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Closeness and control : exploring the relationship between prayer and mental health.

Benjamin Jeppsen
Augustana College - Sioux Falls

Patrick Pössel
University of Louisville

Stephanie Winkeljohn Black
University of Louisville

Annie Bjerg
University of Louisville

Don Wooldridge
University of Louisville

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Abstract

This study explores the relationship between prayer and mental health in the context of two factors of a perceived relationship with God: closeness to God, and an indirect locus of control through God. Three models were tested for mediation using structural equation modeling to assess the separate and combined effects in an online sample of 330 praying adults from predominantly Christian backgrounds. Closeness to God proved to be a superior mediator. Counselors should consider prayer behaviors when culturally relevant, and encourage meditative and colloquial prayer for clients where increased sources of perceived social support would be beneficial.

Closeness and Control: Exploring the Relationship between Prayer and Mental Health

The diverse effects of religiousness on mental health have been well documented (Bonelli & Koenig, 2013; Koenig, 1998; 2009), and incorporation of religious and spiritual issues has been described as an imperative part of culturally competent counseling (Ponterotto, Suzuki, Casas, & Alexander, 2009). Therefore, a clearer understanding of the mechanisms by which religious and spiritual issues impact clients' mental health is necessary for counselors.

Some have cited the social support of religion as one way that religion positively affects mental health (Ferraro & Koch, 1994; Nooney & Woodrum, 2002; Salsman, Brown, Bechting, & Carlson, 2005; Ellison & George, 1994; Bradley, 1995; Idler & Kasl, 1997; Koenig et al., 1997). However, Koenig and associates (1997) found that private prayer/Bible reading was related to social support instead of church attendance or religious media. Though private prayer and Bible reading appear to reflect individual rather than interpersonal activities, there appears to be a social component. As social support is a common theme in counseling, and prayer is a "tool for culturally competent care" for psychologists and counselors working with religious and/or spiritual clients (Miller & Chavier, 2013, pp. 73), a clearer understanding of the relationship between prayer, social support, and mental health could be beneficial to counselors. Thus, the current study intends to explore this apparent connection between private prayer and social support as a possible explanation for the diverse effects of prayer on mental health to provide a better understanding of how to use prayer as a tool in counseling.

Multidimensionality of Prayer

The relationship between prayer and mental health has been extensively researched, revealing mixed results (Finney & Malony, 1985; Francis & Evans, 1995; Francis, Robbins, Lewis, & Barnes, 2008; McCullough, 1995; Pössel, Winkeljohn Black, Bjerg, Jeppsen, &

Wooldridge, 2013; Spilka & Ladd, 2012). Initially, these mixed results have been due, in part, to viewing prayer unidimensionally rather than recognizing the diversity of approaches to prayer and their unique effects (e.g., Poloma & Pendleton, 1989). Thus, to adequately assess the relationship between prayer and mental health, researchers must examine prayer's multiple dimensions. Poloma and Pendleton (1989, 1991) separated prayer into four types based on behaviors (rather than cognitions or intentions) engaged in during prayer: (a) Petitionary prayer - occurs when one requests concrete, material goods for oneself or others; (b) Colloquial prayer - characterized by a conversational tone, talking with God in his/her own words, expressing love and adoration, and asking for guidance; (c) Meditative prayer - more passive approach, characterized by quiet experiences listening for God's direction and feeling God's presence; (d) Ritual prayer - prescribed scripts and texts, whether through reading or reciting memorized prayers, and lacks any form of actual interpersonal communication. These prayer types identified by Poloma and Pendleton reflect diverse approaches to connecting with God through prayer and offer a better lens through which to view the complex relationships with mental health.

Prayer as a form of social support through creating a relationship with God

Some have proposed that the positive effects of prayer could be explained through the development of a personal relationship with God, resulting in benefits consistent with social support (Ellison, 1995; Hawley & Irurita, 1998; Ladd & McIntosh, 2008; Meisenhelder & Chandler 2000a, 2000b, 2001). Ladd and McIntosh (2008) reviewed the social aspects of practicing religion and emphasized the role of prayer in creating social support. They defined prayer as "the typically intentional expression of one's self in an attempt to *establish or enhance connectivity* with the divine, with others in a religious or spiritual framework, and with the self" (p.29, emphasis added). Through the lens of Poloma and Pendleton's (1989, 1991) prayer types, individuals who pray create a connection with God, such as through

conversation with God in Colloquial prayers or seeking divine assistance through Petitionary prayers. Even introspective forms of prayer such as Meditative prayer appear to include a reaching outward by feeling God's presence or listening for God's answer to a prayer (Ladd & Spilka, 2002, 2006; Poloma & Gallup, 1991).

Interpreting prayer in the context of a personal relationship provides some explanation for the contradictory findings in the effects of prayer.. Conflict in close relationships can lead to negative outcomes in mental health (Abbey, Abramis, & Caplan, 1985). Just as with all interpersonal relationships, one's relationship with God might be a source of stress, anxiety, and pain. One might feel frustrated about unfulfilled petitions in prayer and feel distanced from God. When an individual feels at odds with or distanced from God, prayer can be a painful struggle related to negative affect, hopelessness, guilt, and preoccupied attachment (Braam et al., 2008; Ladd & Ladd, 2012). As evidence of this, Petitionary and Ritual prayers have been associated with lower levels of mental health (Poloma & Gallup, 1991; Winkeljohn Black, Pössel, Jeppsen, Bjerg, & Wooldridge, 2013; Whittington & Scher, 2010). Thus, not all prayers are related to improvements in mental health, and the explanation may come in whether prayers are relationally supportive or not.

Whittington and Scher (2010) found that the negative outcomes for prayer (lower self-esteem and life satisfaction) were associated with prayer types that focused on the pray-er and the pray-er's behaviors (such as Petitionary and Ritual prayers) whereas the positive outcomes were more associated with prayers focused on God (such as Colloquial or Meditative prayers). Poloma and Pendleton (1991) found similar results in the context of feeling close to God. The relationally focused prayer-types (Meditative and Colloquial) tended to relate more to closeness to God than those prayer types that were either self-focused (Petitionary) or behavior-focused (Ritual). Thus, assessing the extent to which

prayers build or sustain one's relationship to God might provide an explanation, in part, for the mixed effects of prayer on mental health.

Closeness and control: a formula for social support

As not all interpersonal relationships are supportive, social psychological research has revealed the necessary and sufficient conditions for a relationship to be health-promoting. In order for a relationship to be supportive, it must both provide the individual with a sense of close intimacy and belonging as well as help them to be more competent and self-efficacious (Berkman, 1995). Thus, feeling an interpersonal closeness is important, but a beneficial relationship also increases one's sense of control in their world (Fiske, 2010). Therefore, if one of the mechanisms by which prayer influences mental health is building and sustaining a supportive relationship with God, then the prayer types associated with closeness and control through God should have positive effects on mental health. Moreover, just as research that collapses prayer into one construct fails to capture the dynamics of different approaches to prayer, when assessing one's relationship to God, it is important to account for both constructs as they will be highly correlated but represent unique aspects of a health promoting relationship. To this point, most research has only addressed closeness or control separately.

Closeness to God as a function of prayer.

Researchers have found that psychological proximity, or feeling interpersonally close (that God is "there with them") is a primary function of connecting to God (Choi, 2006; Krause 2009b); further, prayer is the most important means of attaining closeness to God (Granqvist & Kirkpatrick, 2008). Accordingly, individuals engage in more prayer as a function of their desire to rely on a relationship for support in difficult times (Byrd & Boe, 2001; Choi, 2006). Furthermore, Krause (2009b) identified private prayer frequency as both a stronger predictor of closeness to God than church attendance and a mechanism for seeking

proximity with God (Kumari & Pirta, 2009). Therefore, achieving a feeling of closeness with God can be interpreted as a primary function of prayer.

Feeling close to God, can be a powerful, meaningful relationship for the believer (Ladd & McIntosh, 2008). Accordingly, believing that one has a close relationship with God predicts a variety of different indicators of mental health, even when controlling for other sources of social support including church membership and attendance (Kirkpatrick, Shillito, & Kellas, 1999; Mattis et al., 2004, Pollner, 1989). In Krause's three-wave study (2009b), closeness to God, but not prayer frequency, significantly predicted self-esteem. The result that closeness to God, but not prayer frequency, was a predictor of self-esteem at later waves of measurement indicates possible mediation of the association between prayer and self-esteem by closeness to God. However, Krause did not test for such mediation.

God-mediated control as a function of prayer.

Some researchers have emphasized the role of personal control in prayer. These researchers argue that some positive effects of religion on mental health are due to a relationship between personal control and religious belief and practice (Berrenberg, 1987a; Fiori, Hays, & Meador, 2004; Krause, 2005, 2009a). For example, Fiori et al. (2004) proposed that a trust in God, or a sense that God provides personal control, mediates religion's effect on mental health. In other words, individuals have indirect control (as opposed to complete personal internal control or absolute external control). Though they may not have control themselves, they believe that God does, and God can help them. In turn, feelings of God-mediated control are associated with several indicators of mental health, including greater life satisfaction, optimism, a higher sense of self-worth, and less symptoms of depression in the elderly (Krause, 2005, 2009a). Thus, prayer can be an especially useful coping tool inasmuch as it leads to a sense of God-mediated control.

Research has shown that prayer is indeed related to God-mediated control. Krause (2007) showed that group prayer tends to sustain feelings of God-mediated control over time. Similarly, Spilka, Shaver, and Kirkpatrick (1985) identified prayer as a procedure used to enhance one's feeling of control and self-estem. Correspondingly, the relationship between prayer and mental health was mediated by one's beliefs about how, when, and if prayers are answered (Pössel et al., 2013). The impression that one's own prayers are answered may create a sense of control over one's life circumstances. Flexible beliefs concerning the when and how of an answer are based on trust in God, which is the basis of turning control over to God (Krause, 2009a) and would be reflected in a feeling of God-mediated control. This can lead to the impression of a predictable world, which heightens the sense of security and ultimately bolsters one's mental health. Thus, it has been repeatedly proposed that the positive effects of prayer on mental health are due to this sense of God-mediated control (Berrenberg, 1987a; Krause & Tran, 1989; Saudia, Kinny, Young-Ward, & Brown, 1991).

Finally, closeness and control are associated with each other. By exerting personal efforts (e.g. prayer), pray-ers are attempting to indirectly influencetheir outcome by enlisting the aid of a capable ally and may be able to internalize an otherwise external locus of control through their faith in, and feelings of closeness to God. Therefore, it is clear how a sense of close intimacy with God would be related to a sense of control through God, yet they represent distinct aspects of the relationship with God. Thus, to adequately assess the effects of one's relationship to God on mental health, one must examine both the separate and combined effects of closeness and control.

Relationship to God and the Multidimensionality of Prayer

As stated earlier, how people communicate can have an impact on their relationships (Cummings et al., 2002; Lambert et al., 2010; Lambert & Fincham, 2011). Similarly, *how* people pray can be more important in affecting their relationships to God than how *often* they

pray (Ladd & Ladd, 2012; Poloma & Pendleton, 1991). Thus, to explore the role of one's relationship to God as a function of prayer, we must examine different prayer types as they might emphasize relational processes differently, and God-mediated control and closeness to God may have differential effects depending on which prayer type(s) a pray-er uses.

Ritual prayer is behavior-focused and lacks communication with God (Poloma & Pendleton, 1989). It is also an act of obedience to prescribed procedures from religious authorities. This obedience is in response to a faith in God's authorship of the instructions, and reflects an effort to align oneself with God's control (external control) rather than soliciting God's power to align with the pray-er's wishes (mediated control). Thus, Ritual prayer would not be related to God-mediated control or closeness to God.

Similarly, Petitionary prayer does not utilize a two-way communication with God; it is self-focused and would not be expected to enhance closeness to God (Poloma & Gallup, 1991; Whittington & Scher, 2010). It is possible, though that one might feel closer to God when requests are granted, and more distanced when not. However, this may be more related to God-mediated control because it is predicated on a belief that God can grant requests—an exercise in control or efficacy. Thus, through petitioning God they can exercise a mediated personal control to achieve desired outcomes. Therefore it is not expected that Petitionary prayer would be related to closeness, but will be related to God-mediated control.

Colloquial and Meditative prayer emphasize a two-way communication that focuses on one's personal relationship to God. Colloquial prayer includes guidance seeking (Poloma & Pendleton, 1989) that emphasizes God's power and control. Though the request is more abstract, it reflects similar connections to God-mediated control exhibited in petitionary prayer. Colloquial prayer also includes prayers of adoration and thanksgiving. Expressions of love and gratitude enhance the perception of a relationship (Lambert et al., 2010; Lambert & Fincham, 2011). Hence, it is reasonable to suggest that similar expressions in prayer

would lead to perceived closeness in one's relationship to God. Meditative prayer includes

listening for God to answer and worshipping/adoring God (Poloma & Pendleton, 1989),

which both encourages a sense of collaborative control and closeness, respectively.

Hypotheses

Based on the reviewed literature and relational components of each of the proposed

prayer types, the following hypotheses are proposed: First, when controlling for shared

variance between all the prayer types, closeness to God will mediate the relationship between

mental health and Colloquial and Meditative prayers, respectively, but not Petitionary prayer.

Second, when controlling for shared variance between all the prayer types, God-mediated

control will mediate the relationship between mental health and Petitionary, Colloquial, and

Meditative prayer. Third, when controlling for each other by including God-mediated control

and closeness to God as simultaneous mediators in a combined model, it is hypothesized that

the significant indirect effects from the separated models between the respective prayer types

and mental health will remain significant.

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Method

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Participants

Participants were recruited via online listservs of religious organizations, university

newsletters, and social media. Only individuals who pray and were over 18 were included in

the study. Due to the open nature of the recruitment, response rates are not calculable. The

total response count including 460 praying adults. Missing data were random, as evidenced

by Little's Missing Completely At Random (MCAR) Test (χ^2=166.175, p=.082; 1988).

Therefore, listwise-deletion was used, and 130 participants were eliminated from the analysis.

The remaining 330 participants, aged 18 to 82 years (77.7% female; mean age: 37.57 years;

SD: 16.05 years), were included in the analysis. Of these participants, 89.6% were European-

American, 5% were African-American, 2.3% were Mixed Racial, 1.2% were Asian-

American, 0.8% were Hispanic and Other, respectively, and 0.4% were Native American. While 91.9% of the participants identified as Christian (25.4% as Christian-Non-Denominational, 17.3% as Methodist, 16.3% as Catholic, 12.4% as Church of Jesus Christ of Latter-Day Saints, 6.7% as Baptist, and 13.8% as belonging to another Christian denomination), only 2.1% identified as Agnostic, 1.4% as Muslim or Jewish, and 0.4% as Buddhist. Finally, 2.8% of the participants reported no affiliation to any denomination. Point-biseral correlations between the religious identification of participants and the prayer behaviors and proposed mediators are presented in Table 1.

Measures

   Prayer type. Prayer type was measured with the 16-item, self-report Prayer Types Scale (Poloma & Pendleton, 1989). The items ask participants how often they engage in various prayer behaviors, with all items answerable on a 7-point Likert scale (*never – several times a day*). The scale measures the frequency of behaviors for the four identified prayer types: Colloquial, Meditative, Petitionary, and Ritual. The measure was developed with a predominantly Christian sample (>80%), though all participants' data were included in the factor development regardless of religious identity (1% Jewish, 13% "Other", 5% non-religious). The internal consistency for three of the four subscales ranged from adequate to strong for this sample (Cronbach's alpha for Colloquial Prayer = .91; Meditative Prayer = .93; Petitionary Prayer = .90) The internal consistency of the Ritual Prayer scale was consistent with previous uses of the measure ($\alpha = .59$). Previously, the low reliability of the Ritual Prayer item scores has been attributed to only using two items and judged acceptable (Breslin & Lewis, 2010), however, because the reliability was so poor, and Ritual prayer was theoretically unrelated to the mediator, it was not included in the analysis.

   The Belief in Personal Control Scale-Revised Short Form (BPCS-RS). The BPCS-RS consists of 45 5-point Likert scale items describing the degree to which an individual

believes a statement is true (Berrenberg, 1987a). The BPCS-RS is a short form based on the Belief in Personal Control Scale (BPCS; Berrenberg, 1987b) which measures three factors of personal control: a belief in general external control, an exaggerated belief in personal control, and a belief in God-mediated control. In this study, only the God-mediated control scale is included, comprising nine items. Higher scores on this scale indicate a stronger belief in God-mediated control. This subscale demonstrated high internal consistency (α = .93). When compared, graduate seminary students demonstrate significantly higher belief in God-mediated control than graduate psychology students (Berrenberg 1987b), providing evidence for the construct validity of the scale in Christian populations.

Closeness to God. To measure participants' relationships with God, this study used a three-question scale developed by Krause (2002b, 2009b). This scale was developed first with Christians and then with a nationwide sample (no religious denomination data provided). Items are scored on a 4-point Likert scale indicating the degree to which individuals agree with the corresponding statement. Higher scores indicate a stronger relationship with God. Items demonstrated good reliability (α = .93; Krause, 2009). The internal consistency for the current study is .88.

Mental Health. The Profile of Mood States-Short Form (POMS-SF; Shacham, 1983) is a common measure of psychological distress and was used in the current study to assess overall mental health. The POMS-SF has 37 items, where each item is a word describing a specific feeling (e.g., tense, angry, worn out, etc.). Participants were instructed to answer how often they had each feeling within the past two weeks by answering on a 5-point Likert scale (*not at all* to *extremely*). The POMS-SF has six subscales: Anger, Anxiety, Confusion, Depression, Fatigue, and Vigor, which were scored by adding the participant's responses (Shacham, 1983). Scores are calculated by summing the negative affect items (e.g., tense) and the positive affect items (e.g., energetic) separately and then subtracting the sum of the

positive affect items from the sum of the negative affect items for a Total Mood Disturbance score. Thus, high score on the measure indicates low mental health. For ease of interpreting the data, scores are reversed to make higher scores reflect better mental health. The internal consistency for this sample was strong ($\alpha = .95$).

Procedure

Participants were recruited using multiple online tools, including activities announcements by email at two large universities, a Baptist theological seminary, and listservs of multiple psychological and counseling organizations. Emails, online postings, and announcements described the aim of the study as exploring the association between mood and prayer. Interested individuals were asked to use a provided link to go to an online questionnaire (surveymonkey.com). A preamble including a detailed description of the study, its aims, and the risks and benefits of participating in the study was placed at the beginning of the online questionnaire. Only after reading the preamble and agreeing to the participation requirements were individuals able to respond to the items of the online study. The participants did not receive any compensation for their participation, and the study was approved by the Institutional Review Board of the BLINDED FOR REVIEW.

Data Analysis

Three mediation analyses were conducted using AMOS 21 software for structural equation modeling (SEM). SEM was used to test whether the data collected would fit a theoretical model for hypothesized relationships between prayer, closeness to God, and mental health. SEM includes several statistical assumptions about the data being analyzed that must be met in order for the analysis to be appropriate. In order to be consistent with these assumptions, some adjustments were needed. First, the sampling assumptions of SEM include the existence of no missing data. As stated earlier, missing data were random, listwise deletion was conducted to eliminate missing data. Another assumption of SEM is that

the data are normally distributed across each of the variables used in the study. Based on a z-test, all of the variables except the meditative prayer type revealed statistically significant skewness in the data (.489 - 1.064; $p<.05$) and the meditative prayer revealed statistically significant kurtosis (3.92, $p<.05$). Consequently, in addition to the bootstrap analysis, normalized z-scores were calculated for each variable and used in analysis in place of the raw data.

Finally, it is important to note that the relationship between communication and relationship strength is certainly bidirectional. Communication can lead to feeling closer to others (including to God), but closeness can also lead to increased communication. However, this would violate the assumption of unidirectionality for SEM analysis. Research has demonstrated that how we communicate affects relationship strength (Lambert, et al., 2010; Lambert & Fincham, 2011). Cummings, Butler, and Kraut (2002) reviewed research on different methods of communication and found that some are more valuable for building and sustaining interpersonal relationships than others. We propose that a relationship with God is similar—that some communication styles (prayer types) may be more valuable for building and maintaining a relationship with God than others, and that these differences will provide some context for the positive and negative effects of prayer on mental health. Thus, for this reason the directionality of the correlational model assumes that prayer leads to the relational constructs of closeness and control, rather than the other way around.

The first model examined the mediating role of closeness to God alone. The second model examined the mediating role of God-mediated control alone. The third model included both closeness to God and God-mediated control as dual mediators. As many pray-ers use multiple types of prayer regularly, controlling for the effects of each prayer type on mental health as well as the shared variance across prayer types is important in assessing the unique effects of the different types. Thus, in each model, the prayer types were specified to be

correlated with each other. The direct and indirect relationships for the three different proposed models for mediation between the three prayer types and mental health were examined to assess mediation effects. Bootstrap confidence intervals (CI: 95%), using 2,000 bootstraps (Nevitt & Hancock, 1997), were calculated to assess the significance of the direct and indirect effects. Nonsignificant relationships were eliminated to optimize the models.

Model fit was assessed using several goodness of fit indices. The statistics used for examining model fit were the chi square statistic (χ^2), the Tucker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA). When the Chi square statistic is significantly different than zero, the model is judged to be a poor fit (Byrne, 2001). TLI and CFI statistics above .90 are judged to indicate acceptable fit, and statistics above .95 are considered indicators of good fit (Hu & Bentler, 1999). RMSEA scores should be lower, with acceptable fit indicated by scores below .08 and good fit indicated by scores below .05 (Hu & Bentler, 1999). Model comparisons were conducted using the the Akaike Information Criterion (AIC; Akaike, 1974) and the Bayesian Information Criterion (BIC; Schwarz, 1978). The model with lower AIC and BIC scores indicate a better fit to the data. Generally, differences of greater than 2 indicate support for non-equivalency with differences greater than 10 indicating strong support (Burunham & Anderson, 2002; Raftery, 1995). As the AIC tends to favor complexity and the BIC tends to favor simplicity, model comparison is robust when using both statistics, and agreement between the two provides strongest support for the model selected (Kuha, 2004).

Results

Closeness to God as a Mediator

Descriptive statistics and correlations for all variables are presented in Table 2. The first model examined the mediating role of closeness to God on the relationship between each of the three prayer types and mental health. First, a model with all hypothesized direct and

indirect relationships was specified and the significance of the specified relationships was evaluated. Model fit indices for the initial model ranged from good to acceptable fit (see Table 3). To optimize the model, the relationship of Meditative prayer to mental health (p=.704) was eliminated. The model was reassessed for model fit and path significance.

The optimized model is depicted in Figure 1. Model fit for the optimized model was excellent across all indices (see Table 3), and model comparison demonstrates improved fit in one of the two indices (ΔAIC=1.86; ΔBIC=5.66). The standardized direct, and indirect relationships with 95% bootstrap confidence intervals are reported in Table 4. As expected, the indirect relationships of Colloquial and Meditative prayers to mental health through closeness to God were significant and positive. As there was no significant direct relationship to mental health for Meditative prayer when controlling for the indirect relationship, this is considered fully mediated by closeness to God (Zhao, Lynch & Chen, 2010). However, the direct relationship of Colloquial prayer to mental health remained significant despite controlling for a significant indirect relationship through closeness to God, and so it is considered only partially mediated (Zhao, et al., 2010). Petitionary prayer had a significant direct negative relationship to mental health, and was not mediated by closeness.

God-Mediated Control as a Mediator

Next, a model where God-mediated control mediated the relationship between each of the three prayer types and mental health was evaluated. First, a model with all hypothesized direct and indirect relationships specified was tested, and the significance of the specified relationships was evaluated. Model fit indices were in the range of good to acceptable (see Table 3). To optimize the model, the relationship of Meditative prayer to mental health (p=426.) was eliminated. The model was reassessed for model fit and path significance.

The optimized model is depicted in Figure 2. Model fit of the optimized model was better, as all indices met the standards for good fit (see Table 3), and again model comparison

demonstrates improved fit with the optimized model in one of the two indices (ΔAIC=1.37;

ΔBIC=5.16). The standardized direct and indirect relationships with 95% bootstrap

confidence intervals are reported in Table 4. As expected, the indirect relationships of

Petitionary, Colloquial, and Meditative prayers on mental health through God-mediated

control were significant and positive, indicating mediation. Since the direct relationship of

Meditative prayer to mental health was not significant when controlling for the indirect

relationship, this is considered fully mediated by God-mediated control (Zhao, et al. 2010).

On the other hand, Petitionary prayer and Colloquial prayer were only partially mediated as

evidenced by the significant direct relationships to mental health (Zhao, et al., 2010). Also,

consistent with the closeness to God model, Petitionary prayer showed a significant direct

negative effect on mental health. Further, there again remained a significant direct positive

relationship of Colloquial prayer on mental health even while controlling for the indirect

relationship through God-mediated control.

Closeness to God and God-Mediated Control as Dual Mediators

Finally, the combined model with both mediators entered simultaneously was

assessed. Using only the significant relationships of the first two models, an initial model

was specified to assess the mediating roles of God-mediated control and closeness to God on

the relationship between each of the three prayer types and mental health. Model fit for the

initial combined model was poor (see Table 3). When including both proposed mediators in

the model, the relationship between God-mediated control and mental health appeared to be

attenuated by a correlation with closeness to God ($r = .50$). Nevertheless, the direct effects

between each of the different prayer types and God-mediated control remained significant

even while controlling for their respective relationships to closeness to God and the

correlation between closeness to God and God-mediated control. Correlating closeness to

God and God-mediated control made theoretical sense, as they are two theoretical functions

of one's relationship to God. Therefore, the nonsignificant direct effect between God-mediated control and mental health ($p=.806$) was eliminated and a covariance between the two mediators ($p<.001$) was added. The optimized combined model is depicted in Figure 3. Model fit indices showed excellent fit (see Table 3), and significantly improved fit over the initial model ($\Delta AIC=72.67$; $\Delta BIC=72.67$). In this optimized combined model, there is a significant, positive indirect relationship for Colloquial and Meditative prayers on mental health through closeness to God, indicating mediation (Zhao, et al., 2010), and significant direct effects for Petitionary (negative) and Colloquial (positive) prayers to mental health. The lack of a significant direct relationship between God-mediated control and mental health indicates no mediation by God-mediated control for any prayer types, and indicates possible mediation by closeness to God for the relationship between God-mediated control and mental health. Post hoc mediation analysis revealed that there was indeed a significant indirect relationship of God-mediated control to mental health through closeness to God ($p<.001$), indicating full mediation (Zhao, et al., 2010). The standardized direct and indirect effects of the optimized combined model are presented in Table 4.

Comparison between Mediation Models

Finally, models were compared to identify the best fitting model to the data. Between the first two models, the optimized closeness to God model fit the data slightly better than the optimized God-mediated control model ($\Delta AIC=0.64$; $\Delta BIC=4.44$). Further, the optimized closeness to God model demonstrated better fit over the optimized combined model as well ($\Delta AIC=10.05$; $\Delta BIC=29.03$). Thus, the model with closeness to God as the sole mediator for prayer's effects on mental health was judged to be the best fitting model to the data.

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Discussion

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This study examined possible mediating factors for the relationship between prayer and mental health. Colloquial and Meditativeprayer were all positively associated with

mental health. Petitionary prayer was negatively associated with mental health. These findings are consistent with previous research that Petitionary prayer is related to poorer mental health, whereas the other prayer types were associated with better mental health (Poloma & Gallup, 1991; Poloma & Pendleton, 1991; Whittington & Scher, 2010).

Closeness to God and God-mediated control were tested as mediators in the relationships between prayer types and mental health. Testing closeness to God as sole mediator revealed that closeness to God mediated the relationship between mental health and Colloquial and Meditative prayers, but not Petitionary prayers. As the former two prayer types employ relational promoting constructs such as gratitude, love, and adoration and they emphasize two-way communication in the process of prayer, these findings were expected. Results are consistent with other research on interpersonal relationships and the effects of this kind of communication (Lambert et al., 2010; Lambert & Fincham, 2011).

When testing as sole mediator between the prayer types and mental health, God-mediated control mediated the relationship between mental health and Colloquial, Meditative, and Petitionary prayers. These three prayer types include direction seeking or requests for God to utilize power to bring about the pray-er's wishes. Thus, it was expected that they would be related to God-mediated control. These prayer types appear to tap into some of the beneficial functions of God-mediated control, namely a collaborative coping style and mediated efficacy (Berrenberg, 1987a; Pargament et al., 1988). Petitionary prayer was only partially mediated, as the significant negative direct relationship remained. This finding revealed a contradictory relationship of Petitionary prayer to mental health, and may provide some explanation for the diverse effects described in the literature (Maltby, Lewis, & Day, 2008; Poloma & Pendleton, 1991). Based on the findings of this study, Petitionary prayer may have positive effects in as much as it enhances one's efficacy through a sense of God-mediated control. This might be explained by the pray-er's trust-based beliefs in how their

petitions are answered (Pössel et al., 2013). When pray-ers receive what they are seeking, their sense of personal control and efficacy might be strengthened, enhancing their sense of well-being. On the other hand, when they do not receive what they are seeking, a sense of hopelessness might be elicited, and their mental health may suffer. Thus, depending on the pray-er's perception of the prayer's results, Petitionary prayer could result in either positive or negative effects on mental health, hence the diverse results of the study. Other aspects of the prayer type might provide further explanation for the negative direct relationship of mental health with Petitionary prayer (Breslin & Lewis, 2008).

Finally, when both mediators were entered into the model simultaneously, only closeness to God mediated the relationship between prayer and mental health. The direct relationship between God-mediated control and mental health appeared to be better explained by a relationship to closeness to God. In fact, when tested for mediation, closeness to God mediated the relationship between God-mediated control and mental health. Further, when examining model fit, the model examining the mediating effects of closeness to God alone, was the best fitting model to the data. Thus, closeness to God proved to be a better mediator, compared to God-mediated control, in explaining the positive relationship between Colloquial and Meditative prayer types and mental health. Perhaps one's relationship to God is different than human interpersonal relationships due to the pray-er's belief in God's omnipotence. When one feels close to God, he or she is implicitly empowered by the relationship. After all, "The perception of connectivity with the divine provides the individual with an exceptionally powerful social partner" (p. 31; Ladd & McIntosh, 2008), making a sense of increased control and efficacy implicit in the close relationship. Thus it may be that closeness alone addresses both functions of a health-promoting relationship. However, though these effects are statistically significant, the associations revealed very weak effects. The indirect relationship of prayer through closeness to God explained less than

2% of the variance in mental health, and the correlation of all prayer types with mental health ranged from .02 to .26. Thus, the implications of prayer on mental health are limited.

However, the findings of this study may yet have implications for clinical practice. As social support is strongly related to health and well-being (Holt-Lunstad, Smith, & Layton 2010), any possible source of social support can be important to clients for whom it is lacking. It has been shown that clients do believe that religious and spiritual issues are both important and preferable topics to be addressed in counseling (Rose, Westefeld, & Ansley, 2001). Further, prayer has been identified as a valuable clinical tool for counselors (Miller & Chavier, 2013). Thus, especially for clients for whom social support and meaningful interpersonal relationships are clinically relevant, and prayer is a part of their life, how they pray may play a part in their closeness to God. Based on the findings of this study, a counselor might encourage more Colloquial and Meditative prayers in contrast to petitionary prayers. Meditative prayer had the strongest indirect relationship with mental health and was fully mediated by closeness to God. Mindfulness meditation has demonstrated significant improvements for clients when used as an adjunct to therapy (Kutz et al., 1985), and encouraging meditative prayer might serve as a culturally relevant adaptation to the approach.

A major limitation of the study is the cross-sectional nature of the data. Therefore, directionality of the effects is ambiguous. Though it could be interpreted that one's closeness to God predicts more frequent use of all prayer types, it is also important to recognize that one's closeness to another is not static, and how one communicates with others can influence the closeness felt between them (Lambert et al., 2010; Lambert & Finch, 2011). Hence, the literature supports the directionality of the model. However, the use of God-mediated control as a mediator is less clear. As this variable taps into one's locus of control, it might be more trait-based than state-based or the directionality of the model reversed, at least. Thus it may be more appropriate for future studies to assess God-mediated control as a moderator or a

predictor variable rather than a mediator. That said, it has been shown that counseling focused on locus of control had significant effects when working with at-risk college freshman (Whyte 1978). Thus, locus of control is a changeable variable relevant to clinical work. Moreover, though one's beliefs about God-mediated control may have been developed earlier, prayer can be a means to enhance one's sense of control (Spilka et al., 1985). Nevertheless, further exploration into the unique construct of God-mediated control as an element of one's relationship to God warrants further exploration.

Another limitation of the study is the selection of the sample. Participants were predominantly female European-American Christians and the generalizability of the study is limited to such populations. Further, the measures have been developed using primarily Christian populations. Though the language of the instruments were not limited to Christian terms such as "Bible" or "Church", they did refer to God using male pronouns and reflected Judeo-Christian beliefs (especially in the God-Mediated Control Scale). Further testing the relevance and utility of the instruments with diverse religious populations is warranted. Moreover, participant's interpretation of the items that make up the prayer-types measure was not assessed. Certain assumptions underlying the items may have been interpreted differently by participants, affecting the reliability of their prayer-type scores. Further, participants were self-selected volunteers from online sources. Consequently, there may also be a selection bias favoring participants more likely to take the time to fill out a survey about prayer. Due to the limitations in the sample, future studies should emphasize recruitment of male, non-Christian participants from diverse racial and ethnic backgrounds to improve the external validity of the data. Moreover, we did not collect education and socio-economic status information on respondents, introducing further limits to the external validity of the study, as these could introduce a confounding influence on the frequency of the respective prayer behaviors as well as introduce further variance on the mental health variable. Another

important limitation of the sample is the absence of clinical versus non-clinical populations. Measurement of participants considering counseling or currently in counseling might have different mental health scores than those not seeking counseling. Further, questions regarding mental health and spiritual issues might be interpreted differently.

Summarized, both God-mediated control and closeness to God are related to mental health. Further, when evaluated separately, they mediate the relationship between prayer types that emphasize relational processes such as Meditative and Colloquial prayer, and mental health. In addition, God-mediated control partially mediates the relationship between Petitionary prayer and mental health. Finally, when assessing the separate and combined effects in comparison, closeness to God mediated the effects of God-mediated control as well. These findings could be used to inform culturally relevant therapy with clients who pray with their relationship to God as a potential source of support, though implications for practice are limited by the weak associations between prayer and mental health.

References

Abbey, A., Abramis, D. J., & Caplan, R. D. (1985). Effects of different sources of social support and social conflict on emotional well-being. *Basic and Applied Social Psychology*, *6*(2), 111-129.

Akaike, H. (1974). A new look at the statistical model identification. *Automatic Control, IEEE Transactions on*, *19*(6), 716-723.

Berkman, L. F. (1995). The role of social relation s in health promotion. *Psychosomatic Medicine, 57,* 245-254.

Berrenberg, J. L. (1987a). The belief in personal control scale: A measure of God-mediated and exaggerated control. Journal of Personality Assessment, 51(2), 194–206.

Berrenberg, J. L. (1987b). The belief in personal control scale: A revised, short form. Washington, D. C.: U.S. Department of Education, Office of Education Research and Improvement. ERIC #ED325488.

Braam, A. W., Schapp-Jonker, H. S., Mooi, B., Ritter, D., Beekman, A., & Deeg, D. (2008). God image and mood in old age: Results from a community-based pilot study in the Netherlands. *Mental Health, Religion, & Culture, 11,* 221-237.

Bradley, D. E. (1995). Religious involvement and social resources: Evidence from the data set "Americans' Changing Lives". *Journal for the Scientific Study of Religion, 34,* 259-267.

Breslin M. J., & Lewis, C. L. (2008). Theoretical models of the nature of prayer and health: A review. *Mental Health, Religion & Culture, 11,* 9-21.

Burnham, K.P. & Anderson, D.R. (2002). *Model Selection and Multimodel Inference*. Springer Verlag. (second edition).

Byrd, K. & Boe, A. (2001). The correspondence between attachment dimensions and prayer in college students. *The International Journal for the Psychology of Religion, 11,* 9-24.

Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, *1*(1), 55-86.

Choi, K. A. (2006). *The relationships among adult attachment, attachment to God, and prayer* (Doctoral dissertation). Biola University, La Mirada, CA. Retrieved from ProQuest. (Accession No. 3254621)

Cummings, J. N., Butler, B., & Kraut, R. (2002). The quality of online social relationships. *Communications of the ACM*, *45*(7), 103-108.

Ellison, C. G. (1995). Race, religious involvement and depressive symptomatology in a southeastern U.S. community. *Social Science and Medicine, 40*, 1561–1572.

Ellison, C. G. & George, L. K. (1994). Religious involvement, social ties, and social support in a southeastern community. *Journal for the Scientific Study of Religion, 33,* 46-61.

Ferraro, K. F. & Koch, J. R. (1994). Religion and health among black and white adults: Examining social support and consolation. *Journal for the Scientific Study of Religion, 33*(4) 362-375.

Finney, J.R., & Malony, H. N. (1985). Empirical studies of Christian prayer: a review of the literature. *Journal of Psychology and Theology, 13*(2), 104-115.

Fiori, K.L., Hays, J.C., & Meador, K.G. (2004). Spiritual turning points and perceived control over the life course*. International Journal of Aging and Human Development, 59,* 391-420.

Fiske, S. (2010). *Social Beings: Core Motives in Social Psychology.* New York: Wiley.

Francis, L. J., & Evans, T. E. (1995). The psychology of Christian prayer: A review of

empirical research*, Religion*, *25*, 371-378.

Francis, L. J., Robbins, M., Lewis, C. A., & Barnes, L. P. (2008). Prayer and psychological health: A study among sixth-form pupils attending Catholic and Protestant schools in Northern Ireland. *Mental Health, Religion, & Culture, 11*, 85-92.

Granqvist, P., & Kirkpatrick, L. A. (2008). Attachment and religious representations and behavior. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment theory and research* (2nd ed., pp. 906-933). New York: Guilford Press.

Hawley, G., & Irurita, H. G. (1998) Seeking comfort through prayer. *International Journal of Nursing Practice, 4,* 9-18.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.

Idler, E. L. & Kasl, S. V. (1997). Religion among disabled and nondisabled persons I: Cross-sectional patterns in health practices, social activities, and well-being. *Journal of Gerontology: Social Sciences, 52B,* S294-S305.

Kirkpatrick, L. A., Shillito, D. J., & Kellas, S. L. (1999). Loneliness, social support, and perceived relationships with God. *Journal of Social and Personal Relationships, 16,* 13-22.

Koenig, H. G. (Ed.). (1998). *Handbook of religion and mental health.* San Diego, CA: Academic Press.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *Canadian Journal of Psychiatry*, *54*(5), 283-291.

Koenig, H. G., Hays, J. C., George, L. K, Blazer, D. G., Larson, D. B., & Landerman, L. R. (1997). Modeling the cross-sectional relationships between religion, physical health,

social support, and depressive symptoms. *The American Journal of Geriatric Psychiatry, 5*, 131-144.

Krause, N. (2002a). Church-Based Social Support and Health in Old Age Exploring Variations by Race. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *57*(6), S332-S347.

Krause, N. (2002b). A comprehensive strategy for developing closed-ended survey items for use in studies of older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *57*(5), S263-S274.

Krause, N.M. (2005). God-mediated control and psychological well-being in late life. *Research on Aging, 27*, 136-164.

Krause, N.M. (2007). Social Involvement in Religious Institutions and God-Mediated Control Beliefs: A Longitudinal Investigation. *Journal for the Scientific Study of Religion, 46,* 519-537.

Krause, N.M. (2009a). Religious involvement, gratitude, and change in depressive symptoms over time. *The International Journal for the Psychology of Religion, 19*, 155-172.

Krause, N.M. (2009b). Church-based social relationships and change in self-esteem over time. *Journal for the Scientific Study of Religion, 48,* 756-773.

Krause, N.M., & Tran, T.V. (1989). Stress and religious involvement among older Blacks. *Journal of Gerontology: Social Sciences, 44*, S137-S145.

Kuha, J. (2004). AIC and BIC comparisons of assumptions and performance.*Sociological Methods & Research*, *33*(2), 188-229.

Kumari, A., & Pirta, R.S. (2009). Exploring human relationship with God as a secure base. Journal of the Indian Academy of Applied Psychology, 35, 119-124.

Kutz, I., Leserman, J., Dorrington, C., Morrison, C. H., Borysenko, J. Z., & Benson, H.

(1985). Meditation as an adjunct to psychotherapy: An outcome study.

Psychotherapy and Psychosomatics, 43, 209-218.

Ladd, K. L., & Ladd, M. L. (2012, August). In Patrick Possel (Chair). *The full breadth of*

prayer: Positive and negative aspects. Presentation delivered at the American

Psychological Association Convention, Orlando, FL.

Ladd, K. L., & McIntosh, D. N. (2008). Meaning, God, and prayer: Physical and

metaphysical aspects of social support. *Mental Health, Religion, & Culture, 11*, 23-28.

Ladd, K. L., & Spilka, B. (2002). Inward, outward, and upward: Cognitive aspects of prayer.

Journal for the Scientific Study of Religion, 41, 475-484.

Ladd, K. L., & Spilka, B. (2006). Inward, outward, and upward: Scale reliability and

validation. *Journal for the Scientific Study of Religion, 45,* 233-251.

Lambert, N. M., Clark, M. S., Durtschi, J., Fincham, F. D., & Graham, S. M. (2010). Benefits

of Expressing Gratitude Expressing Gratitude to a Partner Changes One's View of the

Relationship. *Psychological Science*, *21*(4), 574-580.

Lambert, N. M., & Fincham, F. D. (2011). Expressing gratitude to a partner leads to more

relationship maintenance behavior. *Emotion*, *11*(1), 52.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing

values. *Journal of the American Statistical Association*, *83*(404), 1198-1202.

Maltby, J., Lewis, C. A., & Day, L. (2008). Prayer and subjective well-being: The application

of a cognitive-behavioral framework. *Mental Health, Religion & Culture, 11*, 119-

129.

Mattis, J. S., Fontenot, D. L., Hatcher-Kay, C. A., Grayman, N. A., & Beale, R. L. (2004).

Religiosity, optimism, and pessimism among African Americans. *Journal of Black*

Psychology, 30, 187-207.

McCullough, M. (1995). Prayer and health: conceptual issues, research review, and research

agenda. *Journal of Psychology and Theology, 23*(1), 15-29.

Meisenhelder, J. B., & Chandler, E. N. (2000a). Prayer and health outcomes in church lay

leaders. *Western Journal of Nursing Research, 22,* 706-716.

Meisenhelder, J. B., & Chandler, E. N. (2000b). Prayer and health outcomes in church

members. *Alternative Therapies in Health and Medicine, 6*, 56-60.

Meisenhelder, J. B., & Chandler, E. N. (2001) Frequency of prayer and functional health in

Presbyterian pastors. *Journal for the Scientific Study of Religion, 40,* 323-329.

Miller, M.M., & Chavier, M. (2013). Clinician's experiences of integrating prayer in the

therapeutic process. *Journal of Spirituality in Mental Health, 15*, 70-93.

Nooney, J., & Woodrum, E. (2002). Religious coping and church-based social support as

predictors of mental health outcomes: Testing a conceptual model. *Journal for the

Scientific Study of Religion, 41,* 359-368.

Pargament, K., Zimbauer, B., Scott, A., Butter, E., Zerowin, J., & Stanik, P. (1998). Red flags

and religious coping: Identifying some religious warning signs among people in crisis.

Journal of Clinical Psychology, 54, 77-89.

Pollner, M. (1989). Divine relations, social relations, and well-being. *Journal of Health and

Social Behavior, 30,* 92-104.

Poloma, M. M., & Gallup, G. H. (1991). *Varieties of Prayer.* Philadelphia, PA: Trinity Press

International.

Poloma, M. M., & Pendleton, B. F. (1989). Exploring types of prayer and the quality of life.

Review of Religious Research, 31, 46 - 53.

Poloma, M. M., & Pendleton, B. F. (1991). The effects of prayer and prayer experiences on

measures of general well-being. *Journal of Psychology and Theology, 19,* 71-83.

Ponterotto, J. G., Suzuki, L. A., Casas, J. M., & Alexander, C. M. (2009). *Handbook of multicultural counseling* (3rd ed.). Thousand Oaks, CA: Sage.

Pössel, P., Winklejohn-Black, S. W., Bjerg, A. C., Jeppsen, B. D., & Wooldridge, D. T. (2013). Do Trust-Based Beliefs Mediate the Associations of Frequency of Private Prayer with Mental Health? A Cross-Sectional Study. *Journal of religion and health*, 1-13.

Pössel, P., Bjerg, A., Winkeljohn Black, S., Jeppsen, B., & Wooldridge, D. (submitted). *Response Styles, Depression, and Prayer: Exploring the Mediating Effects.*

Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological methodology*, *25*, 111-164.

Salsman, J. M., Brown, T. L., Brechting, E. H., & Carlson, C. R. (2005). The link between religion and spirituality and psychological adjustment: The mediating role of optimism and social support. *Personality and Social Psychology Bulletin, 31,* 522-535.

Saudia, T.L., Kinny, M.R., Young-Ward,R.L., & Brown, K.C. (1991). Health locus of control and helpfulness of prayer. *Heart and Lung, 20*, 60-65

Schwarz, G. (1978). Estimating the dimension of a model. *The annals of statistics*, *6*, 461-464.

Shacham, S. (1983). A shortened version of the Profile of Mood States. *Journal of Personality Assessment, 47*, 305–306.

Shrauger, J.S., & Silverman, R.E. (1971). The relationship of religious background and participation to locus of control. *Journal for the Scientific Study of Religion, 10*, 11-16.

Spilka, B., Shaver, P. & Kirkpatrick, L.A. (1985). A general attribution theory for the psychology of religion. *Journal for the Scientific Study of Religion, 24*(1), 1-20.

Spilka, B., & Ladd, K. L. (2012). *The Psychology of Prayer: A Scientific Approach*. Guilford Publication.

Strawbridge, W. J., Shema, S. J., Cohen, R. D., & Kaplan, G. A. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. *Annals of Behavioral Medicine, 23,* 68-74.

Whittington, B. L., & Scher, S. J. (2010). Prayer and subjective well-bing: An examination of six different types of prayer. *International Journal for the Psychology of Religion, 20*, 59-68.

Whyte, C. B. (1978). Effective Counseling Methods for High-Risk College Freshmen. *Measurement and Evaluation in Guidance*, 10(4), 198-200.

Winkeljohn-Black, S., Pössel, P., Jeppsen, B., Bjerg, A. & Wooldridge, D. (2012). *The Relationship Between Prayer Type and Psychological Well-Being, As Mediated By Distress Disclosure*. (Unpublished manuscript in review for publication). University of Louisville, Louisville, KY.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, 37,* 197-206.

Table 1

Point Biseral Correlations between Denominations and Variables

	Prayer Frequency	Colloquial Prayer	Petitionary Prayer	Meditative Prayer	God-Mediated Control	Closeness to God
Baptist	0.103	0.106	-0.036	.117[*]	.149[**]	0.078
Christian_NonD	0.058	0.063	0.084	0.061	.140[*]	0.102
Catholic	-.122[*]	-.172[**]	-.115[*]	-.208[**]	-.126[*]	-.161[**]
Methodist	.126[*]	.144[**]	-0.018	.135[*]	0.048	.140[*]
LDS	.154[**]	.147[**]	.235[**]	.155[**]	.185[**]	.117[*]
Other_Christian	-0.021	0.040	-0.024	0.024	0.001	0.042
Jewish	-0.053	-0.076	-.146[**]	-0.012	-.172[**]	-0.015
Muslim	0.052	0.087	.149[**]	-0.040	0.045	-.159[**]
Buddhist	-0.105	-0.104	-0.029	-0.066	-.164[**]	-0.106
Other	-0.093	-0.094	-0.019	-0.042	-0.082	-0.053
Agnostic	-.195[**]	-.262[**]	-.109[*]	-.193[**]	-.354[**]	-.338[**]
None	-.158[**]	-.166[**]	-0.056	-.201[**]	-.185[**]	-.174[**]

Note. **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2

Descriptive Statistics and Zero-Order Correlations among the Variables

	Colloquial	Meditative	Petitionary	Closeness	God-Mediated	POMS
Colloquial Prayer	--					
Meditative Prayer	.82*	--				
Petitionary Prayer	.46*	.38*	--			
Closeness to God	.65*	.66*	.32*	--		
God-Mediated Control	.65*	.59*	.39*	.72*	--	
POMS Total	.26*	.26*	-.02	.33*	.23*	--
Mean	27.78	20.15	5.62	10.04	34.10	143.82
Standard Deviation	9.06	8.58	3.11	2.12	8.48	20.93

Note. N=330 for all variables. POMS Total =Profile of Mood States total score, reversed so that higher scores reflect better mental health. * $p < .01$ ** $p < .05$. Descriptive statistics are based on the raw data, not the normalized z-scores.

Table 3

Model Fit Indices for the models

Model	χ^2 (df)	*p*	CFI	TLI	RMSEA	AIC	BIC
Closeness to God, Initial	1.85(1)	0.174**	0.99**	0.99**	0.05*	29.85	83.00
Closeness to God, Optimized	1.99(1)	0.369**	1.00**	1.00**	0.00**	27.99	77.34
God Mediated Control, Initial	1.85(1)	0.174**	0.99**	0.99**	0.05*	30.00	86.94
God Mediated Control, Optimized	0.63(1)	0.634**	1.00**	1.00**	0.00**	28.63	81.78
Combined, Initial	24.90(1)	<.001	0.92*	0.60	0.27	110.71	179.04
Combined, Optimized	0.68(1)	.563**	1.00**	1.00**	0.00**	38.04	106.37

Note. *Statistic meets standard for acceptable fit. **Statistic meets standard for good fit. AIC and BIC

are relative indices for model comparisons and have no objective benchmark for model fit.

Table 4

Confidence Intervals (95%), for Multiple Mediation Effects in the Final Models

	Effect	Lower CI	Upper CI
Mediation by Closeness to God Model			
Standardized Direct Effects			
Colloquial →Closeness	.281**	.109	.447
Meditative →Closeness	.449***	.285	.603
Petitionary →POMS Total	-.199**	-.312	-.081
Colloqial→POMS Total	.183*	.035	.327
Closeness→POMS Total	.286***	.135	.435
Standardized Indirect Effects			
Colloquial →Closeness→POMS Total	.080**	.020	.170
Meditative →Closeness →POMS Total	.128***	.066	.191
Mediation by God-Mediated Control Model			
Standardized Direct Effects			
Colloquial →GMC	.353***	.219	.484
Meditative → GMC	.224**	.092	.359
Petitionary → GMC	.154***	.068	.241
Colloquial→POMS Total	.282***	.157	.401
Petitionary →POMS Total	-.205**	-.321	-.082
GMC →POMS Total	.144*	.018	.268
Standardized Indirect Effects			
Colloquial → GMC→POMS Total	.051*	.006	.109
Meditative → GMC →POMS Total	.032*	.003	.071
Petitionary → GMC →POMS Total	.022*	.002	.051

Mediation by both God-Mediated Control and Closeness to God simultaneously Model

Standardized Direct Effects

Colloquial → GMC	.367***	.237	.499
Meditative → GMC	.224**	.095	.363
Petitionary → GMC	.126**	.041	.209
Colloquial → Closeness	.281**	.109	.447
Meditative → Closeness	.449***	.285	.603
Petitionary → POMS Total	-.199**	-.312	-.081
Colloquial → POMS Total	.183*	.035	.327
Closeness → POMS Total	.286***	.135	.435

Indirect Effects

Colloquial →Closeness→POMS Total	.080**	.020	.170
Meditative →Closeness →POMS Total	.128***	.066	.191

Note. $N=330$ for all variables. POMS Total =Profile of Mood States total score, reversed so that higher scores reflect better mental health. * $p < .05$. ** $p < .01$. *** $p < .001$
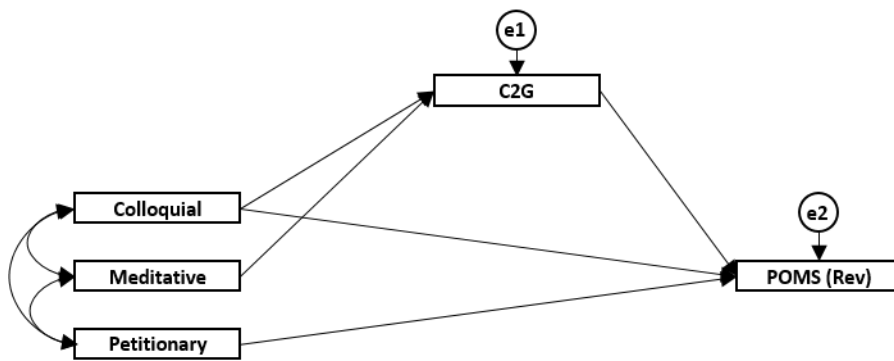
Figure 1. Closeness to God as a mediator, final model. C2G = Closeness to God
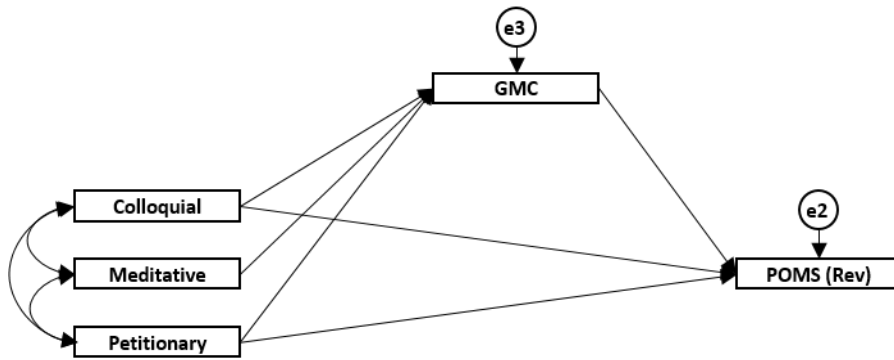
*Figure 2.*God-mediated control as a mediator, final model. GMC = God-Mediated Control
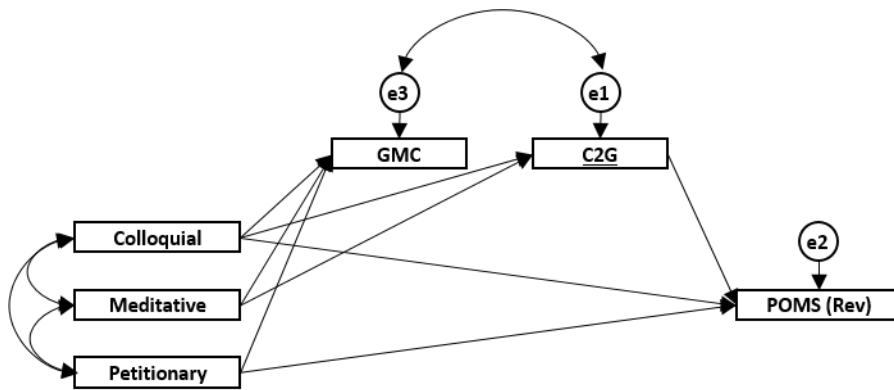
Figure 3. final combined model. GMC = God-Mediated Control, C2G = Closeness to God