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

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Abstract

This study examines a neglected topic in research on religion and psychological well-being: the effects of negative interaction in church on depression. 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 1997–99 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 depression over the study period. In addition, specific dimensions of social negativity have distinctive effects; the impact of criticisms on depression 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.

INTRODUCTION

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 (e.g., Sloan, Bagiella, and Powell 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, McCullough, and Larson 2001; Smith, McCullough, and Poll 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,

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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 and colleagues (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 (e.g., 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 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 depression, 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 depression. 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 (e.g., 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, Ellison, and Wulff 1998).

The remainder of this study is organized as follows. We begin by summarizing theoretical arguments linking negative interaction in church with mental health, particularly depression. Relevant hypotheses concerning main and contingent effects are then tested using both cross-sectional and longitudinal data for members and elders from the 1997–99 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, Umberson, and Landis 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, and opportunities for confiding and emotional comfort) (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, Chatters, and Taylor 2003; Bertera 2005). Nevertheless, compared to the massive literature on the desirable consequences of social integration and support, this line of inquiry remains in its very early stages. 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 and deportment. We are taught from early childhood to value civility and to avoid aggression and confrontation. Thus, overtly negative interaction may be disturbing in part because it is counter-normative behavior. Perhaps for this reason, for most persons the experience of negative interaction is uncommon, i.e., it occurs much less frequently than neutral or positive contact. Thus, when individuals find themselves engaged in negative interactions with others, it is usually unexpected, and consequently jarring and unsettling.

Negative interaction may also undermine psychological well-being for yet another reason: unpleasant exchanges with others may challenge or threaten fundamental notions concerning the self. In other words, such negative encounters may cause us to reconsider how we think or hope that others see us, and in turn, how we see ourselves (e.g., Lakey, Tardiff, and Drew

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 (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 (e.g., Ellison 1993). But 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). This new interest dovetails with a broader focus on religious networks within the subdiscipline, as mechanisms for the socialization of religious beliefs and practices (Cornwall 1987), for the growth of congregations (Olson 1989), and for the recruitment of new members and converts, in addition to the implications for health and well-being. While investigators now recognize the potentially salutary effects of congregational support systems (Krause 2002, 2006b; Krause, Ellison, and Marcum 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 (e.g., clergy performance, allocation of funds), to theological issues, to politics (e.g., war, homosexuality, the role of women). These conflicts are usually studied from the standpoint of the organizations themselves, rather than the well-being of individual members (e.g., Becker et al. 1993; Hartman 1997). However, organizational conflicts may filter down to influence interpersonal relations. Interactions among church members may become tense or frayed as individuals may feel pressed to take sides in these disputes. One's personal good will, integrity, or morality may be called into question by others with differing views.

Many negative interactions may have little to do with such broader issues facing the congregation as a whole (Krause et al. 2000). Rather, individuals may have day-to-day disagreements over petty matters or their respective roles or duties within the church. Some persons may also face criticism, gossip, or subtle ostracism from judgmental members because of their actions, views, or lifestyles, or those of their loved ones. Criticism of this type may be rejected as a violation of privacy, or otherwise inappropriate.

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, programs, etc. may conflict with the needs of family members, work duties, health limitations, 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 depression.

Not all types of negative interaction are equal. For example, in one recent study Newsom and colleagues (2005) showed that certain domains of negative interaction have more potent deleterious effects than others on the mental health of older adults. In particular, they found

that elderly persons are more negatively impacted by feelings that they are neglected by family and friends (e.g., not visited often enough, not included in activities, etc.) 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. This may be the case because excessive demands may have a spillover affect on other domains of life experience. For example, when excessive demands arise in church, people may feel torn between their allegiance to their faith community and their obligations to family, work, friends, and other pursuits. Thus, these demands may lead people to have less time to devote to their spouses and children, or to spend in leisure activities with secular friends, or to give to important tasks in the workplace. As a result, individuals may confront additional problems or conflicts in these other domains, which may further increase their feelings of depression and anxiety.

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 and colleagues (1998), who examined the links between negative interaction and positive and negative affect 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; that is, the strongest deleterious effects surface among clergy, followed by elders. 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. 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 and validation are likely to come from other, more salient social roles, such as those associated with family, work, or other pursuits.

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 and

associates (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 (e.g., regular or frequent attenders), as compared with their less active counterparts? The remainder of our paper presents an empirical exploration of these research questions, based on longitudinal data on Presbyterian (PCUSA) elders and rank-and-file members.

HYPOTHESES

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

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

H2: Compared to individuals with consistently low levels of negative interaction, individuals who experience (a) consistently high levels, (b) increasing levels over time, and/or (c) diminishing levels over time exhibit significantly greater depression. Depression at T_2 will be greatest for (a), followed by (b), followed by (c).

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 devote more time and emotion on church issues.

DATA

To test these hypotheses, we analyze 1997–99 data from a national panel survey of clergy, elders, and rank-and-file members of the Presbyterian Church (U.S.A.). 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, depression, 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% of congregations cooperated, providing 2,163 names. These individuals were surveyed in the fall of 1996, and 63% (n = 1,363) responded, becoming the member sample of the 1997–1999 Panel. Attrition over the three-year life of the Panel resulted in 896 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%) 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% for members and 79% for elders, and to the November 1999 survey, 63% and 66%, 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 915.

MEASURES

Dependent Variables: Depression

Our dependent variables are levels of depression 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 depression. The mean indexes range from 1 to 5, with the Cronbach's alphas of .81 for depression at T_1 and .79 for depression at T_2. The sample means for depression at T_1 and T_2 are 2.01 and 2.12, respectively.

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?" Responses range from 1 (very often) to 4 (never). Negative interaction scales at T_1 and T_2 are composite measures in which the above two items are averaged, with sample means of 1.58 and 1.61. The correlation of these two items at T_1 and T_2 are .48 and .52, respectively. In order to examine whether certain types of negative interaction are more problematic than others for depression, 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 (See Table 3). 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 coded into 14 ordinal 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 ore more times a day) to

6 (never), which are reverse coded in the analysis such that the higher score reflect 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, and negative interaction. 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. Readers should bear these patterns in mind, especially when generalizing our results to the broader PCUSA population. Importantly, however, neither negative interaction nor depressed affect at T_1 predicts attrition across waves of the survey; this facilitates our follow-up analysis on the effects of negative interaction on changes in depression.

Substantive Findings

Table 1 displays the descriptive statistics and the significant tests of negative interaction and depression levels across covariates. In general, both levels of negative interaction and depression differ significantly by age, gender, church roles, and service attendance. More specifically, in comparison with their younger counterparts, older adults exhibit much less exposure to negative interaction (1.48 vs. 1.67 at T_1 and 1.53 vs. 1.68 at T_2) and lower depression (1.81 vs. 2.18 at T_1 and 1.99 vs. 2.24 at T_2). Similarly, compared to their female counterparts, males show significantly lower mean levels of both negative interaction (1.52 vs. 1.63 at T_1 and 1.55 vs. 1.65 at T_2) and depression (1.91 vs. 2.08 at T_1 and 2.02 vs. 2.20 at T_2). By contrast, although elders encounter greater negative interaction within congregations (1.71 vs. 1.39 at T_1 and 1.70 vs. 1.48 at T_2), they exhibit similar, or even less depression in comparison with rank-and-file members (2.00 vs. 2.02 at T_1 and 2.10 vs. 2.15 at T_2). Data on service attendance reveal similar patterns. While weekly attenders experience more frequent negative interaction (1.60 vs. 1.47 at T_1 and 1.65 vs. 1.41 at T_2), they have lower levels of depression (1.98 vs. 2.12 at T_1 and 2.09 vs. 2.28 at T_2) than the less frequent attenders.

Taken as a whole, the analyses presented in Table 1 indicate that: (1) there are gender and age differences in the experience of negative interaction and levels of depression within congregations; and (2) deep involvement in religion and church issues is positively associated with more frequent negative interaction; but (3) greater religious involvement tends to be inversely associated with depression.

Table 2 presents the estimated net effects of church-based negative interaction and covariates on depression. The left-hand side of the table presents cross-sectional results. Consistent with prior research, model 2 shows that the negative interaction scale bears a clear and moderately strong association with depression (Beta=.146, 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. Findings indicate that the T_1 negative interaction scale is moderately strong predictor of changes in depression between T_1 and T_2 (Beta=.121, 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 depression, and the magnitude of their estimated net effects is very similar (Betas=.080, p<.05 and .086, p<.01). 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-term and long-term effects on depression 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 high, i.e., above-average levels of negative interaction in church at both T_1 and T_2 (n=198), (b) those with increased negative interaction across the two waves, i.e., below-average level of negative interaction at T_1, but above-average level of negative interaction at T_2 (n=134), and (c) those with diminshed 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=121). 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=462).

Compared with respondents who reported below-average negative interaction within the congregation, those who experienced consistently high (i.e., above average) social negativity report greater depression (Beta=.094, p<.01), as did persons who reported increasing levels of negative interaction between T_1 and T_2 (Beta=.082, p<.01). Importantly, even persons who reported high levels at T_1, followed by significant declines in negative interaction experienced elevated levels of depressed affect (Beta=.064, p<.05). Along with the patterns in model 5, this refined analysis in model 6 confirms that even (what appears to be) short-term negative interaction—i.e., social difficulty that is resolved or abated over the study period—seems to result in increased levels of depression. These patterns are broadly consistent with those anticipated in H2, and this suggests that the residue of unpleasantness within the congregation may linger for a non-trivial period.

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. 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 (VIF) statistics in these analyses were always well below 4.0, a widely used criterion of acceptability.

On the left-hand side of this table, models 1–2 present cross-sectional analyses. Findings indicate that at T_1, excessive demands (Beta=.159, p<.001) are more strongly related to depression than contemporaneous criticism (Beta=.080, p<.05). In the longitudinal analyses, displayed in models 3–8, we find that T_1 demands continue to affect depression across both waves. With all negative interaction items entered into model 8, T_1 demands remains a significant predictor of change in depression (Beta=.113, p<.001). In addition, T_2 criticism also bears a modest but significant link with depression, even in the final model (Beta=.083, p<.05). Although it initially appeared (in model 6) that T_1 criticism exerts an influence on change in depression, this pattern was eliminated when T_2 criticism was added to the model (model 7). T_2 demands had no significant link with depression 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 depression 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 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 depression 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 vs. 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 depression is significantly higher among younger adults, women, and persons with lower levels of family income. We find no significant association between religious attendance and depression, 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 but inconsistent inverse association with depression in this sample. Compared with rank-and-file laypersons, church elders report consistently lower levels of depression. In the longitudinal models, besides negative interaction in the church, few variables reliably predict changes in depression over the 1997–99 study period. Church elders compare favorably with rank-and-file members in these longitudinal models. There are no significant sociodemographic predictors of changes in depression between T_1 and T_2 in our models.

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, depression. The findings also suggest that any substantial level of negative interaction—even if it is resolved quickly, and therefore 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 depression differently. According to our findings, criticisms (i.e., negative judgments, expressions of displeasure) may have a short-term relationship with depression, 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 depression. One earlier study (Krause et al. 1998) reported that negative interaction appeared to have more deleterious effects on mental health for clergy and elders, as compared with rank-and-file laypersons. Briefly, religious professionals (clergy) and lay leaders (elders) are likely to place greater emphasis on their congregational positions and responsibilities than regular members; stated differently, their religious roles may be more salient for their personal identities, due to their investments of time, resources, and emotional energy in church affairs. Consequently, for them, negative interaction in and about the congregation might be expected to be especially painful, because this challenges (directly or indirectly) their performance in roles that are central to their personal identities. However, our longitudinal findings show no such differences in the relationships between negative interaction and depression. 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.

Although this study has provided answers to several significant questions, future research is needed on several fronts. First, it may be profitable to explore the effects of depression, 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 persons to leave the congregation. (Indeed, because congregational membership is a voluntary activity, some individuals may respond to negative interaction by leaving the congregation. This raises the possibility that our results may reflect low-ball estimates of the “true” effect of negative interaction in church on depression.). Thus, in addition to the implications for mental health, there may be other quite practical implications of our findings, and those of other studies, dealing with negative interaction in religious settings.

Second, 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 persons 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 number of close friends who are members of 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.

Third, 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.

Fourth, although longitudinal data such as theses 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 health 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 US 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 depression, 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., intraversion, neuroticism) and one’s skills (or lack thereof) in (a) developing and sustaining productive, harmonious social relationships, and (b) in managing or resolving conflicts when they arise (e.g., Hansson, Jones, and Carpenter 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 depression, 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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Neal Krause, Ph.D., is a professor in the University of Michigan’s School of Public Health and a Research Professor in the Institute of Gerontology. His research interests fall into three areas. The first involves work on the relationship between religion and health in late life, especially social relationships in the church and health. The second deals with the effects of stress on the health and psychological well-being of older adults. The third part of his research program has to do with social relationships and health among older people in Asia. All three areas are funded by the National Institute on Aging.

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Table 1

Descriptive Statistics: Means, Standard Deviations, Correlations, and the Significant Tests of Negative Interaction and Depression at Two Points of Time across All of the Variables (PCUSA 1997, 1999, N=915)

	Mean/PCT.	Negative interaction at T_1	Negative interaction at T_2	Depression at T_1	Depression at T_2
Key Variables					
Depression at T_2	2.12 (.66)	.21***	.20***	.58***	--
Depression at T_1	2.00 (.68)	.18***	.17***	--	--
Negative interaction at T_2	1.61 (.61)	.53***	--	--	--
Negative interaction at T_1	1.58 (.59)	--	--	--	--
Other Covariates					
Age (60 – 60+)	47.50	1.48***	1.53***	1.81***	1.99***
Age (13 – 59)	52.50	1.67	1.68	2.18	2.24
Females	55.10	1.63**	1.65*	2.08***	2.20***
Males	49.90	1.52	1.55	1.91	2.02
Elders	58.30	1.71***	1.70***	2.00	2.10
Members	41.70	1.39	1.48	2.02	2.15
Daily prayer	71.70	1.60	1.62	1.98	2.11
Others	28.30	1.54	1.57	2.06	2.14
Weekly attendance	82.20	1.60**	1.65***	1.98*	2.09***
Others	17.80	1.47	1.41	2.12	2.28
Family income	3.80 (3.94)	--	--	--	--

Note: 1. Standard deviations are in the parenthesis? ;

2. Bivariate associations between depression and negative interaction are provided at the top of the table;

+ 3.p<.1

* p<.05

** p<.01

*** p<.001.

Table 2

Estimated Net Effects of Negative Interaction Scale and Covariates on Depression, Cross-sectional and Longitudinal Results (OLS Regression Results N=915)

	Cross-sectional		Longitudinal			
Independent Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
Age	−.311***	−.286***	−.055+	−.040	−.033	−.043
	(−.015)	(−.014)	(−.003)	(−.002)	(−.002)	(−.002)
Female	.102**	.088**	.052+	.042	.041	.047+
	(.140)	(.120)	(.069)	(.056)	(.054)	(.063)
Elders	−.088	−.126*	−.098*	−.131**	−.133**	−.134**
	(−.122)	(−.173)	(−.132)	(−.176)	(−.179)	(−.180)
Family income	−.118*	−.116*	−.098+	−.099*	−.100*	−.110*
	(−.020)	(−.020)	(−.016)	(−.017)	(−.017)	(−.019)
Daily prayer	−.052	−.061+	−.004	−.011	−.012	−.011
	(−.036)	(−.042)	(−.002)	(−.008)	(−.008)	(−.008)
Sunday attendance	−.008	−.020	−.036	−.046	−.058+	−.046
	(−.005)	(−.013)	(−.022)	(−.029)	(−.036)	(−.029)
Depression at T_1		--	.548***	.530***	.525***	.532***
		--	(.533)	(.516)	(.511)	(.518)
Negative interaction scale at T_1		.146***		.121***	.080*	--
		(.170)		(.137)	(.090)	--
Negative interaction scale at T_2					.086**	--
					(.094)	--
High (T_1) –High (T_2) negative interaction						.094**
						(.152)
High (T_1) –Low (T_2) negative interaction						.064*
						(.126)
Low (T_1) –High (T2) negative interaction						.082**
						(.153)

	Cross-sectional		Longitudinal			
Independent Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**
R^2	.111	.129	.335	.347	.352	.344

Note: 1. Shown are standardized regression coefficients with metric (unstandardized) regression coefficients in parentheses.

$^{+}$2. p<.10

*p<.05

**p<.01

***<.001.

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Table 3

Estimated Net Effects of Individual Negative Interaction Items and Covariates on Depression, Cross-sectional and Longitudinal Results (OLS Regression Results N=915)

	Cross-sectional			Longitudinal				
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**	**Model 8**
Age	−.288***	−.300***	−.055+	−.042	−.037	−.048	−.041	−.035
	(−.014)	(−.015)	(−.003)	(−.002)	(−.002)	(−.002)	(−.002)	(−.002)
Female	.082**	.100**	−.052+	.037	.037	.050+	.046+	.035
	(.112)	(.136)	(.069)	(.049)	(.050)	(.067)	(.062)	(.047)
Elders	−.112*	−.107+	−.099*	−.129**	−.132**	−.113*	−.114*	−.130**
	(−.169)	(−.147)	(−.132)	(−.173)	(−.177)	(−.152)	(−.153)	(−.175)
Family income	−.112*	−.120*	−.098+	−.095+	−.096+	−.100*	−.102*	−.098*
	(−.019)	(−.021)	(−.016)	(−.016)	(−.016)	(−.017)	(−.017)	(−.016)
Prayer	−.056+	−.059+	−.004	−.008	−.009	−.009	−.010	−.009
	(−.038)	(−.040)	(−.002)	(−.005)	(−.006)	(−.006)	(−.007)	(−.006)
Sunday attendance	−.024	−.011	−.036	−.050+	−.057+	−.038	−.047	−.057+
	(−.016)	(−.007)	(−.022)	(−.031)	(−.036)	(−.024)	(−.029)	(−.036)
Depression at T_1	--	--	.548***	.526***	.524***	.542***	.534***	.520***
	--	--	(.533)	(.512)	(.510)	(.528)	(.520)	(.506)
Individual item--demands at T_1	.159***	--		.134***	.113***	--	--	.113***
	(.148)	--		(.121)	(.102)	--	--	(.102)
Individual item--demands at T_2		--			.048	--	--	.013
		--			(.043)	--	--	(.011)
Individual item--critical at T_1		.080*				.064*	.019	−.021
		(.087)				(.067)	(.020)	(−.022)
Individual item--critical at T_2							.102***	.083*
							(.102)	(.083)
R^2	.133	.116	.335	.350	.351	.338	.346	.354

Note: 1. Shown are standardized regression coefficients with metric (unstandardized) regression coefficients in parentheses.

+2.p<.10

* p<.05

** p<.01

*** <.001.