

Distant Intercessory Prayer and Task Performance

Lynn M. Munson and Douglas Degelman

Vanguard University of Southern California

Author Note

Lynn M. Munson, Department of Psychology, Vanguard University of Southern California;
Douglas Degelman, Department of Psychology, Vanguard University of Southern California.

Correspondence concerning this article should be addressed to Douglas Degelman,
Department of Psychology, Vanguard University of Southern California, Costa Mesa, CA 92626.
E-mail: ddegelman@vanguard.edu

Abstract

In an extension of research demonstrating causal effects of intercessory prayer for physical healing in a medical setting, the present study experimentally examined the effects of intercessory prayer for improved task performance in an employment setting. Trained customer service representatives either did, or did not, receive (over a 14-day period) daily intercessory prayer for the specific needs and challenges of their workplace. Speed of call handling was evaluated for each customer service representative. The specific dependent measures were number of calls per hour and number of seconds per call. No statistically significant differences between prayer and non-prayer groups were found for either calls per hour or seconds per call. Recommendations for research in this new area of study center on methodological issues, including the selection of relevant dependent measures.

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Reviews of research on religion and health have concluded that at least some types of religious behaviors are related to higher levels of physical and mental health (Gartner, Larson, & Allen, 1991; Koenig, 1990; Levin & Vanderpool, 1991; Maton & Pargament, 1987; Paloma & Pendleton, 1991; Payne, Bergin, Bielema, & Jenkins, 1991). One of the “religious behaviors” that has been shown to be related to health and well-being is prayer (Finney & Maloney, 1985; McCullough, 1995; Paloma & Pendleton, 1991).

The empirical studies examined in these reviews have almost all revealed a significant relationship between an individual's religious belief system and measures of well-being (Aldridge, 1991; Friedman & Benson, 1997; Larson et al., 1992; Matthews, 1997). A more difficult question to answer is whether the relationship between religion and health, or more specifically between prayer and health, is causal. Most studies examining prayer and health are correlational, leaving unanswered the question of whether prayer is causing the observed changes in health. To illustrate, if individuals who pray for physical healing (or know that others are praying for them) have more positive outcome measures, many would argue that the positive outcome is not the direct effect of the prayer, but instead may be the result of positive cognitive expectations.

One study that has experimentally examined the causal effect of prayer on health measures was conducted by Randolph Byrd (1988). Byrd conducted what has proved to be a landmark study experimentally examining the causal effect of intercessory prayer (prayer offered on behalf of another) on recovery from cardiological illness. In this double-blind study, patients in a coronary care unit either received or did not receive daily prayer (while hospitalized) from Christian prayer intercessors. Patients receiving prayer had “less congestive heart failure, required less diuretic and antibiotic therapy, had fewer episodes of pneumonia, had fewer cardiac arrests, and were less frequently intubated and ventilated” (Byrd, 1988, p. 829).

In another randomized, double-blind study on the effects of intercessory prayer on outcomes of coronary care unit patients, Harris et al. (1999) found significantly lower overall

adverse outcomes for patients receiving intercessory prayer, although length of stay in the hospital did not differ between those receiving and those not receiving intercessory prayer.

Although these studies provide some evidence of a causal effect of prayer on medical outcomes, there have been no comparable studies examining the potential causal effects of prayer outside a medical setting. One important setting in which to study prayer is the workplace, where prayer may address issues such as potential interpersonal conflict and the pressures inherent in most workplaces (such as deadlines and performance evaluations). The workplace clearly represents an untapped area for research into the possible causal effects of intercessory prayer.

The specific purpose of the present study was to utilize the double-blind methodology of Byrd's (1988) study on health outcomes to evaluate the "distance" effects (Dossey, 1997; Schlitz, 1997) of intercessory prayer (prayer without the individual's presence or awareness) on occupational task performance. In a health care customer service call center, will individuals receiving prayer evidence different levels of task performance (number of calls answered per hour and number of seconds per call) compared to individuals who are not receiving prayer?

Method

Participants

Research participants were 103 trained customer service call center representatives (9 men and 94 women) all residing in southern California.¹ The mean age for the men was 34.0 years ($SD = 8.8$), and the mean age for the women was 37.3 years ($SD = 8.2$). Ethnicity of participants was not evaluated. All study participants had at least six months and no more than two years experience in this customer service call center environment. Primary responsibilities of the customer service representatives were to respond to member questions concerning health care coverage and to attempt to resolve member complaints. Participants worked in a controlled environment at individual pod-like workstations, which were grouped in clusters of five. Each used identical computer and phone answering equipment. Calls were distributed equally as representatives were available.

Two women (ages 36 and 55) served as prayer intercessors for the study. The intercessors

were self-identified Christians who were active participants in prayer ministries in a local United Methodist church.

Apparatus

Data on answer speed and call handling time was attained utilizing the Northern Telecom Meridian Max call reporting system. A daily prayer log sheet was used as a self report by prayer intercessors.

Procedure

Participants were randomly assigned by gender- and age-matched pairs to prayer and non-prayer groups. Participants had no knowledge that a study on intercessory prayer was being conducted, but they were aware of ongoing monitoring of their phone interactions with customers. Permission to use these data for the current study was obtained. Customer service representatives in the prayer group were assigned to two prayer intercessors who had no prior knowledge of the participants. Intercessors were provided with general information related to potential work environment challenges and specific information (age, gender, and identification number) about those for whom they were to pray. They were directed to offer daily specific prayers for efficiency, alertness, and wisdom with members' issues. Most prayers were 3-5 minutes in length. Intercessors recorded daily prayer "events" for each individual.

The study period spanned a 7-day pretest period (11/3/96 to 11/9/96) and a 14-day experimental period (11/10/96 to 11/23/96). Daily measurements of number of calls answered per hour and call handling time (number of seconds per call) were obtained.

Results

For each participant, the mean number of calls per hour and the mean number of seconds per call for both the seven-day pretest period and the fourteen-day experimental period were obtained. Table 1 presents, for both prayer and non-prayer groups, the means and standard deviations of both measures (calls per hour and seconds per call) for both pretest period and experimental period.

Preliminary analyses of *pretest* calls per hour and seconds per call revealed no significant

differences between prayer and non-prayer groups for either calls per hour, $F(1, 96) = 0.43, p = .52$, or seconds per call, $F(1, 96) = 0.92, p = .34$.

Multivariate tests of significance of calls per hour and seconds per call (and follow-up univariate tests of significance of each) revealed no significant differences between prayer and non-prayer groups in the *change* in either the mean number of calls per hour or the mean number of seconds per call from pretest period to experimental period (all $ps > .10$).

Discussion

The major finding of this study is that prayer for a two-week time period did not elicit a statistically significant change in task performance as measured by time per call or number of calls handled per hour among customer service representatives. While other studies found a correlation between prayer and physical or mental wellness, this study, which appears to be the first study dealing with the potential causal effects of prayer on occupational task performance, found no effect of prayer on the two measures of occupational task performance (calls per hour and seconds per call).

In considering the results of this exploratory study, several issues are clear. First, it must be recognized that there are many, many measures potentially affected by intercessory prayer beyond the physical characteristics of the phone conversations between the customer service representatives and the customers. A comprehensive list of these measures is not possible, but included would have to be supervisor evaluations, peer evaluations, customer evaluations, measures of personal peace, confidence, patience, kindness, insight into customer issues, and resolution of customer issues. As the study of intercessory prayer moves into a new area (occupational task performance), it is extremely important for researchers to have an ongoing record of the dependent measures which were, and were not, impacted by intercessory prayer.

The dependent measures employed in this study (calls per hour and seconds per call) were selected primarily because they were measures that were already being collected by the employer. These measures may have been relatively insensitive to the effects of prayer due to certain conditions of employment: customer service representatives received “incentives” (both

monetary and status) for efficient handling of calls. Thus, customer service representatives may have been performing at or near optimal levels, resulting in a ceiling effect.

Second, there is an acknowledged need to report findings of statistical nonsignificance, especially as research moves into a new area. Schlitz (1997) and Larson et al. (1992) both noted the deleterious effects of selective reporting of only statistically significant effects. When a study employs careful controls (such as the present study which controlled the potential biasing effects of participant knowledge of being recipients of prayer), findings of statistical nonsignificance are of greater value than studies in which several rival hypotheses can be identified.

Third, if the effect size that is being examined is reliable yet relatively small, there may be several factors that determine whether a statistically significant effect is observed in a specific situation. Schlitz (1997) observed that the need of participants seems to increase effect size. To the extent that this is so, we would expect employees of whom there are high expectations, or who are experiencing prolonged stressful situations, or who operate in a highly competitive setting might be more likely to be affected by intercessory prayer. Although some of these conditions presumably applied in the present study, the selection of dependent measures may have obscured their impact. Future research in this area should carefully consider the level of participant need.

Few fields of research are as open and inviting as the study of the effects of intercessory prayer in the workplace! In addition to the many potentially important dependent measures already mentioned, future research needs to address additional variables such as the nature and length of the intercessory prayer, the length of time the intercessory prayer period lasts, the personal characteristics of both the participants and the intercessors (including age, gender, and ethnicity), and the occupational characteristics of those receiving prayer (including type of position, length of employment, and ongoing levels of stress). As future research begins to map out the complex ways in which intercessory prayer impacts those in the workplace, additional issues such as the endurance of the effects of prayer over time will certainly arise.

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Footnote

¹The study began with 115 participants; data from 12 were dropped due to insufficient data resulting from illnesses and unexpected days off.

Table 1

Means and Standard Deviations of Mean Calls Per Hour and Mean Seconds Per Call for Prayer and Non-Prayer Groups by Period

| Measure | Period | |
|------------------|------------|--------------|
| | Pretest | Experimental |
| | Prayer | |
| Calls Per Hour | | |
| <i>M</i> | 7.88 | 7.26 |
| <i>SD</i> | 1.86 | 2.03 |
| Seconds Per Call | | |
| <i>M</i> | 350.05 | 355.01 |
| <i>SD</i> | 71.72 | 62.86 |
| | Non-Prayer | |
| Calls Per Hour | | |
| <i>M</i> | 8.23 | 7.38 |
| <i>SD</i> | 2.16 | 2.10 |
| Seconds Per Call | | |
| <i>M</i> | 330.99 | 335.62 |
| <i>SD</i> | 83.29 | 81.59 |