

# Use of the Serenity Prayer Among Adults With Type 2 Diabetes

## A Pilot Study

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The incidence of type 2 diabetes is rising rapidly with significant associated morbidity and mortality. Treatment efforts are focused on control of serum blood glucose levels. It was anticipated that the use of the Serenity Prayer would assist those who need to gain control over their physiological symptoms. A pilot study of the effect of daily recitation of the Serenity Prayer for 6 weeks on serum blood glucoses in patients with uncontrolled type 2 diabetes was implemented. Thirty-six participants were enrolled in the study; there was a very high attrition rate over the course of the study. Serum blood glucose levels over the duration of the study were analyzed. At 4 to 6 weeks, time 2, there were 2 participants who had lower serum blood glucose levels, 2 had increased serum blood glucose levels, and 4 had no change. Challenges in completing this research and specific recommendations for future research are addressed. **KEY WORDS:** *prayer, research challenges, selfcare management, serenityprayer, type 2 diabetes* *Holist Nurs Pract* 2011;25(4):191–197

Prayer is widely practiced in the United States and has become inextricably intertwined with the healing process of those under medical care.<sup>1</sup> In an increasingly diverse and pluralistic society, prayer remains a constant. In a study of 8000 total participants with 5000 of those having diabetes, hypertension, dyslipidemia, and/or heart disease, almost one-half of the participants prayed in relation to health and 90% of those believed that prayer was an effective way to improve health.<sup>2</sup>

Yet, despite the pervasiveness of prayer in social, religious, and health care settings, few studies have been conducted that specifically address prayer as an intervention as related to physiological outcomes. This may be due in part to the difficulties associated with controlling for prayer as an intervention. For nurses to practice holistically, it is important to understand prayer, including how the practice of prayer may affect health outcomes.

Diabetes and its associated morbidity and mortality are on the rise in the United States. Most studies of diabetes have been focused on clinical outcome measures, glycemic control, disease complications, or compliance with disease-specific regimens.<sup>3</sup> Because diabetes is a complex disease, there is a need to address aspects of living with diabetes. Self-care is one of the most important things a diabetic patient can do to increase the quality and the quantity of their life. Self-care for diabetic patients includes general, therapeutic lifestyle interventions as well as home serum blood glucose monitoring. Yet researchers have shown that self-care in diabetic patients is far from optimal.<sup>4</sup>

There is no research evidence for the effect of prayer as a component of self-care management in diabetes. A critical review of the literature demonstrated a large body of research on prayer practices, types of prayer for health, and reasons for prayer.<sup>5–8</sup> The present pilot study was focused on the use of the Serenity Prayer as a self-care intervention among patients with diabetes. This specific prayer was chosen as it incorporated an aspect of self-control in the words of the prayer and seemed to the investigators to be consistent with an emphasis on self-care. No research to date has incorporated the Serenity Prayer as an intervention. Yet this prayer

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appears to be particularly well suited to study in those with chronic disease because of its inherent self-management focus. The Serenity Prayer is as follows: "God grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference."

## BACKGROUND

In the literature, 2 types of prayer are discussed: intercessory prayer (IP) and individual or personal prayer. Individual prayer has been practiced for centuries and is defined as personal communication with one's God or the higher power of one's belief system.<sup>1</sup> Both types of prayer have been found to have significant positive effects on those praying as well as on those being prayed for. Little is known about the efficaciousness of specific prayers and the effects of specific prayers such as the Serenity Prayer.

Intercessory prayer, and its effects on a group of persons who were remote and unknown to those communicating the prayers, is a common method of studying prayer. A large number of research studies have been dedicated to IP and the prayer outcomes on those for whom prayers were said.<sup>9-11</sup> In a meta-analysis of IP, in 7 of the 17 studies reviewed, IP had a clear benefit to the patient.<sup>5</sup>

Praying for health has been found to be a common practice among adults. As opposed to a general practice of personal prayer, prayer for health involves the person specifically praying for their health. The number of people praying for health is quite large, 43% in a recent Centers for Disease Control and Prevention study.<sup>12</sup> Also extremely common is the belief in the efficacy of praying for health.<sup>1</sup> In a study of alternative therapy use among 4404 adults, prayer emerged as the most common alternative therapy; 40% of the subjects reported that they prayed for health and 90.3% of those believed that prayer was related to improved health.<sup>2</sup>

### Prayer as a form of complementary and alternative medicine

A report from the 2002 National Health Interview Survey conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics provides an overview of complementary and alternative medicine (CAM) use among US adults (N = 31 044).<sup>12</sup> Prayer was exceedingly common,

both for one's own health (43%) and for the health of others (24.4%). Excluding prayer for the sake of health, the percentage of US adults who had used CAM in the past 12 months decreased from 62.1% to 36%. These researchers found a surprising 27.7% of respondents who used CAM because they believed that traditional western medicine would not help with their particular health care problem.<sup>12</sup>

In the 2002 National Health Interview Survey among persons with chronic disease (arthritis, cancer, diabetes), prayer and megavitamins were the most frequently used CAM.<sup>13</sup> There were 2474 adults with diabetes in the sample. Compared with the general population, persons with diabetes were more likely to use prayer and less likely to use herbs, yoga, or vitamins.<sup>14</sup> Also, researchers found that, among diabetic patients who reported using CAM, solitary prayer/spiritual practices were the most commonly used CAM.<sup>15</sup>

Another group of researchers studied CAM use among 68 rural African Americans with type 2 diabetes.<sup>6</sup> Participants were asked about religion and faith and the relationship to their diabetes. The majority reported faith in God and prayer being important in their lives. Three themes emerged: prayer and faith in God as a coping mechanism for dealing with diabetes, God guiding health care providers, and a relationship between faith and conventional treatment.<sup>6</sup>

### Summary of existing knowledge and gaps in the research

Complementary and alternative medicine researchers demonstrated a high level of prayer in all populations studied and a belief in the positive effect of prayer. Particularly important to the present study is that no studies were found in which personal prayer was tested as a self-care intervention for persons with diabetes. The pilot study was designed to fill this void.

## METHODS

A quantitative quasi-experimental design was used to determine whether the recitation of the Serenity Prayer affected serum blood glucose levels in patients with type 2 diabetes with a starting hemoglobin A<sub>1C</sub> of more than 7.5%. This study took place at a federally qualified health center in southern California. Data were collected at 3 time points.

## Sample

The study sample included type 2 diabetic patients with a hemoglobin A<sub>1C</sub> more than 7.5%; *type 2 diabetes* was defined as a disease in patients having 2 fasting blood glucose levels greater than 125 mg/dL or a single random fasting glucose level greater than 200 mg/dL. These patients were identified from a chronic disease registry; all of those identified were invited to participate in the study. All tools were translated into Spanish to allow for monolingual Spanish speakers to participate. Exclusion criteria included anyone with a significant immune modifying illness at the start of enrollment such as cancer or pneumonia. A 10% attrition rate was assumed and 79 patients were identified as possible participants.

## Instruments

Serum blood glucose monitors and test strips were provided to the patients. The monitor was Bayer Breeze2, which does not need calibration or test strip coding. Reliability and validity of the Breeze2 glucometer had previously been determined.<sup>16</sup> Patients were instructed on the use of the monitors by the primary investigator.

Background questions were asked about age, marital status, and work status. A series of questions regarding health, specifically heart disease and diabetes, was also asked. In addition, participants were asked questions regarding prayer, including how frequently they prayed, what prayers they used, and where they prayed.

Qualitative questions were included in the time 2 questionnaire. The 5 questions were as follows: When you were asked to say the Serenity Prayer was there anything about that particular prayer that you thought of? The second question asked whether the Serenity Prayer was added or substituted for the participants' regular prayers. The third question asked whether saying the Serenity Prayer changed anything about the way the participants were living their lives and the fourth question asked specifically whether saying the Serenity Prayer changed anything about the way the participants were living with their diabetes. There was one open-ended question that allowed participants to share any thoughts they had on being in the study.

The serum blood glucose diary was given at time 1 and had 3 boxes with 4 spaces in each box for 4 serum blood glucoses per week, for 3 weeks. The participants were asked to check their blood glucose levels on 1 week day and 1 weekend day per week.

The diary had the days of the week to circle and a space for the time the blood glucose level was checked. The serum blood glucose diary was explained to each patient at enrollment. The prayer diary had the exact same 3 boxes at the top for weeks 4 to 6. Participants were asked to use this form to record each time they recited the Serenity Prayer.

## Procedures

Once institutional review board approval was granted, a registry summary report of the patients assigned to the nurse practitioner at the chosen clinic having a hemoglobin A<sub>1C</sub> more than 7.5 was run. Patients were contacted by the bilingual staff and an opportunity to participate in the study was offered. During the telephone call, the study was explained by the staff using a script provided by the primary researcher. If the patient expressed interest, an appointment was made. At this appointment, any regularly scheduled or requested patient care was rendered prior to the study being discussed.

At time 1 the participants filled out the background data, including prayer practices and background health data. Serum blood glucose diaries for the first 3 weeks, along with the glucometer, were given to participants at that first visit and the patients were taught the Serenity Prayer and instructed to recite the prayer at least once daily. They were not given any other instructions about when to say the prayer and under what conditions. The participant was asked to self-address a manila envelope that would be sent to them at week 2 with their week 3 to 6 materials. The prayer diary and a copy of the Serenity Prayer were mailed to the participant's home with the second questionnaire. At the end of their 6 weeks, the participant was asked to return the stamped self-addressed envelope with all of his or her materials inside. The participants were given a Bayer Breeze 2 glucometer to keep whether they completed the study or not. The participants were also given 2 one-dollar bills at enrollment (Time 1) and in their manila envelopes at times 2 and 3.

## RESULTS

Of the original 79 patients identified from the diabetic registry, only 49 were able to be contacted. Only 1 patient refused to participate, citing lack of adequate compensation. Either the remainder had discontinued

phone numbers or were no longer living at the phone number on the registry report, or the phone rang with no answer or no answering machine.

Of the 48 persons who were contacted and agreed to come to the clinic for more information, 15 never presented even after 2 follow-up phone calls. The enrollment period lasted 6 weeks. The final enrollment number was 36, thus only 45% of the 79 possible participants were identified.

An attempt was made during the study period to call patients on a weekly basis and remind them of the need to follow the study guidelines. These phone calls often resulted in messages being left. Of the original 36 enrollees, only 12 turned in any completed materials at week 6.

### Characteristics of the participants who completed the time 1 data

Thirty-six participants completed the initial questionnaires. The sample consisted of 23 women (63.9%) and 13 men (36.1%) with a mean age of 50.31 years (SD = 12.35; range, 28-73). The majority of the sample was African American (n = 15; 41.7%) or Hispanic (n = 16; 44.4%) and single (n = 15; 41.7%). Sample characteristics are included in Table 1.

### Prayer practices

The time 1 questionnaire included specific questions on prayer practices. The majority of participants prayed regularly (n = 35; 69.4%), and equal numbers prayed for themselves and their health (n = 30; 83.3%), while equal numbers also reported praying for others and others' health (n = 26; 72.2%). The majority of the participants prayed quietly alone (n = 35; 83.3%). The prayer characteristics of the time 1 participants are found in Table 2.

### Serum blood glucose levels and Serenity Prayer results

Twelve participants turned in their completed serum blood glucose diaries for weeks 1 through 3; mean serum blood glucose level was 185 (SD = 64.48). Ten participants completed their serum blood glucose diaries for weeks 4 through 6; mean serum blood glucose level for weeks 4 through 6 (n = 10) was 225 (SD = 83).

A total of 9 people reported reciting the Serenity Prayer. The mean number of times participants recited the Serenity Prayer daily was 1.65 (SD = 1.13). From weeks 1 to 6, 4 participants had a decrease in their

**TABLE 1.** Background Characteristics of the Participants (N = 36)

Variable	Frequency	%	Mean ± SD
Age, y			50.3 ± 12.3
28-44	10	27.8	
45-61	18	50.0	
62-73	8	22.2	
Gender			
Female	23	63.9	
Male	13	36.1	
Ethnicity			
Hispanic	16	44.4	
African American	15	41.7	
White	2	5.6	
Asian/Pacific Islander	1	2.8	
Marital status			
Single	15	41.7	
Married	11	30.6	
Widowed	1	2.8	
Divorced	6	16.7	
Separated	3	8.3	
Insurance status			
Uninsured	5	13.9	
County Medical	15	41.7	
Medi-Cal	6	16.7	
Medi-Cal and Medicare	5	13.9	
Medicare	5	13.9	
Completed high school			
Yes	18	50	
No	18	50	
Working, full- or part-time			
Yes	7	19.4	
No	28	80.6	

serum blood glucose levels, and 5 participants showed an increase in serum blood glucose levels. What is interesting to note is the fluctuation in serum blood glucose levels among 8 of the 9 participants from weeks 1 through 6. These results are included in Table 3.

### Time 1 qualitative question

The time 1 questionnaire had one qualitative question asking about specific prayers that participants might be using. The question was answered by 23 participants with 5 reporting no specific prayers and 1 reporting yes but not detailing what prayer it was. The Lord's Prayer was chosen 5 times and the rosary twice. Two participants reported reciting psalms, and one person reported recitation of the Serenity Prayer.

**TABLE 2.** Results on Questionnaire Concerning Prayer Practices (N = 36)

Variable	Yes, f(%)	No, f(%)
Pray regularly <sup>a</sup>	25 (69.4)	10 (27.8)
Pray for yourself <sup>a</sup>	30 (83.3)	5 (13.9)
Pray for your health <sup>a</sup>	30 (83.3)	5 (13.9)
Pray for others <sup>a</sup>	26 (72.2)	9 (25)
Pray for other's health <sup>a</sup>	26 (72.2)	9 (25)
Pray out loud while alone <sup>a</sup>	17 (47.2)	18 (50)
Pray quietly while alone <sup>a</sup>	30 (83.3)	5 (13.9)

<sup>a</sup> Missing data.**TABLE 3.** Serum Blood Glucose Results for Participants Who Recited the Serenity Prayer (N = 9)

ID	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6
1	101.0	105.7	108.0	108.2	110.5	110.0
7	114.3	141.7	237.2	189.7	191.7	139.2
8	253.3	253	195.7	144.7	199.7	194.7
14	182.3	390.7	166	198	262.7	252.2
15	210.3	223.3	155.5	226.5	394	272.5
18	138	104.5	108.8	125.3	124.3	88.3
26	333.3	222.5	304.5	166.5	283.8	318.5
28	143	220	116.3	176.8	186.8	147.8
36	162.7	140.8	125.8	160.3	157.8	147.8

### Time 2 qualitative questions

There were 5 questions asked in time 2. These questions were answered by 7 participants. The first question was, “when you were asked to say the Serenity Prayer, was there anything about that particular prayer that you thought of?” Five of the participants answered this question. One participant answered a simple no. Two of the participants thought of God or of prayer, one stated how much they liked the Serenity Prayer, and another discussed the importance of continuing to recite the prayer after the study was completed. One participant stated, “how true all of it is. And to try and feel and believe the Serenity part.” Yet another participant stated, “that it’s my choice/free will to take meds and make right food choices—If I lean on God through Jesus I will have the strength to choose and I will make the right one—health!”

The second question asked whether the Serenity Prayer was added or substituted for the participants’ regular prayers. There were 8 respondents to this

question. A total of 6 added the prayer to their usual prayers, while one substituted it.

The third question asked whether saying the Serenity Prayer changed anything about the way the participants were living their lives. There were 7 responses to this question. Three of the participants answered “no” that it had not changed anything about how they lived their lives. One participant answered, “Yes, it made me feel more at peace, aware of different situations, to think before acting upon, take things slower, and open eyes.” Another participant responded, “To accept the things I cannot change.” A third participant wrote, “It made me remember that there are some things I cannot change and some I can. Sometimes I tend to forget, saying this everyday made a difference.” Yet another participant recited the Serenity Prayer daily at some point (other than related to this study). A participant whose blood glucose levels fell over the 6 weeks answered, “I mostly say it when I am at work, it reminds me that nobody is obligated to be nice to me—but I am obligated to be nice back.”

The fourth question asked: “do you feel like saying the Serenity Prayer changed anything about the way you were living with diabetes?” Five participants stated that there was no change about the way they were living with diabetes. Three of the participants stated that they were stronger and more determined to change and live a healthier life with, or as one participant stated, “Free from diabetes.” It is interesting to note that all of those citing strength had no change in their serum blood glucose levels over the 6 weeks.

The fifth question was open-ended and asked whether there was anything else anyone wanted to share. One participant stated, “Yes, it made me more aware of myself and situations and surroundings of basic life, health, and responsibility. Being positive, I can change anything with me.” A participant whose blood glucose levels fell stated, “It made me more aware of my health with diabetes.” A second participant with blood glucose levels that fell stated, “Usually I just check my glucose and say, ‘oh well, ok’ and move on writing it down on paper. I’ve been forced to realize just how bad it is getting.”

### Time 3 qualitative question

In time 3, the following question was included: “do you think that being in this study and checking your blood glucoses the way you have been asked to do has changed anything about you or your diabetes?” Six of the 9 participants answered; 4 participants responded

that participation in the study had affected their diet, exercise, and overall diabetes management. One participant whose blood glucose levels fell over the course of the study answered “yes, I changed the way I eat and watch what I eat and how much and what to eat and what not to eat.” Another participant whose blood glucose levels also fell over time answered, “I better start doing something about it fast, I justify and rationalize a lot. Pretending I don’t have it doesn’t mean I don’t have it.” Yet another participant added that she or he felt that the study had given him or her “a better routine and better guidelines to go by.” This participant was one whose blood glucose levels did not change during the course of the study.

## DISCUSSION

This study was complicated by significant implementation problems. It was proposed that a sample of 60 with a 10% attrition rate would be enrolled. Out of a total of 79 possible participants, only 36 participants were enrolled and only 9 completed all phases of the study. Thus the statistical analyses were limited to descriptive results.

Prayer, considered CAM, was used by 89% of the study population. In the 2002 National Health Interview Survey, results indicated that 47.6% of the participants used prayer.<sup>14</sup> In 2002, 47.6% of diabetic patients reported that using CAM almost equaled to the 47.9% of persons without diabetes. These participants in the present study reported the use of prayer at almost twice that of the general population in the 2002 study.

### Serum blood glucose results

For the 9 study participants, 4 showed no change in serum blood glucose levels over 6 weeks, 3 had increases in their serum blood glucose levels, and 2 had decreased levels. It is possible that to see a significant drop in average serum blood glucose levels, more than 6 weeks of data with the recitation of the Serenity Prayer would be needed.

The Serenity Prayer was recited between 1 and 3 times a day for the 9 participants who recited it. This small number of subjects does not allow for generalizations nor are there any other studies on this specific prayer for comparison.

Although the qualitative data in this study were drawn from a small sample, the results are

encouraging for further research. Most of the participants seem to have a greater understanding of their diabetes as well as a greater sense of control over their diabetes at the conclusion of the study. From the qualitative data, those who participated in the study, regardless of the Serenity Prayer recitation, indicated that thought they had more control of their diabetes and their lives.

### Strength and limitations of the study

The strengths of this study were as follows: (a) the setting provided excellent access to diabetic patients with a variety of demographic characteristics, though mostly low income; (b) the subjects are mostly well-established consumers of health care at this site; and (c) the recitation of the Serenity Prayer does not assume any specific religious affiliation. Study limitations were as follows: (a) enrollment numbers were low and attrition was extremely high and (b) multiple variables such as the effect of other prayers or religious practices were not controlled for.

### Recommendations for further research

There are several components of this study that raised questions for future research. While the Serenity Prayer is popular among individuals of all religious backgrounds, no previous research was found that addressed health outcomes of this prayer use. Furthermore, in this study, the only instruction that the participants were given was to recite the prayer at least once daily. In retrospect, we could have been more specific about the conditions under which the prayer was recited, for example, in a quiet place, at rest. We also could have asked the participants to record the conditions under which they recited the prayer, thus providing rich qualitative data for future research. We underestimated the challenges inherent in research with the study group, a group that is not used to participating in longitudinal studies. Additional incentives could have been included to maintain the involvement of the participants, and this is recommended for future research. This study should be replicated with a larger sample and longitudinal assessments of physiological and psychological variables should be obtained. The possibilities of further research using the Serenity Prayer are vast, with application to any patient population.

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