An Evaluation of the Psychometric Properties and Criterion Validity of the Religious Social Support Scale

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Abstract

This study evaluates the psychometric properties and criterion validity of the Religious Social Support (RSS) Scale in a diverse, representative community sample of new mothers ($N = 1,156$). Results indicated that two factors best represented the RSS. Criterion validity was established by demonstrating that the RSS was associated with relational and health outcomes. However, these associations were reduced to statistical insignificance once a general measure of social support was included as a covariate. There were no indications that race moderated either the psychometric properties of the RSS or the relationships between social support and outcomes. Qualitative analyses indicated that religious social support is a salient construct in the lives of women that we studied and suggested ways to improve future developments of RSS scales.

It is now well established that individuals who report some level of religious involvement (including denominational affiliation, religious service attendance, and private prayer or devotional activity) have, on average, better physical and mental health (Hackney and Sanders 2003; McCullough et al. 2000; McCullough and Laurenceau 2005). For example, McCullough and Laurenceau (2005) reported that even after controlling for health behaviors, social support, and personality factors, women who were highly religious had higher mean levels of self-rated health across the life span. Similarly, a meta-analysis of 42 studies indicated that religious involvement was associated with lower mortality (McCullough et al. 2000). With respect to mental health, a narrative review of over 600 data-based reports concluded that religious involvement was associated with a variety of positive outcomes (Koenig 2001). Similarly, a meta-analysis of 34 studies that considered religious involvement and mental health also reported positive effects, though the overall effect size ($r = 0.10$) was small in magnitude (Hackney and Sanders 2003).

One means by which religious involvement may benefit physical and mental health outcomes is through enhanced social support (George, Ellison, and Larson 2002). For example, religious involvement may facilitate socially supportive friendships with congregation members and clergy. In a review of the psychological literature on religion, Emmons and Paloutzian (2003) emphasized the value of measure development and validation efforts, suggesting that further advances in the social scientific study of religion will be constrained by the quality of

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measurement within the field. Their comments are germane to studies involving religious social support, as previous studies have often relied on one- and two-item scales of social support, which have questionable reliability (Krause, Ellison, and Wulff 1998; Olphen et al. 2003).

The Religious Support Scale (RSS) was developed to provide a psychometrically sound measure of social support received within the context of religious involvement (Fiala, Bjorck, and Gorsuch 2002). An extensive set of scale development activities resulted in three, seven-item scales (i.e., God, congregation, and clergy support). These scales had good internal consistencies and good criterion validity. However, Fiala and colleagues' try-out and cross-validation samples consisted entirely of churchgoers who were sampled from Protestant church directories. Participants were primarily white (75 percent), married (59–65 percent across samples), and well educated (83–88 percent of samples had education beyond high school). It is unclear if the psychometric properties of the RSS generalize to a more diverse population of individuals. Moreover, it is unclear whether the RSS would be uniquely predictive of positive functioning, above and beyond a more general measure of social support, in the general population versus the churchgoing populations used by Fiala, Bjorck, and Gorsuch. The primary goal of this study was to test the proposed factor structure and criterion validity of the RSS in a large, racially and socioeconomically diverse community sample of new mothers. A secondary goal was to evaluate whether the scale worked equally well for European and African-American families (Chatters 2000; Hunt and Hunt 2001; Levin and Taylor 1998; Olphen et al. 2003; Van Ness, Kasl, and Jones 2004; Wallace et al. 2003). A third goal was to use ethnographic data to examine how families in the communities being studied actually talk about the role of religion in their lives, with an emphasis on whether support from a personal relationship with God or involvement in religious services are explicitly or implicitly mentioned as sources of social support.

Methods

Study Design

The Family Life Project (FLP) is an ongoing study of a representative sample of children who were born in two major areas of rural poverty east of the Mississippi: Northern Appalachia (Central Pennsylvania; 95 percent European-American); and Eastern North Carolina (40 percent African American). Full details of the study are provided elsewhere (Vernon-Feagans et al., in press). Briefly, recruitment occurred in six counties (three each in NC and PA), seven days/week from September 15, 2003 through September 14, 2004 using a standardized script and screening protocol. The final sample consisted of 1,292 families. Low-income and (in NC) African-American families were oversampled, though complex sampling procedures permit generalizations back to the larger population of children born in these counties during this time period.

Sample

Quantitative analyses were based on 1,156 of the 1,207 respondents who: (1) were interviewed during a home visit when their children were approximately six months of age; and (2) who had completed at least a portion of the RSS Scale. Respondents were overwhelmingly biological mothers of target children (though the sample did include one foster parent, eight grandparents, and one other adult relative of target children). Seventy-eight percent of respondents were European American, while 22 percent were African American. On average, respondents were 27.2 years old. Sixteen percent of respondents did not complete high school/ GED, 20 percent had a four-year college degree or higher, while the remaining 63 percent had varying levels of education and training beyond high school/GED but less than a four-year degree. With respect to marital status, 37 percent of respondents were single, 58 percent were married and living with their spouse, and the remaining 5 percent were separated, divorced, or

widowed. On average, respondent households consisted of four persons and an income-to-needs ratio of 2.2 (slightly twice the poverty level adjusted for family size). At their first home visit, respondents completed the Kfast literacy screener (Kaufman 1994). Respondents who read at an eighth-grade reading level (or beyond) completed questionnaires on their own (81 percent of total sample), whereas those reading below an eighth-grade reading level had questionnaires read to them (19 percent of total sample). Qualitative analyses were based on interviews with 32 (15 African-American and 17 white) North Carolina women, 23 of whom were below 200 percent of the poverty threshold and nine were above it. Data were taken only from the North Carolina respondents because they represented the ethnic diversity that was characteristic of the larger quantitative sample.

Measures

***RSS Scale* (Fiala, Bjorck, and Gorsuch 2002)—**The RSS is a 21-item instrument that consists of three, seven-item scales, representing support from a personal relationship with God, from one's religious congregation, and from one's clergy. Each item is rated on a five-point Likert response scale (from 1 = Strongly Disagree to 5 = Strongly Agree). Participants used a "not applicable" category to indicate items that did not pertain to them (e.g., did not attend religious service). Our strategy for dealing with missing data is described below. A summary of RSS item and scale descriptive statistics are provided in Table 1.

***Questionnaire of Social Support (QSS) Scale* (Sarason et al. 1983)—**The QSS consists of 15 items combined to form four scales, including perceived support from community involvement (mean of two items), friendships (mean of four items), family (mean of six items), and intimate relationships (mean of three items). Whereas the original QSS asked separate questions about the presence and satisfaction of various sources of support, the modified version collapsed each pair of items into a single question (how satisfied are you with …). Each item was rated on a four-point Likert response rating scale (from 1 = Very Dissatisfied to 4 = Very Satisfied). Participants used a not applicable category to indicate items that did not pertain to them (e.g., some respondents were not involved in an intimate relationship).

***Brief Symptom Index-18* (BSI-18; Derogatis 2000)—**The BSI-18, which is derived from the Brief Symptom Inventory (Derogatis and Melisaratos 1983), is an 18-item self-report screening index for psychological distress. The BSI-18 consists of three, six-item subscales, including somatization, depression, and anxiety. We also added a five-item hostility subscale adopted from the original BSI. Each item was rated on a five-point Likert response scale (from 0 = Not at All to 4 = Extremely). Subscale scores consisted of mean ratings.

***Conflict Tactics Scale (CTS)* (Straus 1990)—**The CTS is a 19-item self-report index of intra-family conflict and violence. The CTS consists of three subscales that refer to the behaviors and strategies used to resolve conflict, including reasoning, verbal aggression, and violence. Respondents rate each item twice, once for their own use of a given strategy (self) and once for their partner's use of a given strategy (other). Each item is related on a seven-point Likert response scale (0 = Never to 6 = More than 20 Times).

***Dimensions of Marital Quality (DMQ) Scale* (Johnson et al. 1986)—**The DMQ is a five-item scale that is derived from the work of Johnson and colleagues (Johnson et al. 1986). The DMQ assesses perceptions of relationship instability (thinking about breaking up) as well as behaviors associated with relationship instability, such as discussing breakup with friends, an attorney, or the partner. Items are rated on a six-point Likert response scale (from 1 = never to 6 = yes, within the last three months).

***Personal Assessment of Intimate Relationships (PAIR) Scale* (Schaefer and Olson 1981)**—The PAIR is a 36-item instrument designed to assess the degree of intimacy that an individual perceives that he/she has with another. The PAIR measures the expected versus the realized degree in five areas of intimacy: emotional intimacy, social intimacy, sexual intimacy, intellectual intimacy, and recreational intimacy. Only the six-item emotional intimacy scale is used in this study. Items were rated on a five-point Likert response scale (from 1 = Strongly Disagree to 5 = Strongly Agree).

***Family Resources (FR) Scale* (Van Horn, Bellis, and Snyder 2001)**—The FRS is a 30-item rating scale assessing the adequacy of resources in households with young children. The scale includes items that measure both human and physical resources, including food, shelter, financial resources, transportation, and time to be with family and friends. Items are scored on a five-point Likert response scale (from 1 = Not at All Adequate to 5 = Almost Always Adequate). Only the seven-item subscale regarding time with family and friends was administered and at least six of the seven items had to be nonmissing in order for the scale to be scored.

***Role Overload (ROV) Scale* (Reilly 1982)**—The ROV is a measure that assesses respondents' feelings of being overwhelmed by multiple commitments and not having enough time for themselves. The 13 items (e.g., "I can't ever seem to get caught up") are rated on a five-point Likert response scale (from 1 = Strongly Agree to 5 = Strongly Disagree).

Subjective Health Rating—Respondents completed a widely-used single-item rating of perceived physical health (Krause and Jay 1994). Response categories were 1 = Excellent, 2 = Very Good, 3 = Good, 4 = Fair, 5 = Poor.

Analytic Strategy

All of the motivating questions were answered using structural equation modeling (SEM) methods. SEM models were fit using Mplus version 3.12 (Muthén and Muthén 2004), which accommodated the complex sampling design (i.e., stratification on income and race; individual probability weights associated with oversampling of low-income and African-American families). All SEM models were estimated using a robust maximum likelihood estimator (MLR). Due to the use of the MLR estimator, we computed chi square difference tests between nested models using appropriate adjustments (Satorra and Bentler 1999). Missing data were handled using the full information maximum likelihood methods (Arbuckle 1996). This allowed us to include all available data from all respondents, even those who only completed portions of the RSS Scale (e.g., only God support items). Given the well-known dependency of the likelihood ratio test statistic on sample size (MacCallum 1990), model fit was primarily evaluated using a combination of absolute (standardized root mean residual, SRMR; root mean squared error of approximation, RMSEA) and comparative (comparative fit index, CFI) fit indices, where good fit was defined as SRMR <= 0.08 *and* either a CFI >= 0.95 or RMSEA <= 0.06 (Hu and Bentler 1999).

Three sets of SEM models addressed the motivating goals of this study. The first set contrasted one-, two-, and three-factor models for RSS items using confirmatory factor analysis (CFA). The one-factor model posited that RSS items were unidimensional. The two-factor model included correlated factors for God versus congregation and clergy items. The three-factor model included separate correlated factors for each of the proposed scales (God, congregation, clergy support). Because these models are nested, chi square difference tests were used to determine which model best represented the observed data.

The second set of models tested whether RSS items had similar measurement characteristics for European and African-American respondents (Meredith 1993). Specifically, multiple group CFA models tested for configural, weak, and strong invariance—where configural invariance refers to items loading on similar factors, weak invariance refers to equal factor loadings across groups, and strong invariance refers to equal factor loadings and item intercepts across groups (Widaman and Reise 1997).

The third set of analyses addressed the criterion validity of RSS scales (Nunnally and Bernstein 1994). These analyses tested whether/which dimensions of the RSS were predictive of respondent mental health, family resources, relationship quality, and subjective health both alone and in the presence of a secular measure of social support (see Figure 1). Given the potential for the effects to vary as a function of participant reading level, all predictor and outcome variables were regressed on a dummy variable indicating whether questions were read to respondent (not depicted in figures).

Results

Quantitative Study

Descriptive Information—The RSS Scale was administered in computerized questionnaire format to all respondents without reference to their belief in God or regular attendance at a religious service. Instead, a "not applicable" response was added to the rating scale, thereby permitting respondents to opt out of answering questions that were not pertinent to them (e.g., congregation support items were not applicable for individuals who did not attend religious service). All items marked as "not applicable" were recoded as missing for purposes of data analysis. Fifty-one (4 percent) of the 1,207 participants who completed the six-month home visit had missing data for all RSS items and were excluded from this study. Participants who were included in the study skipped an average of four of the 21 items. The rates of item completion are summarized in Table 1. Respondents were more likely to answer God versus clergy/congregation support items.

Inspection of mean item and scale scores in Table 1 suggested that, on average, respondents strongly endorsed all sources of religious social support, with weighted mean scores for God, congregation, and clergy support scales of 4.5, 4.1, and 4.2, respectively. In addition, the God, congregation, and clergy support scales that were proposed by the scale developers all exhibited high internal consistencies in this sample (Cronbach's alpha = 0.91, 0.91, and 0.92, respectively). These mean values and internal consistency estimates are similar to those reported by the scale developers (Fiala, Bjorck, and Gorsuch 2002).

Confirmatory Factor Analyses—The fit of the three *a priori* models is summarized in Table 2 (labeled Models 1–3). Whereas the one-factor model fit the data poorly, the two- and three-factor models fit the data reasonably well. Chi square difference tests indicated that the two-factor model fit better than the one-factor model, χ^2 (1) = 131, $p < 0.0001$, and the three-factor model fit better than the two-factor model, χ^2 (2) = 181, $p < 0.0001$. Although fit indices substantiated the improved fit between the one-and two-factor models, they did not indicate improvement in fit between the two- and three-factor models (fit indices were identical for two- and three-factor models). Moreover, inspection of parameter estimates from the three-factor model revealed that the estimated correlation between the congregation and clergy latent factors was 0.96. Correlations of this magnitude suggest that the factors are essentially identical. We concluded that the two-factor model provided the most parsimonious fit to the data.

Although the fit indices for the two-factor model were in the acceptable range, we considered modifications to improve fit prior to investigating measurement invariance models.

Modification indices suggested that residual correlations between five pairs of items could improve fit. Two residual correlations were between pairs of adjacent items (Items 1 and 2, 5 and 6). The remaining three residual correlations were between negatively worded items. Reestimating the two-factor model to include these five residual correlations significantly improved model fit as indicated by a chi square difference test, χ^2 (5) = 263, $p < 0.0001$, as well as improved goodness-of-fit statistics (CFI increased from 0.90 to 0.94; RMSEA decreased from 0.06 to 0.04; compare Models 2 and 4 in Table 2).

Measurement Invariance—Having established a good fitting CFA model in the overall sample, a series of four increasingly restrictive multiple group models were fit to determine whether the measurement properties of the RSS were equivalent across race groups. The results of measurement invariance models are summarized in Table 2 (labeled Models 5–8). The general logic and procedures for testing for measurement invariance have been articulated by Widaman and Reise (1997) and are not repeated here. The model imposing configural invariance of the RSS across race groups fit the data reasonably well (per fit indices) and was used as a baseline model. Inspection of parameter estimates across groups indicated that the factor loadings for the three negatively worded items (Items 7, 12, 17), as well as Item 4, took on noticeably different values across groups, in each case being smaller (less related to underlying construct) in the African-American versus European-American group.

A model imposing weak measurement invariance was established by reestimating the configural (baseline) model while equating all factor loadings across groups. Although goodness-of-fit indices between configural and weak invariance models were largely identical, the weak invariance model fit worse than the configural (baseline) model, χ^2 (19) = 42, $p = 0.002$. Given the observation that four of the items may differ by race group, the weak invariance model was reestimated equating all factor loadings except for the four items noted above. This *partial* weak invariance model did not statistically differ from the configural (baseline) model, χ^2 (15) = 24, $p = 0.087$.

Finally, a model imposing strong measurement invariance was established by reestimating the partial weak invariance model while additionally equating all intercepts for the items that had equal factor loadings (i.e., 17 of 21 items). Goodness-of-fit indices between the partial weak and partial strong invariance models were identical. A formal test of equivalence between weak and strong models indicated a modest difference, χ^2 (30) = 44, $p = 0.047$. Nonetheless, inspection of item intercepts across race groups in the previous model did not reveal any items that appeared to work differently across race groups.

Having established that the majority of RSS items worked equivalently across race groups, we next describe group differences in factor means, variances, and correlations for God and congregation/clergy support factors. Latent means for the European-American group were fixed to 0 for identification purposes and served as a reference. Relative to the European-American reference group, African-American respondents had latent mean scores that were 0.12 and 0.24 standard deviation units larger on the congregation/clergy support scale ($z = 1.73$, $p = 0.084$) and the God support scales ($z = 4.64$, $p < 0.001$), respectively. Latent variances for the European-American group were fixed to 1.0 for identification purposes and served as a reference. Latent variances for the God and congregation/clergy support scales were estimated as 0.78 and 0.95, respectively. Thus, African Americans exhibited approximately 22 percent and 5 percent less variation in the latent variables for God and congregation/clergy support, relative to the European-American reference group. Nonetheless, there was significant variability in God and congregation/clergy support scores among African-American participants. Finally, the correlations between God and congregation/clergy factors were 0.47 and 0.24 for European-American and African-American groups, respectively, indicating a

greater dissociation between support from God relative to congregation/clergy among African-American respondents.

Criterion Validity—Criterion validity was initially established by regressing three latent variables (relationship quality, family resources, mental health) and a single indicator of physical health onto the congregation/clergy and God support scales that were derived from CFAs, above (identical to Figure 1 except secular social support not yet included in model). This model fit the data well (see Model 1 of Table 3). Standardized regression coefficients for criterion validity analyses involving the entire sample are summarized in Table 4. God support was predictive of relationship quality and family resources, whereas congregation/clergy support was predictive of mental health, relationship quality, family resources, and subjective health. Although many of these effects were significant, the standardized regression coefficients were small, as were R^2 for outcomes (see Table 4).

These analyses were repeated using a multiple groups approach (i.e., Model 1 was repeated for both race groups simultaneously). The first model (Model 2 of Table 3) did not impose any constraints on regression parameters across race groups. The second model (Model 3 of Table 3) imposed equality constraints on the regression coefficients relating the four primary outcomes to each of the two RSS scales. A chi square difference test between models was not significant, $\chi^2(8) = 8.9$, $p = 0.35$, indicating that race did not moderate the relationship between any of the RSS scales with any of the outcomes.

A parallel set of criterion validity analyses were estimated that included an additional predictor, namely, a latent variable representing general social support (Figure 1). This latent variable was comprised of the four QSS scales (support from community involvement, family, friendship, and intimate relationships). This model fit the data reasonably well (see Model 4 of Table 3). Standardized regression coefficients representing the joint effects of the RSS scales and QSS on outcomes are summarized in Table 4. With the inclusion of a latent variable of general social support, the congregation/clergy scale was no longer predictive of any outcome; moreover, the God support scale was only predictive of relationship quality. In contrast, the latent variable of social support was strongly predictive of all four outcomes. The superiority in prediction associated with the general measure of social support was most evident when comparing R^2 values across models (compare two columns of R^2 in Table 4). Specifically, the inclusion of the general measure of social support resulted in three times as much variation being explained for family resources and health outcomes and almost 10 times as much variation being explained for mental health and relationship quality outcomes. A parallel set of multiple group models as those described above was run to test whether the relationship between social support (from God, clergy/congregation, and general sources) were moderated by race. A chi square difference test between models in which regression parameters were free versus fixed across race groups was not significant, $\chi^2(12) = 2$, $p = 0.99$, indicating that race did not moderate the relationship between either religious or general social support in the prediction of outcomes (compare Models 5 and 6 in Table 3).

Qualitative Study

Though the ethnographic component of the FLP did not investigate the RSS directly, we used qualitative data to gain a broader perspective on the role of religious social support in families like those included in the quantitative study. Specifically, we examined what kinds of religious support women used, how they felt supported by religion, and the language women used to discuss this support. The latter enabled us to understand whether the statements in the RSS are indicative of how women conceptualize and experience support from their religious lives.

We employ two data analysis strategies. First, every interview transcription was analyzed to determine all instances of participants discussing God or her congregation or clergy in terms

of support. All references to religious support were then sorted to delineate "support from God statements" from "support from congregation or clergy statements" for each participant. We then noted whether the reference to God or congregation or clergy was made spontaneously or whether it occurred in response to a specific question about religion. An example of a spontaneous reference follows.

> Interviewer: "How do you deal with stress?"

> Respondent: "Talk to the Lord, write letters to the Lord. That's what I been doing, writing a letter to the Lord every morning. Just tell Him my needs. He know what I need, He know what I'm going through so I just talk to Him about it. He the only one who can fix it."

An example of a solicited reference is:

> Interviewer: "When you pray, how does it help you?"

> Respondent: "It makes me feel better. Like somebody heard me and I'm not talking to myself. I let out some of my stress and my anger. It gives me hope."

Second, all respondents completed a structured interview on social support during which they named sources of emotional, informational, or financial support in their lives. These interviews were analyzed to identify respondents who had volunteered reporting receiving support from God or a member of their congregation or clergy. We also examined the full data set (case studies of each respondent) to determine whether she classified herself as religious or spiritual, and whether she attended church. We analyzed the data for differences in ethnicity but did not look at respondents' differences by education or income due to a lack of variability in the sample.

Virtually every participant expressed belief in God, and over a third attended church regularly. There were no ethnic differences in the number of women who believed in God or who attended church. The majority of participants made at least one reference to religion as social support (either in terms of God or congregation/clergy) and most women made several statements throughout the series of interviews. Typical examples of references to support from God included, "God won't give me more than I can handle"; "God watches over me and helps me when I need it"; and "God has a plan for me." Respondents' statements regarding support from fellow church members or leaders almost always involved specific deeds to help the respondent. For example: "A preacher from church came and prayed for me when I was really bad off"; "A woman from my church helped me find housing"; and "People from my church donate money to me when I need it." Women were over three times as likely to reference God or spirituality as a source of support than a member of their congregation or clergy. This mirrors the finding in the quantitative data of higher mean scores for God support versus congregation or clergy support (compare mean scale scores for African American and white on God, congregation, and clergy support scales at the bottom of Table 2). Spontaneous statements about religious support outnumbered solicited statements by more than two to one. African-American women made many more references to religious support than did white women, though the two groups talked about religious support in the same general ways. This also mirrors findings in the quantitative data that African-American women had higher latent means on both congregation/clergy and, especially, God support factors.

The analysis of the structured social support interview indicates that over half of the African-American participants listed God or a member of their congregation or clergy as a significant source of support in their lives. Conversely, none of the white participants listed God or congregation or clergy as a source of support.

Discussion

Improved measurement of constructs like religious social support is critical for the scientific study of religion. The RSS Scale was developed to provide a psychometrically sound measure of social support received through one's relationship with God, congregation members, and clergy. This study provided a rigorous evaluation of the RSS in a community sample.

A two-factor model provided the most parsimonious fit to the data, with God support being distinguished from congregation/clergy support. This differs from the three-factor solution (God, clergy, congregation support) proposed by the scale developers. We suspect that these differences are due to the characteristics of the individuals who participated in the two studies. Participants in our study, who were new mothers sampled from the general population, essentially made no distinction between support received from the congregation versus clergy. This may have been due to the fact that many did not attend a religious service on a routine basis. It is worth emphasizing that although we oversampled low income and, in North Carolina, African-American families, all analyses were weighted to reflect the characteristics of the counties within which our families resided. In contrast, participants in Fiala, Bjorck, and Gorsuch's (2002) study, who were sampled from Protestant church directories, likely had a stronger commitment to religious service, thereby permitting them to make a distinction between support received from their congregation versus clergy.

Criterion validity analyses indicated that both RSS scales were significantly related to indices of mental and physical health, as well as relationship quality and family resources. However, virtually all of the relationships with health and behavioral outcome variables were reduced to nonsignificance in the presence of a secular measure of social support. These results contradict those reported by Fiala, Bjorck, and Gorsuch (2002). We speculate that among the segment of the population who regularly attend church (more likely represented in the Fiala sample), religious social support may make unique contributions above and beyond general social support in the prediction of well-being. In our community sample, where belief in God and attendance at religious services are more variable, social support received from God and congregation/clergy convey little unique information beyond that available in general measures of social support.

With the exception of trivial differences in the performance of four items, the factor structure of the RSS did not vary by race group. Although African-American participants endorsed higher mean levels of congregation/clergy and especially God support and exhibited less variation in their scores relative to European-American participants, all respondents endorsed high levels of God and congregation/clergy support, and the reliability (internal consistency) of scales was high. There was no evidence that the relationship between social support (religious or general) and outcomes was moderated by race. Collectively, these results suggest that the RSS is an equally good measure for European and African-American participants.

Qualitative data indicated that while there were no race differences in reported belief in God, church attendance, or the manner in which religious support was discussed, there were differences in the quantity of religious support references made during interviews. African-American participants were far more likely to make religious support references, both spontaneous and solicited, than white women. The combined results of quantitative and qualitative data suggest that differences in the use of religious language by African-American (versus European-American) participants, particularly comments about God, may reflect more of a cultural expression of religious belief that does not necessarily serve a psychologically adaptive function distinct from the protection afforded by secular measures of social support.

This study suffered from at least three limitations. First, it is unclear if/how these results would generalize to a representative sample of men and/or from women of more diverse ages. Second,

all of the outcomes were based on self-reports. Some of the associations between social support and outcomes were due to shared method variance. Moreover, improved measurement (e.g., diagnostic interviews to index mental health) may have changed the results of criterion validity analyses. Third, the quantitative study did not explicitly ask about the frequency of participant church-going behavior. Hence, we cannot test speculations that differences between this study and those reported by Fiala and colleagues are a function of differences related to churchgoers.

In sum, the construct of social support has been conceptualized as a potential mediator of the positive relationship between religious involvement and improved physical and mental health. The ability to rigorously test this proposition is dependent on the availability of psychometrically sound measures of religious social support. The RSS Scale represents one such measure. This study further documented a number of positive aspects of this measure, as well as revealed ways that this measure might be improved or modified.

Acknowledgments

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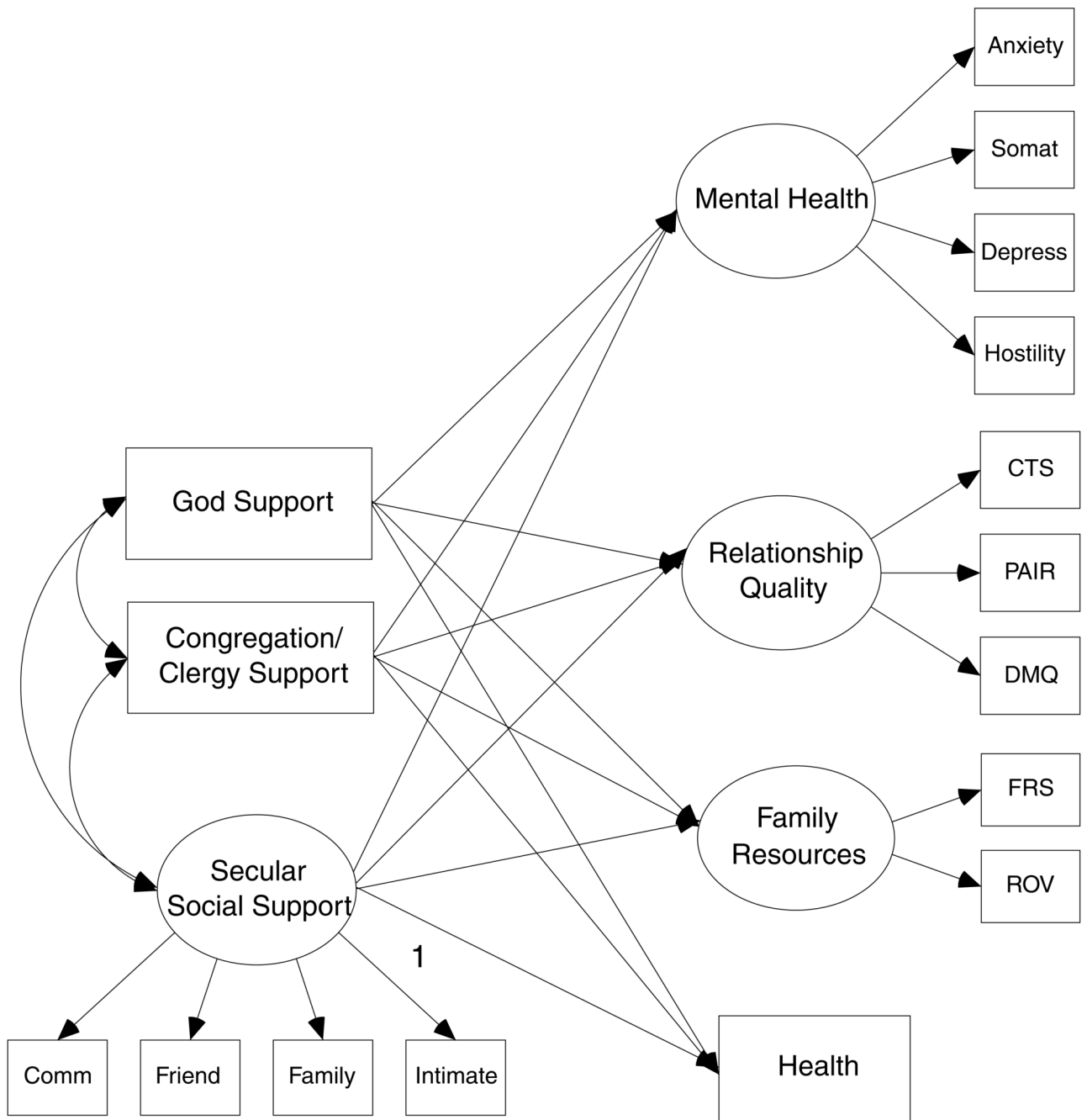
FIGURE 1.
CRITERION VALIDITY: HEALTH AND BEHAVIORAL OUTCOMES REGRESSED ON
RELIGIOUS AND SECULAR SOCIAL SUPPORT

TABLE 1

RSS ITEM AND SCALE DESCRIPTIVE STATISTICS

Abbreviated Item Text	Total		European American		African American	
	N	X (95% CI)	N	X (95% CI)	N	X (95% CI)
1. God cares about my life.	1,139	4.6 (4.5–4.6)	662	4.5 (4.5–4.6)	477	4.7 (4.6–4.8)
2. Worth in the eyes of God.	1,130	4.6 (4.6–4.7)	657	4.6 (4.5–4.7)	473	4.7 (4.6–4.8)
3. Turn to God for advice.	1,123	4.5 (4.5–4.6)	645	4.5 (4.4–4.6)	478	4.7 (4.6–4.8)
4. God gives assistance.	1,122	4.5 (4.4–4.5)	648	4.4 (4.3–4.5)	474	4.7 (4.6–4.8)
5. I feel appreciated by God.	1,133	4.5 (4.5–4.6)	657	4.5 (4.4–4.6)	476	4.7 (4.6–4.8)
6. God gives sense that I belong.	1,131	4.5 (4.5–4.6)	655	4.5 (4.4–4.6)	476	4.7 (4.7–4.8)
7. I do not feel close to God.	1,116	1.6 (1.6–1.7)	649	1.6 (1.5–1.7)	476	1.6 (1.5–1.8)
8. Turn to congregation for advice.	867	3.9 (3.8–4.0)	498	3.9 (3.8–4.0)	369	3.9 (3.8–4.1)
9. Church leaders give assistance.	834	4.1 (4.1–4.2)	474	4.1 (4.0–4.3)	360	4.2 (4.1–4.4)
10. Congregation cares about my life.	827	4.2 (4.1–4.3)	466	4.2 (4.1–4.3)	361	4.3 (4.1–4.4)
11. Worth in eyes of church leaders.	813	4.2 (4.1–4.3)	457	4.2 (4.1–4.3)	356	4.3 (4.1–4.4)
12. Not close to my congregation.	817	2.2 (2.0–2.3)	463	2.2 (2.1–2.3)	354	2.0 (1.9–2.2)
13. Church leadership for advice.	833	4.2 (4.1–4.3)	469	4.1 (4.0–4.3)	364	4.3 (4.1–4.4)
14. Congregation sense I belong.	820	4.2 (4.1–4.3)	461	4.2 (4.1–4.3)	359	4.3 (4.1–4.4)
15. Church leaders care about my life.	813	4.2 (4.1–4.3)	458	4.2 (4.1–4.3)	355	4.3 (4.2–4.5)
16. Appreciated by congregation.	811	4.2 (4.1–4.3)	457	4.2 (4.1–4.3)	354	4.3 (4.2–4.5)
17. Not feel close to church leaders.	804	2.0 (1.9–2.1)	459	2.0 (1.9–2.1)	345	1.8 (1.6–1.9)
18. Congregation give assistance.	822	4.2 (4.1–4.3)	465	4.2 (4.1–4.3)	357	4.4 (4.2–4.5)
19. Leaders sense that I belong.	816	4.2 (4.1–4.3)	458	4.2 (4.1–4.3)	358	4.3 (4.2–4.5)
20. Worth in eyes of congregation.	815	4.2 (4.1–4.3)	463	4.2 (4.1–4.3)	352	4.3 (4.1–4.4)
21. Appreciated by church leaders.	815	4.2 (4.1–4.3)	458	4.1 (4.0–4.3)	357	4.3 (4.2–4.4)
Number of missing items	1,156	4.3 (3.9–4.7)	676	4.4 (3.9–4.9)	480	3.8 (3.3–4.4)
God Support Scale	1,118	4.5 (4.5–4.6)	646	4.5 (4.4–4.6)	472	4.7 (4.6–4.7)
Congregation Support Scale	790	4.1 (4.1–4.2)	451	4.1 (4.0–4.2)	339	4.2 (4.1–4.3)
Clergy Support Scale	793	4.2 (4.1–4.3)	450	4.2 (4.1–4.3)	343	4.3 (4.2–4.4)

Note: X = Mean; CI = Confidence interval; God, Congregation, and Clergy Scales were not scored if more than one of the items constituting the scale was missing.

TABLE 2

MEASUREMENT MODELS

Model	Model Description	χ^2	df	p	SRMR	CFI	RMSEA
1	1 factor (21 items)	2,772.3	189	<0.0001	0.21	0.63	0.11
2	2 factors (God, clergy/congregation)	899.6	188	<0.0001	0.05	0.90	0.06
3	3 factors (God, clergy, congregation)	866.6	186	<0.0001	0.05	0.90	0.06
4	Modified 2 factors (correlated errors)	598.2	183	<0.0001	0.04	0.94	0.04
5	Configural invariance (no constraints)	945.6	366	<0.0001	0.05	0.92	0.05
6	Weak invariance	988.1	385	<0.0001	0.06	0.92	0.05
7	Weak (partial) invariance	971.0	381	<0.0001	0.06	0.92	0.05
8	Strong (partial) invariance	999.3	396	<0.0001	0.06	0.92	0.05

Nested Tests	χ^2	df	p
Model 2 vs. 1	130.7	1	<0.0001
Model 2 vs. 3	181.0	2	<0.0001
Model 2 vs. 4	262.9	5	<0.0001
Model 5 vs. 6	41.7	19	0.002
Model 5 vs. 7	22.9	15	0.087
Model 5 vs. 8	44.1	30	0.047

Note: $N = 1,156$; *df* = degrees of freedom; *p* = probability; SRMR = standardized root mean square residual; CFI = comparative fit index; RMSEA = root mean squared error of approximation.

TABLE 3

STRUCTURAL MODELS

Model	Model Description	χ^2	df	p	SRMR	CFI	RMSEA
1	TS: DVs on RSS	176.9	50	<0.0001	0.04	0.95	0.05
2	MG: DVs on RSS (no constraints)	233.5	106	<0.0001	0.06	0.96	0.05
3	MG: DVs on RSS (regression constraints)	242.4	114	<0.0001	0.06	0.96	0.04
4	TS: DVs on RSS + General	466.4	97	<0.0001	0.05	0.90	0.06
5	MG: DVs on RSS + General (no constraints)	590.6	206	<0.0001	0.06	0.91	0.06
6	MG: DVs on RSS + General (regression constraints)	592.6	218	<0.0001	0.06	0.91	0.06

Nested Tests	χ^2	df	p
Model 2 vs. 3	8.9	8	0.35
Model 5 vs. 6	2.0	12	0.99

Note: $N = 1,156$; *df* = degrees of freedom; *p* = probability; SRMR = standardized root mean square residual; CFI = comparative fit index; RMSEA = root mean squared error of approximation; TS = total sample analyses; MG = multiple group analyses; DVs = dependent variables; General = general social support latent variable.

TABLE 4

CRITERION VALIDITY IN TOTAL SAMPLE

Outcome Construct	Religious Social Support				Religious + General Social Support				
	R^2	β (God)	β (C/C)		R^2	β (God)	β (C/C)	β (GSS)	
Mental health	0.035	-0.076	-0.143[*]		0.386	-0.016	0.017	-0.623[***]	
Relationship quality	0.067	-0.113[*]	-0.159[**]		0.630	-0.032	0.045	-0.792[***]	
Family resources	0.070	0.149[***]	0.134[*]		0.231	0.111[**]	0.019	0.423[***]	
Health	0.019	-0.018	-0.104[*]		0.061	0.002	-0.047	-0.216[***]	

[*] $p < 0.05$,

[**] $p <= 0.01$;

[***] $p < 0.001$.

Note: God = God support scale; C/C = congregation/clergy support scale; GSS = latent variable of general social support.