to which previous researchers have paid relatively limited attention in studying religious effects on distress. Our focus on this ethnic group is important because African Americans tend to report higher average levels of strain or stressors and distress than do other groups (Mirowsky and Ross 1989). Our examination of religiosity among African Americans is also of special relevance due to the higher levels of religious involvement and the symbolic centrality that religious institutions, especially churches, have within many African-American communities.

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THEORY AND HYPOTHESES

Building on ample evidence that religion promotes beneficial outcomes in the lives of American adolescents (Johnson, Thompson, and Webb 2002; Koenig, McCullough, and Larson 2000; Regnerus 2003), Smith (2003a) proposes a sociological theory explaining the constructive effects of religion. Although his theory focuses on the lives of American youth, it is also intended to “apply to American adults, and to youth and adults outside the United States” (2003a:20). Smith emphasizes that his theory is nonreductionistic in that it conceptualizes indirect effects of religion on various outcomes, as just that, a *religious* effect rather than being interpreted as a nonreligious effect (see also Johnson et al. 2001; Regnerus 2003 for the same epistemological argument). It is also nonreductionist because the theory is based on a nonnaturalistic or supernaturalistic presupposition that “there is something particularly *religious* in religion, which is not reducible to nonreligious explanations, and that these religious elements can exert ‘causal’ influence in forming cultural practices and motivating action” (Smith 2003a:19–20).

Smith’s theory consists of three larger conceptual dimensions of social influence, each of which has three specific factors that exert religious influences: (1) moral order (moral directives, spiritual experiences, and role models), (2) learned competencies (community and leadership skills, coping skills, and cultural capital), and (3) social and organizational ties (social capital, network closure, and extracommunity skills). Among these nine distinct but connected and potentially mutually reinforcing factors, we focus on two from the dimensions of learned competencies and social and organizational ties: coping skills and social capital. Thus, a brief conceptual discussion of these two is in order.

Coping skills: American religions promote a variety of beliefs and practices that can help believers cope with the stress of difficult situations social-psychologically, to process difficult emotions, and to resolve interpersonal conflicts, and so enhance the well-being and life capacities of [people]. (Smith 2003a:23)

Sense of control (also referred to as “internal locus of control,” “sense of personal efficacy,” or “mastery”) is likely to be promoted and strengthened by religious “beliefs that a loving and omnipotent divinity is in control of one’s life, that all things work together for the good of those who love God, . . . that a divine Providence is guiding one’s steps, . . . that God gives the strength to confront and overcome injustice” (Smith 2003a:23). Conceptually, sense of control constitutes the opposite end of powerlessness (which is inherently demoralizing) on a continuum and thus is likely to reduce psychological distress (Mirowsky and Ross 1989).

Social capital: American religion . . . emphasizes personal interactions over time, thus providing [people] with personal access to other . . . members in their religious communities, affording cross-generational network ties with the potential to provide extra-familial, trusting relationships of care and accountability, and linking [people] to wider sources of helpful information, resources, and opportunities. (Smith 2003a:25)

Social support is another important outcome of active religious involvement. This concept is broadly defined here to include the potential as well as perceived and actual support that one may use in dealing with strain or stressors (Anashensel 1992; Mirowsky and Ross 1986, 1989; Pearlin 1989). Thus, by social support we refer to the sense of not only being cared for by others but also having intimate, personal relationships. There is evidence that social support reduces the impact of strain on distress by protecting against stressful events and situations (Mirowsky and Ross 1986). Further, some argue that the sense of having someone who loves and understands may, in and of itself, reduce distress, regardless of whether the person provides practical help and protection (Thoits 1982).

This study tests the following hypotheses.

- H1 *Religiosity has direct negative effects on distress.*
- H2a *Religiosity has direct positive effects on sense of control.*
- H2b *Sense of control has direct negative effects on distress.*

- H2c *The direct effects of religiosity on distress decrease in size once sense of control is held constant.*
 H3a *Religiosity has direct positive effects on social support.*
 H3b *Social support has direct negative effects on distress.*
 H3c *The direct effects of religiosity on distress decrease in size once social support is held constant.*

PRIOR RESEARCH

Previous researchers tend to find positive effects of religion on various mental health outcomes (Jang and Johnson 2003; Johnson, Thompson, and Webb 2002; Koenig, McCullough, and Larson 2000; Levin, Markides, and Ray 1996; Regnerus 2003; Ross 1990; Sherkat and Ellison 1999; Williams et al. 1991). Much of this research attributes the salutary effects of religious involvement to various factors that religion promotes, such as social integration and support, psychological resources, coping behaviors and resources, and various positive emotions and healthy beliefs. However, very few researchers have directly tested these mediating hypotheses with one exception. Specifically, analyzing data from the 1995 Detroit Area Study, Ellison et al. (2001) tested two groups of variables hypothesized to mediate religious effects on psychological distress and well-being: social (contact with family members, positive social support from family and friends, and negative social interaction with family and friends) and psychological resources (self-esteem and personal mastery). Although they found significant direct effects of multiple dimensions of religious involvement (church attendance, prayer, and eternal belief) on both distress and well-being, the hypothesized mediating variables failed to explain the religious effects. Ellison et al. interpret these findings as indicating that the salutary effects of religious involvement cannot be explained in terms of social and psychological resources, at least not in their data.

Previous research on the effects of religiosity on sense of control and social support and these two variables' effects on distress tends to provide indirect evidence supporting our hypotheses. That is, recent studies show that religious beliefs provide a source of personal mastery and effective, instrumental coping among people. This is particularly true for African Americans, since they are more likely than their white counterparts to confront proactively a wide range of distressful events and conditions, based on their religious beliefs and personal relationships with God or a "divine other" who is seen as a partner as well as guide in handling problems (Ellison 1993; Mattis and Jagers 2001; Neighbors et al. 1983). It is worth noting, however, that some researchers have suggested that religion may increase an individual's fatalism and cognitive inflexibility, thereby diminishing rather than enhancing sense of control and ability to adopt instrumental coping (Ellis 1962; Mirowsky and Ross 1989).

Previous research, however, consistently shows that religiosity is an important source of both emotional and instrumental support, through one's relationships with co-religionists and God or a "divine other," and this is especially true for African Americans (Ellison 1993; Mattis and Jagers 2001; Taylor, Chatters, and Jackson 1997). Such support is expected to be more likely among religious people since previous research finds highly religious individuals are more friendly and trustful of other people than nonreligious or less religious people (Ellison 1992; Ellison et al. 2001).

Finally, according to researchers of mental health, social patterns of distress provide evidence of the social origin of individuals' psychological well-being (Aneshensel 1992; Mirowsky and Ross 1986, 1989; Pearlin 1989). Those patterns show that people who occupy disadvantaged positions in the social structure are more likely to experience distress than are more advantaged individuals. For example, higher levels of distress among women than men are often attributed to their relative disadvantages in society (Mirowsky and Ross 1995). Institutional affiliation as well as social status also affects distress (e.g., married people are less distressed than the unmarried). These patterns of distress are social in both their origins (i.e., social statuses and affiliations with social institutions) and their processes (i.e., the way they are causally related to distress). Among various mediators proposed to explain the social patterns of distress, the two most prominent concepts are sense of control and social support (Aneshensel 1992; Mirowsky and Ross 1986, 1989; Pearlin 1989).

Previous research on mental health tends to show that African Americans are more distressed than others (especially whites) due to their more frequent experiences of strain or stressors, including racism and economic disadvantage, largely caused by their relatively disadvantaged social status, such as income, education, employment, and neighborhood of residence (Mirowsky and Ross 1989; Schulz et al. 2000). Thus, our examination of the strain-distress relationship is of special relevance to African Americans.

Our focus on religiosity is also of special significance for African Americans due to their relatively high levels of involvement in religious institutions, especially black-controlled churches, which continue to play a vital role in most African-American communities (Ellison 1993; Sherkat and Ellison 1999). Previous research documents that African Americans not only report higher levels of religiosity than whites in the form of service attendance, membership in religious organization, prayer, and Bible study, but they are also more likely than whites to employ religious coping strategies, and to report considerable satisfaction with the outcomes of religious coping efforts (Connell and Gibson 1997; Ellison 1993; Ellison and Taylor 1996). In addition, throughout American history, religious institutions (especially black churches) have been an important agency of social organization among African Americans (Ellison 1993; Johnson et al. 2000). During the pre-Civil-War era, for example, many forms of organized activities, otherwise unavailable to African Americans, grew out of the church, which Frazier (1963) calls the "invisible institution." After the Civil War, black religious institutions continued to be centers of social and political activities as well as community gatherings, and thus helped African Americans deal with the harsh socioeconomic and political environments of the day (Frazier 1963; Lincoln and Mamiya 1990; Mukenge 1983; Paris 1985; Washington 1964).

In sum, previous research has rarely tested whether sense of control and social support explain the effects of religiosity on psychological distress. However, to the extent that religious involvement and beliefs increase sense of control and social support and these psychological and social resources decrease distress as previous studies show, both sense of control and social support are likely to mediate the effects of religiosity on distress.

METHODS

Data

The data to test our hypotheses come from the last of four waves of the National Survey of Black Americans (NSBA), a nationally representative panel survey of adult African Americans. A multistage area probability sampling was conducted based on the national distribution of African Americans indicated in the 1970 Census. Every African-American household in the continental United States had the same probability of being selected, and among eligible respondents (18 years of age or older, self-identified black, and U.S. citizens) of each selected household, one person was randomly chosen for a face-to-face interview (see Jackson 1991 for a detailed description of the NSBA). For the initial wave of the survey, a total of 2,107 respondents were interviewed in 1979 and 1980, with a response rate of 67 percent. Although this rate is relatively low (due partly to the African Americans' residential concentration within urban areas), Jackson (1991:25) reports, "[o]verall, the national sample is fairly representative of the black population as reported by the 1980 Census," despite a slight tendency to overrepresent older women, low-income groups, and southern residents.

In all three subsequent waves, a telephone survey was used. For the second wave of the survey (conducted in 1987 and 1988), 57 percent (1,210) of the original respondents were located and asked for an interview,¹ and 77 percent (935) of them were interviewed along with 16 new respondents ($n = 951$). In the third wave, 83 percent (779) of the original respondents from the second wave as well as 14 others (12 of the 16 new respondents added at the second wave and

two new added at the third wave) were interviewed in 1988 and 1989 ($n = 793$). The final wave of data was collected in 1992 from a total sample of 659 respondents, and 94 percent (623, which is 80 percent of those original respondents from the third wave) of them participated in all four waves of the survey (the other 36 respondents included 28 last interviewed at the second wave, one last interviewed at the first wave, six of the 16 additional respondents added at the second wave, and one new added at the fourth wave).

Rather than analyzing all four waves of data, we focus on the last wave for two reasons. First, the second wave of data included no measure of religiosity and the third wave included a very limited measure (only religious attendance). This makes it impossible to use these two waves of data since religiosity is one of our key concepts. Second, although the first wave included various measures of religiosity, the substantial time lag (12–13 years) between the two waves makes it impractical to conduct a meaningful longitudinal analysis (e.g., Levin and Taylor 1998). So, instead of conducting a panel study using both waves of data, we decided to focus on the last wave, which is better suited to establish causal order between our independent variables and the dependent variable, distress. Specifically, all our independent variables measure attributes at the time of the survey (i.e., current measures) with one exception (negative life events during one month prior to survey). The first wave, however, included distress items covering too long a measurement period (i.e., distress experienced at *any time* prior to survey) to address the issue of causal ordering. On the other hand, the fourth wave includes two sets of distress items with different measurement periods, distress during *a month* and *three to four years* prior to survey. Thus, we analyzed data from the last wave, comparing two alternative measures of distress, “state” and “situational” distress (see the next section for details).

Our sample ($n = 659$) consists of respondents whose age ranges from 29 to 90 with a mean age of 53. The sample is 68 percent female (450), overrepresenting women, as expected (see note 2), who made up 56 percent of the total non-Hispanic black resident population, age 30 and older, in 1992 (U.S. Department of Commerce 1994).

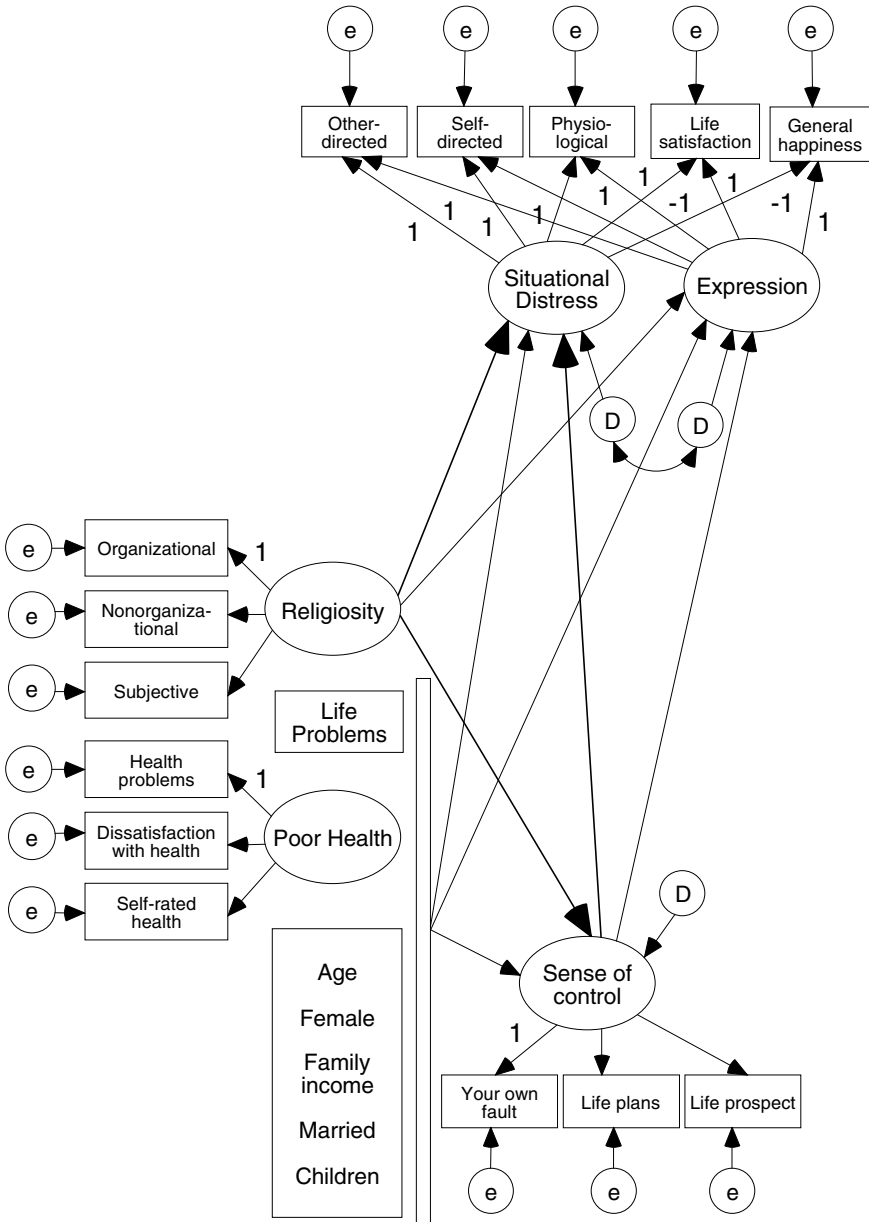
Measures

Figure 1 presents a structural model of hypothesized relationships among our variables as well as measurement models of all latent constructs including an “expression” factor (which is explained further below).² We describe measures of these variables, beginning with the ultimate endogenous variable, distress, and moving to mediating variables, sense of control and social support, and then exogenous variables including religiosity.

The NSBA data enable us to construct two measurement models of distress, state and situational distress. First, the NSBA includes 10 items asking each respondent: “During the past month, how much of the time [have you felt distressed in various ways]?” (See Appendix A for factor loadings and Cronbach’s alphas as well as wording of items used.) We used nine of the 10 items to construct two indicators of the state distress construct, *depression* and *anxiety*,³ which are the “two major forms” of distress as “an unpleasant subjective *state*” (Mirowsky and Ross 1989:21, emphasis added).⁴ Second, each respondent was also asked about serious “personal problems,” including financial, residential, job-related, health-related, and interpersonal problems, that came up not only in a respondent’s life but also in the lives of his or her significant others. Forty-two percent (274) of the total respondents answered this question affirmatively and were asked 11 follow-up questions about how often they felt distressed during that time. We used these responses to construct three indicators of the situational distress construct: *self-directed* emotional (depression and anxiety), *other-directed* emotional (anger), and *physiological distress* (e.g., poor appetite or restless sleep).

We use these measures of distress as indicators of a factor called “expression,” as well as the distress construct, to build a “cross-cutting factor model” based on Mirowsky and Ross’s (1995) creative application of structural equation modeling to unobtrusively appraise and control for

FIGURE 1
A THEORETICAL MODEL OF RELIGIOSITY, SOCIAL SUPPORT,
AND SITUATIONAL DISTRESS



differences in emotional expressiveness (see Figure 1). The underlying logic of the cross-cutting factor model is simply that emotionally expressive people, by definition, have a tendency to express freely their feelings, both positive and negative; and distressed people, by definition, are likely to express negative feelings but unlikely to express positive feelings. To measure positive feelings, we will use two indicators, *life satisfaction* and *general happiness* (see Appendix A). In terms of structural equation modeling, the model fixes the metric loadings of the distress indicators to +1 on both the distress and expression factors, whereas it fixes the metric loadings of *life satisfaction* and *general happiness* to -1 on the distress factor (i.e., distressed people are less likely to be

satisfied with their lives and generally unhappy) and +1 on the expression factor (see Figure 1 and Appendix B).

For the sense of control construct measuring the extent of each respondent's confidence that his or her life would work out as he or she plans or expects, we employ three indicators, *your own fault*, *life plans*, and *life prospect* (see Appendix A). We measure the social support construct by three indicators, *religious*, *family*, and *friend support*, each of which includes the same set of five items tapping the extent of potential (i.e., the levels of contact, intimacy, and satisfaction with church members, family, and friends) as well as perceived and actual support (see Appendix A).

Our measurement model of the religiosity construct is built on Levine, Taylor, and Chatters's (1995) methodological work on the multidimensionality of religious involvement for African Americans based on the first wave of the NSBA data. Specifically, using eight items of religious involvement, we constructed indicators of three dimensions—*organizational* (religious service attendance and participation in other activities), *nonorganizational* (reading religious materials, watching or listening to religious programs on TV or radio, praying, asking someone to pray), and *subjective religiosity* (perceived religiousness and religion as a guide for living).

We included two constructs of strain or stressor in our analysis. First, the NSBA asked each respondent whether he or she had any of nine problems listed (including problems with money, job, family or marriage, and racism) during a month prior to the survey and, if the respondent reported he or she did, then how much the problem upset him or her. Instead of simply counting the number of problems acknowledged, we constructed an index of *life problems* by calculating the mean of the nine items asking about the degree of undesirability of problems reported, which is akin to the concept of strain or stressor (Aneshensel et al. 1991). Second, we use three indicators to measure the poor health construct: *health problems*, *dissatisfaction with health*, and *self-rated health*. The first is an index of 11 items about diseases or conditions (including arthritis, ulcers, cancers, high blood pressure, and stroke), while the next two are single-item indicators. For the same reason as we focused on the undesirability of life problems, we constructed the indicator of health problems to measure the degree of health impairment rather than number of health problems by using items asking how much a reported health problem keeps the respondent from working or carrying out his or her daily tasks.

Finally, we include sociodemographic variables that tend to be associated with the above variables (Mirowsky and Ross 1986, 1989, 1992; Jackson and Neighbors 1996; Levine, Taylor, and Chatters 1995; Ross, Mirowsky, and Goldsteen 1990; Taylor, Chatters, and Jackson 1997): gender (0 = male; 1 = *female*), *age*, *family income*, marital status (0 = not or never married; 1 = *married*), and number of *children* living in the same household (see Appendix A).⁵

Model Estimation

Based on latent-variable structural equation modeling, using Amos Version 4.0 (Arbuckle and Wothke 1995),⁶ we estimated our theoretical model in three steps separately for the two alternative constructs of state and situational distress. In the first step, the distress construct and the expression factor were regressed on all exogenous variables for a baseline model to estimate the direct effects of religiosity on distress (H1). In the second step, the sense of control construct was added to the baseline model to test whether this intervening variable explains the effects of religiosity on distress (H2). Finally, we conducted the same test for the social support construct (H3).

To handle properly missing data on our measures, especially those of situational distress (see above), we applied the full information maximum likelihood approach, which Amos takes and previous studies have found yields unbiased, efficient, and consistent estimates relative to other approaches, including data imputation as well as listwise and pairwise deletion (Arbuckle and Wothke 1995).

RESULTS

Table 1 presents results from estimating structural models of state distress. All the models have a reasonable fit, with RMSEA smaller than 0.08, and factor loadings are generally high (see Appendix B for estimated measurement models). For statistical significance ($\alpha = 0.05$), we conducted two-tailed tests for all relationships, while also applying a one-tailed test to any nonsignificant hypothesized relationship, which is appropriate for directional hypotheses.

Consistent with our first hypothesis, a baseline model (Model 1) shows that religiosity has significant negative effects on state distress (-0.08): that is, African Americans who are religiously committed tend to report lower levels of distress than those who are not. The effects, however, become nonsignificant when sense of control is added to the model as an intervening variable between religiosity and distress (-0.04), indicating that the salutary effects of religiosity on distress are explained by sense of control, as hypothesized (H2). That is, Model 2 shows that religiosity has positive effects on sense of control (0.04 , $p < 0.05$, one-tailed test), which in turn has negative effects on distress (-1.41). Also, consistent with H3, the significant effects of religiosity on state distress become nonsignificant (0.11) when social support is added to the baseline model (see Model 3). Specifically, religiosity has positive effects on social support (3.16), which in turn has negative effects on distress (-0.06).⁷

In addition, we estimated Model 3 without the indicator of religious support to determine whether religious people rely primarily on support from other members of religious institutions. Results presented in Model 3a indicate that this is not the case. Specifically, religious people still report higher levels of social support from their family members and friends than do their nonreligious or less religious counterparts (1.07), and this support from family and friends explains the effects of religiosity on distress (0.03). Thus, while our data do not allow us to examine whether family and friends providing social support attend the same religious institution as the respondent, we can conclude that religious people are more likely to receive social support, whether it is from family and friends or members of their religious institutions, and thus be less distressed than nonreligious or less religious people.

Table 2 shows the same four sets of results as Table 1, when estimating structural models of situational distress. All estimated models show acceptable fit, with RMSEA smaller than 0.08, and provide empirical support for all of our hypotheses. First, religiosity is found to have significant negative effects on situational distress (-0.18): that is, African Americans who are religiously committed tend to experience lower levels of psychological and physiological distress in response to serious personal problems than those who are not. Second, this religious effect decreases in size (-0.11), though remaining significant ($p < 0.05$, one-tailed test), when sense of control was introduced to the baseline model. This partial explanation indicates the indirect effects of religiosity on situational distress via sense of control; specifically, religiosity has positive effects on sense of control (0.04), which in turn has negative effects on distress (-1.82).⁸

On the other hand, social support fully explains the effects of religiosity on situational distress, whether the indicator of religious support is included in the model (Model 3) or not (Model 3a). That is, the effects of religiosity on distress become nonsignificant when social support is controlled for (-0.03 and -0.08 in Models 3 and 3a, respectively) as religiosity has positive effects on social support (3.18 and 1.14 , respectively), which in turn has negative effects on situational distress (-0.05 and -0.11 , respectively). In sum, all three hypotheses receive empirical support from the estimated models of situational as well as state distress.⁹

DISCUSSION AND CONCLUSION

Although previous studies tend to report an inverse relationship between religiosity and distress, little empirical research has been conducted to account for the relationship. This is partly due to the lack of a systematic theory explaining the salutary effects of religion on mental health.

TABLE 1
UNSTANDARDIZED AND STANDARDIZED (IN PARENTHESES) PARAMETER ESTIMATES OF THE STRUCTURAL MODEL
OF RELIGIOSITY, SENSE OF CONTROL, SOCIAL SUPPORT, AND STATE DISTRESS ($N = 659$)

Endogenous Variables	Exogenous Variables								Endogenous Variables		R^2	Endogenous Residual Covariance	Model Fit	
	Age	Family Income	Married	Children	Life Problems	Poor Health	Female	Religiosity	Sense of Control	Social Support			χ^2 (df)	RMSEA
<i>Model 1: Baseline Model</i>														
1. Expression	-0.01* (-0.24)	-0.03* (-0.35)	0.08* (0.13)	-0.02 (-0.07)	0.01* (0.15)	-0.03 (-0.12)	0.03 (0.04)	0.05 (0.10)			0.14	0.05* (0.48)	280.54* (68)	0.069
2. State distress	-0.01* (-0.33)	-0.03* (-0.20)	0.05 (0.05)	-0.05* (-0.11)	0.04* (0.42)	0.10* (0.26)	0.02 (0.02)	-0.08* (-0.10)			0.48			
<i>Model 2: Sense of Control Model</i>														
1. Sense of control	0.00* (0.24)	0.01* (0.28)	-0.03 (-0.10)	-0.00 (-0.03)	-0.01* (-0.48)	-0.03* (-0.24)	-0.01 (-0.02)	0.04 [†] (0.13)			0.46		347.22* (106)	0.059
2. Expression	-0.01* (-0.27)	-0.03* (-0.38)	0.09* (0.14)	-0.02 (-0.07)	0.01* (0.19)	-0.02 (-0.09)	0.03 (0.04)	0.04 (0.08)	0.19 (0.10)		0.15	0.06* (0.58)		
3. State distress	-0.01* (-0.23)	-0.01 (-0.08)	0.01 (0.01)	-0.06* (-0.13)	0.02* (0.25)	0.06* (0.16)	0.02 (0.01)	-0.04 (-0.04)	-1.41* (-0.43)		0.58			
<i>Model 3: Social Support Model</i>														
1. Social support	0.01 (0.05)	0.02* (0.17)	-0.76* (-0.14)	-0.01 (-0.00)	-0.07* (-0.13)	0.01 (0.00)	-0.21 (-0.03)	3.16* (0.73)			0.54		479.15* (106)	0.073
2. Expression	-0.01* (-0.24)	-0.03* (-0.34)	0.07 (0.11)	-0.02 (-0.07)	0.01* (0.14)	-0.03 (-0.12)	0.03 (0.04)	0.08 (0.17)		-0.01 (-0.10)	0.15	0.05* (0.48)		
3. State distress	-0.01* (-0.31)	-0.02 (-0.15)	0.01 (0.01)	-0.05* (-0.12)	0.04* (0.38)	0.10* (0.26)	0.02 (0.01)	0.11 (0.13)		-0.06* (-0.33)	0.53			
<i>Model 3a: Social Support (Without Religious Support) Model</i>														
1. Social support	0.00 (0.03)	0.13* (0.31)	-0.54* (-0.16)	-0.09 (-0.06)	-0.05* (-0.19)	-0.13 (-0.11)	0.21 (0.06)	1.07* (0.40)			0.29		329.49* (89)	0.064
2. Expression	-0.01* (-0.25)	-0.03* (-0.42)	0.10* (0.16)	-0.02 (-0.06)	0.01* (0.18)	-0.02 (-0.10)	0.02 (0.03)	0.01 (0.02)		0.04* (0.19)	0.17	0.06* (0.59)		
3. State distress	-0.01* (-0.32)	-0.01* (-0.11)	-0.00 (-0.00)	-0.06* (-0.13)	0.03* (0.36)	0.08* (0.22)	0.05 (0.04)	0.03 (0.03)		-0.11* (-0.33)	0.55			

* $p < 0.05$ (two-tailed test); [†] $p < 0.05$ (one-tailed test).

Source: National Survey of Black Americans 1992.

TABLE 2
UNSTANDARDIZED AND STANDARDIZED (IN PARENTHESES) PARAMETER ESTIMATES OF THE STRUCTURAL MODEL
OF RELIGIOSITY, SENSE OF CONTROL, SOCIAL SUPPORT, AND SITUATIONAL DISTRESS ($N = 659$)

Endogenous Variables	Exogenous Variables								Endogenous Variables		Endogenous Residual Covariance	Model Fit		
	Age	Family Income	Married	Children	Life Problems	Poor Health	Female	Religiosity	Sense of Control	Social Support		R^2	$\chi^2 (df)$	RMSEA
<i>Model 1: Baseline Model</i>														
1. Expression	0.01* (0.38)	0.01* (0.05)	-0.02 (-0.02)	0.06* (0.16)	0.01* (0.19)	-0.06* (-0.20)	0.26* (0.28)	-0.04 (-0.05)			0.20	0.11* (0.65)	328.13* (83)	0.067
2. Situational distress	0.01* (0.19)	0.01 (0.08)	-0.04 (-0.04)	0.06* (0.09)	0.01* (0.49)	0.06* (0.14)	0.28* (0.23)	-0.18* (-0.20)			0.40			
<i>Model 2: Sense of Control Model</i>														
1. Sense of control	0.00 (0.14)	0.01* (0.23)	-0.03 (-0.10)	-0.01 (-0.06)	-0.01* (-0.44)	-0.02* (-0.22)	-0.02 (-0.05)	0.04* (0.15)			0.45		388.91* (124)	0.057
2. Expression	0.01* (0.38)	0.01 (0.06)	-0.03 (-0.03)	0.06* (0.16)	0.01 (0.17)	-0.06* (-0.19)	0.26* (0.28)	-0.03 (-0.04)	-0.19 (-0.07)		0.20	0.11* (0.72)		
3. Situational distress	0.01* (0.25)	0.03* (0.20)	-0.11 (-0.09)	0.03 (0.06)	0.03* (0.27)	0.02 (0.05)	0.25* (0.20)	-0.11† (-0.12)	-1.82* (-0.49)		0.54			
<i>Model 3: Social Support Model</i>														
1. Social support	-0.00 (-0.02)	0.08* (0.12)	-0.73* (-0.13)	-0.08 (-0.03)	-0.08* (-0.16)	0.02 (0.01)	-0.32 (-0.05)	3.18* (0.74)			0.54		518.94* (124)	0.070
2. Expression	0.01* (0.38)	0.00 (0.04)	-0.02 (-0.02)	0.06 (0.16)	0.02* (0.20)	-0.06* (-0.21)	0.26* (0.28)	-0.05 (-0.08)		0.00 (0.02)	0.20	0.11* (0.67)		
3. Situational distress	0.01* (0.18)	0.02 (0.10)	-0.08 (-0.07)	0.04 (0.08)	0.04* (0.45)	0.06* (0.14)	0.27* (0.22)	-0.03 (-0.04)		-0.05* (-0.24)	0.42			
<i>Model 3a: Social Support (Without Religious Support) Model</i>														
1. Social support	-0.02* (-0.13)	0.08* (0.19)	-0.51* (-0.15)	-0.18* (-0.12)	-0.07* (-0.24)	-0.11 (-0.09)	0.06 (0.02)	1.14* (0.42)			0.29		373.95* (107)	0.062
2. Expression	0.01* (0.39)	0.00 (0.01)	0.01 (0.01)	0.07* (0.18)	0.02* (0.23)	-0.06* (-0.18)	0.25* (0.27)	-0.08 (-0.12)		0.04 (0.17)	0.21	0.12* (0.74)		
3. Situational distress	0.01* (0.16)	0.02* (0.14)	-0.09 (-0.08)	0.03 (0.06)	0.04* (0.42)	0.05† (0.12)	0.29* (0.24)	-0.08 (-0.08)		-0.11* (-0.28)	0.45			

* $p < 0.05$ (two-tailed test); † $p < 0.05$ (one-tailed test).

Source: National Survey of Black Americans 1992.

To fill this gap in the literature, we conducted a test of Smith's (2003a) new theory by focusing on two explanatory variables from two of the theory's three dimensions of religious influence (see also Smith 2003b, 2003c for a partial illustration of the theory's utility). Although this study is a partial test of the theory in that it examined two of nine explanatory factors of religious effects—coping skills and social capital—these concepts are what mental health researchers tend to identify as the most relevant to explain the social patterns of distress regarding a person's religiosity: sense of control and social support.

Our study provides strong empirical evidence that religious effects on distress are at least partly explained by sense of control and social support as hypothesized: that is, religious African Americans tend to be less distressed because they have more sense of control and social support than their nonreligious or less religious counterparts. This pattern, observed at the significance level of 0.05 for a two-tailed test with minor exceptions, remains consistent across two measures of distress, which further strengthens our conclusion in support of what Smith conceptualizes as an indirect *religious* effect. In addition, while not our original focus, sense of control and social support were found to explain the social patterns of distress involving a person's socioeconomic status and children (Mirowsky and Ross 1989). Specifically, as expected, family income has negative effects on distress (see Table 1), whereas having children is positively related to distress (see Table 2). Their effects, however, become nonsignificant once sense of control or social support is controlled for, which indicates that people of low socioeconomic status and caregivers of children are likely to be distressed because they tend to lack sense of control and social support.

The overall findings are consistent with our hypotheses, but are inconsistent with Ellison et al.'s (2001) report that the variables representing social and psychological resources (including measures of social support and sense of control) failed to explain religious effects on psychological distress and well-being. Although Ellison et al. did not find evidence that is consistent with Smith's (2003a) proposition that a person's coping skills and social capital mediate the salutary effect of religion, their findings do not necessarily contradict Smith's theory, in that Ellison et al. still found direct effects of religious involvement on mental health rather than the indirect effects documented in the present study.

The difference in findings between Ellison et al.'s and our study could be attributed to three methodological factors. First, it might be due to their use of OLS regression, which did not allow them to control for measurement errors in estimating relationships among latent constructs including religiosity and distress. Second, while both studies analyzed cross-sectional survey data collected from a probability sample of adults, their data come from a regional sample (i.e., a three-county Detroit metro area), whereas the present study uses data from a national sample. Finally, findings from Ellison et al. are based on an ethnically diverse sample, in which African Americans were oversampled. We analyzed data from African Americans only. This difference might indicate that the mediating processes are more applicable to African Americans because they are more likely to experience salutary effects of religious involvement, like enhanced sense of control and social support, than other ethnic groups, including whites (Ellison 1993; Mattis and Jagers 2001; Neighbors et al. 1983), although this remains speculative until future research directly addresses the issue.

Another inconsistency concerns the present finding that religious people have a higher sense of control, which seems to run counter to previous research suggesting that religion may decrease sense of control because it is likely to increase fatalism and cognitive inflexibility (Ellis 1962; Mirowsky and Ross 1986, 1989). For example, religion may lead people to substitute active, instrumental coping with passive, escapist coping by simply praying but not addressing problems directly. In addition, according to Mirowsky and Ross (1989:170), religion may reduce sense of control by decreasing cognitive flexibility or a "capacity for open-ended, open-minded problem solving." Specifically, they conceptualize inflexibility as a consequence of authoritarianism, whose characteristics are closely related to religion: "the belief that there is one and only one legitimate

perspective; . . . the belief that mankind's unrestrained nature is evil; and the belief that familiar social institutions, traditions, and roles are facts of nature, results of cosmic laws, or manifestations of divine will" (Mirowsky and Ross 1989:155). These are especially characteristic of monotheistic religions such as Christianity, which is the predominant religion among African Americans. Thus, to the extent that these characteristics of authoritarianism are consistent with any given religion, we should expect religiosity to increase cognitive inflexibility, thereby decreasing sense of control.

Although we could not directly measure cognitive inflexibility, our finding that religiosity has positive effects on sense of control implies that religion is unlikely to increase cognitive inflexibility. In fact, recent studies on the effects of religion on criminal justice attitudes and parenting yield findings consistent with this inference. For example, Applegate et al. (2000) found that religious fundamentalists (i.e., those who interpret the Bible literally, believe in the punitiveness of God, and consider religion as important in guiding their daily lives) showed compassionate as well as punitive correctional attitudes due to their religious belief in forgiveness as well as just punishment, indicating open mindedness toward correctional options. This contrasts with previous studies that tend to portray fundamentalist Christians as rigid and inflexible in their attitudes toward criminal sanctions (Grasmick and McGill 1994; Grasmick et al. 1992). Similarly, Wilcox (1998) reported that conservative Protestant parents are more likely than other parents to be authoritative, applying a warm but firm approach to parenting, which is not synonymous with being authoritarian or closed minded (see also Pearce and Axinn 1998).

In addition, our findings are consistent with previous studies reporting that religion is likely to enhance a sense of control by encouraging people to interpret various stressors "as the will of God, and/or as opportunities for personal development or spiritual growth" based on "a fundamental belief in a 'just world,' in which good people enjoy good fortune and bad people get what they deserve" in the end (Ellison 1993:1031). Researchers also found that the empowering nature of religious coping (e.g., "nothing is impossible with God") enables people to apply an active, instrumental approach to problem solving, while some people turn to religion as a crutch, using it as passive coping and showing low levels of sense of control (Ellison 1993).

Although the overall findings support our hypotheses, we need to acknowledge several limitations of our study. First, this study is based on cross-sectional data, which is limited in testing causal hypotheses. Our hypotheses should be tested using prospective, longitudinal data with a relatively short lag between waves. Such data will also help examine reciprocal causal relationships between religiosity and distress, for example, whether distress decreases or increases religious involvement and commitment as well as how religiosity affects distress.

Second, while we analyzed nationally representative data, the generalizability of this study is confined to African-American adults, so this study should be replicated for other ethnic or racial groups (e.g., Asian or Hispanic as well as white Americans). In addition, our findings should be interpreted with caution given that our sample, studied in 1992, is about one-third of the original sample for the 1979–1980 survey due to panel mortality over time. Given our data constraints, we cannot directly examine the degree of bias in estimating hypothesized relationships, which might have been caused by the sample attrition. According to Jackson et al. (1996), however, our sample tends to represent a somewhat advantaged group of African Americans in terms of physical and mental health as well as socioeconomic status relative to the original respondents. It is possible, therefore, that our analyses have conservatively estimated relationships. On the other hand, this potential underestimation might have been partly cancelled out because those survivors over the period of 12–13 years were found to be doing worse at the last rather than the first wave in terms of physical and mental health and, to a lesser degree, support network involvement (Jackson and Neighbors 1996; Taylor, Chatters, and Jackson 1997). At any rate, these changes in sample characteristics should be kept in mind when interpreting the present findings.

Third, given that our study is confined to individual-level causation, future research needs to incorporate aggregate-level data into multilevel analysis of relationships between religiosity and distress in a community context. For example, consistent with the social disorganization perspective, community-level strain (e.g., structural disadvantages like community-level poverty)

can be hypothesized to affect individual-level distress (Agnew 1999). Similarly, based on the moral community thesis (Stark 1996), it can also be hypothesized that the negative effects of individual religiosity on psychological distress are stronger in communities in which a relatively high proportion of residents are religious.

In conclusion, the current study contributes to the current literatures on the relationship between religiosity and mental health and psychological well-being by testing a sociological theory of religious effects. Specifically, the present findings help us understand why religious people are less distressed than nonreligious or less religious people. Methodologically, our application of structural equation modeling to estimate theoretical relationships between latent variables of religiosity and distress is another key contribution to the religious literatures that tend to lack studies based on a latent-variable modeling approach. Finally, the present study indicates that Smith's theory has taken an important step in identifying key explanatory mechanisms of religious effects on positive and healthy outcomes.

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NOTES

1. Taylor, Chatters, and Jackson (1997:299–300) report: “Of the remaining original NSBA sample, approximately 7% were thought to be deceased; another 34% either had no telephone, their whereabouts were unknown to relatives, or both; while only 2% refused involvement at the initial tracking stage.”
2. Following the convention of structural equation modeling, we used ovals for latent variables (including error terms) and rectangles for manifest variables. Although Figure 1 shows a situational distress model that includes sense of control as an intervening variable between religiosity and distress, in our analysis the model is estimated again by replacing sense of control with social support to test our mediating hypothesis separately for the two intervening variables. The same analysis is repeated for the state distress model as explained in the next section.
3. In our description of measurement, the names of variables are all italicized, and each variable's descriptive statistics (mean and standard deviation) are reported in Appendix A.
4. We dropped one item asking about feeling “able to relax” because it failed to load highly on either the depression or anxiety factor.
5. We also included region of residence (0 = nonsouth; 1 = south) in our preliminary analyses because African Americans living in the south, who tend to be more religious than those in the nonsouth, were disproportionately more selected into the NSBA sample (Jackson 1991; Jackson and Neighbors 1996; Sherkat and Ellison 1999). However, we dropped the variable because in general it was not significantly related to other variables.
6. To assess goodness of fit, we used Steiger's Root Mean Square Error of Approximation (RMSEA, Browne and Cudeck 1992), Bentler-Bonett's Normed Fit Index (NFI, Bentler and Bonett 1980), and the chi-square divided by its degrees of freedom (fit ratio). Incremental indexes such as NFI (whose acceptable minimum value is 0.9) are often unstable (Sugawara and MacCallum 1993), and there is no consensus on a “good” fit ratio, although values exceeding 5 are questionable (Bollen 1989). Thus, we focus on the RMSEA, while reporting the chi-square and its degrees of freedom. An RMSEA smaller than 0.05 indicates a close fit; an RMSEA between 0.05 and 0.08 shows a reasonable fit (Browne and Cudeck 1992).
7. Given Mirowsky and Ross's (1989) finding a curvilinear relationship between religiosity and distress, we regressed each distress indicator on a composite measure of religiosity (i.e., combining the three religiosity indicators) and its quadratic term after centering using mean, that is, $(\text{religiosity} - [-0.13])^2$. We found a significant inverted U-shaped relationship only for the depression indicator: $\text{Depression} = 0.01 - 0.01 * \text{Religiosity} - 0.00 * (\text{Religiosity} + 0.13)^2$ ($* p < 0.05$, two-tailed test). However, this curvilinearity of religious effects on depression was fully explained by sense of control and social support, consistent with our finding.
8. Although Mirowsky (1995) found a pattern of declining sense of control across age groups with the lowest levels in the oldest, we did not find significant effects of the quadratic term of age: $\text{Sense of Control} = -0.85 * \text{Age} - 0.00 * (\text{Age} - 52.86)^2$ ($* p < 0.05$, two-tailed test).
9. The effects of gender (being female) on the expression factor are found to be positive in the situational distress model, though not significant in the state distress model: that is, women are more expressive of their feelings than men, as a previous study found (Mirowsky and Ross 1995). Thus, a failure to control for emotional expressiveness would have introduced bias into our model estimation, which is based on a full information maximum likelihood approach.

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APPENDIX A
ITEMS USED FOR ANALYSIS

CONSTRUCT/Indicator	Description of Item (Means and SD)	Factor Loading	α
STATE DISTRESS	“During the past month, how much of the time _____” (1 = none; 2 = some of the time; 3 = most of the time; 4 = all of the time)		
Depression	(1) have you been in low or very low spirits? (2) have you been moody or brooded about things? (3) have you felt downhearted and blue? (4) did you feel depressed during the past month? (Mean = 0.00; SD = 0.83)	0.76 0.68 0.82 0.81	0.85

(Continues)

APPENDIX A
(Continued)

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
Anxiety	(1) did you feel you were under strain, stress, or pressure?	0.63	0.82
	(2) have you felt tense or high strung?	0.64	
	(3) have you been bothered by nervousness or your nerves?	0.65	
	(4) have you felt restless and upset?	0.74	
	(5) have you been anxious or worried? (Mean = 0.00; <i>SD</i> = 0.79)	0.80	
SITUATIONAL DISTRESS	<p>“Problems often come up in life. Sometimes they are personal problems. Since the last time we talked with you . . . , was there a time when you felt: you were about at the point of a nervous breakdown; so nervous you couldn’t do much of anything; [or] down and depressed, so low that you felt like you just couldn’t get going? . . . did you have a serious personal problem you could not handle by yourself? . . . did you have what you thought was a serious personal problem that you tried to handle by yourself? . . . During that time, how often _____”</p> <p>(1 = never; 2 = hardly ever; 3 = not too often; 4 = fairly often; 5 = very often)</p>		
Self-directed emotional distress	(1) did you feel lonely?	0.70	0.82
	(2) did you feel that you just couldn’t get going?	0.77	
	(3) were you depressed?	0.82	
	(4) were you jumpy or jittery?	0.64	
	(5) did you cry easily or have crying spells? (Mean = 3.23; <i>SD</i> = 1.00)	0.56	
Other-directed emotional distress	(1) did you lose your temper?	0.49	0.70
	(2) did you get angrier than you were willing to admit?	0.89	
	(3) did you boil inside, but did not show it? (Mean = 3.09; <i>SD</i> = 1.03)	0.65	
Physiological distress	(1) did you feel like not eating or have a poor appetite?	0.64	0.71
	(2) did you have restless sleep or trouble getting to sleep?	0.74	
	(3) did you actually feel physically sick? (Mean = 3.14; <i>SD</i> = 1.10)	0.64	
LIFE SATISFACTION	<p>“In general, how satisfied are you with your life as a whole these days? Would you say that you are very satisfied (= 4), somewhat satisfied (= 3), somewhat dissatisfied (= 2), or very dissatisfied (= 1)?”</p> <p>(Mean = 3.21; <i>SD</i> = 0.76)</p>		

(Continues)

APPENDIX A
(Continued)

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
GENERAL HAPPINESS	<p>“Now I would like to ask you a few questions about how you are feeling these days. Taking all things together, how would you say things are these days—would you say you are very happy (= 3), pretty happy (= 2), or not too happy (= 1) these days?”</p> <p>(Mean = 2.07; <i>SD</i> = 0.65)</p>		
SENSE OF CONTROL	<p>“Please tell me whether you agree or disagree with [the statement that _____].”</p> <p>(1 = disagree; 2 = agree)</p>		
Your own fault	<p>“Some people just do not use the breaks that come their way; if they do not do well, it is their own fault.”</p> <p>(Mean = 1.57; <i>SD</i> = 0.50)</p>	0.35	0.38
Life plans	<p>“When you make plans ahead, do you usually get to carry out things the way you expected, or do things usually come up to make you change your plans?”</p> <p>(0 = have to change plans; 1 = carry out way expected)</p> <p>(Mean = 0.61; <i>SD</i> = 0.49)</p>	0.38	
Life prospect	<p>“Have you usually felt pretty sure your life would work out the way you want it to, or have there been times when you have not been sure about it?”</p> <p>(0 = haven’t been sure; 1 = pretty sure)</p> <p>(Mean = 0.30; <i>SD</i> = 0.46)</p>	0.51	
SOCIAL SUPPORT			
Religious support	<p>“How often do you see, write, or talk on the telephone with members of your church (or place of worship)?</p> <p>(1 = a few times a year; 2 = at least once a month; 3 = a few times a month; 4 = at least once a week; 5 = nearly every day)</p> <p>“How many people in your church (or place of worship) would help you out if you needed help?”</p> <p>(the actual number of people; 0, 1, . . . , 7, and 8 or more)</p> <p>“[When people in your church (or place of worship) help you out,] [h]ow much help are they/would they be do you?”</p> <p>(1 = only a little help; 2 = some help; 3 = a lot of help)</p>	0.44 0.52 0.57	0.70

(Continues)

APPENDIX A
(Continued)

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
	“Would you say people in your church (or place of worship) are very close (= 4) in their feelings toward each other, fairly close (= 3), not too close (= 2), or not close at all (= 1)?”	0.62	
	“How satisfied are you with the quality of the relationship you have with the people in your church (or place of worship)? (1 = very dissatisfied; 2 = somewhat dissatisfied; 3 = somewhat satisfied; 4 = very satisfied) (Mean = -0.00; <i>SD</i> = 3.33)	0.70	
Family support	“How often do you see, write, or talk on the telephone with family or relatives who do not live with you? (1 = never; 2 = hardly ever; 3 = a few times a year; 4 = at least once a month; 5 = a few times a month; 6 = at least once a week; 7 = nearly every day)	0.29	0.66
	“How many people in your family would help you out if you needed help?” (1 = none; 2 = one to two; 3 = three to five; 4 = five to seven; 5 = eight or more)	0.43	
	“[When people in your family help you out,] [h]ow much help are they/would they be to you?” (1 = only a little help; 2 = some help; 3 = a lot of help)	0.45	
	“Would you say your family members are very close (= 4) in their feelings toward each other, fairly close (= 3), not too close (= 2), or not close at all (=1)?”	0.80	
	“How satisfied are you with the quality of the relationship you have with the people in your family?” (1 = very dissatisfied; 2 = somewhat dissatisfied; 3 = somewhat satisfied; 4 = very satisfied) (Mean = -0.00; <i>SD</i> = 3.26)	0.68	
Friend support	“How often do you see, write, or talk on the telephone with your friends?” (1 = never; 2 = hardly ever; 3 = a few times a year; 4 = at least once a month; 5 = a few times a month; 6 = at least once a week; 7 = nearly every day)	0.43	0.70
	“How many people in your friends would help you out if you needed help?” (the actual number of people; 0, 1, . . . , 7, and 8 or more)	0.45	

(Continues)

APPENDIX A
(Continued)

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
	<p>“[When people in your family help you out,] [h]ow much help are they/would they be to you?”</p> <p>(1 = only a little help; 2 = some help; 3 = a lot of help)</p>	0.63	
	<p>“Would you say your friends are very close (= 4) in their feelings toward each other, fairly close (= 3), not too close (= 2), or not close at all (= 1)?”</p>	0.62	
	<p>“How satisfied are you with the quality of the relationship you have with your friends?”</p> <p>(1 = very dissatisfied; 2 = somewhat dissatisfied; 3 = somewhat satisfied; 4 = very satisfied)</p> <p>(Mean = -0.00; <i>SD</i> = 3.30)</p>	0.68	
RELIGIOSITY			
Organizational religiosity	<p>“How often do you usually attend religious services?”</p> <p>(0 = never; 1 = less than once a year; 2 = a few times a year; 3 = a few times a month; 4 = at least once a week; 5 = nearly everyday)</p>	n.a.	0.68
	<p>“Besides regular service, how often do you take part in other activities at your place of worship?”</p> <p>(1 = never; 2 = a few times a year; 3 = a few times a month; 4 = at least once a year; 5 = nearly everyday)</p> <p>(Mean = -0.13; <i>SD</i> = 0.90)</p>	n.a.	
Nonorganizational religiosity	<p>“How often do you _____?”</p> <p>(1 = never; 2 = a few times a year; 3 = a few times a month; 4 = at least once a week; 5 = nearly everyday)</p>		
	(1) read religious books or other religious materials	0.72	0.71
	(2) watch or listen to religious programs on TV or radio	0.62	
	(3) pray	0.59	
	(4) ask someone to pray for you	0.56	
	(Mean = -0.00; <i>SD</i> = 0.73)		
Subjective religiosity	<p>“How religious would you say you are?”</p> <p>(1 = not religious at all; 2 = not too religious; 3 = fairly religious; 4 = very religious)</p>	n.a.	0.54
	<p>“Would you say your religion provides some guidance (= 1) in your day-to-day living, quite a bit of guidance (= 2), or a great deal of guidance (= 3) in day-to-day living?”</p> <p>(Mean = -0.00; <i>SD</i> = 0.86)</p>	n.a.	

(Continues)

APPENDIX A
(Continued)

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
LIFE PROBLEMS	<p>“Over the past month or so, have _____? How much did that upset you?”</p> <p>(0 = no problem reported; 1 = not upset at all; 2 = upset only a little; 3 = upset a lot; 4 = upset a great deal)</p> <p>(1) you had money problems (2) you had job problems (3) you had family or marriage problems (4) you had problems with people outside your family (5) you had problems with your children (6) you or your family been the victim of a crime (7) you had problems with the police (8) you had problems with your love life (9) you or your family been treated badly because of your race</p> <p>(Mean = 5.33; <i>SD</i> = 5.72)</p>		
POOR HEALTH			
Health problems	<p>“Please tell me whether a doctor has told you since the last time we talked with you . . . that you have _____. How much does this keep you from working or carrying out your daily tasks?”</p> <p>(0 = no health problem reported; 1 = not at all; 2 = a little; 3 = a great deal)</p> <p>(1) arthritis or rheumatism (2) ulcers (3) cancers (4) hypertension or “high blood pressure” (5) diabetes or “sugar” (6) a liver problem (7) a kidney problem (8) a stroke (9) a blood circulation problem or “hardening of the arteries” (10) sickle cell anemia (11) heart trouble or heart attack</p> <p>(Mean = 1.89; <i>SD</i> = 2.95)</p>		
Dissatisfaction with health	<p>“In general, how satisfied are you with your health?”</p> <p>(1 = very satisfied; 2 = somewhat satisfied; 3 = somewhat dissatisfied; 4 = very dissatisfied)</p> <p>(Mean = 1.82; <i>SD</i> = 0.80)</p>		
Self-rated health	<p>“How would you rate your health at the present time?”</p> <p>(1 = excellent; 2 = very good; 3 = good; 4 = fair; 5 = poor)</p> <p>(Mean = 2.59; <i>SD</i> = 1.09)</p>		

(Continues)

**APPENDIX A
(Continued)**

CONSTRUCT/Indicator	Description of Item (Means and <i>SD</i>)	Factor Loading	α
GENDER	Respondent's sex (0 = male; 1 = female) (Mean = 0.68; <i>SD</i> = 0.47)		
AGE	Respondent's age at the time of interview (actual age) (Mean = 52.86; <i>SD</i> = 14.70)		
FAMILY INCOME	Family's total income from all sources in 1991 (in thousand dollars) (Mean = 30.31; <i>SD</i> = 26.16)		
MARITAL STATUS	"Are you currently married, separated, divorced, widowed, or have you never been married?" (1 = married; 0 = separated, divorced, widowed, or never married) (Mean = 0.49; <i>SD</i> = 0.50)		
CHILDREN	Number of children living in the same household (0 = none; 1 = one; 2 = two; 3 = three; 4 = four; 5 = five; 6 = six) (Mean = 0.79; <i>SD</i> = 1.14)		

**APPENDIX B
UNSTANDARDIZED AND STANDARDIZED (IN PARENTHESES) PARAMETER
ESTIMATES OF THE MEASUREMENT MODELS OF STATE
AND SITUATIONAL DISTRESS (*N* = 659)**

Indicators	Theoretical Constructs						R^2
	Poor Health	Religiosity	Social Support	Sense of Control	Expression	State Distress	
<i>Model of State Distress^b</i>							
Health problems	1.00 ^a (0.48)						0.23
Dissatisfaction with health	0.42* (0.74)						0.54
Self-rated health	0.63* (0.82)						0.68
Organizational religiosity		1.00 ^a (0.73)					0.53
Nonorganizational religiosity		0.89* (0.80)					0.64
Subjective religiosity		0.84* (0.64)					0.41

(Continues)

**APPENDIX B
(Continued)**

Indicators	Theoretical Constructs						R ²	
	Poor Health	Religiosity	Social Support	Sense of Control	Expression	State Distress		Situational Distress
Religious support			1.00 ^a (0.84)					0.70
Family support			0.46* (0.40)					0.16
Friend support			0.60* (0.51)					0.26
Your own fault				1.00 ^a (0.33)				0.11
Life plans				1.13* (0.38)				0.14
Life prospect				1.50* (0.52)				0.27
Life satisfaction					1.00 ^a (0.40)	-1.00 ^a (-0.68)		0.38
General happiness					1.00 ^a (0.49)	-1.00 ^a (-0.84)		0.58
Depression					1.00 ^a (0.37)	1.00 ^a (0.63)		0.74
Anxiety					1.00 ^a (0.38)	1.00 ^a (0.64)		0.77
<i>Model of Situational Distress^{b,c}</i>								
Life satisfaction					1.00 ^a (0.56)		-1.00 ^a (-0.73)	0.38
General happiness					1.00 ^a (0.68)		-1.00 ^a (-0.89)	0.56
Other-directed emotions					1.00 ^a (0.36)		1.00 ^a (0.47)	0.55
Self-directed emotions					1.00 ^a (0.42)		1.00 ^a (0.54)	0.72
Physiological distress					1.00 ^a		1.00 ^a	0.63

^aRefers to fixed coefficient.

^bShows results from estimating the social support model (i.e., Model 3 in Tables 1 and 2) except the parameter estimates of “Your own fault,” “Life plans,” and “Life prospect” indicators, which come from the estimated model of sense of control (i.e., Model 2 in Table 1).

^cShows only the cross-cutting factor model because the other part of estimated measurement model remains the same as the model of state distress.

* $p < 0.05$ (one-tailed test).

Source: National Survey of Black Americans 1992.