

Does Negative Interaction in the Church Increase Psychological Distress? Longitudinal Findings from the Presbyterian Panel Survey*

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This study examines the effects of negative interaction in church on psychological distress. After outlining a series of theoretical arguments linking negative interaction with health and well-being, relevant hypotheses are tested using longitudinal data from two surveys of the 1997–1999 Presbyterian Panel, a nationwide panel of members and elders (lay leaders) in congregations of the Presbyterian Church (USA). Findings confirm that negative interaction appears to foster or exacerbate distress over the study period. In addition, specific dimensions of social negativity have distinctive effects; the impact of criticisms on distress surface only in cross-sectional models, while the effects of excessive demands emerge only in the longitudinal models. No subgroup variations in these effects are detected. Implications of these findings are discussed with regard to (a) research on religion and health and (b) congregational life, and a number of promising directions for future research are elaborated.

Key words: religion; churches; congregations; social support; negative interaction; health.

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Over the past quarter century, a growing literature has examined relationships between individual religious involvement and health, including mental and physical health and mortality risk. Although this work remains highly controversial in some quarters (Sloan et al. 1999), mounting evidence indicates that some aspects of religiousness and spirituality can have salutary effects on a range of health and well-being outcomes (Koenig et al. 2001; Smith et al. 2003; Hummer et al. 2004). Many—perhaps most—studies in this area have gauged religious involvement in terms of affiliation and/or self-reported religious behavior, such as the frequency of attendance at services, or the frequency of prayer or other devotional activities. Recognizing the limitations of such measures, in recent years investigators have increasingly turned to more sophisticated conceptualization, focusing on content-based measures (e.g., personal spiritual experiences, spiritual well-being) and functional measures (e.g., meaning, coping, support) in order to capture the role of religiousness and spirituality in individual lives (Ellison and Levin 1998; Krause 2002; Idler et al. 2003).

Although most studies in this area highlight the salutary effects of religious involvement, a small but growing body of work focuses on the deleterious effects of “spiritual struggles” (Exline 2002; Pargament 2002). As McConnell et al. (2006) point out, the literature identifies three main classes of such problems: (a) intrapsychic struggles, such as chronic doubting or other internal conflicts over religion or spiritual concerns; (b) interactional struggles, or insecure or conflictual relationships with a (perceived) divine other; and (c) interpersonal struggles, or problematic relationships with other persons (e.g., congregation members, clergy) in religious settings. Such struggles are relatively rare in samples drawn from the general, community-dwelling population, but they are more common in certain types of clinical samples. Study findings show that these struggles tax health and well-being, as well as spiritual comfort; they are associated with a wide array of undesirable outcomes, ranging from depression, anxiety, and suicide ideation to health declines, and elevated mortality risk in some clinical samples (Pargament et al. 2001; Exline 2002; Krause 2006a).

Our study focuses on interpersonal struggles, i.e., negative interaction in the church. An emerging body of literature, reviewed below, convincingly shows that negative interaction in secular settings can have deleterious implications for mental and physical health. This provides a strong basis for investigating social negativity within religious communities as well. Despite the growing interest in positive congregational relationships, negative interaction in these settings remains understudied, and less is known about negative interaction in the church than about other types of spiritual struggles.

In particular, several key issues remain unresolved. The evidence to date concerning links between negative interaction within the congregation and psychological well-being has been entirely cross-sectional. To our knowledge, none of these works have addressed the effects of negative interaction on change in distress, which is an important prerequisite for assessing causality.

Another benefit of analyzing longitudinal data is that it is possible to assess the effects of changes in negative interaction on changes in distress. This adds a much-needed dynamic element to the field; by studying these changes we come closer to capturing social reality. It is also possible to assess whether the duration of exposure to social negativity makes a difference for well-being. Specifically, we can compare the psychological effects of consistent exposure to social negativity, as well as increasing and diminishing levels of social negativity, with those of consistent absence of negative interaction.

In addition, it remains unclear whether certain kinds of negative interaction in church are more problematic than others, or whether chronic negative interaction has a more deleterious effect on individuals than interpersonal conflict that is resolved quickly. This is worth exploring because studies conducted in secular contexts indicate that specific domains of negative interaction can differ in their effects on well-being (Newsom et al. 2005). Finally, it is not clear whether the effects of church-based negative interaction vary according to the salience of religious or congregational roles, a pattern that has been suggested by at least one previous study (Krause et al. 1998).

The remainder of this article is organized as follows. We begin by summarizing theoretical arguments linking negative interaction in church with mental health, particularly psychological distress. Relevant hypotheses concerning main and contingent effects are then tested using both cross-sectional and longitudinal data for members and elders from the 1997–1999 Presbyterian Panel, a nationwide sample of PCUSA constituencies. Finally, we review the findings and discuss their implications for future research on church-based social networks, as well as the religion-health connection more generally.

THEORETICAL AND EMPIRICAL BACKGROUND

Negative Interaction, Health, and Well-being

A voluminous literature explores the implications of social relationships for the health and well-being of individuals (Cohen 2004; Krause 2005a). One longstanding area of interest has focused on the apparent benefits of social integration, gauged in terms of social network size and density, frequency of interaction, number of group affiliations, and other indicators. Most studies in this tradition have shown that persons with more friends, regular contact with others, frequent opportunities for novel experiences and social stimulation enjoy better health and well-being than others, and that social isolates—i.e., those who lack meaningful contact with others—tend to fare poorly (House et al. 1988). Another major tradition of work has centered on the quality and functions of social relations. Researchers have identified a number of types of social support, including tangible aid (e.g., provision of goods, services, information) and socioemotional assistance (e.g., provision of companionship, morale support) (Barrera 1986). Still others have emphasized the value of

anticipated support, or the perception that the members of one's social network would provide needed assistance if circumstances arose (Wethington and Kessler 1986; Krause 1997; Shaw 2005). These functional aspects of social bonds can promote mental and physical health directly, and can also enhance individuals' resilience in the face of chronic stress or major life events. Taken together, this body of work on social relationships and health now encompasses literally thousands of published studies over the past quarter century, and the results demonstrate that many aspects of social integration and support can yield significant benefits for individuals' health and well-being.

However, it would be a serious mistake to assume that all social interaction is pleasant, and that all social relationships have salutary health effects. Indeed, a small but growing body of evidence shows that unpleasant exchanges may exact a negative toll on individual health and well-being (Rook 1984; Krause and Jay 1991; Krause 2005b). According to some researchers, the deleterious effects of unpleasant interactions on well-being may actually be greater in magnitude than the salutary effects of positive social support (Okun and Keith 1998; Lincoln et al. 2003; Bertera 2005). Clearly this is an area that warrants further scrutiny.

Why are negative interactions so potentially damaging to personal well-being? Prior theory and research suggest several reasons (Rook 1990; Krause 2005a). First, interpersonal unpleasantness violates widely shared expectations regarding social conduct. We are taught from early childhood to value civility and to avoid confrontation. Thus, negative interaction may be disturbing in part because it is counter-normative behavior and thus less common than neutral or positive contact. When individuals find themselves engaged in negative interactions with others, it is usually unexpected, and consequently unsettling.

Negative interaction may also undermine psychological well-being for yet another reason: unpleasant exchanges with others may challenge fundamental notions concerning the self, causing us to reconsider how we think that others see us, and in turn, how we see ourselves (Lakey et al. 1994; Newsom et al. 2005). Briefly, a fundamental premise in social psychology is that feelings of self-worth are critical determinants of both health and well-being. Classic social psychological theory holds that feelings about the self are strongly influenced by feedback from significant others, as suggested by Cooley's (1902) notion of the "looking glass self" (Rosenberg 1981). It follows from this that when the feedback from others is perceived to be favorable, this can enhance feelings of self-worth and well-being (Ellison 1993). However, it is also the case that when the feedback received from others is experienced as negative, this may undermine well-being (Rook 1990).

Negative Interaction in Religious Congregations

Although congregational networks and social relationships received short shrift from researchers for years, a recent body of work now focuses on church-based social support and its links with mental and physical health (Taylor and

Chatters 1988; Ellison and George 1994; Bradley 1995; Krause 2002). While investigators now recognize the potentially salutary effects of congregational support systems (Krause 2002, 2006b; Krause et al. 2002), to date only a few studies have explored negative interactions within religious settings. Indeed, of the types of “spiritual struggle” noted earlier, the interpersonal domain may be the least studied and least understood.

It is well known that congregations are sometimes sites of conflict (Becker et al. 1993). These can range from disputes over church administration, to theological issues, to politics. These conflicts are usually studied from the standpoint of the organizations themselves, rather than the well-being of individual members (Becker et al. 1993; Hartman 1997). However, organizational conflicts may filter down to interpersonal relations. Interactions among church members may become tense as individuals feel pressed to take sides in these disputes. One’s personal good will or morality may be called into question by others with differing views. Of course, many negative interactions have little to do with such broader issues facing the congregation as a whole (Krause et al. 2000). Rather, individuals often disagree over petty matters, and some face criticism, gossip, or subtle ostracism from judgmental members because of their actions, views, or lifestyles, or those of their loved ones. These latter interactions may be experienced negatively as intrusiveness.

In addition, some religious groups are “greedy institutions.” That is, they may demand significant inputs of time, money, and energy—more than some members may be able to give. For individuals, requests or demands for participation in church activities may conflict with family, work, or other commitments. Viewed from this perspective, such demands may also be experienced as negative interaction. They may be stressful for church members, who feel torn between their commitment to the congregation and their other obligations. In these ways, congregational settings may give rise to negative interactions, which may foster or exacerbate feelings of distress.

Not all types of negative interaction are equal. For example, in one recent study, Newsom et al. (2005) showed that certain domains of negative interaction have more deleterious effects than others on the mental health of older adults. In particular, they found that elderly persons are more negatively affected by feelings that they are neglected by family and friends (e.g., not visited often enough) than by other types of negative interaction (e.g., criticism). These findings suggest that specific types of social negativity may differ in their psychological consequences for various segments of the population.

How might this general principle work in the present study? Our analysis centers on two specific facets of negative interaction in the church: (a) criticism and intrusiveness; and (b) excessive demands for time, money, and energy. Although both dimensions may affect well-being adversely, it is reasonable to expect that high levels of demands may take a particularly heavy toll on mental health, one that may be longer lasting than that of critical comments because excessive demands may have a spillover effect on other domains of life experience.

For example, when excessive demands arise in church, people not only feel torn between their allegiance to their faith community and their other obligations, but the demands of church may lead people to devote less time to their spouses and children, to leisure activities with secular friends, or to important tasks in the workplace. As a result, individuals may confront additional problems in these other domains, which may further increase their feelings of distress.

Despite the potential importance of negative interaction within the congregation for members' health and well-being, this topic has received little attention from researchers. One exception to this general pattern of neglect is a study by Krause et al. (1998), who examined the links between negative interaction and positive and negative effect among Presbyterian (PCUSA) clergy, elders, and rank-and-file laypersons. Findings from that study suggest that the effects of negative interaction differ according to the respondent's role within the church. The association between negative interaction in the church and psychological well-being among rank-and-file laypersons appear to be modest in comparison to persons who occupy leadership positions within the congregation.

These patterns make sense from the standpoint of social-psychological theories of role salience and role hierarchies (Stryker 1987; Burke 1991). Briefly, negative feedback in those social roles that are most important to the individual are often experienced as particularly unpleasant or threatening to self-image, and therefore may have potent noxious effects on mental health, as in the case of religious professionals (clergy) or lay leaders (elders), who have considerable responsibility for the routine execution of church affairs. Negative interactions with fellow church members, while displeasing, may not be as harmful for laypersons, for whom: (a) continued church involvement is entirely voluntary, and (b) personal identity is likely to come from other, more salient social roles, such as those associated with family and work.

Based on this role salience perspective, the effects of negative interaction may vary across other subgroups as well. Because the frequency of attendance at religious services may reflect differences in personal commitment and temporal investment in religious congregations, as well as the degree of exposure to unpleasant social exchanges, it is reasonable to expect that negative interaction in church may take a greater toll on those who attend services more frequently. In addition, a long tradition of research demonstrates that women are more religious than men by virtually any conventional indicator, and at all stages of the life course (Miller and Hoffmann 1995; Sherkat and Ellison 1999). Further, within both religious and secular contexts, women tend to be more focused on relationships and relational stability than men (Krause et al. 2002). Compared with younger persons, older adults are also more engaged with religiousness and spirituality, and they tend to gain more from supportive social relations within the church than their younger counterparts (Krause 2005c). In light of these patterns, and the role salience perspective articulated by Krause et al. (1998), it is possible that women and older adults may be more adversely affected by

negative church-based interactions than other persons. However, to date we are aware of no studies that systematically investigate these relationships.

In sum, our understanding of these issues remains in its infancy. In particular, several important issues raised by this previous work deserve closer attention. First, one limitation of that earlier study was its reliance on cross-sectional data. This leaves open a crucial question: Does negative interaction in the church have any clear long-term impact on psychological well-being? And this, in turn, raises a related issue: if negative interaction occurs but is resolved quickly, does it still have a deleterious effect on mental health, or is only chronic negative interaction harmful? In addition, since the term “negative interaction” can refer to a diverse array of phenomena, are certain types of experiences categorized as negative interaction more psychologically damaging than others? And finally, is negative interaction within the church more stressful for certain segments of the churchgoing population than for others? In light of the role salience perspective elaborated in the earlier work by Krause et al. (1998), are the deleterious effects of negative interaction in the church especially pronounced (a) for church elders, as opposed to rank-and-file laypersons, or (b) for more active members when compared with their less active counterparts?

HYPOTHESES

Based on the theoretical ideas and empirical findings described above, we propose the following hypotheses:

H1: Negative interaction has both short- and long-term effects on distress.

H2: Individuals who experience (a) consistently high levels of negative interaction, (b) increasing levels over time, and/or (c) diminishing levels over time exhibit significantly greater symptoms of psychological distress than individuals with (d) consistently low levels of negative interaction. Symptoms of distress at T2 will be greater for persons in group (a), followed by those in groups (b), (c), and (d), in that order.

H3: Certain types of negative interaction are more harmful than others such that excessive demands from coreligionists are more detrimental on psychological well-being than criticisms from others.

H4: Negative interaction is more harmful for certain subgroups such as church elders, frequent church attenders, women, or older adults, who tend to devote more time and energy to congregational life.

DATA

To test these hypotheses, we analyze 1997–1999 data from a national panel survey of clergy, elders, and rank-and-file members of the Presbyterian

Church (USA). The members sample was drawn from the population of active members of PCUSA congregations, and the elders sample was drawn from the population of elders who were currently serving on the session of a PCUSA congregation. (The session is the governing board of a Presbyterian congregation.) Clergy are excluded in the analyses because of their special church position, which makes them differ significantly from elders and laypersons in terms of the quantity and intensity of negative interaction encountered within congregations, and the adaptation of religious coping responses.

The Presbyterian Panel was created from Presbyterians who completed and returned a screening survey in late 1996. These individuals were sent a total of 12 mail surveys, beginning in February 1997 and ending in November 1999. We use data on sociodemographic characteristics and church participation from the screening survey, and on negative interaction, distress, and other covariates from the first and last waves.

The member sample was drawn in two stages. First, using proportional sampling based on size, 425 congregations were selected from the population of 11,361. Selected congregations were then asked to provide eight names by matching eight preassigned random numbers to a numbered list of all active members. In all, 73 percent of congregations cooperated, providing 2,163 names. These individuals were surveyed in the fall of 1996, and 63 percent ($n = 1,363$) responded, becoming the member sample of the 1997–1999 Panel. Attrition over the three-year life of the Panel resulted in 898 participating members for the final survey in November 1999.

Elder names were sampled from the same 425 congregations from which members were chosen, with four or five names drawn randomly for each from the list of all elders serving on sessions maintained by the national offices of the PCUSA. A total of 1,759 elders were selected, with 1,316 (75 percent) returning the screening questionnaire and becoming the elders sample of the three-year Panel. Attrition reduced the number to 1,008 by November 1999.

Response rates to the February 1997 survey were 75 percent for members and 79 percent for elders, and to the November 1999 survey, 63 and 66 percent, respectively. For this analysis, the two samples are combined. To maintain comparability between the cross-sectional and longitudinal analyses, we include only those cases for which complete data are available at both waves. After listwise deletion of missing values, the total sample size in this study is 898.

MEASURES

Dependent Variables: Distress

Our dependent variables are levels of distress at two sequential data collection points. At T_1 (February 1997) and T_2 (November 1999), respondents were asked: "How much of the time during the past four weeks: a) they have been a very nervous person; b) have felt so down in the dumps; c) have felt

downhearted and blue; d) felt worn out; and e) tired?" Responses to each item range from (1) all of the time to (6) none of the time, and they are reverse coded where appropriate, so that higher scores reflect greater levels of distress. The mean indice range from 1 to 5, with the Cronbach's α of .81 for distress at T_1 and .79 for distress at T_2 .

Independent Variables: Negative Interaction

We include both scales and single-item indicators to gauge different aspects of negative interactions within congregations. In the survey, respondents were asked: "Think back over the past year, how often have the people in your congregation, a) made too many demands on you, and b) been critical of you and the things you have done?" Response categories include: 1 (very often), 2 (sometimes), 3 (rarely), and 4 (never). Negative interaction scales at T_1 and T_2 are composite measures in which the above two items are averaged. The correlation of these two items at T_1 and T_2 is .47 and .49, respectively. In order to examine whether certain types of negative interaction are more problematic than others for distress, we disaggregate the composite measure and use the single-item indicators of "excessive demands" and "criticisms" in the multivariate analyses, replacing the negative interaction scales. Responses to these items are coded such that higher scores reflect greater levels of negative interaction.

Sociodemographic and Religious Adjustments

We include the following sociodemographic adjustments: age is in years. Gender is coded 1 for female. Total family income before taxes is an ordinal variable coded into 14 categories, with a minimum category of under \$10K and a maximum category of over \$150K.

Three religious indicators are used as covariates. Church leadership roles are measured via a dummy variable, coded 1 for elders and 0 for rank-and-file laypersons. Religious attendance is gauged as a single item tapping organizational religious involvement. Respondents were asked: "How often do you attend religious services?" Responses are coded from 1 (never) to 6 (every week). We use the frequency of prayer as an indicator of non-organizational religiousness. The original responses for prayer range from 1 (two or more times a day) to 6 (never), which are reverse coded in the analysis such that the higher score reflects more frequent prayer.

RESULTS

The findings from this study are organized in three sections. The examination of sample attrition on the study findings is discussed first. Following this, the substantive results are presented. Finally, some supplementary analyses will be briefly mentioned.

Effects of Sample Attrition

Given that a number of subjects did not participate in the second-wave interview, our sample size diminishes significantly. This sample attrition deserves close examination since the loss of participants may result in sample selection bias (SSB) if those who remain in the sample differ significantly from the population from which they are drawn. Although it is difficult to explore this SSB issue precisely, some preliminary insights may be obtained by comparing the characteristics of respondents at T_1 with those of respondents who remained in the sample at T_2 . To implement this strategy, we first create a binary variable, coding the lost subjects as 1 and the remaining subjects as 0. Then, using logistic regression, this binary outcome is regressed on the T_1 measures such as age, gender, family income, elder status within the church, frequency of prayer and attendance, negative interaction, and distress at T_1 . As is often the case, findings from these analyses reveal that sample attrition occurred in a non-random fashion. Subjects who were lost at T_2 are more likely to be younger persons, rank-and-file laypersons (rather than elders), less frequent attenders, and to have lower levels of family income and more symptoms of distress. Readers should bear these patterns in mind, especially when generalizing our results to the broader PCUSA population. Importantly, however, negative interaction at T_1 does not predict attrition across waves of the survey; this facilitates our follow-up analysis on the effects of negative interaction on changes in distress.

Substantive Findings

Table 1 presents the range, mean or percentage, and standard deviation (if relevant) for each variable used in these analyses, along with the correlations of predictor variables with T_1 and T_2 measures of psychological distress. With regard to the dependent variables, the average T_1 and T_2 distress scores are 2.00 and 2.11, respectively, somewhat below the midpoint of the theoretical range of 1–5. The correlation between the T_1 and T_2 measures is moderate ($r = .56$, $p < .001$), suggesting that there is considerable stability in symptoms of distress across the 21-month study period from February 1997 to November 1999. Means on the T_1 and T_2 measures of negative interaction in church are 1.57 and 1.60, respectively, which also fall well below the theoretical midpoint of the 1–4 range. Mean scores for the item tapping excessive demands are somewhat higher than those for the item gauging criticism; this is the case at both T_1 and T_2 . Thus, the average respondent in the Presbyterian Panel data reports relatively low levels of both negative interaction with fellow church members and psychological distress at both points in time. Turning to the other variables in the study, the average participant is approximately 57 years old, with a family income of approximately \$60,000–70,000 per year. More than half of participants (55 percent) are female, and a majority (57.5 percent) are church elders rather than rank-and-file laypersons. Finally, the average

TABLE 1 Descriptive Statistics: Means, Standard Deviations, Correlations, and the Significant Tests of Negative Interaction and Psychological Distress at Two Points of Time across All of the Variables (PCUSA 1997–1999, $n = 898$)

	Mean/ PCT	Standard deviation	Minimum value	Maximum value	Correlation with T ₁ distress	Correlation with T ₂ distress
<i>Key variables</i>						
T ₂ distress	2.11	.66	1.00	4.80	.56**	
T ₁ distress	2.00	.67	1.00	5.00		.56**
T ₂ negative interaction scale	1.60	.60	1.00	4.00	.15**	.19**
Demands at T ₂	1.72	.73	1.00	4.00	.12**	.15**
Critical at T ₂	1.47	.66	1.00	4.00	.13**	.18**
T ₁ negative interaction scale	1.57	.58	1.00	4.00	.17**	.19**
Demands at T ₁	1.72	.72	1.00	4.00	.18**	.21**
Critical at T ₁	1.43	.63	1.00	4.00	.10**	.11**
<i>Other covariates</i>						
Age	57.15	13.85	18.00	93.00	-.33**	-.23**
Females	54.80		.00	1.00	.13**	.14**
Elders	57.50		.00	1.00	-.02	-.05
Prayer	5.07	.99	2.00	6.00	-.09**	-.05
Sunday attendance	7.01	1.06	1.00	8.00	-.07**	-.08*
Family income	8.06	3.34	1.00	14.00	.03	-.03

Note: * $p < .05$; ** $p < .01$ (two-tailed).

respondent attends services weekly and engages in prayer approximately once per day.

Each measure of negative interaction exhibits modest but significant zero-order correlations with the T₁ and T₂ measures of psychological distress. These correlations range in magnitude from .10 to .21. Age is inversely associated with symptoms of distress at T₁ (-.33) and T₂ (-.23). Women report somewhat greater symptoms of distress than men at both time points, a pattern that is consistent with the findings of numerous previous studies based on general population samples. Perhaps because the average level of socioeconomic status is relatively high among PCUSA members, the association between family income and symptoms of distress is negligible here. The frequency of attendance at services is slightly and inversely correlated with T₁ and T₂ distress scores, while frequency of prayer bears a small, significant

inverse correlation with distress only at T_1 . Finally, there is no zero-order difference in levels of distress between elders and rank-and-file laypersons.

Table 2 presents the estimated net effects of church-based negative interaction and covariates on distress. The left-hand side of the table presents cross-sectional results. Model 1, the baseline model, includes only control variables; subsequent cross-sectional models are evaluated in comparison with this initial model. Consistent with prior research, model 2 shows that the negative interaction scale bears a clear and moderately strong association with distress ($\beta = .132, p < .001$), even net of controls for sociodemographic factors, personal religious practice, and church roles. Models 3–6 reveal the longitudinal results that are the heart of our study. Model 3 constitutes the baseline longitudinal model, against which all subsequent models are compared. Findings indicate that the T_1 negative interaction scale is a moderately strong predictor of changes in distress between T_1 and T_2 ($\beta = .118, p < .001$). When the T_1 and T_2 (contemporaneous) measures of negative interaction are included simultaneously in model 5, both variables are significantly related to T_2 distress, and the magnitude of their estimated net effects is very similar ($\beta = .080, p < .05$; $\beta = .081, p < .05$). Taken together, these patterns of results in models 2, 4, and 5 offer clear support for *H1*: Church-based negative interaction appears to have both short- and long-term effects on distress in this sample.

Next we turn to an assessment of *H2*, based on model 6 in table 2. To do this, we created dummy variables to identify (a) respondents with above-average levels of negative interaction in church at both T_1 and T_2 ($n = 190$), (b) those with diminished levels of negative interaction across waves of the survey, i.e., above-average level of negative interaction at T_1 , but below-average level of negative interaction at T_2 ($n = 119$), and (c) those with increased negative interaction across the two waves, i.e., below-average levels of negative interaction at T_1 , but above-average levels at T_2 ($n = 131$). Those individuals with consistently below-average levels of negative interaction (i.e., at both T_1 and T_2) constitute the reference category in these analyses ($n = 458$).¹

Compared with respondents who reported below-average negative interaction within the congregation, those who experienced consistently above-average social negativity report greater distress ($\beta = .091, p < .01$), as did persons who reported increasing levels of negative interaction between T_1 and

¹Regarding our decision to distinguish between respondents with above-average levels of negative interaction versus those with below-average levels: Although it may have been theoretically interesting to isolate only those persons with “high” scores on the negative interaction measures (i.e., scores of 3 and 4 on each item), the distribution on these items is markedly skewed, with only a relatively small number of persons reporting scores in this “high” range. Thus, for statistical reasons, it is not feasible to concentrate on this small segment of the sample. Nevertheless, this skewed distribution is broadly consistent with our characterization of negative interaction as relatively uncommon and non-normative, and also with the findings of most studies on the frequency of negative interaction in various secular, as well as religious, settings.

TABLE 2 Estimated Net Effects of Negative Interaction Scale and Covariates on Psychological Distress, Cross-sectional and Longitudinal Results (OLS Regression Results $n = 898$)

Independent variables	Cross-sectional		Longitudinal			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	-.318*** (-.015)	-.297*** (-.014)	-.065* (-.003)	-.051 ⁺ (-.002)	-.042 (-.002)	-.052 ⁺ (-.002)
Female	.102** (.138)	.087** (.117)	.054 ⁺ (-.071)	.042 (-.056)	.041 (-.055)	.049 ⁺ (-.064)
Elders	.007 (.009)	-.028 (-.038)	-.014 (-.018)	-.044 (-.059)	-.046 (-.061)	-.037 (-.049)
Family income	-.050 (-.010)	-.052 (-.010)	-.066* (-.013)	-.068* (-.013)	-.066* (-.013)	-.070* (-.014)
Daily prayer	-.050 (-.034)	-.058 ⁺ (-.030)	-.003 (-.002)	-.010 (-.007)	-.012 (-.008)	-.010 (-.007)
Sunday attendance	-.004 (-.002)	-.015 (-.011)	-.036 (-.022)	-.046 (-.029)	-.057 ⁺ (-.035)	-.046 (-.029)
Distress at T ₁			-.532*** (-.519)	-.517*** (-.504)	-.514*** (-.501)	-.519*** (-.506)
Negative interaction scale at T ₁		-.132*** (-.154)		-.118*** (-.134)	-.080* (-.090)	
Negative interaction scale at T ₂					-.081* (-.090)	
Above-avg (T ₁) - Above-avg (T ₂) negative interaction						-.091** (-.147)

Continued

TABLE 2 *Continued*

Independent variables	Cross-sectional		Longitudinal			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Above-avg (T ₁) – Below-avg (T ₂) negative interaction						–.060* (–.117)
Below-avg (T ₁) – Above-avg (T ₂) negative interaction						–.083** (–.155)
Adjusted R ²	–.111	–.129	–.322	–.334	–.338	–.331
Change in R ²		.018***		.012***	.016***	.009**

Note: Shown are standardized regression coefficients with metric (unstandardized) regression coefficients in parentheses. Significance tests of change in R² are conducted by comparing models against the baseline models.

[†]*p* < .10; **p* < .05; ***p* < .01; ****p* < .001 (two-tailed).

T_2 ($\beta = .083, p < .01$). Importantly, even persons who experienced higher levels at T_1 , followed by declines in negative interaction, experienced elevated levels of psychological distress ($\beta = .060, p < .05$). Along with the patterns in model 5, this refined analysis in model 6 confirms that even rather modest levels of negative interaction in church may foster psychological distress, and this is true even when these levels of negative interaction do not persist over a long period of time.

In table 3, we estimate parallel models to explore the possible differential effects of the specific components of the negative interaction measure, excessive demands and criticism. To gauge the statistical significance of changes in model fit when these negative interaction items are added, cross-sectional models in table 3 are compared against the baseline cross-sectional model, i.e., model 1 in table 2. The longitudinal models in table 3 are compared against the baseline longitudinal model, i.e., model 3 in table 2. Preliminary investigation indicated that, although these items are moderately correlated within and across waves, including them simultaneously as independent predictors does not result in significant multicollinearity; variance inflation factor statistics in these analyses were always under 4.0, which is well below the criteria of acceptability cited by many statisticians (von Eye and Schuster 1998: 137; Cohen et al. 2003: 423).

On the left-hand side of this table, models 1–3 present cross-sectional analyses. When individual T_1 negative interaction items are included separately as predictors of T_1 symptoms of distress, both excessive demands ($\beta = .145, p < .001$) and to a lesser extent criticism ($\beta = .070, p < .05$) are positively linked with distress. However, when these items are added simultaneously in model 3, only T_1 excessive demands emerges as a significant predictor of T_1 distress ($\beta = .139, p < .001$); criticism bears no independent association with this baseline measure of symptoms of distress ($\beta = .013, p = ns$).

In the longitudinal analyses, displayed in models 4–8, we find that T_1 demands continue to affect distress across both waves. With all negative interaction items entered into model 8, T_1 demands remains a significant predictor of change in distress ($\beta = .117, p < .001$). In addition, T_2 criticism also bears a modest but significant link with distress, even in the final model ($\beta = .078, p < .05$). Although it initially appeared (in model 6) that T_1 criticism exerts an influence on change in distress, this pattern was eliminated when T_2 criticism was added to the model (model 7). T_2 demands had no significant link with distress in any model.

Viewed broadly, these findings seem to suggest that within religious congregations (at least, within PCUSA churches), some individuals suffer from excessive demands by fellow members for time, energy, and resources, and these individuals experience heightened levels of distress over a period of time from this source of interpersonal strain. Negative feedback from fellow members, e.g., criticism over behavior or conduct, is somewhat less potent than excessive demands. However, frequent criticism can be hurtful, and seems to exact only

TABLE 3 Estimated Net Effects of Individual Negative Interaction Items and Covariates on Psychological Distress, Cross-sectional and Longitudinal Results (OLS Regression Results $n = 898$)

Variables	Cross-sectional			Longitudinal				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Age	-.299*** (-.015)	-.308*** (-.015)	-.298*** (-.015)	-.053 ⁺ (-.003)	-.038 (-.002)	-.058 ⁺ (-.003)	-.050 (-.002)	-.045 (-.002)
Female	-.081* (-.110)	-.098**(.133)	-.081* (-.110)	-.037 (-.049)	-.037 (-.049)	-.052 ⁺ (-.068)	-.048 ⁺ (-.064)	-.036 (-.047)
Elders	-.028 (-.038)	-.008 (-.011)	-.029 (-.040)	-.046 (-.061)	-.050 ⁺ (-.065)	-.026 (-.034)	-.024 (-.032)	-.044 (-.058)
Family income	-.053 (-.011)	-.050 (-.010)	-.053 (-.011)	-.070* (-.014)	-.069* (-.014)	-.066* (-.013)	-.063* (-.013)	-.067* (-.013)
Prayer	-.056 ⁺ (-.038)	-.056 ⁺ (-.038)	-.055 ⁺ (-.037)	-.007 (-.005)	-.008 (-.005)	-.007 (-.005)	-.009 (-.006)	-.009 (-.006)
Sunday attendance	-.019 (-.012)	-.006 (-.004)	-.019 (-.012)	-.050 ⁺ (-.031)	-.057 ⁺ (-.036)	-.038 (-.024)	-.045 (-.028)	-.057 (-.035)
Distress at T ₁				-.513*** (-.500)	-.512*** (-.499)	-.528*** (-.515)	-.522*** (-.509)	-.509*** (-.496)
Individual item: demands at T ₁	-.145*** (-.135)		-.139*** (-.130)	-.134*** (-.122)	-.114*** (-.104)			.117*** (.106)
Individual item: demands at T ₂					-.045 (-.040)			-.012 (-.011)
Individual item: critical at T ₁		-.070* (-.076)	-.013 (-.014)			-.058* (-.061)	-.016 (-.017)	-.025 (-.027)
Individual item: critical at T ₂							-.097** (-.097)	-.078* (-.078)
Adjusted R ²	-.133	-.118	-.132	-.337	-.338	-.325	-.331	-.340
Change in R ²	-.022***	-.007*	.021***	.015***	.016***	.003*	.011***	.018***

Note: Shown are standardized regression coefficients with metric (unstandardized) regression coefficients in parentheses. Significance tests of change in R² are conducted by comparing models against the baseline models in Table 2.

⁺ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed).

a short-term, but not a long-term impact on psychological well-being. These findings support *H3*, showing that specific types of church-based negative interaction may have different implications for mental health, in terms of the degree of their impact, as well as the time period within which this effect is manifested.

Supplementary Analyses

In a series of additional analyses (not tabled, but available from the authors upon request), we considered the possibility that negative interaction may have more deleterious effects for certain subgroups than for others. Contrary to *H4*, which suggested the possibility of such subgroup variations, we found no differences in the longitudinal effects of negative interaction—operationalized via the composite scale and also using individual items—on distress by gender or age. In addition, mindful of earlier cross-sectional findings indicating that negative interaction may be more problematic for persons with greater role commitments within the church (Krause et al. 1998), we explored variations in the effects of social negativity by formal role status (i.e., elders versus rank-and-file members) and by frequency of attendance at services. However, no longitudinal support for this role salience thesis was detected. Overall, our results fail to support *H4*.

Effects of Covariates

Finally, although the estimated net effects of covariates are not the primary focus of this study, several patterns merit brief mention. In the cross-sectional models, in addition to negative interaction, T_1 distress is significantly higher among younger adults and women. We find no significant association between religious attendance and distress, perhaps partly due to the truncated distribution on this variable; respondents were selected into the Presbyterian Panel Survey on the basis of their membership in a PCUSA congregation, which implies at least modest church attendance in many cases. Frequency of prayer bears a small inverse relationship with T_1 symptoms of distress in this sample ($p < .10$). Frequency of attendance at religious services bears a weak inverse relationship to distress in some, but not all, of the longitudinal models. In the longitudinal models, besides negative interaction in the church, few variables reliably predict changes in distress over the 1997–1999 study period. Family income is significantly associated with less distress in the longitudinal models and female is marginally significant.

DISCUSSION

As we noted at the outset, interest in the implications of church-based social ties for health and well-being has expanded markedly in the past decade. However, nearly all of the empirical work in this area has focused on salutary

effects of formal and informal support systems, notably the benefits of anticipated and enacted support. Far fewer studies have probed the consequences of negative interaction in church for personal well-being, and the limited work to date has relied upon cross-sectional data. Thus, we have contributed to this literature in at least three ways: (1) by using data from a longitudinal survey of Presbyterians; (2) by examining the effects of two different types of negative interaction within the church; and (3) by exploring variations in the effects of these measures of negative interaction by (a) religious role salience and (b) other sociodemographic characteristics.

First, our findings add to the modest but growing body of knowledge concerning "spiritual struggles" and their links with mental health. In particular, they offer important confirmation that negative interaction in church may have longitudinal effects on, in addition to cross-sectional associations with, psychological distress. The findings also suggest that even a modest degree of negative interaction—even if it diminishes over time—can have deleterious effects on mental health. The evidence for longitudinal, as well as cross-sectional, links between negative interaction and mental health makes it more difficult to dismiss these results as spurious, and brings us closer to establishing a causal relationship between interpersonal conflicts in religious settings and negative psychosocial outcomes.

Second, upon closer investigation, we also see that specific types of negative interaction may impact distress differently. According to our findings, criticisms may have a short-term relationship with distress, as recipients of this type of negative feedback experience a rapid emotional response. On the other hand, excessive demands for time, energy, money, etc. appear to take a longer term toll on personal well-being. These differences make sense in light of the distinctive challenges posed by each type of negative interaction. The sting of negative judgments about the self may be relatively immediate, but it may take some time for the exhausting impact of congregational demands to be felt fully, and for the cumulative obligations to church, family, work, and other life domains to give rise to role conflict and role overload.

Third, in contrast to previous research based on cross-sectional data, our results reveal no significant subgroup variations in the links between negative interaction in church and distress. One earlier study (Krause et al. 1998) reported that negative interaction appeared to have more deleterious effects on mental health for clergy and elders, when compared with rank-and-file laypersons. Our longitudinal findings, in contrast, show no such differences in the relationships between negative interaction and distress. Nor do we find any variations in these effects by gender, age, or other sociodemographic characteristics. Thus, our results appear to be quite robust, at least across segments of the PCUSA lay population.

We can offer several speculative explanations for the absence of subgroup variations in the effects of negative interaction. On the one hand, our data may lack sufficient measures of congregational role salience, such as measures

of the centrality of church-based social relationships within the personal networks of the individual respondents, or the importance of church ties for the respondent's sense of self. The availability of more direct measures might allow for a more precise test of the logic underlying our hypotheses. In addition, the absence of such effects may stem from methodological issues. As is often the case in studies of this type, average levels of negative interaction and distress are low at T_1 and change only moderately over the 21-month study period. These low scores and high stability on key variables poses challenges to the analysis of longitudinal effects, and may make it particularly difficult to detect subgroup variations in these relationships. In any event, given the sound theoretical basis for anticipating sociodemographic and other subgroup differences in the effects of negative interaction on well-being, we believe that investigators should continue to explore these issues in the future.

Although this study has provided answers to significant questions, future research is needed on several fronts. First, we only have an omnibus measure of symptoms of psychological distress, which combines elements of depression, anxiety, and somatization. Although such measures of distress enjoy a long history and wide contemporary use in the research literature on mental health, it would also be worthwhile to examine the effects of negative church-based interaction on more specific psychological outcomes (e.g., self-esteem, personal mastery) and psychiatric conditions (e.g., major depression, generalized anxiety disorder). Such research will clarify the range of the deleterious consequences of negative interaction experienced within religious settings.

Second, it may be profitable to explore the effects of distress, and perhaps other aspects of mental health, on changes in church attendance and congregational participation. In particular, it seems likely that negative interaction within the church can diminish the vitality, religious experience, and contributions of individual church members. Recurrent or ongoing negative interaction, and its psychosocial sequelae, may actually lead some to leave the congregation. Thus, in addition to the implications for mental health, there may be other quite practical implications of studies of negative interaction in religious settings.

Third, it would be useful to know more about the antecedents and correlates of negative interaction within different types of congregations. Although to some extent this may emerge from broader organizational conflicts, some level of negative interaction may be inevitable, especially among those who are embedded within smaller, denser congregations and religious networks. Indeed, one study reports that the strongest predictor of individual reports of negative interaction in church is the number of close friends who are members of the same congregation. We need to know more than we currently do about how to deter negative interpersonal contacts, or at least to minimize their undesirable impacts on individuals.

Fourth, as we noted earlier, there are other types of negative interaction besides the two variants that were considered here, criticisms and excessive

demands. For example, congregations can be sites for the dissemination of rumors, expressions of jealousy, and other kinds of negativity. In light of the apparent significance of negative interaction for individual well-being, we need to know more about informal sanctions (e.g., gossip, ostracism) work within congregations, how negative feedback is communicated, etc.—how negative interaction really works, and what the various sources and foci of negativity are in different types of communities.

Fifth, although longitudinal data such as those provide advantages in comparison to cross-sectional data, our data still cannot tell us “who started it,” or about the course of episodes of negative interaction. It would be valuable to investigate these issues over a longer period of time, e.g., three or more waves of data collected over several years, which would permit more sophisticated modeling to examine the effects of church-based negative interaction on trajectories of mental health, as well as the probable bidirectional relationships between negative interaction, congregational participation, and well-being. And since most of our knowledge about these issues comes from data on PCUSA members, it will obviously be important to collect data on other, more representative samples of U.S. adults, including both community-dwelling and clinical samples.

Finally, according to one recent study, individuals who report negative relationships in one domain (e.g., family members, coworkers) also tend to report negativity in other settings, and that negative interaction for such persons can be a relatively persistent feature of their social experience (Krause and Rook 2003). Thus, we need additional research to isolate the unique contributions of church-based negative interaction to distress, as opposed to negativity that emanates from other sources or settings. Further, all of this suggests that some responsibility for negative interaction can rest with the individual who is reporting it. Such negativity may be partly a reflection of one’s personality (e.g., introversion, neuroticism) and one’s skills (or lack thereof) in (a) developing and sustaining productive, harmonious social relationships, and (b) managing or resolving conflicts when they arise (Hansson et al. 1984). These characteristics can make some individuals poorly suited for certain types of congregational roles.

Although there is much additional work to be done, we believe that this study has made a significant contribution to the emerging literature on spiritual struggles, and specifically negative interaction within congregations, and health and well-being. To our knowledge, this is the first longitudinal examination of the effects of negative interaction on distress, and the results suggest that this may be an important, albeit largely overlooked, topic for religion-health researchers. Further work along the lines sketched above can shed additional light on the antecedents, correlates, and consequences of social negativity in religious settings.

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