

Eastern Illinois University  
**The Keep**

---

Masters Theses

Student Theses & Publications

---

1-1-2012

# Prayers of obligation and well-being: A study of the effects of Orthodox Jewish prayer

Charles T. Coleman

*Eastern Illinois University*

This research is a product of the graduate program in [Psychology](#) at Eastern Illinois University. [Find out more](#) about the program.

---

## Recommended Citation

Coleman, Charles T., "Prayers of obligation and well-being: A study of the effects of Orthodox Jewish prayer" (2012). *Masters Theses*. 986.  
<http://thekeep.eiu.edu/theses/986>

This Thesis is brought to you for free and open access by the Student Theses & Publications at The Keep. It has been accepted for inclusion in Masters Theses by an authorized administrator of The Keep. For more information, please contact [tabruns@eiu.edu](mailto:tabruns@eiu.edu).

**\*\*\*\*\*US Copyright Notice\*\*\*\*\***

**No further reproduction or distribution of this copy is permitted by electronic transmission or any other means.**

**The user should review the copyright notice on the following scanned image(s) contained in the original work from which this electronic copy was made.**

**Section 108: United States Copyright Law**

**The copyright law of the United States [Title 17, United States Code] governs the making of photocopies or other reproductions of copyrighted materials.**

**Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that use may be liable for copyright infringement.**

**This institution reserves the right to refuse to accept a copying order if, in its judgment, fulfillment of the order would involve violation of copyright law. No further reproduction and distribution of this copy is permitted by transmission or any other means.**

**THESIS MAINTENANCE AND REPRODUCTION CERTIFICATE**

TO: Graduate Degree Candidates (who have written formal theses)

SUBJECT: Permission to Reproduce Theses

An important part of Booth Library at Eastern Illinois University's ongoing mission is to preserve and provide access to works of scholarship. In order to further this goal, Booth Library makes all theses produced at Eastern Illinois University available for personal study, research, and other not-for-profit educational purposes. Under 17 U.S.C. § 108, the library may reproduce and distribute a copy without infringing on copyright; however, professional courtesy dictates that permission be requested from the author before doing so.

By signing this form:

- You confirm your authorship of the thesis.
- You retain the copyright and intellectual property rights associated with the original research, creative activity, and intellectual or artistic content of the thesis.
- You certify your compliance with federal copyright law (Title 17 of the U.S. Code) and your right to authorize reproduction and distribution of all copyrighted material included in your thesis.
- You grant Booth Library the non-exclusive, perpetual right to make copies of your thesis, freely and publicly available without restriction, by means of any current or successive technology, including but not limited to photocopying, microfilm, digitization, or Internet.
- You acknowledge that by depositing your thesis with Booth Library, your work is available for viewing by the public and may be borrowed through the library's circulation and interlibrary department or accessed electronically.
- You waive the confidentiality provisions of the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) with respect to the contents of the thesis, including your name and status as a student at Eastern Illinois University.

**Petition to Delay:**

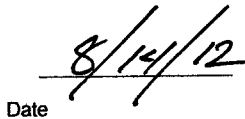
I respectfully petition that Booth Library delay maintenance and reproduction of my thesis until the date specified and for the reasons below. I understand that my degree will not be conferred until the thesis is available for maintenance and reproduction.

Date:

Reasons:



Author's Signature



Date

**This form must be submitted in duplicate.**

**Prayers of Obligation and Well-Being :**  
**A Study of the Effects of Orthodox Jewish Prayer**

BY  
**Charles T. Coleman**

**THESIS**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

**Master of Arts in Clinical Psychology**

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY  
CHARLESTON, ILLINOIS

2012  
YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING  
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

  
\_\_\_\_\_  
THESIS COMMITTEE CHAIR      8/14/12  
DATE

  
\_\_\_\_\_  
DEPARTMENT/SCHOOL CHAIR      8/14/12      DATE  
OR CHAIR'S DESIGNEE

  
\_\_\_\_\_  
THESIS COMMITTEE MEMBER      7-31-12      DATE

\_\_\_\_\_  
THESIS COMMITTEE MEMBER      DATE

  
\_\_\_\_\_  
THESIS COMMITTEE MEMBER      7/31/12      DATE

\_\_\_\_\_  
THESIS COMMITTEE MEMBER      DATE

Copyright 2012

By

Charles T. Coleman

## Abstract

In a study to explore the effect of concentration during Orthodox Jewish obligatory prayer on well-being, ten Orthodox Jewish prayers were rated by experts (Rabbis) for the inclusion of the five identified prayer types of adoration, thanksgiving, confession, supplication, and reception. The ratings were used to establish a prayer type score for each of the ten prayers studied. Other Orthodox Jewish males (non-Rabbis) were then surveyed about their individual level of concentration during the same ten prayers and about health and psychological well-being. Although the multiple regression analyses showed no link between degree of concentration and well-being, it was determined that the obligatory prayers studied were primarily comprised of the five identified prayer types with the only difference being their obligatory nature.

Dedication Page

This work is dedicated to my father

**Howard Weldon Coleman**

**1939-2010**

## Acknowledgements

I would like to thank the following for all their help during this process. My wife Mechelle Coleman and my mother Betty Connour, thank you for putting up with me. The instructors who helped me get here: Dr. Sharma, Dr. Bernas, Dr. Allan, Dr. Gruber, Dr. Scher, Ms. Marjorie Hanft and Ms. Cathy Schoonover. I would also like to thank the Illinois Department of Rehabilitation for making this financially possible.



## Table of Contents

|                          |     |
|--------------------------|-----|
| Index of Tables          | 7.  |
| Introduction             | 8.  |
| Literature Review        | 8.  |
| Methodology              | 16. |
| Results                  | 20. |
| Discussion & Conclusions | 23. |
| References               | 31. |
| Appendix                 | 44. |

## Index of Tables

|  |     |
|--|-----|
| Table 1. Kavannah index reliability alpha estimates  | 36. |
| Table 2. Mean prayer ratings by type   | 37. |
| Table 3. Correlation matrix of well-being measures   | 38. |
| Table 4. Summary of multiple regression analyses for<br>variables predicting SDHS scores           | 39. |
| Table 5. Summary of multiple regression analyses for<br>variables predicting SWLS scores           | 40. |
| Table 6. Summary of multiple regression analyses for<br>variables predicting MLQ (presence) scores | 41. |
| Table 7. Summary of multiple regression analyses for<br>variables predicting MLQ (search) scores   | 42. |
| Table 8. Summary of multiple regression analysis for<br>variables predicting SIC scores            | 43. |

Prayer is an essential aspect of the spiritual path of the individual for the majority of the major world religions (Baesler, 1997). A survey of Americans found that 90% reported that they pray, and that number may be higher in other cultures (Gallup & Lindsay, 1999).

The most basic definition of prayer is that it is a communication or conversation between a believer and his/her god or deity. Basic prayer typically requires no supplies and can be performed almost anywhere, making it available to all. The prevalence of religious belief and prayer has led social scientists to study these practices. As a result there is a growing base of empirical research on the subject.

Prayer is used by many as a means of coping during times of stress (Pargament, 1997) or as a personal quest for understanding following tragic or catastrophic events (Ai, Tice, Peterson & Huang, 2005). Participation in group ritual and prayer is often an important means of social support. This support is especially important for practitioners later in life as they deal with the loss of friends and family and their own declining health (Levin, Markides & Ray, 1996). The social support provided by religious organizations has been theorized to give a greater sense of comfort because of the similarity of beliefs among members (Ellison & George, 1994). The support provided by group prayer is also beneficial to minorities and recent immigrants as a means of reinforcing their ethnic or cultural identity (Warner & Wittner, 1998).

### Literature Review

Most research has focused on the benefits of prayer and can be divided into two general categories, psychological effects and physical effects. Research on the psychological effects of prayer has found associations with stress reduction and coping

skills (Pargament, 1997). Prayer and religious practice have also been found to reduce negative psychological symptoms after traumatic events, such as lowering the scores on a posttraumatic stress disorder checklist (McLeish & Del Ben, 2008), or increasing optimism after the 9/11 national crisis (Ai, Tice, Peterson & Haung, 2005).

Prayer has been linked to an overall increase in well being and life satisfaction as demonstrated by higher scores on measures of existential well being and happiness (Poloma & Pendleton, 1991). Prayer has been associated with increased subjective well being (Lewis & Cruise, 2006; Maltby, Lewis & Day, 2008). In a recent time diary survey designed to examine emotional experiences associated with daily activities, participants reported the highest level of positive emotions when they were engaged in religious activities (Krueger et al., 2009). Those who pray have been shown to have decreased anxiety (Koenig, Ford, George, Blazer & Meador, 1993) and less depression (Smith, McCullough, & Poll, 2003).

Research about the physical health benefits associated with religious practice and prayer has shown several positive links. Prayer has been correlated with better health outcomes for older persons who engage in public religious involvement (George, Ellison & Larson, 2002). Those who used prayer as a coping mechanism prior to cardiac surgery had better post-operative outcomes (Contrada, Goyal, Cather, Rafalson, Idler & Krause, 2004). Researchers performing a meta-analysis of previous studies found that religious involvement and prayer indicated a better survival rate from all-cause mortality (McCullough, Hoyt, Larson, Koenig, Thoresen, 2000). Prayer is a widely used effective coping mechanism for arthritis pain (Arcury, Bernard, Jordan & Cook, 1996; Bill-Harvey, Rippey, Abeles & Pfeiffer, 1989). Prayer is also linked to better coping with

cancer (Johnson & Outlaw, 2002; Soderstrom & Martinson, 1987; Taylor, Outlaw, Bernardo & Roy, 1999).

In an effort to better understand these associations, researchers have begun to study different types of prayer, which has many forms and can be active or passive in nature. The Multidimensional Prayer Inventory (MPI; Laird, et.al. 2004) was developed as an empirically valid multidimensional measure of different prayer types. It measures five different prayer types: adoration, confession, thanksgiving, supplication, and reception. The MPI defines prayers of adoration as those focused on the worship of God alone, without thought given to individual desires or needs (Laird, et. al, 2004). Prayers of confession involve the participants' acknowledgement of misdeeds or faults (Laird, et. al, 2004). Thanksgiving prayers are defined as prayers where the worshipper expresses gratitude to God for life events and circumstances (Laird, et. al, 2004). Prayers of supplication involve direct requests for God's intervention in the lives of worshippers and others (Laird, et. al, 2004). During prayers of reception the worshipper passively waits for guidance, wisdom, and understanding from God. Reception is the most passive form of prayer and is often seen as a form of meditation.

#### Obligatory Prayers

Inclusion in some religions requires members to maintain strict lifestyle criteria over all aspects of behavior such as habits of grooming, style of dress, food restrictions and standardized worship rituals. Prayer directed towards the chosen deity is one of the most fundamental of these rituals. In most religions with standardized worship there are set procedures for prayer that include primarily location, occasion (daily or specific events), and scripted prayers recited in a set order. These types of prayers have been

labeled by Poloma & Gallup (1991) as “ritualistic,” which is misleading because all prayers are by nature rituals and the title makes no distinction between spontaneous and required prayer. In this study the term “obligatory prayer” has been chosen because it focuses on the “why” of the prayers as opposed to the “what”. Obligatory prayer can be defined as prayers that a person must perform to abide by the tenants of a particular faith. Most religions have a mechanism for prayer in their ideology. In some religions such, as Protestantism, level of participation and the schedule for prayer is left almost entirely up to the individual. Most forms of Christianity mirror this individualism and reserve obligatory prayers for group worship and special occasions, if at all. There are more scripted forms of Christianity, such as Greek Orthodox and Roman Catholicism; but for the most part their level of participation and obligation pale in comparison to Islam and Orthodox Judaism.

#### Roman Catholic Prayer

Roman Catholicism incorporates a high level of ritual practice and prayer when compared to other Christian based religions (Turner, 2007). In the Catholic faith there are rituals for confession and communion, but when examined closely the level of obligation is much lower than in Orthodox Judaism (Turner, 2007). Catholicism requires members to receive communion at mass to be eligible for salvation after death. However, there is no set schedule for communion, and frequency is left to the individual (Turner, 2007). Other than changing from the Latin only mass in the 1960s, the basic elements of the Catholic ritual have been in place for a thousand years. The basic requirements of the Catholic parishioner are to follow the teachings of Christ, obey the moral laws of the Church, pray daily, and to support the Church financially (Turner, 2007). The moral laws

of the Church require members to attend mass on Sundays and the 11 feast days throughout the year. There are also fasting requirements during the Lenten season. Confession of member's sins to a priest is required annually or more often if needed. If a mortal sin has been committed since the member has last received communion, they are required to confess their sins before being allowed to participate in the communion mass. If the member were to perish before they confess and receive communion, then according to the beliefs of the religion they will be denied salvation in heaven (Turner, 2007).

#### Islamic Prayer

Obligatory prayer is also one of the five pillars of the Islamic faith and is required daily (Pennington, 2009). Although Friday is the primary day of prayer, Muslims are required to pray, prostrated and bowing, five times each day. The prayer ritual requires symbolic washing of the hands and feet in either water or sand, and that prayers are recited in the direction of Mecca (Pennington, 2009). In addition to daily prayer Muslims are required to make at least one pilgrimage to Mecca in their lifetimes if at all possible.

#### Orthodox Jewish Prayer

Prayer is obligatory for male Orthodox Jews, and their lives are guided by the traditional Jewish Codes of Law that dictate synagogue procedures and prayer rituals (Donin, 1980). Males in this culture are required to pray three times daily, meet strict food requirements, and also to say brief prayers in certain situations such as eating or drinking. (Some prayer is obligatory for Orthodox Jewish females, but this obligation is at a much lower level than for males). When this is contrasted to the mostly voluntary prayer habits of a typical Protestant, the differences in level of obligatory prayer are clear and it becomes obvious how the results of a study containing a majority of Protestants

would not be applicable to those who actually engage in obligatory prayer. Protestantism is an independent religion by nature and is more focused on individual worship rather than organized ritual (Mead, et. al, 2010).

Although all three faiths (Catholicism, Islam, Judaism) employ a greater degree of ritual prayer than typical Protestantism, Orthodox Judaism and Islam require more frequent participation and impose a stronger obligation than Catholicism (Mead, et.al, 2010). It is possible for a Catholic to meet the basic tenets of the faith with minimal daily participation; whereas Orthodox Judaism by definition requires strict adherence to all of the traditional Jewish Codes of Law (Donin, 1980), and a Muslim is one who abides by the five pillars of Islam (Pennington, 2009). As a result, a sample population of mostly Catholics would not provide as good a representation of those who are obliged to pray as a sample of Orthodox Jews or Muslims. Catholicism may be considered more ritualistic than other Christian faiths, but it still allows members a good deal of choice in their individual level of participation. The same cannot be said about Orthodox Judaism or Islam. These religions are faiths of practice, whereas Christianity generally only requires a declaration to God of commitment (Mead, et.al, 2010).

Research has shown that different types of prayer yield different psychological results (Ai, Tice, Huang, Rodgers & Bolling, 2008; Laird, et. al, 2004). Empirical research on prayers of obligation are especially rare; in a study of how prayer type relates to well being, Whittington and Scher (2010) used the MPI and found that egoless prayer types (those not focused on the self) like thanksgiving, adoration and reception provided positive effects on well being. This study also included a scale to measure obligatory prayer. The Whittington and Scher (2010) study found that when other prayer types were



controlled for, obligatory prayers had a negative effect on well being. In a previous study on prayer type and general well being, Poloma & Pendleton (1991) found a small positive relationship between ritualistic prayer and negative affect. Those who reported engaging in more ritualistic prayer also reported more feelings of sadness, loneliness, tension and fear.

The authors of both studies acknowledge problems that prevent these results from being a complete picture of obligatory prayer. The primary difficulty with these studies is with the sample makeup. The population of the Whittington & Scher (2010) study contained 62 Muslims and only 39 Jews, 11 of whom reported being Orthodox. This is only 17% of the total of 427 participants. The Poloma & Pendleton (1991) study used the Akron Area Survey (AAS) as a sample pool. The AAS reported that 1% of the 560 sampled were Jewish, and 13% was “other,” lumping Muslims and those of various Eastern religions together. Although these samples may be an approximate representation of the population of the Akron, Ohio area, it is not enough to allow inferences about the effects of prayers of obligation among members of religions where obligation plays a substantial role. As these religions have a much higher level of obligatory prayer, it is hard to apply the results of these studies without using a sample containing only Orthodox Jews or Muslims.

The earlier studies had posed other problems as well. When discussing ritual prayer in their study, Poloma & Pendleton (1991) referred to it as “rote” and “mechanical;” their study also suggested that ritual prayers were less mentally demanding than verbal or meditative prayer. Likewise, Whittington & Scher (2010) questioned whether these types of prayer were performed solely as a requirement, or were motivated

primarily by a fear of punishment from God. The demographic problems of these respective studies do not allow their results to be extrapolated to those who pray as a result of obligation, or to what the respondents may have been thinking during prayer.

There are several possible causes for the findings about obligatory prayer in both the Whittington & Scher (2010) and Poloma & Pendleton (1991) studies. One possible cause is related to the participant's motivation for praying. If those performing these rituals are doing so only out of a sense of obligation and are giving little real thought to their actions, it stands to reason that they are not attaining the egoless state of introspection that is associated with the benefits provided by the other prayer types. It is possible that obligatory prayer includes many of the same aspects of the other prayer types, and therefore should provide the same overall benefits to well being if those praying pay attention to the meaning of the prayers. To determine if these prayers do have any affect psychologically it would be beneficial to examine obligatory prayers to see to what extent they mirror characteristics of the other types of prayer. If obligatory prayers do contain aspects of the other prayer types, then the negative findings of the Whittington & Scher (2010) study may be limited to those who pray *only* out of a sense of obligation.

To guard against rote recitation of obligatory prayer, Jewish law requires the worshipper to consider who is being addressed, and to free the mind of extraneous thoughts, concentrating on the prayer. The Hebrew word for this practice is *Kavannah* and can be equated with the concept of mindfulness, or being present and focused in the current moment; to pray with *Kavannah* requires the worshipper to concentrate on the meaning of the texts being read . According to Donin (1980) “*Kavannah* in prayer is the

very antithesis of the mechanical and perfunctory reading of words” (p.19). Worshippers are advised to avoid prayer if they cannot assemble a minimal level of Kavannah, and to always be mindful of whom they are addressing (i.e. God). The inclusion of song in Jewish prayer aids participants in focusing their hearts, minds and emotions during prayer; this helps increase the level of Kavannah of all in attendance (Donin, 1980).

I hypothesize that prayers of obligation are comprised of aspects of the other prayer types, and that the only major difference is the ritual nature and not the actual content. It is predicted that obligatory Jewish prayer will contain elements of all five established prayer types (adoration, thanksgiving, confession, supplication, and reception). As a result it is predicted that these obligatory prayers will have the same positive effect on well being when variables related to concentration are taken into account.

It is predicted that the psychological and physical benefits of prayers of obligation will be reliant upon each participant’s individual degree of focus and concentration (Kavannah) on the prayers. It is predicted that those who have a higher degree of Kavannah will experience more positive well being when the prayers consist mostly of elements of adoration, thanksgiving and reception. Likewise those with lower Kavannah on these prayers will experience fewer benefits or none at all. Prayers of supplication and confession are predicted to have either a negative effect on well being or none at all.

## Methodology

### *Participants*

This study simultaneously recruited two groups who self identified into the following categories: rabbis (n = 12) as expert raters and other male Orthodox Jews (n = 81) as participants. The rationale for using subjects of one sex is that in Orthodox Judaism males are required to pray three times daily and Orthodox females are not; therefore, females do not have the same degree of obligation toward prayer as males. As obligatory prayer is the focus of this study, sex is less important than the frequency of required prayer. The participants and expert raters were recruited from Internet groups and Listservs focusing on Orthodox Judaism. All questionnaires were completed online and demographic information about participants was collected.

#### *Procedure*

The expert raters (Rabbis) were used to rate each of the 10 prayers: (1) Morning Blessings (Birkhot Hashachar), (2) Kaddish, (3) the Shema and Its Blessings, (4) Pesukei d' Zimra, (5) Tachanun, (6) Hallel, (7) the daily Amidah (Shemoneh Eserei), (8) Shabbat (Sabbath) and Holiday Amidah, (9) the blessings before eating (Birkhot Hanehnin), and (10) blessing after eating (Birkhat Hamazon/ Al Hamichya) for the percentages of adoration, confession, thanksgiving, supplication and reception contained in each prayer (detailed definitions of each prayer are included in the appendix). The rabbis were encouraged to free report any other elements of these prayers that were not neatly defined by the five prayer types. Each prayer received a score based upon the mean level of each prayer as rated by expert raters. As a result, each prayer was given a score for thanksgiving (T), adoration (A), confession (C), supplication (S), and reception (R). The participants were asked to rate their degree of concentration during each of the same ten prayers. In addition, they completed four other measures: The Satisfaction with Life

Scale (SWLS), the Short Depression-Happiness Scale (SDHS), the Meaning in Life Questionnaire (MLQ), and The Symptoms of Illness Checklist (SIC).

### *Materials*

Participants were asked to complete a survey rating the degree of concentration, emotion and distraction related to each of the selected required prayers of Orthodox Judaism. Participants completed four additional measures.

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson & Griffin, 1985) was developed as a five-item instrument to measure global life satisfaction. This measure is scored on a likert scale from 1 to 7. The SWLS showed good reliability (two-month test  $r = .82$ ) (Diener et al, 1985), and correlated well with interview based ratings of life satisfaction. Sample questions include “if I could live my life over I would change almost nothing” and “in most ways my life is close to ideal.”

The Short Depression-Happiness Scale (SDHS; Joseph, Linley, Harwood, Lewis & McCollum, 2004) is a shortened version of the original 25-item Depression-Happiness Scale. The SDHS is intended to be a rapid assessment of the depression-happiness continuum for research or therapeutic intervention. This version is a self report instrument and consists of 6-items scored on a 4 point likert type scale. Like the original Depression-Happiness Scale, this scale contains an equal number of items that assess positive and negative affect symptoms. Two week test retest showed reliability ( $r = .68$ ), (Joseph et al.2004). Sample items include “I felt life was enjoyable” and “I am pleased with the way I am”.

The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi & Kaler, 2006) contains ten items measuring perceived meaning in life. This concept is important to

positive/ humanistic psychology and this scale was developed to allow psychologists a rapid means of assessing to what extent clients seek a greater purpose in their lives. The MLQ contains two dimensions; presence and search and is scored on a 7 point likert scale. These dimensions measure the presence of meaning in one's life, and the level of search for meaning. The MLQ has displayed reliability with one-month test retest for presence ( $r = .70$ ) and search ( $r = .73$ ), (Steger et al. 2006). Samples of items include "I understand life's meaning" and "I am always looking to find my life's purpose."

To assess overall health we used the Symptoms of Illness Checklist (SIC., Stowell, Hedges, Ghambaryan, Key & Bloch, 2009); this measure contains 33 items and was developed to study the psychological influences on physical symptoms of illness. It is designed to be a brief self report measure that can be used in health psychology research. The SIC avoids physical and psychological symptoms that are associated with the sympathetic nervous system and that can be inflated by stress, such as depression, sweaty palms and dry mouth. Questions are rated for frequency of occurrence and impact on daily life using a 6 point likert type scale. Questions rate the presence and degree of debilitation from illnesses such as joint pain, headaches, and insomnia. According to Stowell, et al. (2009) the SIC has good reliability (one week test-retest  $r = .90$ ), and has shown concurrent validity with established measures such as the Symptoms Checklist-90-R, (Derogatis, 1983). Participants were also asked to report their weight, height, and whether or not they used alcohol or smoked.

When the online survey was posted, two mistakes were made that deviated from the standardized version of the SIC. Question #28 of the SIC pertaining to cold sores was mistakenly omitted; likewise question #31 about change in appetite was repeated on the

survey. The doubled responses to question #31 were examined and found to be highly correlated. The Impact scores correlated at .975 and the Frequency scores correlated at .99. As a result the scores of the repeated responses were averaged and used in the regressions. Question # 30 of the SIC was intentionally omitted because it pertained to menstrual problems and the online survey was limited to male participants.

To measure each participant's concentration (Kavannah) three questions were created to be asked about each of the ten prayers chosen. These items were graded on a 7-point likert scale; examples include "during this prayer I think consciously about the meaning of every word," "I emotionally respond to the meaning of this prayer," and "I am easily distracted while saying this prayer." The complete versions of all measures used are included in the appendix

## Results

### *Independent variable development*

During the analysis of the reliability of the Kavannah items it was determined the reversed item "I am easily distracted while saying this prayer" consistently lowered alpha estimates. The negative aspects of this item may have bothered survey respondents, who, if answering yes, were in essence admitting a sin against God. In an effort to keep reliability as high as possible it was decided to remove the item. A comparison of the two item and three item alpha estimates can be found in Table 1. The remaining two Kavannah scores from each participant for each prayer were combined into a measure of that individual's degree of concentration (Kavannah) for that prayer. Thus, participants were given 10 Kavannah scores, one for each prayer.

### *Kavannah Index development*

The responses from the expert raters were examined for outliers, and two respondents who consistently gave extreme responses were removed, resulting in a pool of 12 rabbis for the development of the Kavannah Index. Means for the five prayer types (adoration, thanksgiving, supplication, confession, and reception) were obtained for each of the 10 prayers examined. The results are displayed in Table 2.

### *Prayer-type score development*

Prayer scores from the expert raters and participant responses were used to create five individual prayer-type scores for each participant. These five scores represented that individual's level of thanksgiving, supplication, adoration, confession and reception. These individual scores were obtained by multiplying the mean expert rater scores by each participant's Kavannah score (K) for the same prayer. These scores were summed to determine the individual's overall score for each prayer type. An example equation for a participant's possible thanksgiving score is as follows:

$$\text{Total} = (K_1 T_1) + (K_2 T_2) + (K_3 T_3) + \dots + (K_{10} T_{10})$$

Where  $K_1$  = the participants (Ps) Kavannah score for the Morning Blessings (Birkhot Hashachar),  $K_2$  = Ps Kavannah score for the Kaddish,  $K_3$  = Ps Kavannah score for the Shema and its Blessings, etc.  $T_1$  = the experts mean rating of thanksgiving for the Morning Blessings (Birkhot Hashachar),  $T_2$  = experts mean rating of thanksgiving for the Kaddish,  $T_3$  = the expert's mean rating of thanksgiving for the Shema and It's Blessings, etc. Once each participant had an overall score for each prayer type, these scores were



used to perform a regression analysis against the psychological measures. A correlation matrix between the prayer-type scores and the psychological measures is presented in Table 3.

Multiple regression analyses were performed to examine how prayer type (adoration, supplication, thanksgiving, confession, and reception) predicted scores on three measures of well-being (SWLS, SDHS, and MLQ). Results of the regressions show that prayer type was not an accurate predictor of well-being. A complete summary of the well-being regression results can be found in Tables 4-7. Overall none of the regression results yielded statistically significant results.

The participant's survey responses contained questions about their height, weight, and alcohol or tobacco use. This information was used to give each participant a Body Mass Index (BMI) score to supplement their responses to the Symptoms of Illness Checklist (SIC). One participant was removed as an outlier because their BMI score was significantly higher than that of the other respondents. A large number of participants did not complete the entire SIC ( $n = 77$ ), resulting in a difference in sample sizes from the psychological measures ( $n = 81$ ). A multiple regression analysis was conducted to examine how the following factors predicted participants Symptom of Illness Checklist scores: smoking, alcohol consumption, Body Mass Index (BMI), and prayer-type scores. Results show this set of predictors only accounted for 10.3% of the variance in SIC scores;  $F(8, 77) = .99$ . Furthermore, none of the regression coefficients were statistically significant. A summary of the health regression results can be found in Table 8.

## Discussion and Conclusions

Despite the non-significant results related to Kavannah, there were results that supported the hypotheses. After being given detailed definitions of the five prayer types the expert raters examined and rated the ten prayers chosen for this study. These expert raters determined that the ten prayers chosen contained elements of each of the five prayer types supporting the original hypotheses.

The statistical analyses of the hypotheses related to concentration (Kavannah) were not statistically significant. There are many reasons for the lack of significance in this study but the primary issue is our assumption that the Kavannah level of the prayers was primarily dependant upon the prayers themselves. It was assumed in our study that certain prayers commanded a greater degree of Kavannah than others, and that level remained constant across time. Scher, Ballas, & Coletta (2012) suggest that Orthodox Jewish men do have differing levels of Kavannah for different parts of the prayers, but that which prayers receive the most Kavannah varies dependant upon the level of stress and personal problems people experience at that particular time.

The cross sectional nature of this study is a weakness as well; using a measure of a single point in time makes it impossible to detect daily changes or a directional trend in concentration. As a result the responses here may well have been outliers and not reflective of the participant's average level of concentration during prayer. To study a subject like concentration, a longitudinal method would more accurately document daily fluctuations in overall Kavannah level and yield more applicable results. Data collection immediately following a prayer service may also provide more accurate results.

There is also a strong possibility that our study was too broad in scope. For example, the daily Amidah is comprised of 19 blessings, and it is completely possible that the level of Kavannah varies across each blessing. By looking at a complex prayer like the Amidah as a whole we miss these fluctuations, and dilute the level of Kavannah for the entire prayer.

There are several factors in the design and administration that could potentially mask the relationship between Kavannah and the psychological benefits of obligatory prayer. One factor may be the small number of actual participants. This study originally proposed using 150 to 200 participants, but due to slow recruitment, a high percentage of incomplete responses, and time constraints the final sample was less than 100. The large number of participants who did not complete the survey highlights another potential flaw in the design. The on-line survey completed by participants contained a total of 73 items. Volunteers may simply not have wanted to devote the time needed to complete the entire survey. The 33 items of the Symptoms of Illness Checklist (SIC) required two answers per item and some of these questions were intimate in nature. These factors coupled with it being placed last on the survey may have contributed to the high rate of non-completion at this point in the survey. Mid-way through data collection a progress meter was added to the survey to encourage completion with minimal success. Despite efforts to encourage completion of the entire survey, of the 214 respondents, 81 had enough data for the well-being regressions, and 77 for the Health regressions.

There may have been problems with the measures themselves, many of which were chosen for accessibility and length instead of purely psychometric properties. It is possible that the measures chosen do not work well with the Orthodox Jewish population

or were inappropriate for the constructs we were attempting to measure. A more common measure such as the current version of the Beck Depression Inventory (BDI) may yield different results.

Most of the prayers contained high levels of at least two prayer types; the daily Amidah was the only prayer examined to contain significant levels of all five prayer types. This result is expected as the description of the elements of the daily Amidah closely correlate to adoration, thanksgiving and supplication.

According to Donin (1980):

Almost every phrase has its source in the Bible. Each blessing is a very ingenious collection of Biblical words and phrases pieced together to form a new composition that reflects a broad spectrum of personal needs, communal needs, and Jewish convictions. (p.70)

Considering the origins of this prayer it is no surprise that it correlates so closely to the five prayer types identified through the study of Christian prayer. The daily Amidah was also one of the few prayers that contained significant amounts of the confession prayer type.

The other prayer that scored high in the confession prayer type was Tachanun. The word Tachanun literally means supplication and this prayer scored highest in the supplication and confession prayer types. When this prayer is recited on Monday and Thursday mornings it is supplemented with seven paragraphs of supplications. These added sections deal with the collective sufferings of the Jewish people, which are seen as the result of weakness and sin, and ask for forgiveness and mercy directly from God (Donin, 1980). With the exception of Tachanun and the daily Amidah the confession

prayer type was consistently the lowest scoring across all ten prayers examined. These results suggest confession is less important to Orthodox Jewish worship than the other prayer types. The lack of emphasis on confession and seeking forgiveness may be indicative of the Jewish belief that God is merciful and not anxious to punish or execute judgments (Donin, 1980).

The majority of the ten prayers correlated well with the five prayer types. The Blessings before Eating and Birkhat Hamazon are both prayers of thanksgiving associated with meals or the consumption of specific foods; as a result they scored highest in the thanksgiving prayer type. These prayers are similar to with the common Christian practice of saying grace before a meal and therefore correlate well with the thanksgiving prayer type defined by the study of Christian prayer.

The other prayers all scored highest in either the adoration, thanksgiving or supplication prayer types. One prayer stood out by scoring lower across all prayer types. This prayer was Shema, which is a declaration of one's faith and an allegiance to a single God. The low score across all prayer types indicates that this is a different type of prayer that does not fit neatly into any one of the five established prayer types. This prayer scored highest in adoration, but the mean was still low when compared to the other ten prayers examined. The lower mean could signify that the adoration prayer type was the "best fit" of the choices provided to the expert raters. Shema also scored a mean of zero in the confession prayer type, indicating that this prayer type did not fit that factor at all. These results suggest that there may be a need for a separate prayer type for faiths that have prayers of a declarative nature.

Overall the ten prayers selected were found to be comprised of the five prayer types. There were instances such as Shema which scored low across all prayer types, where the prayer did not seem to be best defined by these types; this most likely indicates the restraints of prayer types defined predominantly by the study of Christians. It is safe to theorize that other faiths may have a large variety of prayers that do not fit neatly into one of the five prayer types used here. Regardless the results described here confirm the hypothesis that the primary difference between voluntary and obligatory prayer is the difference in context and situation, not the content of the message.

Although there were no statistically significant results, analysis of the health data collected revealed some paradoxical results. The most strange was the question about the consumption of alcohol. Of those responding to this question, 37 percent stated that they did not consume alcohol despite the frequent use of alcohol in the form of red wine in Orthodox Jewish ritual. Wine has a prominent role in the Passover Seder, traditional marriage ceremonies and grace after meals (Donin, 1980). The most sensible explanation for these results is that some respondents do not view this wine the same as alcohol or the small amount consumed to be “drinking.” The question stated “do you drink alcohol”; in this form some respondents may have identified alcohol as liquor and not as wine or beer. There are no restrictions on alcohol use in Orthodox Judaism. The Torah does restrict the drinking of wine during some fasts, but ultimately encourages moderate drinking as an enjoyment of one of God’s creations and as a part of a life lived on the “middle road of moderation” (Donin, 1980 p.59).

In an examination of the mean scores of participants of this study and the overall normative mean of the Short Depression-Happiness Scale (SDHS) a t-test for

independent means was conducted on the SDHS scores. Results indicate Orthodox Jewish males who completed the SDHS ( $M = 13.61$ ) had a significantly higher mean score than the SDHS norm ( $M = 12.13$ ,  $S.D. = 3.27$ ,  $t(88) = 4.37$ ,  $p < .001$ ). The Orthodox Jewish males mean score was .45 standard deviations higher than the normative mean for the measure.

Despite earlier research that stated those who engage in prayers of obligation suffer negative effects on well-being, the Orthodox Jews who participated in this study did better than the normative sample of the Short Depression-Happiness Scale (SDHS). Recent survey results from Gallup-Healthways found that overall Jews who reported being very religious also reported higher levels of well-being than those of other faiths (Gallup-Healthways, 2010). The Gallup-Healthways study conducted 372,000 interviews between 2009 and 2010 and these results were reported after the factors of age, income, education, race/ethnicity, marital status and region were controlled for (Gallup-Healthways, 2010). By definition very religious Jews may likely be Orthodox, and therefore practice obligatory prayer. This study also found that those who self described as very religious had higher levels of well-being across all faiths (Gallup-Healthways, 2010). It can be surmised that those who consider themselves very religious would practice a higher incidence of prayer, and are therefore reaping the benefits to well-being described in previous research. The results of the Gallup-Healthways survey led reporters to search for the happiest person in America. The person who matched all of the characteristics associated with the highest levels of happiness was 69 year old Alvin Wung of Hawaii, a self employed Chinese-American Jew by choice (Rampell, 2011).

Although our study did not establish a link between level of concentration (Kavannah) during prayer and well-being, it did show that those who pray out of obligation score similarly on well-being as those who participated in the normative research of the measures used in this study. These results coupled with the Gallup-Healthways survey show Orthodox Jews have the same, if not higher, levels of well-being as those who practice other faiths. The Gallup-Healthways data suggest that level of religiosity is a greater defining factor in well-being than type of faith (Gallup-Healthways, 2010).

There are additional topics of research that could help clarify the role of prayer in well-being. A similar study of Muslims could give insight into the makeup of Islamic prayer, and be easier to execute due to a larger pool of potential participants.

Depending on the method of measurement, Islam is either first or second in the number of participant's world-wide. The discrepancy is attributed to how many different sects are included under the umbrella of "Christianity." Adherents.com collects census data directly from worldwide governments and is the most widely cited source for data on the religious populations of the world. They rank Islam second only to Christianity in followers. Their data ranks the top three religions with the most followers as; Christianity at 2.1 billion (33% of total global population), Islam at 1.5 billion (21%), and Non-Religious at 1.1 billion (16%) (Adherents, 2012). The benefits of using Islamic recruits in place of Orthodox Jews is obvious when considering Orthodox Jews are only a portion of the 14 Million (0.22%) in the world who report as being Jewish. Regardless of whether future studies use Islamic or Jewish populations, the questions about the effects of



obligatory prayer are unlikely to ever be answered until researchers focus on these populations.

A study similar to this, but with a larger sample and alternate measures could further explore the relationship between level of concentration and benefit from obligatory prayer. A separate study could examine how the physical aspects of Orthodox Jewish prayer such as rocking and the rhythmic patterns of spoken Hebrew prayers score in the reception prayer type which has correlations to meditation. A longitudinal study utilizing a daily diary of well-being may yield better understanding of the effects of Orthodox Jewish prayer. Such a method would also give a better picture of how the Orthodox Jewish population quantifies well-being and life satisfaction. Information such as this could lead to better instruments and understanding for this under studied population.

## References

- Adherents (2005.). Religions by Adherents. Available from.  
[http://www.adherents.com/Religions\\_By\\_Adherents.html](http://www.adherents.com/Religions_By_Adherents.html).
- Ai, A.L., Tice, T.N., Huang, B., Rodgers, W., & Bolling, S.F. (2008). Types of prayer, optimism, and well being of middle-aged and older patients undergoing open-heart surgery. *Mental Health, Religion and Culture, 11*, 131-150. DOI: 10.1080/13674670701324798.
- Ai, A.L., Tice, T.N., Peterson, C., & Huang, B. (2005). Prayers, spiritual support, and positive attitudes in coping with the September 11<sup>th</sup> national crisis. *Journal of Personality, 73*, 763-791. DOI: 10.1111/j.1467-6494.2005.00328.x.
- Arcury, T., Bernard, S., Jordan, J. & Cook, H. (1996). Gender and ethnic differences in alternative and conventional arthritis remedy use among community dwelling rural adults with arthritis. *Arthritic Care and Research, 1*, 384-390. DOI: 10.1002/1529-0131(199610)
- Baesler, E.J. (1997). Interpersonal Christian prayers. *Journal of Communication and Religion, 20*, 40-64. [www.cios.org/www/jcrmain.htm](http://www.cios.org/www/jcrmain.htm)
- Bill-Harvey, D., Rippey, R. Abeles, M., & Pfeiffer, C. (1989). Methods used by urban low-income minorities to care for their arthritis. *Arthritic Care and Research, 2* 60-64. DOI: 10.1002/anr.1790020207
- Contrada, R.J., Goyal, T.M., Cather, C., Rafalson, L., Idler, E.L., & Krause, T. (2004). Psychosocial factors in outcomes of heart surgery: The impact of religious involvement and depressive symptoms. *Health Psychology, 23*, 227-238. DOI: 10.1037/0278-6133.23.3.227.

- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The Satisfaction with Life Scale. *The Journal of Personality Assessment*, 49, 71-75. DOI: 10.1207/s15327752jpa4901\_13
- Donin, H. (1980). *To pray as a Jew*. New York, NY: Basic Books.
- 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. DOI: 10.2307/1386636
- Gallup-Healthways poll (2010, February). Retrieved April, 27 2011 from <http://www.well-beingindex.com>
- Gallup Jr. G., & Lindsay, D. M. (1999). *Surveying the Religious Landscape: Trends in US Beliefs*. Harrisburg, PA: Morehouse.
- George, L.K., Ellison, C.G., & Larson, D.B. (2002). Explaining the relationships between religious involvement and health. *Psychological Inquiry*, 13, 190-200. DOI: 10.1207/S15327965PLI1303\_04
- Johnson, S., & Outlaw, F. (2002). Use of prayer among persons with cancer. *Holistic Nursing Practice*, 16(3), 46-60. <http://journals.lww.com/hnpjjournal/pages/default.aspx>
- Joseph, S., Linley, P.A., Harwood, J., Lewis, C.A., & McCollam, P. (2004). Rapid assessment of well being: The Short Depression-Happiness Scale (SDHS). *Psychology and Psychotherapy: Theory, Research, and Practice*, 77, 463-478. DOI: 10.1348/1476083042555406

- Koenig, H., Ford, S., George, L., Blazer, D. & Meador, K. (1993). Religion and anxiety disorder: an examination and comparison of associations in young, middle-aged, and elderly adults. *Journal of Anxiety Disorders*, 7, 321-342. DOI: 10.1016/0887-6185(93)90028-J
- Krueger, A.B., Ed. (2009). Measuring the subjective well-being of nations: National accounts of time use and well-being. Chicago: University of Chicago Press.
- Laird, S.P., Snyder, C.R., Rapoff, M.A., & Green, S. (2004). Measuring private prayer: The development, validation, and clinical application of the Multidimensional Prayer Inventory. *The International Journal for the Psychology of Religion*, 14, 251-272. DOI: 10.1207/s15327582ijpr1404\_2.
- Lewis, C., Cruise, S. (2006). Religion and happiness: Consensus, contradictions, comments and concerns. *Mental Health, Religion, and Culture*, 9, 213-225. DOI: 10.1080/13694670600615276
- Levin, J.S., Markides, K.S., & Ray, L.A. (1996). Religious attendance and psychological well-being in Mexican-Americans: A panel analysis of three generations data. *Gerontologist*, 36, 454-463. DOI: 10.1093/geront/36.4.454
- Maltby, J., Lewis, C.A., & Day, L. (2008). Prayer and subjective well-being: The application of a cognitive- behavioral framework. *Mental Health Religion and Culture*, 11, 119-129. DOI: 10.1080/13674670701485722.
- McLeish, A.C., Del Ben, K.S. (2008). Symptoms of depression and posttraumatic stress disorder in an outpatient population before and after Hurricane Katrina. *Depression and Anxiety*, 25, 416-421. DOI: 10.1002/da.20426.

- McCullough, M., Hoyt, W., Larson, D., Koenig, H., & Thorsen, C. (2000). Religious involvement and mortality: A meta-analytic review. *Health and Psychology, 19*, 211-222. DOI: 10.1037/0278-6133.19.3.211.
- Mead, F., Hill, S., Atwood, C. (2010) *Handbook of denominations in the United States*. Nashville, TN: Abingdon Press.
- Pargament, K.I., (1997). *The Psychology of Religion and Coping: Theory, Research, and Practice*. New York: Guilford.
- Pennington, R. (2009). Muslim Prayer: How do Muslims Pray? Retrieved from <http://muslimvoices.org/muslim-prayer/>.
- Poloma, M., & Pendleton, B. (1991). The effects of prayer and prayer experiences on measures of well being. *Journal of Psychology and Theology, 19*, 71-83.  
<http://journals.biola.edu/jpt/>
- Rampell, C. (2001, March 5). Discovered: Happiest man in America. The New York Times. Retrieved from <http://www.nytimes.com>
- Scher, S.J., Ballas, H. & Coletta, N. (April, 2012). Preliminary results of a grounded theory study on Davening. Presented at The Research Conference on Judaism and Mental Health. N.Y., NY.
- Soderstrom, K. & Martinson, I. (1987). Patient's spiritual coping strategies: A study of nurse and patient perspectives. *Oncology Nursing Forum, 14*(2), 41-46.  
<http://www.ons.org/publications/ONF>
- Smith, T. B., McCullough, M.E., & Poll, J. (2003). Religiousness and depression: Evidence for a main effect and the moderating influence of stressful life events. *Psychological Bulletin, 129*, 614-636. DOI: 10.1037/h0087878.

- Steger, M., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire. Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80-93. DOI: 10.1037/0022-0167.53.1.80.
- Stowell, J., Hedges, D., Ghambaryan, A., Key, C., & Bloch, G. (2009). Validation of the Symptoms of Illness Checklist (SIC) as a tool for health psychology research. *Journal of Health Psychology, 14*, 68-77. DOI: 10.1177/1359105308097947.
- Taylor, E., Outlaw, F., Bernardo, T., & Roy, A. (1999). Spiritual conflicts associated with praying about cancer. *Psycho-oncology, 8*, 386-394.
- Turner, P. (2007). *When other Christians become Catholic*. Collegeville, MN: Liturgical Press.
- Warner, S.R., & Wittner, J.G. (1998). *Gatherings in diaspora: Religious communities and the new immigration*. Philadelphia: Temple University Press.
- Whittington, B., & Scher, S. (2010). Prayer and subjective well being: An examination of six different types of prayer. *The International Journal for the Psychology of Religion, 19*, 1-10. DOI: 10.1080/10508610903146316

Table 1.  
Kavannah Index Reliability Alpha Estimates

|                         | 3 Item | 2 Item |
|-------------------------|--------|--------|
| Morning Blessings       | .62    | .79    |
| Kaddish                 | .62    | .82    |
| Shema                   | .75    | .91    |
| Pesukei                 | .80    | .92    |
| Tachanun                | .83    | .91    |
| Hallel                  | .80    | .88    |
| Amidah                  | .74    | .88    |
| Shabbat                 | .74    | .82    |
| Blessings Before Eating | .62    | .75    |
| Birkhat Hamazon         | .74    | .82    |

Table 2.  
Mean prayer ratings from expert raters by type

|                         | Adoration | Thanksgiving | Supplication. | Confession | Reception |
|-------------------------|-----------|--------------|---------------|------------|-----------|
| Morning Blessing        | 57.67     | 76.50*       | 19.42         | 1.17       | 8.00      |
| Kaddish                 | 84.03*    | 7.67         | 34.67         | .00        | 19.00     |
| Shema                   | 55.58*    | 28.92        | 28.25         | .00        | 15.25     |
| Pesukei                 | 69.17*    | 46.75        | 28.25         | 3.50       | 13.58     |
| Tachanun                | 5.17      | 8.08         | 58.17         | 67.58*     | 8.75      |
| Hallel                  | 66.33*    | 65.92        | 26.42         | .00        | 5.75      |
| Amidah                  | 44.75     | 50.58        | 71.92*        | 32.08      | 23.67     |
| Shabbat                 | 59.50*    | 51.83        | 16.17         | .25        | 7.92      |
| Blessings Before Eating | 30.33     | 78.92*       | 3.67          | .00        | .67       |
| Birkhat Hamazon         | 37.75     | 82.33*       | 31.00         | .92        | 12.83     |

Note. \* = the highest mean rating for each prayer.



Table 3.

## Correlation Matrix of well-being measures

|                   | Mean  | Standard<br>Deviation | SDHS   | SWLS   | MLQ<br>(Presence) | MLQ<br>(Search) | Prayer-Type<br>Score |
|-------------------|-------|-----------------------|--------|--------|-------------------|-----------------|----------------------|
| SDHS              | 19.62 | 3.28                  | .847   |        |                   |                 |                      |
| SWLS              | 23.19 | 6.25                  | .636** | .857   |                   |                 |                      |
| MLQ (presence)    | 26.95 | 5.24                  | .505** | .630** | .840              |                 |                      |
| MLQ (search)      | 22.03 | 8.03                  | -.114  | .000   | .310**            | .927            |                      |
| Prayer-Type Score | 65.71 | 14.76                 | .068   | .054   | .242*             | .206            | .909                 |

= p < .05, \*\* = p < .01

Note: Cronbach's alpha is on the main diagonal. SDHS = Short Depression-Happiness Scale, SWLS = The Satisfaction with Life Scale, MLQ = The Meaning in Life Questionnaire.

Table 4

*Summary of Multiple Regression Analysis for Variables Predicting Short Depression-Happiness Scale Scores (n=81)*

| Variable     | <i>B</i> | <i>SE B</i> | $\beta$ |
|--------------|----------|-------------|---------|
| Adoration    | -.007    | .006        | .234    |
| Thanksgiving | .003     | .003        | .289    |
| Supplication | .005     | .026        | .840    |
| Confession   | -.007    | .017        | .681    |
| Reception    | .008     | .054        | .882    |

*Note.*  $R^2 = .033$ ; adjusted  $R^2 = -.031$ , There were no significant results.

Table 5

*Summary of Multiple Regression Analysis for Variables Predicting Satisfaction with Life Scale scores (n=81)*

| Variable     | <i>B</i> | <i>SE B</i> | $\beta$ |
|--------------|----------|-------------|---------|
| Adoration    | -.23     | .010        | .029    |
| Thanksgiving | .007     | .006        | .274    |
| Supplication | .022     | .049        | .653    |
| Confession   | -.028    | .031        | .372    |
| Reception    | .041     | .099        | .678    |

*Note.*  $R^2 = .079$ ; adjusted  $R^2 = .019$ , There were no significant results.

Table 6

*Summary of Multiple Regression Analysis for Variables Predicting Meaning in Life Questionnaire presence scores (n=80)*

| Variable     | <i>B</i> | <i>SE B</i> | $\beta$ |
|--------------|----------|-------------|---------|
| Adoration    | -.007    | .009        | .440    |
| Thanksgiving | .000     | .005        | .946    |
| Supplication | .036     | .041        | .379    |
| Confession   | -.024    | .026        | .361    |
| Reception    | .041     | .084        | .622    |

*Note.*  $R^2 = .082$ ; adjusted  $R^2 = .021$ , There were no significant results.

Table 7

*Summary of Multiple Regression Analysis for Variables Predicting Meaning in Life Questionnaire search scores (n=81)*

| Variable     | <i>B</i> | <i>SE B</i> | $\beta$ |
|--------------|----------|-------------|---------|
| Adoration    | -.008    | .013        | .518    |
| Thanksgiving | .000     | .008        | .973    |
| Supplication | .098     | .061        | .111    |
| Confession   | -.058    | .039        | .142    |
| Reception    | .169     | .124        | .178    |

*Note.*  $R^2 = .089$ ; adjusted  $R^2 = .029$ , There were no significant results.

Table 8

*Summary of Multiple Regression Analysis for Variables predicting Symptoms of Illness Checklist scores (n=77)*

| Variable     | <i>B</i> | <i>SE B</i> | $\beta$ |
|--------------|----------|-------------|---------|
| BMI          | .012     | 1.04        | .99     |
| Alcohol use  | 3.75     | 9.52        | .70     |
| Smoking      | -19.87   | 8.98        | .03     |
| Adoration    | .063     | .101        | .54     |
| Thanksgiving | -.022    | .058        | .70     |
| Supplication | -.034    | .463        | .94     |
| Confession   | .084     | .299        | .78     |
| Reception    | -.156    | .933        | .87     |

*Note.*  $R^2 = .103$ ; adjusted  $R^2 = .000$ , There were no significant results.

## Appendix

Prayer descriptions based on Donin (1980)

The Morning Blessings (Birkhot Hashachar).

These are prayers that are recited at the beginning of the morning services and thank God for a renewal of the day .

The Kaddish.

In this prayer, the central theme is the magnification and sanctification of God's name. This prayer is recited daily and during mourning and has close parallels to the Lord's Prayer used in Christianity.

The Shema and its Blessings.

This prayer is the centerpiece of the morning and evening services involving recitation of Deuteronomy 6: 4-9, Deuteronomy 11: 13-21, and Numbers 15: 37-41. It is a declaration of one's faith and of the commitment to follow the 613 commandments of the Torah. The Shema also reinforces the concept of a single God and monotheism.

Pesukei d' Zimra.

These prayers are recited daily during the morning services and consist of Psalms, hymnal verses and blessings. The purpose of these prayers is to praise God prior to making more request based prayers later in the day.

Tachanun.

This prayer varies in length depending upon the day of the week. The most frequent version consists of a personal appeal to God for grace and strength that is performed with the head bowed down. This prayer is also seen as a form of confession where weaknesses and faults are admitted.

Hallel.

This prayer is a verbatim recitation of Psalms that is used to give praise and thanksgiving to God. This prayer is reserved for holidays and joyous occasions.

The daily Amidah (Shemoneh Eserei).

This prayer is said three times daily and consists of 19 blessings. It is recited standing with feet together facing Jerusalem. It contains four elements: a beginning that is focused on praise, the next elements are focused on requests for self, requests for the Jewish people and society and is ended with a prayer of thanksgiving to God.

The Shabbat (Sabbath) and Holiday Amidah.

This is a more specific version of the daily Amidah where the middle 13 blessings are made specific pertaining to the particular holiday or occasion.

The blessings before eating (Birkhot Hanehnin).

These are blessing that are recited before eating a meal or when experiencing something pleasurable such as a fragrance or sight.

The blessings after eating (Birkhat Hamazon/ Al Hamichya).

These are blessings after eating a meal that includes bread (Birkhat Hamazon) or other products made from wheat, barley, rye, oats or spelt ( Al Hamichya).



### **The Meaning in Life Questionnaire**

Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers.

Please answer according to the scale below:

1= absolutely untrue, 2= mostly untrue, 3= somewhat untrue, 4= can't say true or false, 5= somewhat true, 6= mostly true, 7= absolutely true.

1. I understand my life's meaning.
2. I am looking for something that makes my life feel meaningful.
3. I am always looking to find my life's purpose.
4. My life has a clear sense of purpose.
5. I have a good sense of what makes my life meaningful.
6. I have discovered a satisfying life purpose.
7. I am always searching for something that makes my life feel significant.
8. I am seeking a purpose or mission for my life.
9. My life has no clear purpose.
10. I am searching for meaning in my life.

## **The Satisfaction with Life Scale**

Instructions for administering the scale are: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item.

Please be open and honest in your responding.

The 7-point scale is: 1= strongly disagree, 2= disagree, 3= slightly disagree, 4= neither agree nor disagree, 5= slightly agree, 6= agree, 7= strongly agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

### **The Short Depression- Happiness Scale**

A number of statements that people have made to describe how they feel are given below. Please read each one and tick the box which best describes how frequently you felt that way in the past seven days, including today. Some statements describe positive feelings and some describe negative feelings. You may have experienced both positive and negative feelings at different times during the past seven days.

1= never, 2= rarely, 3= sometimes, 4= often.

1. I felt dissatisfied with my life.
2. I felt happy.
3. I felt cheerless.
4. I felt pleased with the way I am.
5. I felt that life was enjoyable.
6. I felt that life was meaningless.

**Symptoms of Illness Checklist (SIC)**

Listed on the following pages are common symptoms of illness. Next to each symptom, there are two columns, titled “**FREQUENCY**” and “**IMPACT ON DAILY ACTIVITIES**”. For each symptom, please mark each of the columns according to the guidelines below.

|  |  |
|--|--|
| <p><b><u>FREQUENCY</u></b><br/>         Circle the appropriate letter corresponding to the frequency with which you have experienced the symptom over the past <b>two months</b> according to the following:</p> <p>A = Did not have the symptom<br/>         B = 1-3 days during the past 2 months<br/>         C = 4-7 days during the past 2 months<br/>         D = 8-14 days during the past 2 months<br/>         E = 15-49 days during the past 2 months<br/>         F = 50-60 days (daily) during the past 2 months</p> | <p><b><u>IMPACT ON DAILY ACTIVITIES</u></b><br/>         Circle the appropriate letter corresponding to the impact of the symptom, according to the following:</p> <p>G = Did not have the symptom<br/>         H = Symptom present, but didn't interfere with daily activities<br/>         I = Symptom slightly interfered with daily activities<br/>         J = Symptom considerably interfered with daily activities<br/>         K = Symptom severely interfered with daily activities</p> |
|--|--|

| Symptom  | Frequency   | Impact    |
|--|-------------|-----------|
| 1. Sore throat   | A B C D E F | G H I J K |
| 2. High Blood Pressure   | A B C D E F | G H I J K |
| 3. Ear Problems (ear ache or pain, ringing or buzzing in ears, etc.) | A B C D E F | G H I J K |
| 4. Muscle aches or pains not due to strenuous exercise or joints.    | A B C D E F | G H I J K |
| 5. Joint (not muscle) problems (stiffness, pain, swelling, etc.)     | A B C D E F | G H I J K |
| 6. Cough due to illness  | A B C D E F | G H I J K |

|  | Frequency   | Impact    |
|--|-------------|-----------|
| 7. Respiratory problems other than cough<br>(wheezing, shortness of breath, etc.)            | A B C D E F | G H I J K |
| 8. Back and neck problems (back ache, pain, etc.)  | A B C D E F | G H I J K |
| 9. Sleeping problems (insomnia, trouble falling<br>asleep etc.)                              | A B C D E F | G H I J K |
| 10. Abdominal pain (due to ulcers, acid indigestion<br>appendicitis, etc.)                   | A B C D E F | G H I J K |
| 11. Feeling exhausted or fatigued.   | A B C D E F | G H I J K |
| 12. Blood in feces   | A B C D E F | G H I J K |
| 13. Skin rash anywhere on the body   | A B C D E F | G H I J K |
| 14. Urinary problems (painful urination, blood<br>in urine, etc.)                            | A B C D E F | G H I J K |
| 15. Lightheaded, faint, dizzy  | A B C D E F | G H I J K |
| 16. Chest pain   | A B C D E F | G H I J K |
| 17. Constipation   | A B C D E F | G H I J K |
| 18. Diarrhea   | A B C D E F | G H I J K |
| 19. Eye problems (redness, impaired, discharge,<br>or unusually blurry vision, etc.)         | A B C D E F | G H I J K |
| 20. Dental problems (bleeding or discomfort in gums,<br>teeth, or mouth; canker sores, etc.) | A B C D E F | G H I J K |
| 21. Sinus problems   | A B C D E F | G H I J K |

|   | Frequency   | Impact    |
|---|-------------|-----------|
| 22. Nasal problems (runny nose, congested nasal passages, etc.) | A B C D E F | G H I J K |
| 23. Nausea (stomach illness, vomiting, etc.)                    | A B C D E F | G H I J K |
| 24. Headaches (migraines, other)                                | A B C D E F | G H I J K |
| 25. Fever   | A B C D E F | G H I J K |
| 26. Swollen ankles or feet                                      | A B C D E F | G H I J K |
| 27. Muscle twitching  | A B C D E F | G H I J K |
| 28. Cold sores  | A B C D E F | G H I J K |
| 29. Numbness/tingling in hands or feet                          | A B C D E F | G H I J K |
| 30. Menstrual problems  | A B C D E F | G H I J K |
| 31. Change of appetite (loss of appetite, overeating, etc.)     | A B C D E F | G H I J K |
| 32. Swollen glands in neck                                      | A B C D E F | G H I J K |
| 33. Other (if not included above)                               | A B C D E F | G H I J K |

---

**Expert Rater Questions:**

Please consider the following definitions when rating the prayers:

Adoration- Prayers focused solely on the worship and praise of God, without referring to specific circumstances or needs.

Thanksgiving- Prayers that express gratitude towards God for specific life circumstances.

Supplication- Prayers that ask for intervention or other specific requests from God.

Confession- Requests of forgiveness for acknowledged faults, misdeeds or shortcomings.

Reception- Passively waiting for wisdom or guidance from God.

1) To what extent do the Morning Blessings (Birkhot Hashachar) reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

2) To what extent does the Kaddish reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

3) To what degree do the Shema and it's Blessings reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

4) To what degree does Pesukei d'Zimra reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

5) To what degree does Tachanun reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

6) To what extent does Hallel reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

7) To what degree does the daily Amidah (Shemoneh Eserei) reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

8) To what extent do the Shabbat and Holiday Amidah reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

9) To what extent do the Blessings Before Eating (Birkhot Hanehnin) reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_



10) To what degree do Birkhat Hamazon/ Al Hamichya reflect the dimensions of:

Adoration \_\_\_\_\_  
Thanksgiving \_\_\_\_\_  
Supplication \_\_\_\_\_  
Confession \_\_\_\_\_  
Reception \_\_\_\_\_  
Other \_\_\_\_\_

### Participant Questions

There are three statements for each prayer with which you may agree or disagree. Using the 1-7 scale below please indicate your level of agreement with the statements by placing the appropriate number on the line preceding each item. Please be open and honest in your responding.

The 7-point scale is:

1= Never

2= Rarely, less than 10% of the time

3= Occasionally, 30% of the time

4= Sometimes, 50% of the time

5= Frequently, 70% of the time

6= Usually, 90% of the time

7= Always

#### 1) During the Morning Blessings (Birkhot Hashachar).

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

#### 2) During the Kaddish.

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

#### 3) During the Shema and it's Blessings.

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

#### 4) During the Pesukei d'Zimra.

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

5) During Tachanun

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

6) During Hallel

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

7) During the Daily Amidah (Shemoneh Eserei).

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

8) During the Shabbat and Holiday Amidah.

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

9) During the Blessings before eating (Birkhot Hanehnin).

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_

10) During the Birkhat Hamazon/ Al Hamichya.

I think consciously about the meaning of every word \_\_\_\_\_

I emotionally respond to the meaning of this prayer. \_\_\_\_\_

I am easily distracted while saying this prayer. \_\_\_\_\_