Church-Based Social Support and Religious Coping

NEAL KRAUSE
CHRISTOPHER G. ELLISON
BENJAMIN A. SHAW
JOHN P. MARCUM
JASON D. BOARDMAN

The purpose of this study is twofold: to explore the nature of church-based social support, and to see whether support received in religious settings is related to the use of religious coping methods. The data come from a nationwide survey of members of the Presbyterian Church USA. Three dimensions of religious support are examined in detail: emotional support from church members, spiritual support from church members, and emotional support from the pastor. These dimensions of support are used to evaluate an issue that has been largely overlooked in the literature—the relationship between religious support and religious coping. The findings reveal that people are especially inclined to use positive religious coping responses when they receive spiritual support from church members. Even though emotional support from the pastor also increases the use of religious coping methods, the relationship is not as strong. Finally, emotional support from church members has no effect.

INTRODUCTION

Church-based social relationships have been an important focus in the sociological study of religion since the founding of the discipline (Durkheim 1915; Weber 1922). The emphasis on social ties in religious settings is perhaps best captured in the classic work of Simmel (1905), who argued that, “The faith which has come to be regarded as the essential, the substance, of religion, is first a relation between individuals” (p. 366). Since that time, sociologists of religion have used church-based social ties to explain a wide range of outcomes, including the recruitment of new members into religious communities (Olson 1989; Stark and Bainbridge 1980), the stability of religious affiliations (Sherkat and Wilson 1995), the transmission of religious identity (Olson 1993), and genesis of religious commitment (Cornwall 1987).

More recently, growing interest in the relationship between religion and health has created exciting new opportunities to study social relationships in the church. In particular, a number of studies suggest that people who are more religious tend to enjoy better health than individuals who are less involved in religion (Levin 1994). As Ellison and Levin (1998) point out, the health-related impact of religion may be explained, in part, by social relationships that flourish in church settings. Moreover, these investigators argue that the influence of social ties in the church may be especially pronounced because people who are more involved in their faith tend to receive more support, and evaluate this assistance more favorably, than individuals who are less religious (Ellison and George 1994).

Neal Krause is a Professor in the Department of Health Behavior and Health Education, School of Public Health, University of Michigan, 1420 Washington Heights, Ann Arbor, MI 48109-2029. Email: nkrause@umich.edu
Christopher G. Ellison is a Professor of Sociology at the University of Texas at Austin, Austin, TX 78712-1088. Email: cellison@mail.la.utexas.edu
Benjamin A. Shaw is a doctoral student in the Department of Health Behavior and Health Education, School of Public Health, University of Michigan, 1420 Washington Heights, Ann Arbor, MI 48109-2029. Email: bashaw@umich.edu
John P. Marcum is the Administrator of the Presbyterian Panel Survey in the Research Services Office of the Presbyterian Church (USA), 100 Witherspoon St., Louisville, KY 40202-1396. Email: MarcumJ@ctr.pcusa.org
Jason D. Boardman is a doctoral student in the Department of Sociology at the University of Texas at Austin, Austin, TX 78712-1088. Email: jasonb@mail.la.utexas.edu

Despite both early and contemporary interest in church-based support, we know surprising little about this complex conceptual domain. More specifically, church members may help each other in a number of different ways, but there have been few efforts to systematically delineate the precise nature of these supportive behaviors. The work of Taylor and Chatters (1986) provides one notable exception. Their research indicates that assistance from church members complements support provided by family members. The companionship and prayer support provided by coreligionists (i.e., rank-and-file church members) is especially important in this respect. Even so, the work of Taylor and Chatters (1986) focused exclusively on older African-Americans. As a result, it is difficult to generalize their findings to other populations.

The purpose of this study is to probe more deeply into the nature of church-based social support. We do this in two ways. First, we systematically examine the relationships among three types or dimensions of religious support: emotional support from church members, spiritual support from church members, and emotional support from the pastor. Second, we embed these social support measures in a conceptual model that aims to explore an issue that has been largely overlooked in the literature—the relationship between religious support and religious coping. Research on the association between religious support and religious coping is important for the following reason. One of the primary functions of religion is to help people deal with adversity (Pargament 1997). Since stressful experiences have been shown to increase the risk of developing physical and mental health problems (Krause 1999), the study of religious coping should tell us a good deal about the relationship between religion and health. Yet, we know relatively little about the factors that influence the adoption of religious coping responses. A major premise in this study is that religious coping is a social phenomenon that has its roots in the strong social ties that thrive in religious settings.

**Religious Support and Religious Coping**

**Conceptualizing and Measuring Religious Support**

Research on social support in secular settings provides a good way to begin thinking about the content and nature of social support in the church. This secular research indicates that a number of different dimensions are subsumed under the broad rubric of social support, including social contact, received support (e.g., emotional, tangible, and informational assistance), support provided to others, satisfaction with support, negative interaction, and anticipated support (i.e., assistance that a person believes will be available in the future if the need arises) (Krause 2001). Although it is important to develop religious counterparts of each secular support dimension, the sheer number of dimensions that must be taken into account makes it difficult to accomplish this task in a single study. A more reasonable strategy is to approach the study of religious support in an incremental fashion. Here, the goal is to begin with a few key dimensions of religious support, carefully devise sound measures of them, and learn more about how they affect important outcomes, like religious coping. Following this, the scope of inquiry can be expanded by gradually bringing additional dimensions of religious support into play. Consistent with this strategy, this study will focus on three pivotal measures of religious support: emotional support from church members, spiritual support from church members, and emotional support from the clergy.

People in religious settings clearly help each other in ways that are largely secular in nature. For example, there is some evidence that coreligionists often exchange emotional and tangible support (Krause, Ellison, and Wulff 1998; Taylor and Chatters 1988). But it is also true that fellow parishioners help each other in ways that are uniquely religious, such as providing spiritual support (i.e., mutual encouragement to adopt and practice various tenets of religion). As a result, it is important to take both the secular and sacred aspects of religious support into account. Consistent with this view, the first set of social support indicators is potentially more secular in nature, and assesses emotional support provided by church members. As noted earlier, the secular
literature on social support suggests that people can receive emotional, tangible, and informational assistance from others. Even so, we focus solely on emotional support because extensive research in secular settings indicates that the different types of received support correlate highly, and that emotional support may be the most critical type for promoting health and well-being (Kahn 1994). The measure of emotional support from coreligionists is juxtaposed with a set of items designed to assess support that is unique to religious people. More specifically, this dimension, which we call spiritual support, assesses whether fellow parishioners help people maintain and deepen their faith, as well as apply their religious beliefs in daily life.

Research on social support in secular settings also reveals that it may be important to take the source of support into account (Krause and Jay 1991). This means that the propensity to seek help, as well as the effectiveness of assistance that has been provided, may vary depending on whether the support provider is a child, spouse, friend, or other relative. This issue seems to be particularly relevant for the study of social support in religious settings because the pastor may be an especially important help provider. Evidence of this may be found in the frequently cited work of Veroff, Kulka, and Douvan (1981). Their findings reveal that when personal problems arise, people are more likely to seek assistance from a member of the clergy than from a mental health professional (see also Chalfant, Heller, Roberts, Briones, Aguirre-Hochbaum, and Farr 1990; Neighbors, Musick, and Williams 1998).

A pastor obviously provides support to church members in a number of different ways. But if the goal is to evaluate whether the source of support matters, then the best approach involves holding the type of support constant and varying only the source. Cast within the context of the present study, this means we would want to contrast emotional support from church members with emotional support provided by the clergy.

Having identified three key dimensions of religious support, the next task is to examine the relationships among them. This is important for two reasons. First, as noted earlier, the source of support figures prominently in our specification. Examining the correlation between emotional support from members and emotional support from the pastor can tell us whether one source is used as a substitute for the other, or whether emotional support from church members complements emotional support provided by the clergy. This is noteworthy because the relationship between these different sources of support begins to tell us something about the wider social climate in the church. In particular, a high correlation between emotional support from church members, spiritual support from church members, and emotional support from the pastor would point to a higher degree of social cohesion in the church, than if these measures were not strongly related. Second, if the different dimensions of support are highly correlated, then we would have some evidence that they spring from, or are driven by, a common process. To see why this issue is important, it is helpful to return to the work of Simmel (1905).

When Simmel (1905) wrote his treatise on religion, he did not focus on specific facets of church-based support, such as emotional support from fellow parishioners. Instead, he was interested in a broader and more abstract process that shapes relationships among religious people regardless of the specific form these social ties may take. In particular, Simmel (1905) focused on the role that faith plays in the maintenance of interpersonal relationships. However, he was not speaking of religious faith directly; instead, he was concerned with the faith that people have in each other. To understand what he meant, and to see how his notion of social faith is related to religion, it is necessary to briefly examine his ideas on the basic nature of social ties. Simply put, Simmel (1905) maintained that because people never know each other conclusively, all social relationships are based on faith. Here, “faith” refers to trust or belief in the goodwill and intentions of others. However, sounding much like Durkheim (1915), he went on to point out that this faith among people comes to full bloom in religious settings, where the relationships among people “offer such deep analogies to the individual’s relations to his God that they would seem almost nothing more than their condensation and transformation” (Simmel 1905:371). Viewed more broadly, Simmel (1905) proposed that religious manifestations of faith that people have in
each other drive social encounters in the church regardless of the specific form or content this interaction may take (e.g., whether emotional or spiritual support is exchanged).

If it is true that a more general process generates specific types or dimensions of social support, then we must endeavor to evaluate it empirically. One way to do this is to estimate a second-order factor model (Alwin 1988). Figure 1 contains a second-order factor model that is based on the religious support measures discussed above. This model specifies that the three specific dimensions of church-based support (emotional support from fellow parishioners, spiritual support from church members, and emotional support from the pastor) are determined by a more abstract and overarching construct we call social support in religious settings (depicted in Figure 1 as $\xi_1$). Although this specification does not evaluate Simmel’s (1905) notion of faith directly, it nevertheless takes a necessary first step by seeing whether the three first-order factors are intercorrelated (as evidenced by the factor loadings of the three dimensions on the second-order religious support construct). Evaluating these interrelationships can help us determine whether the three dimensions of religious support arise from an unmeasured higher-order process, or whether they are determined in relatively unique ways.

**Church-Based Support and Religious Coping**

Consistent with the rationale provided earlier, the model depicted in Figure 2 was developed to see whether the three dimensions of social support in religious settings can help us better understand why church members decide to adopt religious coping responses. We are not the first to examine the interface between social support and religious coping. Two studies figure prominently in this area. The first was conducted by Koenig and his colleagues (Koenig et al. 1992). These investigators found that older men with more social support are more likely to use religious coping responses than elderly men who received less assistance from others (Koenig et al. 1992). However, the measures used in this study assess support provided by social networks taken as a whole. Since social networks may contain people who are religious as well as those
who are not, it is difficult to tell precisely why global measures of support may be related to the greater use of religious coping methods.

The second study to examine the relationship between religious support and religious coping methods was conducted by Wuthnow (1994). He reports that close social ties that arise in small formal church groups (e.g., prayer and Bible-study groups) encourage individuals to turn to religion when personal crises arise. However, Wuthnow’s (1994) study was restricted to social relationships within formal church groups (i.e., prayer and Bible-study groups). This overlooks the possibility that church members may encourage the use of religious coping methods during informal one-on-one interaction as well.

We aim to build on the work of Koenig et al. (1992) and Wuthnow (1994) by assessing whether three measures of support provided explicitly in religious settings are associated with the use of religious coping methods. Moreover, as discussed below, the measures of religious support we use are not restricted to a specific formal setting in the church (e.g., prayer groups or Bible-study groups). Instead, these indicators throw a broader net by assessing support obtained in church, regardless of the particular context in which it was provided.

Although great strides have been made in the evaluation of religious coping responses (Pargament, Koenig, and Perez 2000), the wide majority of studies on religious coping have been conducted by psychologists, who tend to view coping responses largely in terms of internal cognitions and individual behaviors. Although some investigators have included measures of religious support in their coping scales, little effort has been made to see if assistance from coreligionists shapes the selection and execution of individual cognitive and behavioral coping methods (Pargament, Olsen, Reilly, Falgout, Ensing, and Van Haitsma 1992). This is unfortunate, because research on secular coping strategies suggests that significant others may play a critical role in this respect.
The relationship between secular support and secular coping methods is clearly delineated in the insightful work of Caplan (1981). He argues that when people are faced with stressful events, they often turn to significant others for assistance. Social network members typically respond by helping the stressed individual define the problem situation and develop a plan of action. In addition, Caplan (1981) maintains that support providers often assist in implementing the plan, and provide feedback and guidance as the plan is being executed. Cast within the jargon of the coping literature, Caplan (1981) is essentially arguing that significant others help shape primary stress appraisals (i.e., they help define the problem situation) and nurture the adaptation and execution of appropriate coping responses (i.e., plans of action).

Given the general proclivity of supportive others to encourage and assist in the adaptation of coping responses, it would be helpful to know if (and how) this takes place in the church. The three dimensions of religious support in our study make it possible to evaluate two broad possibilities. The first is based on the rationale behind the second-order factor model. If the various dimensions of religious support affect coping, and the dimensions of support are generated by a common higher-order process, then all three types of support may exert the same effect on religious coping methods. In contrast, the second perspective specifies that some dimensions of support play a larger role in shaping religious coping responses than others. If this second view is correct, it is important to reflect on how these differences may be manifested. Once again, there are two possible scenarios. The first is tied more closely with the formal role and function of the church, whereas the second is more subtle and is likely to arise as an unintended consequence of affiliating with religious others.

Earlier, we defined spiritual support as the tendency for coreligionists to help a person maintain and deepen his or her faith by encouraging the person to integrate religious beliefs and practices into daily life. Although religious beliefs and practices encompass many aspects of life, one of the central functions of religion is to help people deal with the deleterious effects of adversity (Pargament 1997). Evidence of this may be found in sacred texts, which are replete with guidance on how to deal with stressful situations. Perhaps this is one reason prayer groups and Bible-study groups in the church often focus on religious coping methods. In fact, as Wuthnow (1994) points out, the personal testimony of group members who have used their faith to deal with personal crises encourages other group members to do the same. If the goal of spiritual support is to infuse religion into daily life, and a good deal of religion has to do with coping, it follows that spiritual support and religious coping may be correlated highly.

Social ties in the church may promote the adoption of religious coping responses in more subtle ways as well. People in religious institutions typically strive to create a warm social atmosphere that promotes a sense of bonding, cohesiveness, and solidarity. In fact, numerous social gatherings that take place in church (e.g., coffee hour after religious services) are designed explicitly for this purpose. This becomes fertile ground for the adoption of religious values and practices because people are more willing to listen to, learn from, and emulate individuals who are close to them. These observations are consistent with long-standing findings in the study of small groups. More specifically, this research indicates that people are more likely to adopt the behavior of others in a group when the group is highly cohesive and supportive (Thibaut and Kelley 1959). If this is true, then emotional support from fellow parishioners, as well as emotional support from the clergy, may promote the adoption of religious coping responses.

Taken as a whole, the discussion provided in this section leads to the following study hypotheses:
1. Greater spiritual support from church members is associated with the greater use of religious coping responses;
2. The use of religious coping responses will be greater among respondents who receive more emotional support from the members in their church; and
3. More emotional support from the clergy is related to the more frequent use of religious coping responses.
Methods

Sample

The data for this study come from a national panel survey of clergy, elders, and rank-and-file members of the Presbyterian Church (USA). However, the analyses conducted below are essentially cross-sectional because the full complement of social support measures were not administered until the final wave of interviews. To understand the nature of these data fully, it is helpful to review the data collection plan for the entire panel study. The study began in the fall of 1996, with individuals surveyed quarterly through the end of 1999. The sample of members was drawn from the population of active members in the Presbyterian Church (USA) congregations. The sample of elders was drawn from the list of active elders, that is, elders currently serving on session. The session is the governing board of a congregation. Elders may be thought of as lay leaders of a congregation.

There are two reasons why the clergy are excluded in the analyses that follow. First, it would be impossible to include members of the clergy in analyses designed to contrast emotional support from members with emotional support from clergy. Second, the processes driving the adaptation of religious coping responses are likely to differ significantly for members of the clergy because of the extensive training they have received in seminary, and their decision to dedicate their life’s work to the church.

The panel data were collected in four waves, the first in the fall of 1996, and the others in February 1997, May 1997, and November 1999. A two-stage process was used to select the original sample of rank-and-file members in 1996. First, sampling with probability proportionate to size, 425 congregations were selected from the population of 11,361 Presbyterian congregations in the United States. Each selected congregation was asked to compile a numbered alphabetical list of members’ names. Then, each congregation was asked to send the names and addresses of eight members on the list who matched eight numbers generated at random. Seventy-six percent of the congregations sent the requested names (N = 324), resulting in an initial pool of 2,163 rank-and-file church members. Sixty-three percent of these randomly selected members returned completed, self-administered questionnaires by mail in 1996 (N = 1,363). The sample sizes of members obtained in the three subsequent surveys of these study participants were: February 1997 (N = 1,022), May 1997 (N = 969), and November 1999 (N = 559).

The sample of elders was drawn directly from a central list maintained by the national office. A two-step process was used to sample the names of elders. First, a list of elders was assembled for each of the churches that were used to sample rank-and-file members. Then, using an algorithm, between four and five elders were drawn from each congregation. Self-administered questionnaires were sent to sampled elders at the same time they were sent to members. The following sample sizes of elders were obtained at each data collection point: 1996 (N = 1,759), February 1997 (N = 986), May 1997 (N = 801), and November 1999 (N = 662).

The sample of elders and rank-and-file members was pooled in the analyses presented below. After using listwise deletion of missing values to deal with item nonresponse, the pooled sample size ranged from 770 to 1,066. Preliminary analysis of the sample consisting of 770 cases reveals that 57 percent were elders, the average age of the study participants was 55.95 years (SD = 13.73 years), and approximately 46 percent were men.

Measures

Table 1 contains the measures that were used in this study. All of the measures in this table come from the November 1999 survey.
**TABLE 1**

**STUDY MEASURES**

1. **Emotional Support from Members**
   These questions deal with relationships you’ve had over the past year with other members in the congregation you serve or attend. In answering, please think just about members. How often have the members of your congregation:
   - A. made you feel loved and cared for?
   - B. listened to you talk about your private problems and concerns?

2. **Spiritual Support from Members**
   During the past year, how often have the members of your congregation:
   - A. shared their religious experiences with you?
   - B. helped you live according to your religious beliefs?
   - C. helped you to know God better?

3. **Emotional Support from the Pastor**
   Now we’d like you to think about the relationship you have had with the pastor(s) of your congregation over the past year.
   - A. How often does your pastor(s) speak with you about your private problems and concerns?
   - B. This question is about times you have talked with your pastor(s) individually. Thinking of these times, how often has your pastor expressed interest and concern in your well-being?

4. **Religious Coping**
   - A. I thought about how my life is part of a larger spiritual force.
   - B. I looked to God for strength, support, and guidance.
   - C. I tried to find a lesson from God in this problem.
   - D. I sought help from God in letting go of my anger.

---

*a* These items were scored in the following manner (coding in parentheses): never (1), once in a while (2), fairly often (3), very often (4).

*b* These items were scored in the following manner: not at all (1), somewhat (2), quite a bit (3), a great deal (4).

---

**Emotional Support from Church Members**

As shown in Table 1, emotional support from church members is assessed with two indicators. Both refer to emotional support received during the year prior to the Wave 4 (i.e., November 1999) survey. The first asks how often coreligionists make a respondent feel loved and cared for, while the second asks how often they are willing to listen to a study participant talk about his or her private problems and concerns. A high score on these indicators denotes more emotional support. These items were devised by a panel of experts who were convened by the National Institute on Aging and the Fetzer Institute to address issues in the measurement of religion (Fetzer Institute/National Institute on Aging Working Group 1999).

**Spiritual Support**

Three indicators were used to assess spiritual support that was received during the previous year. The instructions that preceded these questions asked respondents to think only of church members when providing an answer. The three indicators focus on whether church members help study participants live according to their religious beliefs, know God better, and whether fellow parishioners share their own religious experiences with them. A high score on these indicators denotes greater spiritual support.
Emotional Support from the Pastor

Two questions were also included in the survey to measure emotional support from the clergy during the past year. If a church contained more than one minister, respondents were instructed to think about the emotional support they received from all pastors in their church taken together. The first support item asks how often the minister listens to a respondent talk about his or her own private problems while the second gauges how often the pastor expresses interest and concern in their well-being. It should be emphasized that the second question refers to interest and concern that was expressed during face-to-face interaction with the pastor. This is important because a minister can express concern for a church member during a sermon or other part of a formal religious service. A high score on these measures indicates greater emotional support from the clergy.

Religious Coping

Religious coping is measured with four items taken from the larger battery developed by Pargament, Smith, and Koenig (1996). These indicators assess positive or helpful religious coping methods (Pargament 1997). Information on these coping responses was obtained in the following manner. First, study participants were asked to identify the most recent major problem they had faced. Following this, they were asked to indicate how often they used each of the coping responses listed in Table 1 to deal with these difficulties. These indicators are coded so that a high score means that a study participant relied on a particular coping strategy a great deal.

Contrasting Elders and Members

As noted earlier, we pooled the sample of members with the sample of elders when the analyses for this study were performed. This has potentially important implications for estimating the model depicted in Figure 2. In particular, occupying different roles in the church can exert differential effects on religious support and the use of religious coping responses. A binary variable was computed to control for the effects of these different roles in Figure 2. A score of 1 was assigned to rank-and-file church members and a score of 0 was given to elders (the Data Analysis Strategy section below contains a different way of dealing with sample origin when the second-order factor model is estimated).

Control Measures

The relationship between religious support and religious coping was evaluated after the effects of the following control variables were taken into consideration: age (coded in years), sex (1 = male; 0 = female), total yearly family income, and the frequency of church attendance. Income was coded into 14 ordinal categories ranging from less than $10,000 (scored 1) to $150,000 or more (scored 14). The frequency of church attendance was coded into eight ordinal categories ranging from never (scored 1) to every week (scored 8). The measure of income comes from the questionnaires distributed in the fall of 1996 (this was the only time data on income was gathered), while the indicators of age and sex come from the February 1997 survey.

Data Analysis Strategy

The factor model of religious support (see Figure 1) as well as the model of religious support and religious coping (see Figure 2) were analyzed with Version 8.30 of the LISREL statistical software program (Jöreskog, Sörbom, du Toit, and du Toit 1999). However, the fact that our subjects come from two separate samples (elders and members) may create both statistical and
TABLE 2
SEQUENTIAL TESTS FOR EVALUATING FACTORIAL INVARiance

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Baseline model—no equivalence constraints imposed across samples consisting of elders and members</td>
</tr>
<tr>
<td>Model 2</td>
<td>First-order factor loadings constrained to be equivalent across groups</td>
</tr>
<tr>
<td>Model 3</td>
<td>Measurement error terms constrained to be equivalent across groups</td>
</tr>
<tr>
<td>Model 4</td>
<td>Second-order factor loadings constrained to be equivalent across groups</td>
</tr>
</tbody>
</table>

Substantive problems in the estimation of the second-order factor model. Stated in statistical terms, the elements in the measurement model depicted in Figure 1 may not be the same for elders and rank-and-file church members. Here, the elements of the measurement model include the first-order factor loadings, measurement error terms, and second-order factor loadings. If these estimates differ across groups, then estimating the model with a pooled sample of elders and members may mask important statistical and substantive issues in the data.

The elements of the measurement model are estimated with a covariance matrix. If the religious support items mean the same thing to elders and members, then they will answer these questions in the same way. If they answer the religious support items in the same way, then the covariances (and the correlations) among these items should be the same in both groups. To the extent this is true, the factor loadings and measurement error terms derived from these covariances should also be the same. However, if the elements of the measurement model differ across groups, we can conclude that the religious support items are interpreted differently by, and mean different things to, elders and members. If this proves to be the case, it would be inappropriate to pool the two samples. This issue is known in the literature as the problem of factorial invariance (Bollen 1989).

Fortunately, it is possible to evaluate the extent of this problem by performing a series of tests sequentially. This series of nested models is presented in Table 2. First, two models identical to the one depicted in Figure 1 are created for elders and members, respectively. These models are estimated simultaneously. Initially, all the parameters are allowed to vary freely across the two groups (see Model 1 in Table 2). This provides the baseline for evaluating the utility of the remaining models. In Model 2, the first-order factor loadings are constrained to be equivalent in the two groups. If this equality constraint does not change the fit of the model to the data significantly, it is left in force when the next model is estimated. In the third model, the measurement error terms associated with the observed religious support items are constrained to be equal across groups. Finally, in the fourth model, the second-order factor loadings are constrained to be equivalent across the models for members and elders.

RESULTS

Measurement Model of Religious Support

Tests of Factorial Invariance

Select goodness-of-fit data for the tests of factorial invariance of the measurement model are provided in Table 3. As the data in this table reveal, the fit of the baseline model to the data is acceptable. More specifically, the Bentler-Bonett Normed Fit Index (NFI—Bentler and Bonett 1980) estimate of 0.934 exceeds the recommended cutpoint of 0.900. Similarly, the standardized root mean square residual estimate of 0.037 is below the recommended ceiling of 0.05 (Kelloway 1998). Finally, Bollen’s (1989) incremental fit index (IFI) estimate of 0.938 is reasonably close to
TABLE 3
GOODNESS-OF-FIT MEASURES FOR SEQUENTIAL TESTS

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$ Change</th>
<th>Bentler NFI$^a$</th>
<th>Bollen IFI$^b$</th>
<th>SRMSE$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>340.279</td>
<td>22</td>
<td>—</td>
<td>0.934</td>
<td>0.938</td>
<td>0.037</td>
</tr>
<tr>
<td>2</td>
<td>342.958</td>
<td>26</td>
<td>2.679</td>
<td>0.933</td>
<td>0.938</td>
<td>0.038</td>
</tr>
<tr>
<td>3</td>
<td>354.640</td>
<td>33</td>
<td>11.682</td>
<td>0.931</td>
<td>0.937</td>
<td>0.038</td>
</tr>
<tr>
<td>4</td>
<td>356.016</td>
<td>35</td>
<td>1.376</td>
<td>0.931</td>
<td>0.937</td>
<td>0.040</td>
</tr>
</tbody>
</table>

$^a$ Normed Fit Index (Bentler and Bonett 1980).
$^b$ Bollen’s Incremental Fit Index (Bollen 1989).
$^c$ Standardized Root Mean Square Error.

the ideal value of 1.0. But more importantly, as the data in Table 3 indicate, constraining the first-order factor loadings to be equivalent for elders and members (see Model 2) does not change the fit of the model to the data significantly. Evidence of this may be found by examining the change in chi-square values from Model 1 to Model 2 (chi-square change = 2.679 with 4 degrees of freedom is not significant). We therefore conclude that the first-order factor loadings are invariant across groups and leave this equality constraint in place when estimating Model 3. The test of Model 3 reveals that the measurement error terms associated with the observed measures of religious support are also invariant across groups. More specifically, the change in fit from Model 2 to Model 3 is not statistically significant (chi-square change = 11.682 with 7 degrees of freedom is not significant). Finally, the test for the invariance of the second-order factor loadings also indicates they are the same in both groups (chi-square change = 1.376 with 2 degrees of freedom is not significant).

Taken as a whole, the analyses presented in this section indicate that the parameters in the measurement model of religious support are the same for elders and rank-and-file church members. Two important conclusions may be derived from these results. First, it is appropriate to pool the two samples when estimating the second-order factor model of religious support. Second, the findings further suggest that the religious support items are interpreted in the same way by elders and rank-and-file church members.

**Psychometric Properties of Religious Support Items**

Based on the analyses presented above, the samples consisting of elders and members were pooled and the second-order factor model depicted in Figure 1 was re-estimated. The fit of this pooled model to the data was acceptable. Evidence of this may be found by examining Bentler and Bonett’s Normed Fit Index (0.940) (Bentler and Bonett 1980), which exceeds the recommended cutpoint of 0.900, as well as Bollen’s incremental fit index (0.942), which is close to the ideal value of 1.0 (Bollen 1989). Finally, the standardized root mean square residual value of 0.039 is again below the recommended ceiling of 0.05 (Kelloway 1998). The factor loadings and measurement error terms estimated with the second-order factor model are presented in Table 4. The coefficients associated with the first-order factors are important because they provide preliminary information about the psychometric properties of the observed indicators. Although there are no firm guidelines in the literature, experience suggests that first-order factor loadings in excess of 0.400 tend to have reasonably good reliability and validity. As the data in Table 4 reveal, the standardized first-order factor loadings range from 0.830 to 0.930, suggesting that the measures of religious support are adequate.

Although the factor loadings and measurement error terms associated with each observed indicator provide useful information about the reliability of each item, it would be helpful to
TABLE 4
ESTIMATES FROM THE SECOND-ORDER FACTOR MODEL
OF RELIGIOUS SUPPORT
(N = 1,066)

<table>
<thead>
<tr>
<th>First-Order Factors</th>
<th>Emotional Support from Members</th>
<th>Spiritual Support from Pastor</th>
<th>Error Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>y₁</td>
<td>0.853ₐ</td>
<td></td>
<td>0.273</td>
</tr>
<tr>
<td>y₂</td>
<td>0.830</td>
<td></td>
<td>0.311</td>
</tr>
<tr>
<td>y₃</td>
<td>0.814</td>
<td></td>
<td>0.338</td>
</tr>
<tr>
<td>y₄</td>
<td>0.930</td>
<td></td>
<td>0.135</td>
</tr>
<tr>
<td>y₅</td>
<td>0.921</td>
<td></td>
<td>0.152</td>
</tr>
<tr>
<td>y₆</td>
<td>0.827</td>
<td></td>
<td>0.316</td>
</tr>
<tr>
<td>y₇</td>
<td>0.832</td>
<td></td>
<td>0.309</td>
</tr>
<tr>
<td>Residual Variance</td>
<td>0.039ₚ</td>
<td>0.315</td>
<td>0.712</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Second-Order Factor</th>
<th>Religious Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Support from Members</td>
<td>0.981</td>
</tr>
<tr>
<td>Spiritual Support from Members</td>
<td>0.827</td>
</tr>
<tr>
<td>Emotional Support from Pastor</td>
<td>0.537</td>
</tr>
</tbody>
</table>

ₐ All parameter estimates are from the completely standardized solution. The first-listed item in each factor was fixed at 1.0 in the unstandardized solution. Unless otherwise noted, all parameter estimates are significant at the 0.001 level.

ₚ Parameter estimate not significant at 0.05 level.

know something about the reliability of the composite measures of religious support as well. Fortunately, it is possible to derive these estimates with a formula provided by Rock et al. (Rock, Werts, Linn, and Jöreskog 1977). Applying this formula to the data provided in Table 4 indicates that the reliability estimates of the three religious support measures are good: emotional support from members (0.829), spiritual support from members (0.919), and emotional support from clergy (0.815).

Returning to Table 4, the data reveal that the first-order factors of religious support are, in turn, related quite strongly to the proposed second-order factor. In particular, the standardized second-order factor loadings range from 0.537 to 0.981. These empirical results point to two important substantive conclusions. First, it would appear that the three dimensions of religious support spring from, and are being driven by, the same higher-order process. Second, emotional support from church members is not used as a substitute for emotional support from the pastor. The fact that these dimensions of support are correlated suggests that the two sources of emotional support complement each other.

**Religious Support and Religious Coping**

**Fit of the Model to the Data and Item Reliability**

The analyses indicate that the fit of the model depicted in Figure 2 to the data is adequate. In particular, the Normed Fit Index value of 0.910 exceeds the recommended cutpoint of 0.900 (Bentler and Bonett 1980). Similarly, the estimate of Bollen’s incremental fit index (0.923) is reasonably close to the ideal value of 1.0 (Bollen 1989). Finally, the standardized root mean square residual value of 0.036 is below the ceiling recommended by Kelloway (1998).
TABLE 5
MEASUREMENT MODEL PARAMETER ESTIMATES FOR RELIGIOUS SUPPORT AND RELIGIOUS COPING
(N = 770)\(^a\)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Factor Loading(^b)</th>
<th>Measurement Errors(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emotional Support from Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Loved and cared for(^d)</td>
<td>0.822</td>
<td>0.324</td>
</tr>
<tr>
<td>B. Listened to you talk</td>
<td>0.827</td>
<td>0.316</td>
</tr>
<tr>
<td>2. Spiritual Support from Members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Shared religious experiences</td>
<td>0.812</td>
<td>0.340</td>
</tr>
<tr>
<td>B. Lived according to beliefs</td>
<td>0.921</td>
<td>0.152</td>
</tr>
<tr>
<td>C. Know God better</td>
<td>0.914</td>
<td>0.165</td>
</tr>
<tr>
<td>3. Emotional Support from Pastor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Private problems and concerns</td>
<td>0.850</td>
<td>0.277</td>
</tr>
<tr>
<td>B. Expressed interest and concern</td>
<td>0.796</td>
<td>0.366</td>
</tr>
<tr>
<td>4. Positive Religious Coping</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Larger spiritual force</td>
<td>0.575</td>
<td>0.670</td>
</tr>
<tr>
<td>B. Looked to God for strength</td>
<td>0.791</td>
<td>0.374</td>
</tr>
<tr>
<td>C. Tried to find lesson</td>
<td>0.734</td>
<td>0.461</td>
</tr>
<tr>
<td>D. Letting go of anger</td>
<td>0.641</td>
<td>0.589</td>
</tr>
</tbody>
</table>

\(^a\) The fit of the model to the data is: \(\chi^2 = 472.900\) with 73 degrees of freedom.

\(^b\) Factor loading from completely standardized solution. The first-listed item for each latent construct was fixed at 1.0 in the unstandardized solution.

\(^c\) Measurement error estimates from completely standardized solution. All factor loadings and measurement errors are significant at the 0.001 level.

\(^d\) Item content is paraphrased for purposes of identification. See Table 1 for the complete text of each indicator.

The factor loadings and measurement error terms derived from estimating the model in Figure 2 are presented in Table 5. Once again, these estimates fall within an acceptable range (0.575 to 0.921). Since the psychometric properties of the religious support items have already been reviewed, only the estimates associated with the religious coping indicators are examined here. The factor loadings for the coping items range from 0.575 to 0.791, suggesting that these measures have acceptable psychometric properties. Applying the formula derived by Rock et al. (1977) to these data suggest that the reliability for the composite measure of religious coping is acceptable as well (0.782).

**Substantive Findings**

The effects of the three religious support measures on religious coping are presented in Table 6. The relationship between the control measures and coping are also provided in this table. The most important findings in Table 6 involve the impact of the three religious support measures. The data suggest that more spiritual support from church members is associated with greater use of religious coping methods (Beta = 0.402; \(p < 0.001\)). The same is true with respect to emotional support from the pastor (Beta = 0.115; \(p < 0.05\)), but the effects do not seem to be as strong. In contrast, emotional support from church members does not appear to be related significantly to the use of religious coping responses (Beta = 0.004; not significant).

Viewed broadly, the findings presented in Table 6 highlight the social genesis of religious coping responses. In particular, these results suggest that people are more likely to turn to religious
TABLE 6
RELIGIOUS SUPPORT AND RELIGIOUS COPING
(N = 770)$^a$

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Emotional Support from Members</th>
<th>Spiritual Support from Members</th>
<th>Emotional Support from Pastor</th>
<th>Positive Religious Coping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td>0.113$^{**b}$</td>
<td>0.052</td>
<td>0.017</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.007)$^c$</td>
<td>(0.003)</td>
<td>(0.001)</td>
<td>(.001)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td>$-0.313^{***}$</td>
<td>$-0.195^{***}$</td>
<td>0.019</td>
<td>$-0.156^{***}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>($-0.258$)</td>
<td>($-0.158$)</td>
<td>(0.016)</td>
<td>($-0.090$)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td>0.014</td>
<td>0.012</td>
<td>0.030</td>
<td>$-0.060$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.012)</td>
<td>(0.106)</td>
<td>(0.025)</td>
<td>($-0.035$)</td>
</tr>
<tr>
<td>Church Attendance</td>
<td></td>
<td>0.302$^{***}$</td>
<td>0.404$^{***}$</td>
<td>0.229$^{***}$</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.248)</td>
<td>(0.328)</td>
<td>(0.195)</td>
<td>($0.021$)</td>
</tr>
<tr>
<td>Members/Elders</td>
<td></td>
<td>$-0.157^{***}$</td>
<td>$-0.106^{***}$</td>
<td>$-0.142^{***}$</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>($-0.129$)</td>
<td>($-0.086$)</td>
<td>($-0.121$)</td>
<td>($0.008$)</td>
</tr>
<tr>
<td>Emotional Support</td>
<td></td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from Members</td>
<td></td>
<td>(0.003)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiritual Support</td>
<td></td>
<td>0.402$^{***}$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from Members</td>
<td></td>
<td>(0.285)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Support</td>
<td></td>
<td>0.115$^*$</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>from Pastor</td>
<td></td>
<td>(0.078)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple R$^2$</td>
<td></td>
<td>0.243</td>
<td>0.238</td>
<td>0.089</td>
<td>0.292</td>
</tr>
</tbody>
</table>

$^a$ The fit of the model to the data is: $\chi^2 = 472.900$ with 73 degrees of freedom.

$^b$ Standardized regression coefficient.

$^c$ Metric (unstandardized) regression coefficient.

$^* = p < 0.05; ^{**} = p < 0.01; ^{***} = p < 0.001.$

coping when hard times arise if they get emotional support from their pastor, and especially if they get spiritual support from the members in their church. The data in Table 6 further reveal that, taken together, the independent variables in Figure 2 explain approximately 29 percent of the variance in positive religious coping methods.

The relationship between spiritual support and religious coping appears to be substantially larger than the association between emotional support from the pastor and religious coping. But it is important to know if the difference between these parameter estimates is statistically significant. This issue was addressed in the following way. The model of religious support and coping was estimated a second time, after the effect of emotional support from the pastor on religious coping was constrained to equal the corresponding effect of spiritual support on religious coping. The difference in chi-square values for the two models suggests that the fit of the model to the data became significantly worse when the equality constraint was in place (chi-square change = 10.863 with 1 degree of freedom, $p < 0.001$). This test reveals that spiritual support from church members plays a significantly larger role in shaping religious coping responses than emotional support from the pastor. Taken as a whole, the findings presented up to this point suggest that it may not be appropriate to add the three religious support measures together when studying factors that influence religious coping methods.

Evaluating whether the three dimensions of religious support affect coping in the same way represents a test of construct validity. More specifically, evidence of the construct validity of the second-order factor model would be obtained if the three dimensions of religious support have
the same impact on coping. However, as the findings reviewed above reveal, this is not the case. Even so, it would be premature to conclude that the second-order factor model is invalid, because we performed only one test using one external measure (i.e., coping). It may well be that the three religious support measures are related in the same way to some other external criterion, such as health or psychological well-being. It is for this reason that Bollen (1989) and others maintain that establishing construct validity is a long process requiring multiple tests.

Several other important results emerge from the model estimating the relationship between religious support and religious coping. To begin with, the findings in Table 6 indicate that, compared to people who don’t go to church very often, individuals who attend church frequently tend to get more emotional support from church members (Beta = 0.302; \( p < 0.001 \)), more spiritual support from church members (Beta = 0.404; \( p < 0.001 \)), and more emotional support from the pastor (Beta = 0.229; \( p < 0.001 \)). The church attendance measure is important because, in a sense, it may also be viewed as a measure of social support. In particular, church attendance may be thought of as the counterpart of social contact measures in the secular social support literature because when people attend religious services they are more likely to come into contact with religious others. Viewed in these terms, the data point to the obvious conclusion that social contact (e.g., via frequent church attendance) is a necessary prerequisite for the receipt of religious support.

However, there is a second aspect of the findings involving church attendance that is more thought provoking. In particular, the data appear to indicate that the frequency of church attendance is not directly related to the use of religious coping responses (Beta = 0.036; not significant). At first, this appears to be counternintuitive because it seems that one of the reasons people go to church is to learn how to deal with adversity. However, greater insight into this issue can be obtained by examining the study findings more carefully. In particular, the data indicate that the frequency of church attendance is related to religious support, and religious support is, in turn, associated with the use of religious coping methods. Stated in a more technical way, this raises the possibility that church attendance is related to religious coping indirectly through support received from religious others. Fortunately, the LISREL software program computes estimates of such indirect effects and provides tests of statistical significance for them. These additional estimates (not shown in Table 6) reveal that the indirect effect of church attendance on religious coping that operates through religious support is statistically significant (Beta = 0.190; \( p < 0.001 \)).

There is, however, one limitation in the estimation of indirect effects that are computed by the LISREL software program. More specifically, the estimates are more properly called overall indirect effects because they represent the impact of church attendance on religious coping that operate through all three religious coping measures taken together. This is problematic because the three religious support measures do not exert the same impact on coping. Moreover, the effect of emotional support from church members is not statistically significant. To get a better handle on this issue, the specific indirect effects that operate through each measure of religious support must be computed by hand. These computations reveal that the largest specific indirect effect operates through spiritual support (0.404 \( \times \) 0.402 = 0.162), and accounts for 85 percent of the overall indirect effect reported above (0.162/0.190 = 0.853).

The analysis of the indirect effects in our model suggest that, within the constraints imposed by the measures we use, frequent church attendance is related to the use of religious coping responses solely because of the support received from religious others. This result, coupled with the findings involving the direct effects of the religious support measures, boldly underscores the social basis of religious coping.

**Conclusions**

Religion is an inherently social phenomenon. People worship together in groups and social relationships tend to thrive in church settings. These interpersonal ties are bolstered by basic
tenets of the Christian faith that encourage people to help each other. Yet we know so little about the precise nature and functions of interpersonal ties in the church. A necessary first step toward addressing this gap in the knowledge base involves identifying and closely evaluating different types or dimensions of religious support. We pursued this issue by focusing on three specific types of religious support—emotional support from church members, spiritual support from church members, and emotional support from pastors. These dimensions of support are noteworthy because they assess different types of assistance (emotional versus spiritual) as well as different sources of help (church members versus clergy). To the best of our knowledge, this is one of the few studies to rigorously examine multiple types and multiple sources of church-based support at the same time.

Viewed broadly, the results indicate that the three dimensions of religious support are related, yet conceptually distinct. With respect to the first, the data suggest that emotional support from church members, spiritual support from church members, and emotional support from pastors are correlated fairly highly. One way to interpret these results is to think about these types of support as being driven by a more abstract, high-order process. Using the work of Simmel (1905), we suggested that it might have something to do with a broader sense of faith. But this is an elusive construct because the precise meaning and nature of faith in this context is not entirely clear. A top priority is to figure out what stands behind and unites the various dimensions of support.

Even though the three dimensions of support we examined are related, they are at the same time conceptually distinct. Evidence of this comes from the analyses involving religious coping. Here, the data reveal that our measures of support are not all related to religious coping in the same way. In particular, spiritual support appears to play an especially critical role in shaping the use of religious coping responses. In contrast, emotional support from clergy has much weaker effects, and emotional support from church members appears to have no influence at all. These findings are noteworthy because they highlight the inherently social nature of religious coping. It seems only natural that when people are faced with adversity, they seek out the opinions of like-minded others in order to identify and pursue the best plan of action. The input of others may be especially important because research in secular settings suggests that the noxious effects of stress arise, in part, by compromising the problem-solving skills of the focal person (Caplan 1981). Since churches promote religious solutions to personal problems and provide strategies to manage the emotions associated with them, it follows that church members should be especially inclined to encourage the use of religious coping methods. In this way, fellow parishioners serve as a conduit for the transmission and practical application of core tenets of the faith.

There is still a great deal we do not know about the interface between religious support and religious coping. For example, members of the clergy are likely to encourage the use of religious coping responses as well. In fact, finding religious solutions to personal problems is one of the main functions of religious counseling (Worthington 1993). We need to know more about how things like spiritual support from clergy interface with spiritual support from church members. We couldn’t pursue this issue because we did not have data on spiritual support from clergy. One might argue, for example, that spiritual support from clergy will be more effective, and carry more weight, because of the skills and training of the pastors, as well as the aura of legitimacy that is bestowed on them by the clerical role. In contrast, spiritual support from church members may be more efficacious because these significant others are likely to have the same demographic characteristics, attitudes, and beliefs as the support recipient. This is important because research in secular settings indicates that similarity promotes acceptance of ideas and recommendations (Miller and Prentice 1996). Moreover, the level of intimacy and acceptance that permeates informal social ties in the church may foster the uninhibited questioning of coping recommendations and the expression of any reservations about them. By encouraging and facilitating more open communication, church members may be more successful in getting a focal person to ultimately adopt religious coping responses.

In the process of pursuing issues in the study of religious support, it is important to keep in mind that even though religion has largely beneficial effects, there are negative aspects to it
as well. Evidence of this may be found, for example, in Pargament’s work on religious coping (Pargament 1997). He reports that there are negative as well as positive patterns of religious coping. Perhaps more important, recent work by Krause, Ellison, and Wulff (1998) suggests that there is a good deal of interpersonal conflict in the church, and that this negative interaction may exert an especially noxious effect on well-being (see also Krause, Morgan, Chatters, and Meltzer 2000). The findings from the present study suggest that positive support increases positive religious coping responses. We need to know if negative interaction has the opposite effect, by encouraging people who encounter interpersonal conflict in the church to either reject the use of religious coping responses, adopt negative religious coping methods, or withdraw from religion altogether.

Finally, we need to know more about how religious support and religious coping affect health and well-being. Research indicates that religious coping affects these outcomes (Pargament 1997). Similarly, there is some evidence that religious support is related to health and well-being as well (Krause, Ellison, and Wulff 1998). However, we don’t know much about the combined effects of religious support and religious coping. For example, what happens if religious coping methods recommended by others fail to alleviate the problem at hand? Does failure compound the original problem by bringing added concerns about the adequacy of one’s social ties or religious beliefs to the foreground? Conversely, does the successful resolution of a problem through the application of recommended religious coping responses serve to bind a person even more tightly to the group, and impart a greater sense of security, thereby further enhancing his or her sense of health and well-being?

In the process of examining these as well as other issues, researchers should pay attention to the limitations in the work we have done. Four are identified briefly below.

First, our sample consists solely of Presbyterians. As a result, it is not clear whether the findings reported above generalize to people in other denominations and faiths.

Second, the data used in this study are cross-sectional. Consequently, we cannot rule out the possibility that religious coping determines religious support. This means, for example, that people who are inclined to use positive religious coping responses may be more likely to seek out the company (and support) of like-minded religious others.

Third, as reported earlier, subject attrition over time as well as item nonresponse occurred in a systematic fashion (see notes 2 and 3). Even so, we believe this study makes an important contribution to the literature because we identify and measure multiple types of church-based support, provide evidence that these indicators are psychometrically sound, and show how they are related to religious coping. This is noteworthy because these issues have been largely overlooked by other investigators.

Finally, the impact of support in the church may depend on the size of the congregation. It is possible, for example, that people in small churches receive more support from their pastor and fellow members than individuals from larger congregations and that as a result, they are more likely to adopt religious coping responses. The empirical evaluation of this issue should be a top priority in the future.4

Despite these shortcomings, we hope the work we have done encourages further research on social support in religious settings. Moreover, we hope the overall strategy we took in addressing the study of support in religious settings serves as a template for developing this as well as other components of religion. In particular, the careful theoretical delineation of key dimensions of a construct, coupled with rigorous confirmatory factor analytic procedures, provides a more systematic way of approaching largely unexplored facets of religion.

ACKNOWLEDGEMENTS

This research is supported by a grant from the National Institute on Aging (RO1 AG 14749—Neal Krause, Principal Investigator). The authors would like to thank Brian Finch for his statistical advice.
NOTES

1. As the sampling design reveals, more than one subject was recruited from each congregation. Since individual cases are clustered within congregations, the observations are not independent, and data analytic problems may arise. Under these circumstances, special statistical estimation procedures may be called for (i.e., hierarchical linear modeling (HLM)). To assess the impact of any potential bias due to clustering, we conducted an HLM analysis using the SAS PROC MIXED procedure. Since this program does not take random measurement error into account (i.e., the model is not estimated in a latent variable framework), the HLM findings were compared to results generated by ordinary least squares multiple regression (OLS). Religious coping served as the dependent variable in both models. The findings were virtually identical, suggesting that individuals in the same congregation can, in fact, be treated as independent observations, and thus, individual-level analyses can be used. A table containing the results of these analyses is available from the first-listed author.

2. When the panel design for this study was described, we reported that some subjects were lost to follow-up. The loss of subjects over time can bias empirical findings if sample attrition occurs nonrandomly. Although it is difficult to determine the extent of the problem precisely, some preliminary insight can be obtained by using select data from the baseline interview to see if those who were lost to follow-up differ significantly from those who remained in the study (see Norris 1987, for a detailed discussion of this approach). The following procedures were used to implement this strategy. First, a binary variable was constructed by assigning a score of 0 to all subjects who completed the Wave 4 interview schedule and a score of 1 to those who were lost to follow-up. Then, using logistic regression, this binary indicator was regressed on the following baseline measures: age, sex, marital status, income, the frequency of church attendance, and whether a study participant was a rank-and-file church member or an elder. The findings from this analysis reveal that the loss of subjects over time did not occur in a random manner. More specifically, these data suggest that compared to people who remained in the study, those who were lost to follow-up were more likely to be younger, male, and attend church less often. Moreover rank-and-file members were more likely than elders to be lost to follow-up. The potentially biasing effects of this nonrandom attrition should be kept in mind as the findings from this study are reviewed.

3. When the sample for this study was described, we also pointed out that only 770 cases were available for the analyses involving religious support and religious coping. This suggests that even though some people participated in the final wave of the study, some failed to answer all social support and coping questions (i.e., there was a significant amount of item nonresponse). It is important to also evaluate whether this item nonresponse occurred randomly. Potential problems with item nonresponse were also evaluated with logistic regression. Four sets of analyses were performed, one for each of the three religious support measures, as well as the religious coping index. In each instance, a binary outcome was created by assigning a score of 1 to study participants who failed to answer all questions and a score of 0 to those who provided complete data. This binary outcome was then regressed on the following measures: age, sex, marital status, income, the frequency of church attendance, and whether a respondent was an elder or rank-and-file church member. In each instance, the analyses revealed that item nonresponse occurred in a nonrandom manner. More specifically, those who failed to answer all the questions on emotional support from church members tended to go to church less often and were more likely to be rank-and-file parishioners than elders. Similarly, study participants who didn’t answer all the spiritual support items were more likely to be older, male, and attend church less often. Those who didn’t provide complete data on the items dealing with emotional support from the pastor were more likely to be rank-and-file church members than elders. Finally, study participants who did not answer all the religious coping questions were more likely to be older and male. Once again, the potential biases arising from these nonrandom patterns of item nonresponse should be kept in mind as the findings from this study are reviewed.

4. The only measure of church size contained in our data came from the baseline survey in 1996. Since the social support data we analyze come from the final round of data collection in 1999, the size measure is not contemporaneous. These data are, therefore, limited because a person could change congregations or church size could change significantly during this time. Even so, we conducted some preliminary analyses to see whether the available measure of church size affected the relationships between religious support and religious coping. No significant findings emerged from these analyses. Nevertheless, continued work with church size is important because it may be related to key outcomes in more complex ways than we examined. For example, there could be a nonlinear relationship between church size and coping, whereby small congregations foster the adaptation of religious coping responses up to a critical size threshold point.

REFERENCES


