Perceived Social Support, Received Social Support, and Depression Among Clergy

AUTHORS

David E. Eagle
Duke Center for Health Policy & Inequalities Research
Duke University

Celia F. Hybels
Department of Psychiatry and Behavioral Sciences, Center for the Study of Aging and Human Development
Duke University Medical Center

Rae Jean Proeschold-Bell
Duke Global Health Institute, Duke Center for Health Policy & Inequalities Research
Duke University

Corresponding author:
David E. Eagle
Duke Center for Health Policy & Inequalities Research
310 Trent Drive
Box 90392
Durham, NC 27708
David.eagle@duke.edu

Abstract

We argue perceived support is best conceptualized as more a measure of how an individual appraises their situation rather than a true reflection of how much support they receive. To test this theory, we used survey data from the Clergy Health Initiative Panel Survey to examine the relationship between perceived and received social support and their association with depressive symptoms in clergy (N=1,288). Overall, analyses revealed perceived support had a weak association with received support. Greater perceived support had a significant relationship with lower depressive symptoms. In contrast, greater received support had only a small relationship with lower depressive symptoms, which was fully mediated by perceived support. Our results raise questions about the effectiveness of many clergy social support interventions, which often aim to boost the quality and/or quantity of received social support. We suggest it may be more advantageous to boost perceptions of social support, possibly through cognitive reframing or positive mental health interventions

KEYWORDS
Social support; Social networks; Clergy; Mental health; Religion; Interpersonal perceptions

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Implications

Considered as a whole, our results are consistent with the theory that individual and contextual factors exert a strong influence on the evaluation of an individual's received support. In this analysis, the perception of support is far more consequential than the reception of support in predicting depressive symptoms. We found evidence from a group of clergy with objectively high levels of received support that there was wide variation in their overall appraisal of perceived social support. Differences in perceived support were driven in part by higher levels of received support and also likely from contextual factors like congregational size that were not correlated with received support. Additionally, even in this population with high levels of received support, received social support was very weakly related to depression and, when considered along with perceived social support, did not have a significant association. These findings do not support Hobfoll's (2009) thesis that perceived and received social support are related in essentially a linear manner. These findings also do not support the idea that perceived and received social support are weakly correlated because they operate on different time-scales (i.e. perceived support involves a long-term appraisal of support, but received support only draws upon recent experiences). Our measure of received support covered a relatively long time horizon, yet was still weakly correlated with our measures of perceived support.

In terms of the implications, these findings speak to the design of social support interventions as a way to improve health, at least among clergy. One major problem with interventions designed to boost social support is that they have not produced overwhelming results in reducing mental health problems, including depression (Cohen et al., 2000). Part of this may be because perceived support is the key factor that is driving depressive symptoms but most interventions target received support. If perception of support operates with relative independence from reception of support, then interventions focused on boosting the perceptions of support may be more important than interventions that emphasize helping people develop more and deeper supportive relationships (Brand, Lakey, & Berman, 1995).

Understanding how social support is related to depressive symptoms is crucial in designing interventions to tackle the problem of high rates of depression among this and similar populations (e.g. nurses and social workers). Although counter-intuitive in nature, these results suggest that interventions that place priority on helping clergy boost their perceptions of social support may be more effective than interventions that seek to increase the number or quality of supportive relationships that clergy possess. In an effort to boost their perceptions of support, the majority of existing social support interventions provide participants with additional social relationships through support groups, trained volunteers, or staff (Lakey & Lutz, 1996). Besides the evidence that shows limited effectiveness of these interventions (Cohen et al., 2000), boosting the amount of received support may have little effect among clergy because, as our data reveal, they already have a relatively large number of close, supportive relationships. Additionally, asking people experiencing heavy time demands (Carroll, 2006, pp. 100–102) to incorporate a support group into their schedule may add to feelings of being overwhelmed. Research on the effectiveness of peer support groups for improving clergy health has been mixed – in previous research, some pastors found them helpful and others reported them to be unhelpful because they added time demands to an already busy schedule and took time away from more enjoyable activities (Miles & Proeschold-Bell, 2013). In a study of how to tailor health

interventions, clergy ranked peer support groups near the bottom (Proeschold Bell et al., 2012). Because of these factors, intervening on perceptions of support may be more beneficial.

Given the widespread recognition that perceived social support and depression are tightly linked, increasing perceived support among clergy may be an important preventive strategy for depression. At present, there are few interventions designed specifically to boost perceived social support (Brand et al., 1995), but there are several possible candidates that may provide a useful starting place. For example, in an intervention designed to boost positive mental health, researchers noticed that participants in a loving-kindness intervention also reported an increase in perceived social support (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Cognitive reframing, which has been shown to reduce depression in caregivers of people with dementia (Vernooij-Dassen, Draskovic, McCleery, & Downs, 2011), could also be tailored to help clergy reframe their perceptions of social support. It may be possible to encourage pastors to draw on their current social supports and highlight the unusually large number of supportive people pastors report possessing in order to boost their perceptions of support.

Introduction

A wide range of studies have shown that higher levels of social support are intimately connected to better mental health outcomes (Cohen, Gottlieb, & Underwood, 2000; George, Blazer, Hughes, & Fowler, 1989; Moak & Agrawal, 2010; Seeman, 1996). Researchers distinguish between two major types of social support: perceived social support and received social support (Barrera, 1986; Vangelisti, 2009). Perceived social support refers to the perceived availability and adequacy of social connections; received social support focuses on the quantity and quality of the support given. This distinction is important because a wealth of studies show that perceived social support is only modestly correlated with measures of received support (Haber, Cohen, Lucas, & Baltes, 2007; Lakey, Orehek, Hain, & Vanvleet, 2010). And while there is a strong and well-validated relationship between poor mental health and low levels of perceived social support (Lakey & Cronin, 2008; Liang, Krause, & Bennett, 2001), the relationship between received social support and mental health outcomes is weak (Barrera, 1986; Lakey et al., 2010; Son, Lin, & George, 2008; Uchino, 2009; Wethington & Kessler, 1986). In some cases, higher levels of received or enacted support are associated with worse mental health outcomes (Gleason, Iida, Shrout, & Bolger, 2008; Kaul & Lakey, 2003; Liang et al., 2001; Maisel & Gable, 2009; Myroniuk & Anglewicz, 2015; Reinhardt, Boerner, & Horowitz, 2006).

One important theory for why received and perceived social support are loosely correlated proposes that people with high levels of perceived social support have what Uchino (2009) calls, a “positive psychosocial profile.” People with a more positive psychosocial profile are simply more apt to evaluate any form of received support in a more positive manner (Lakey & Cassady, 1990). For example, experimental evidence suggests that perceptions of received social support are strongly related to an individual’s attachment style (Collins & Feeney, 2004; Mikulincer & Shaver, 2009) - people with more secure attachment styles are much more likely to evaluate any reception of social support as positive. In this study, we provide further support to the theory that individual factors exert a strong influence on the evaluation of an individual’s received

support and argue this may explain why perceived and received support are often weakly correlated.

We also suspect that contextual factors – things such as the characteristics of a person's place of employment or popular notions of how isolating a particular career can be – are likely to alter perceptions of support. For example, in this study, where we focus on clergy, the size of congregation served may alter how supported clergy feel. However, size may not actually impact the amount of support clergy receive because clergy are often discouraged from forming supportive relationships with their parishioners over fears that it might impede the clergy's ability to provide care (Bloom, 2013).

We provide evidence from a large occupational sample that, among people with objectively high levels of received support, there is wide variation in their overall perceptions of social support. Our findings challenge the notion that perceived social support is merely an aggregate measure of the amount and quality of social support an individual receives.

Some argue that the relationship between perceived and received social support is weak because received-support measures usually tap experiences over a short time period, whereas perceived social support measures take a longer-term view. Someone who generally feels well supported may simply not have had reason or opportunity to seek out support (Hobfoll, 2009).

In this study, we asked a group of clergy to evaluate their level of received social support over a relatively long time-horizon (the past six months) and also asked them to report the current perception of their level of support. We used a longer-term measure of received support in order to mitigate concerns about received and perceived support being on two different time horizons. If our hypothesis is true – that perceived support is more a measure of how an individual appraises their situation, rather than a true reflection of how much support they receive – then we would expect perceived support to be weakly correlated with a longer-term measure of received social support. We would also expect that between perceived and received social support, perceived social support would bear the stronger relationship to depression. We would also expect that when examined together, perceived social support would completely mediate the association between depressive symptoms and received social support. And finally, if perception is the driving factor, we would expect the size of the congregation to alter the clergy's perception of support, but not their reception of support.

Why study these questions with a group of clergy? Clergy have a number of characteristics that make them a useful group to study. First and foremost, in both popular and academic circles, lack of received social support is frequently cited as a key factor contributing to poor mental health among clergy (Carroll, 2006, pp. 177–178; Knox, Virginia, Thull, & Lombardo, 2005; Virginia, 1998). Craig Barnes, president of Princeton Seminary and a former pastor, describes the situation faced by pastors as one of "crowded loneliness" –where pastors are always surrounded by people, but have few, if any, supportive relationships (Barnes, 2012; Merritt, 2014). Clergy often report that they are discouraged from forming friendships with their congregants because it may blur the line between the giver and recipient of care and create potential ethical conflicts (Bloom, 2013). The idea of "crowded loneliness" coincides with the theory that perceived support is an accurate reflection of received support (i.e. that clergy's perception of isolation corresponds with the amount of support they receive). The second factor that makes clergy a good study population is that there is reason to suspect that clergy may not accurately perceive their level of received support. Clergy are mostly married, they have

frequent contact with the people in their congregation, they work closely with many of the lay people in their congregations, and they become deeply invested in the lives of their parishioners. These seem ideal conditions for developing social connectedness. The final factor that makes clergy an excellent group to research is that studies of clergy consistently report high levels of depressive symptoms. Using the CES-D to measure depressive symptoms, two studies of Roman Catholic priests reported that 18 percent (Knox, Virginia, & Smith, 2007) and 20 percent (Knox, Virginia, & Lombardo, 2002; Knox et al., 2005) had elevated depressive symptoms. Using the PHQ-9, our own panel survey of United Methodist clergy in North Carolina found rates of elevated depressive symptoms consistent with major depression in the past two weeks between 8.3 and 10.8 percent (CHI Panel Survey). These are much higher than US population estimates with the PHQ-8 of 3.4% (Centers for Disease Control and Prevention (CDC), 2010). Higher levels of depression in clergy may make it easier to detect significant relationships between social support and depression.

Data and Methods

The data for this study came from the Clergy Health Initiative (CHI) Panel Survey, a 9-year longitudinal study of United Methodist clergy in North Carolina. Participants consented to and completed online surveys every two years. Data from the 2014 survey were used for these analyses. The survey collected responses from 1,788 current and former United Methodist pastors in 2014, with an overall response rate of 75.0%. To minimize variability in work expectations and responsibilities, we restricted these analyses to clergy who served in congregational ministry and excluded those who were retired or worked in positions outside a local congregation. Full data from 1,137 participants plus partial data from another 151 respondents were available for analysis.

Measures of Perceived and Received Social Support

We operationalized *perceived social support* with three items from the CHI Panel survey. The first question was adopted from the Behavioral Risk Factor Surveillance System (BRFSS), which monitors the prevalence of key health characteristics across the United States (Centers for Disease Control and Prevention, 2006; Mokdad et al., 2003). The question stated, "How often do you get the social and emotional support you need?" Response categories were *always, usually, sometimes, rarely, and never*. To simplify the interpretation of this variable in the descriptive analyses, the always/usually and the rarely/never categories were combined. The second question asked, "How socially isolated do you feel?" The response categories were *not at all*, *slightly*, *moderately*, *very*, *extremely*. Again, we recoded this into a three-category variable by combining the *not at all/slightly* and the *very/extremely* categories. The third question asked, "Over the past year, how often have you felt lonely and isolated in your work?" Respondents could choose *very often*, *fairly often*, *once in a while*, and *never*. The *once in a while* and *never* categories were combined.

We also combined several variables to construct a perceived social support scale. This scale was constructed by summing the raw scores of: the BRFSS item (0-4), the reverse-coded social isolation question (0-4), and the reverse-coded question on social isolation at work (reverse

coded, 0-3). This scale had an acceptable internal validity, with an alpha of 0.75. A principal components analysis indicated that these items all loaded on a single underlying factor. The scale ranged from 0 to 11, with higher values indicating higher levels of perceived support. In regression analyses, this variable was standardized and added as a continuous measure.

Received social support was conceptualized as both the quantity and quality of social support received (Barrera, 1986). Quantity of received support was measured through a series name generator and interpreter questions. Respondents were asked, "Looking back over the last 6 months, who are the people with whom you discussed important personal matters? Personal matters include things that trouble you, like a serious medical diagnosis, spiritual doubts or fears, financial worries, and family problems," and "Looking back over the last 6 months - who are the people with whom you discussed important professional matters? Professional matters include things that either trouble you about work, like conflict with congregants, or things that you want advice on about work, like complex church dynamics or career advice." Respondents could provide as many names as they wished, including their spouse. From these data, we calculated the total number of people clergy turned to for either personal or professional support in the past 6 months. A person who was considered both a personal and a professional support was only included once. For regression analyses, this variable was standardized and entered as a continuous measure.

Relationship quality was assessed using a measure of the closeness of supportive relationships. For the first five people named as personal confidants and the first five people named as professional confidants, respondents were asked a series of name interpreter questions. We used one of these interpreter questions to assess relationship quality. Respondents were asked how close they were to the individual named and offered five response categories: 0=*not at all close, 1=somewhat close, 2=moderately close, 3=very close,* and 4=*extremely close.* We then took the average of the closeness scores across all the individuals named to construct a mean closeness score for each respondent. In regression analyses, this variable was standardized and entered as a continuous variable.

Depressive Symptoms

Depressive symptoms were measured using the Patient Health Questionnaire-9 (PHQ-9), which consists of nine items on the frequency of depressive symptoms during the past 2 weeks (Kroenke, Spitzer, & Williams, 2001). The inventory has well-established reliability and validity, with a range from 0 to 27. For categorical descriptions, we report scores ≥10 to indicate depressive symptoms consistent with moderate to severe depression (Manea, Gilbody, & McMillan, 2012).

Control Variables

We controlled for several factors that could be related to both depression and measures of social isolation. These were the respondent's age (included as a continuous variable), gender (reference = male), race (white (ref) vs. non-white), educational attainment (high school graduate (ref), bachelor's degree, or master's degree or higher), marital status (married (ref) vs. not married), and average hours worked per week (included as a continuous variable).

Congregational Size

We also examined the relationship of congregation size to levels of perceived and received social support. In this study, the size of the congregation was measured by the congregation's report of the number of people who attended weekend services in a typical week. For clergy

who served multiple congregations, size was measured as the total attendance of all congregations served.

Statistical Analyses

First, we calculated summary statistics for the measures of perceived and received social support, depressive symptoms and the control variables. Next, we gathered data to compare clergy to the general population. This comparison was complicated by the fact that United Methodist clergy differed from the general population on key characteristics: they were older, had a higher level of education, and were more likely to be white and male. In order to compare clergy to a similar group of people in the state population, we estimated two separate logistic regression models with controls applied to both the CHI and BRFSS datasets and we predicted two outcomes: 1) "I always or usually get the social and emotional support I need" and 2) "I rarely or never get the social support I need." This allowed us to estimate the prevalence of the outcome in both the population and the CHI panel with the controls set at their reference levels.

The CHI name generator question was roughly similar to a question on the 2010 General Social Survey (GSS) (McPherson, Smith-Lovin, & Brashears, 2008; Paik & Sanchagrin, 2013). The 2010 GSS reported the number of people that respondents talked to about important matters in the past 6 months. Because the question on the CHI Panel Survey was more restricted (i.e., not about generic important matters but about the number of people you talked to about important personal or professional problems), we expected that the GSS question, being more expansive, would generate larger networks. As with social support, we estimated the number of names given with an OLS regression model with demographic controls applied to compare clergy to a similar group in the population.

We then estimated a series of four OLS regression models to examine the strength of association between PHQ-9 scores, and perceived and received social support. In order to normalize the distribution of PHQ-9 scores, we transformed with the following equation: $PHQ9_{transformed} = ln(PHQ9_{raw} + 1)$. We used adjusted-$R^2$ to calculate the proportion of the variance in depression scores accounted for by the inclusion of different sets of variables. The first regression model in the series of four included only our perceived support scale, the second only included the quantity and quality of received support, the third added received and perceived support together, and the fourth model added the control variables.

Finally, we tested the association between perceived support, congregational size and received support by adding size to a regression model with perceived support as the outcome. We compare models where only received support is added to one where size was added alongside received support. Because most congregations were very small and the size distribution highly skewed, size was recoded into a categorical variable, with indicator variables for the size quantile the congregation occupies (congregations with number of attenders below the 25th percentile was the reference).

Results

Summary statistics are presented in Table 1. 70.2% of clergy said they "always" or "usually" got the social and emotional support they needed; 7.9 percent reported "rarely" or "never." About a third of clergy reported they felt socially isolated "fairly" or "very often" at work. On average, clergy named 7.3 people as confidants (i.e. people from whom they had received

support). Approximately one quarter of the confidants were named exclusively as professional confidants, 14.0% exclusively as confidants for personal problems and 69.4% in both categories (again, the count of the number of confidants did not double count people who fell into both the personal and professional confidant categories). Clergy reported average closeness scores of 2.55 (between "somewhat" and "moderately" close) on a scale of 0 to 4. This group of clergy was, on average, 53 years of age. A large majority of clergy were male, married, white, had a graduate degree, and worked in paid employment for 48.7 hours per week. The average PHQ-9 score was 3.86 and had a standard deviation of 3.98. A total of 8.9 percent of clergy reported PHQ-9 scores of 10 or higher, consistent with moderate to severe depression.

Comparison to Nationally Representative Samples

According to the 2010 BRFSS, 78 percent of the general adult population "always" or "usually" got the support they needed; 8.2 percent reported that they "rarely" or "never" got the support they needed. However, socio-economically, the general population differed from clergy in important ways that were also associated with perceived support. We present estimates in the BRFSS sample of the level of perceived support with controls applied in Table 2, Model 1 (1=always or usually get the support I need) and Model 2 (1=rarely or never get the support I need). These models controlled for age, gender, education, marital status, race and state of residence. With everything set at the reference levels, the model predicted that 87 percent ($e^{1.978}/(1 + e^{1.978})$, where 1.978 is the constant in the Model 1) of people in the BRFSS sample "always" or "usually got the emotional and social support they need" and 3.2 percent ($e^{-3.403}/(1 + e^{3.403})$, where -3.404 is the constant in Model 3) of people "rarely" or "never got the support they need." All of the control variables were significantly related to the outcome, which was not surprising given the very large sample size. In Table 2, Models 2 and 4, we ran the same models using the CHI Panel data. The model predicted that with all the variables set at their reference levels, 71.5 percent ($e^{0.922}/(1 + e^{0.922})$, where 0.922 is the constant in Model 2) "always" or "usually got the support they need" and 7.6 percent ($e^{-2.504}/(1 + e^{-2.504})$, where -2.504 is the constant in Model 4) "never" or "rarely got the support they need." In Model 2, predicting always getting the needed emotional support, being not married was negatively and significantly related to the outcome with an odds ratio of 0.68 ($p \leq 0.01$). In Model 4, predicting rarely or never getting the needed support, being female was negatively and significantly related to the outcome with an odds ratio of 0.48 ($p \leq 0.001$) and being non-white was positively and significantly related to the outcome with an odds ratio of 2.72 ($p \leq 0.001$).

Turning to received social support, in the 2010 General Social Survey, respondents reported talking to, on average, 2.4 people about "important matters" (Paik & Sanchagrin, 2013). In Table 3, Model 1, we present the average of number of people the participant discussed important matters with in the past 6 months with the control variables applied. With controls applied, the mean network size was 2.81 (the constant from Model 1); gender, race and education were significantly related to network size. In Model 2, we present the results from the CHI survey with controls applied. This model predicted an average number of confidants of 8.07 (the constant from Model 2). Female gender had a significant positive relationship with network size, with an odds ratio of 2.34 ($p<0.01$); being unmarried and not having a college degree had a significant negative relationship with network size, with odds ratios of 0.34 ($p<0.01$) and 0.45 ($p<0.01$), respectively.

Correlation between Perceived and Received Support

In Table 4, we report the level of received support versus the amount of support you usually receive. The relationship is in the predicted direction, with those always/usually getting the support they need associated with a larger number of confidants (7.68 vs. 5.10) and a higher mean closeness (2.62 vs. 2.25) than those reporting they sometimes or rarely get the support they need. To further examine this relationship, in Table 5, we report the results of a regression model predicting the standardized perceived social support scale with the number of respondents (Model 1) and the average closeness to respondents (Model 2). The perceived social support scale had a relatively weak, but highly significant, relationship with both the number of confidants ($\beta_{standardized} = 0.142$, SE=0.03) and the closeness to those confidants ($\beta_{standardized} = 0.182$, SE=0.03).

We also examined whether the correlation between perceived and received support differed between men and women (correlations not shown). While women named more confidants (average for female = 8.1, males = 7.1, t=-4.4, p<0.001) and had lower levels of perceived social isolation (average score for females = 1.1, average for males = 1.0, t=-2.97 , p=0.003, scale is from 0 to 4), they had similar mean levels of perceived social support (average for females = 1.2, for males = 1.2 , t=-0.23, p=0.81, scale is from 0 to 4) and mean closeness to the confidants named (average for females = 2.5, average for males = 2.6 , t=0.28, p=0.78, scale is from 0 to 4). In addition, the correlation between perceived and received social support did not differ between men and women (ANOVA between a regression model without female as a control variable as compared to a model with female as a control, F=1.70, p=0.20).

Congregational Size and Social Support

Finally, we examined the relationship between the size of the congregation and perceived and received support. First of all, most congregations are small. The 25th percentile of size was 60 attenders, the median was 96, the 75th percentile was 201 and the largest congregation had 2,022 members. In Table 6, we report the results of two regression models using size as a predictor of the number of confidants and the perceived social support scale. In Model 1, we found no relationship between the number of confidants named and the size of the congregation. In Model 2, we found that there was a negative but significant relationship between perceived social support and being in a congregation with between 59 and 201 attenders. Clergy in congregations with between 59 and 96 attenders had average perceived social support scores that were 0.21 points lower than scores from clergy in the smallest congregations; clergy in congregations with between 95 and 201 attenders had average perceived social support scores that were 0.22 points lower than those in the smallest congregations.

Depression and Social Support, Regression Models

In Table 7, we present four regression models where we predicted logged PHQ-9 scores. Model 1 included only the perceived social support scale. In this model, perceived social support was strongly associated with depression ($\beta_{standardized} = -0.48$, SE=0.019). This model predicted that a one standard deviation increase in the perceived social support scale was associated with a 53.1 percent reduction in PHQ-9 score ($\frac{(e^{(1.274-0.482)}-1)-(e^{1.274}-1)}{e^{1.274}-1}$, where 1.274 was the constant and -0.482 was the coefficient on perceived support.) A two-standard deviation increase in perceived social support was associated with an 85.9 percent reduction in PHQ-9 score $\frac{(e^{(1.274-2\times 0.482)}-1)-(e^{1.274}-1)}{e^{1.274}-1}$. The adjusted R^2 for this model was 0.35.

Model 2 included measures of the quantity and quality of supportive interactions. The number of confidants possessed a small, significant relationship with depression ($\beta_{standardized}$ = -0.058, SE=0.024). As the number of confidants increased by one standard deviation (equivalent to an increase of 4 people), the PHQ-9 score was predicted to decline by 7.8 percent ($\frac{(e^{(1.274-0.058)}-1)-(e^{1.274}-1)}{e^{1.274}-1}$). A one standard deviation increase in mean closeness with confidants was associated with approximately a 16 percent decrease in PHQ-9 scores ($\frac{(e^{(1.274-0.109)}-1)-(e^{1.274}-1)}{e^{1.274}-1}$). The adjusted R^2 for this model was 0.02.

Model 3 included both perceived social support and the two measures of received social support. In this model, both the number of confidants named ($\beta_{standardized}$ = 0.013, SE= 0.02) and the average closeness ($\beta_{standardized}$ = 0.003, SE= 0.020) were no longer significant. The adjusted R^2 for this model was 0.35, which did not represent an improvement over the model with only perceived support included (F-test between Models 1 and 3, F=0.184, p=0.832).

Model 4 added the control variables. Adding the controls improved model fit with an adjusted R^2 of 0.36 (F-test between Models 3 and 4, F=3.65, p<0.001). Two control variables emerged as small but significant predictors of PHQ-9 scores. For a one standard deviation increase in age, PHQ-9 scores declined by 11.3 percent ($\frac{(e^{(1.280-0.085)}-1)-(e^{1.280}-1)}{e^{1.280}-1}$). For a one standard deviation increase in the total number of hours worked, PHQ-9 scores increased by about 4.8 percent ($\frac{(e^{(1.280+0.034)}-1)-(e^{1.280}-1)}{e^{1.280}-1}$). In this model, the magnitude of the perceived social support scale coefficient dropped slightly compared to the model without controls.

Discussion

In this analysis, we described the relationships between both perceived and received social support and depression among a group of clergy. While clergy often complain about experiencing "crowded loneliness" – that is, that due to the nature of their jobs, clergy are surrounded by people but have few close, supportive relationships – this group of clergy appeared to have relatively high levels of received support. In the past 6 months, they talked to 7.3 different people about an important personal or professional problem – 8.1 different people when demographic controls were applied. By way of comparison, on a more expansive measure and with a demographically matched national sample, people talked to an average of 2.8 people about simply "important matters." Presumably, if asked the more specific question from the CHI panel survey, people would report smaller numbers of confidants because, in general, people have a very expansive view of what constitutes "important matters" (Bearman & Parigi, 2004). Consistent with this thinking, when previous waves of the CHI Panel Survey asked the GSS important matters name generator item, the average network size was much larger (Eagle & Proeschold-Bell, 2015).

There was a positive association between perceived and received social support. However, we found that even among those who indicated never getting the support they needed, they reported a relatively large number of confidants and reasonably high mean closeness. The correlation between perceived and received social support was relatively small and variation in the received social support measure only accounted for a small amount of variation in our perceived social support scale.

We found evidence that clergy in medium-sized congregations had modestly lower perceived social support scale scores as compared to those in very small congregations. Clergy in large congregations did not differ from those in small congregations in perceived social support. There was no relationship between received social support and congregational size. This suggests that the lower levels of perceived support may being driven in part by congregational characteristics net of the actual level of support.

Like many other studies, we found a weak association between received and perceived social support (Haber et al., 2007; Lakey et al., 2010) and a strong association between perceived social support and depression (Cohen et al., 2000; Cornwell & Waite, 2009; George et al., 1989; Moak & Agrawal, 2010; Seeman, 1996). While perceived social support was strongly related to depression, the clergy in this study had substantially lower perceived support. Clergy's level of perceived social support was 8 percentage points lower than the general population. With demographic variables included, the difference was nearly 20 percentage points.

In terms of received support, we found a small but significant association between more confidants and depression. We also found a small but significant relationship between lower levels of closeness to one's confidants and higher levels of depressive symptoms. These findings are consistent with previous studies that report weak and variable associations between received social support and depression/depressive symptoms (Kaul & Lakey, 2003; Lakey et al., 2002; Lakey & Cronin, 2008). The received support variables did not account for a large portion of the variance in depressive symptoms, with an adjusted R^2 of only 0.02, as compared to 0.35 when the perceived social support scale was added on its own.

Lower levels of perceived social support were strongly associated with higher levels of depressive symptoms in these clergy, and this association remained significant when received social support and demographic variables were controlled. When considered with perceived social support, both the number of confidants and the average closeness of the confidants were no longer significantly associated with depression. The effect of perceived social support was essentially unchanged and remained strongly significant. These findings suggest that, in so far as received social support is associated with lower depressive symptoms, at least among clergy, it likely operates by boosting perceptions of support.

Strengths and Limitations

There are several limitations to consider with this study. One component of our measure of perceived social support included adequacy of needed social support but did not include quality, satisfaction, and perceived availability. However, the other two components of the perceived social support measure focused on social isolation in general and separately at work, which strengthened the construct measure. Our measure of received social support assessed, in part, social interactions. We do not know how long or extensive the conversations were that people had about important personal or professional matters. If these were relatively brief encounters, that may help explain why there was a weak (albeit significant) association between received support and depression. There may be systematic differences in how people recalled the number and quality of supportive relationships. For example, participants with more depressive symptoms may not identify as many close confidants or may minimize the closeness of the relationships and may be more likely to perceive their network as inadequate as part of their depression.

Also, this study was cross-sectional, so the direction of association between social support and depression is not known. Persons with higher levels of depressive symptoms may have difficulty maintaining close relationships. In terms of comparing our data with national samples, our study population had more years of education and was more likely to be male and white than a comparative general population sample. While we tried to account for these differences, we may not have captured all the ways that clergy are different from the general population. Also, while we did measure the closeness of the respondent to their confidant, we did not evaluate the quality of the support received, which is known to moderate the relationship between perceived and received support (Faw, 2016). Less than 2% of clergy reported no experiences of received support. Because of this, our results do not generalize to populations where there are a substantial proportion of individuals who report high levels of objective isolation. In those cases, it may still be vital to target received social support. The clergy in the sample all come from a single Mainline Protestant denomination. These findings may not generalize to Conservative Protestant, Catholic, or other denominations where clergy-lay dynamics may be different. Evidence from a study of Roman Catholic diocesan priests found that they tended to underuse social support (Pietkiewicz & Bachryj, 2016). Additionally, in denominations where clergy are not paid, clergy may feel even more isolated due to more acute financial and time-constraints.

Despite these limitations, this study had multiple strengths. We studied a large sample of clergy within one denomination with similar work expectations and experiences; the homogeneity of the sample is helpful in holding constant the kinds of stressors experienced and support needed, as well as the environmental constraints on when and how support is available. This study adds to a growing body of literature describing the associations between social support and depression within the context of religion and health. Further, this study makes strides in teasing apart the relationships between perceived and received social support with depression.

Clergy report relatively high levels of depressive symptoms and frequently report that their occupation makes it difficult for them to sustain supportive friendships. In this analysis, we found that clergy were more likely than the general population to report that they did not receive the social and emotional support that they needed. However, when asked to report on the number of people with whom they discussed important personal and professional problems, clergy reported a large number of these conversations over the past six months. The problem with clergy appears to lie with perceptions, rather than received support. Only perceived social support was related to depression symptoms; received social support was not. Our analysis suggests that clergy and their supervisors may be wise to turn to interventions that boost perceived social support, possibly through cognitive reframing or increasing positive mental health.

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Table 1
Summary Statistics

Number of cases	1,288
PHQ-9, range: 0-27, mean (sd)	3.86 (3.98)
PHQ-9 of 10 or more, n (%)	115 (8.9)
Get social support needed, n (%)	
always/usually	902 (70.2)
Sometimes	282 (21.9)
rarely/never	101 (7.9)
Socially isolated n (%)	
Not at all/slightly	920 (71.4)
Moderately	253 (19.6)
Very/extremely	115 (8.9)
Isolated in work n (%)	
Once in a while/never	886 (68.6)
Fairly often	276 (21.4)
Very often	129 (10.0)
Perceived social support scale (range: 0-11), mean (sd)	7.63 (2.29)
Number of confidants, mean (sd)	7.3 (4.4)
Average closeness score (range: 1-5), mean (sd)	2.55 (0.65)
Age, mean (sd)	53.29 (11.68)
Female, n (%)	387 (30.0)
Married, n (%)	1148 (88.9)
Education, n (%)	
HS	133 (10.3)
Bachelor's	135 (10.5)
Master's	1019 (79.2)
Non-white, n (%)	118 (9.1)
Total number of hours worked, mean (sd)	48.67 (13.53)

Source: Clergy Health Initiative Panel Survey, 2014
PHQ = Patient Health Questionnaire

Table 2
Logistic regression of perceived social support with demographic controls applied using the 2010 BRFSS (n = 421,477) and the 2014 Clergy Health Initiative Panel Survey (n = 1,283)

	Model 1	Model 2	Model 3	Model 4
Dependent Variable:	"I always get the emotional support I need"	"I always get the emotional support I need"	"I rarely or never get the emotional support I need"	"I rarely or never get the emotional support I need"
Data Source	2010 BRFSS	2014 CHI Panel Survey	2010 BRFSS	2014 CHI Panel Survey
	Coefficients (Standard Errors)	Coefficients (Standard Errors)	Coefficients (Standard Errors)	Coefficients (Standard Errors)
Age (centered at CHI mean of 53.3)	-0.006*** (0.0002)		0.017*** (0.0003)	
Female	0.36*** (0.0075)	0.032 (0.14)	-0.61*** (0.011)	-0.74*** (0.28)
Non-white (ref=white)	-0.67*** (0.0091)	-0.13 (0.21)	0.71*** (0.013)	1.00*** (0.27)
Unmarried (ref = married)	-0.65*** (0.0074)	-0.38** (0.19)	0.67*** (0.012)	0.37 (0.32)
No college degree (ref=college degree)	-0.668*** (0.0083)	-0.127 (0.20)	0.93*** (0.015)	0.297 (0.30)
Live outside NC (ref=live in NC)	-0.124*** (0.023)		0.155*** (0.036)	
Constant	1.978*** (0.024)	0.922*** (0.080)	-3.404*** (0.038)	-2.504*** (0.14)
	N=421,477	N = 1,283	N=421,477	N = 1,283
	Pseudo R^2 = 0.069	Pseudo R^2 = 0.035	Pseudo R^2 = 0.069	Pseudo R^2 = 0.032

*p<0.05**p<0.01***p<0.001
BRFSS = Behavioral Risk Factor Surveillance System; CHI = Clergy Health Initiative

Table 3
OLS regression of the number of people with whom respondents discussed important matters (i.e. received support), with demographic controls applied from both the 2010 General Social Survey (n=1,252) and the 2014 Clergy Health Initiative Panel Survey (n=1,238)

	Model 1	Model 2
Data Source	2010 GSS	2014 CHI Panel Survey
	Coefficients (Standard Errors)	Coefficients (Standard Errors)
Age (centered at survey mean of 53.3)	0.004	
	(0.0029)	
Female	0.26**	0.86***
	(0.096)	(0.29)
Non-white (ref=white)	-0.59***	-0.28
	(0.12)	(0.44)
Not married (ref = married)	-0.094	-1.06**
	(0.095)	(0.4)
No college degree (ref=college degree)	-0.53***	-0.79**
	(0.1012)	(0.41)
Live outside NC (ref=live in NC)	0.008	
	(0.114)	
Constant	2.81***	8.07***
	(0.14)	(0.41)
	N=1,252	N=1,238
	Adjusted R^2 = 0.048	Adjusted R^2 = 0.020

*p<0.05**p<0.01***p<0.001
CHI = Clergy Health Initiative; GSS = General Social Survey; OLS = Ordinary Least Squares

Table 4
Bivariate associations between perceived and received support (n=1,139)

	Received Support:			
	Number of Confidants		Average Closeness	
Perceived Support:	Mean	SD	Mean	SD
How often do you get the support you need?				
...Always/Usually	7.68	4.64	2.62	0.62
…Sometimes	6.82	3.56	2.43	0.64
…Rarely/Never	5.10	2.78	2.25	0.89

Source: 2014 Clergy Health Initiative Panel Survey

Table 5
Ordinary least squares regression showing the relationship between perceived and received social support (n=1,139)

Perceived Social Support Scale (standardized) [1]		
	Model 1	Model 2
Number of confidants (standardized)	0.142*** (0.03)	
Mean closeness (standardized)		0.182*** (0.03)
Intercept	0.0175 (0.03)	0.031 (0.03)
	N=1,139	N=1,139
Adjusted R^2	0.025	0.036

*p<0.05**p<0.01***p<0.001
OLS = Ordinary Least Squares

Table 6
OLS regression showing the relationship between perceived and received social support (Number of Confidants, n=1,212) and congregational size (n=1,279)

	Dependent variable:	
	Number of Confidants	Perceived Social Support Scale (standardized)
	Model (1)	Model (2)
Average attendance (ref= 0-59 attenders)		
60-95 attenders	0.388 (0.354)	-0.209** (0.079)
96-200 attenders	0.215 (0.358)	-0.223** (0.080)
More than 200 attenders	0.428 (0.357)	0.0165 (0.079)
Constant	7.038*** (0.255)	0.103* (0.057)
	N=1,212	N=1,279
Adjusted R^2	-0.001	0.010

*p<0.05; **p<0.01; ***p<0.001
OLS = Ordinary Least Squares

Table 7
Ordinary least squares regression models predicting PHQ scores (n=1,137)

	Dependent variable: ln(PHQ + 1)			
	Semi-Standardized Regression Coefficients [1] (standard error)			
	Model 1	Model 2	Model 3	Model 4
Perceived social support scale (standardized)	-0.482*** (0.019)		-0.483*** (0.02)	-0.459*** (0.021)
Number of confidants (standardized)		-0.058** (0.024)	0.013 (0.02)	-0.009 (0.02)
Average closeness (standardized)		-0.109*** (0.024)	-0.003 (0.02)	-0.018 (0.02)
Age (standardized)				-0.085*** (0.02)
Female				0.036 (0.045)
Education (ref=High school only)				
Bachelor's degree				0.011 (0.087)
Graduate degree				-0.043 (0.066)
Non-white				-0.094 (0.071)
Married				0.027 (0.062)
Hours worked (standardized)				0.034* (0.02)
Constant	1.274*** (0.019)	1.274*** (0.024)	1.274*** (0.019)	1.280*** (0.086)
	N=1,137	N=1,137	N=1,137	N=1,137
Adjusted R^2	0.351	0.020	0.350	0.360

*p<0.05**p<0.01***p<0.001
OLS = Ordinary Least Squares
[1] The independent variable was standardized, but not the dependent variable.
Coefficients represent the impact of a 1 standard deviation increase on *ln*(PHQ9 + 1) scores.