



BY DOUG O. DEHNING, LINDSAY A. NELSON, JEANETTE A. STEWART, AND WILLIAM C. STEWART

## Does Religious Adherence Help Diabetic Patients' Well-Being?

**ABSTRACT:** *The purpose of this survey was to evaluate the impact of patients' depth of religious adherence on their outlook toward their disease and treatment. A 15-question survey assessing self-reported level of basic practices of the Christian faith, sense of personal well-being, and attitude toward diabetic treatment was distributed to consecutive patients with diabetes at an ophthalmology clinic in Missouri. Christian patients were chosen because they represent one important end of the spectrum of religious belief in U.S. culture and the majority of patients in the clinic. Of 299 patients, the more adherent a patient was to faith-based activities or demonstrated knowledge of basic dogma, the greater their sense of well-being ( $p < 0.001$ ), suggesting Christian religion/spirituality may be a positive coping mechanism for diabetic patients.*

**KEY WORDS:** *chronic illness, coping mechanisms, diabetes, medical treatment, religion, well-being*

A growing number of studies suggest a connection between religion, spirituality, and both mental and physical health (Curlin, Sellergren, Lantos, & Chin, 2007; Koenig, 2004; Murphy & Fitchett, 2009). In fact, church attendance, religious practices, and spiritual beliefs may improve health and generally benefit individuals with chronic illness (Koenig, King, & Carson, 2012; Parsons, Cruise, Davenport, & Jones,

2006). Furthermore, many primary care physicians believe religion and spirituality are important to their patients (Curlin et al., 2007).

recently investigated the extent of religious level and personal well-being in glaucoma and ocular hypertensive patients. They found that religion/spirituality among Christians in the United States may be a positive coping mechanism for a glaucoma patient (Stewart, Sharpe, Kristoffersen, Nelson, & Stewart, 2011). The purpose of this survey was to evaluate in a diabetic population the impact of patients' depth of religious belief and practice on their outlook toward their disease and treatment.

### EXPLORING RELIGION AND DISEASE OUTLOOK

To explore the relationship between religious belief and disease/treatment outlook, a survey was conducted for

---

*Seven out of 10 American adults describe themselves as Christian, whereas more than 6 in 10 state they are "deeply spiritual."*

---

■ **Doug O. Dehning, MD**, is an ophthalmologist with Discover Vision Centers, Independence, Missouri.

■ **Lindsay A. Nelson, BS**, is the data manager with PRN Pharmaceutical Research Network, LLC, Cheyenne, Wyoming.

■ **Jeanette A. Stewart, RN**, is the co-founder and research director of PRN Pharmaceutical Research Network, LLC, Cheyenne, Wyoming.

■ **William C. Stewart, MD**, is the co-founder and medical director of PRN Pharmaceutical Research Network, LLC, Cheyenne, Wyoming.

Accepted by peer review 2/26/13.

The authors declare no conflict of interest.

Given the relationship between religion, spirituality, and health, religious practice might provide a positive framework for improving patients' personal attitude toward their disease, treatment, and their physician. Little has been published exploring patients' religious belief and personal views or attitude toward their disease and treatment. Stewart and associates

diabetic patients at the ophthalmic clinical practice of one of the authors (DOD). Consecutive patients with a diagnosis of diabetes were asked to complete a survey that evaluated self-reported level of basic practices of the Christian faith, their sense of personal well-being, and their attitude toward their diabetic treatment (see survey in the Appendix). No clinical categorization



or assessments were made regarding the type or severity of the diabetes diagnosis.

All potentially qualified patients who had been diagnosed with diabetes by their primary healthcare provider were asked to complete the survey. These patients were being followed or referred to the ophthalmology office for potential or already realized ocular complications of diabetes. Patients who did not wish to participate, were

patient gave his or her verbal informed consent, the survey coordinator explained the purpose of the survey; that he or she could withdraw at any time without repercussion; that the information would be kept anonymous; and ensured that the patient had signed a Health Insurance Portability and Accountability Act (HIPAA) waiver for the office allowing use of de-identified personal information for research.

center. To accomplish this, patients placed their survey into a sealed envelope that they inserted into a locked collection box. Each survey was identified only by a number that could not be linked to the patient's identity. Because of these procedures to protect privacy, the coordinator was not able to verify that all questions had been answered on surveys.

The survey was developed by one of the authors (WCS) and is shown in the Appendix. Questions were developed regarding the activities of faith; the correct answer to the knowledge question and general responses to adherence were derived from theological texts (Geisler, 2004; Ryrie, 1981). Questions 1 to 9 were scored on a 7-point scale (0–6), with 0 being the most adherent. The scale was constructed as a Likert-type rating scale on a horizontal bar with space separating the seven possible number choices. Patients marked their perceived answer across the scale.

---

*Patients most involved in their religious faith and demonstrating at least a basic knowledge about the faith reported greater personal well-being related to their life in general and their diabetic treatment specifically.*

---

unable to read and write English (and did not have someone to assist them), could not cooperate or understand the questions due to cognitive skills, and those without diabetes were not asked to complete the survey.

We focused on the Christian faith in our survey to obtain a relatively pure cohort of common belief and practice. Recent surveys report that 7 out of 10 American adults describe themselves as Christian, whereas more than 6 in 10 state they are “deeply spiritual” (Barna Group, 2013). Thus, these Christian patients represent one important end of the spectrum of religious belief in U.S. culture. The majority of patients taking the survey stated they were Christians; we did not include those who stated they were atheists, agnostics, or who left religious affiliation blank on the survey in our analysis.

As this was a noninterventional informal survey, clinical trial registration and Institutional Review Board approval were not obtained. If a

The survey coordinator completed the section of the survey about the patient's medical history before providing it to the patient. The patient then answered the remaining questions. The patient was instructed to take as much time as needed to complete the survey. Patients were not required to respond to every item on the form. However, the patient must have responded to at least 50% of the questions to be included in the analysis. The patient was asked not to make any notations on the survey that would identify him or her to the investigators. Patients were not financially compensated for their participation.

If patients had poor vision and/or handwriting, the survey coordinator or accompanying family member could read the survey questions to them and/or record their responses. Patients were assured their answers would not be viewed by the physicians in the office; completed surveys were sent directly to the data analysis

## **ANALYZING SURVEY RESPONSES**

Complete surveys were scored and analyzed to examine possible connections between religious beliefs and practices, and outlook on disease and treatment. All statistical tests were nonpaired, two-sided, and used a  $p$ -value of 0.05 for establishing significance. The sample population was not powered statistically as this was a descriptive, noncomparative survey. The analysis was limited to self-professed Christians who were either religiously adherent or nonadherent. We included both groups to attain a range of responses from individuals exposed to Christian culture.

Survey questions were classified as follows: “religious adherence” questions (questions 10–15) were divided between queries regarding activities of faith (questions 10–14) and a “knowledge” question (question 15). Together, these six questions were

termed as “adherence” questions and were designed to assess a patient’s seriousness in practicing his or her religion. In contrast, we included nine “well-being” questions (questions 1–9), which reflect the potential impact of the practice of the patient’s religion on his or her personal mental well-being and treatment.

A one-way analysis of variance (ANOVA) was used to evaluate each response on the nine well-being questions based on the level of response to the adherence questions (54 separate evaluations). Because of the multiple analyses of the well-being questions, we used a modified Bonferroni correction ( $\alpha/10$ ) to adjust the  $p$ -value in order to declare significance. We also evaluated the results by the number of patients who answered any number (0–6) of the adherence questions (questions 10–14) as most active, or by noting the knowledge question (question 15) as “yes,” by an ANOVA test of the mean score for each well-being question.

Finally, we performed a multivariate linear regression analysis to evaluate for statistical associations of religious level to the patient’s visual

**Table 1: Mean Responses to Survey Questions**

Survey Question <sup>a</sup>	Patients <sup>b</sup> (N = 299)	Mean ± SD <sup>c</sup>
1: I am satisfied with life	299	1.2 ± 1.3
2: I have peace	298	1.1 ± 1.2
3: I am happy	298	1.2 ± 1.3
4: I have purpose	298	1.3 ± 1.5
5: God cares about my diabetes	296	1.0 ± 1.4
6: God helps my treatment of diabetes	295	1.2 ± 1.5
7: My faith helps me cope with diabetes	290	1.2 ± 1.5
8: God helps me with my attitude toward diabetes	292	1.1 ± 1.5
9: I believe my physicians are trying to help my diabetes	294	0.6 ± 1.0
10: I associate with other members of my faith	247	0.7 ± 0.8
11: I study the Holy Scriptures	232	0.9 ± 0.9
12: I pray to God	267	0.2 ± 0.6
13: I praise God	272	0.2 ± 0.6
14: I teach others about the truth of my faith	191	0.5 ± 0.8
15: When I die I will go to heaven	251	Yes
	30	Unsure
	3	No

<sup>a</sup>Questions 1–9 were on a 7-point scale (0–6) with 0 being the most adherent. Questions 10–14 allowed for written in responses, but were converted to a 4-point scale (0–3) with 0 being the most adherent. Question 15 had three levels of response.

<sup>b</sup>Others and blanks were excluded.

<sup>c</sup>Mean (average) and standard deviation from the mean.

( $\alpha/10$ ) to adjust the  $p$ -value in order to declare significance.

religion;  $n = 4$ ). Within this population, 273 (91%) patients indicated they were Caucasian, 10 (3%) African-Americans, 8 (3%) Asians, and 6 (2%) others; 156 (52%) were females and 136 (45%) males. The average age was  $68.5 \pm 12.7$  years. Excluded from the analysis were five patients from other faiths and three patients who did not complete at least 50% of the questions. The mean results for each of the survey questions are found in Table 1. The patients’ visual acuity, years with diabetes, and complications from diabetes are shown in Table 2.

Of the analyzed population, 223 (75%) completed all survey questions. Some patients declined to fill out at least one item on this portion of the history or answer specific survey questions.

*The exercise of faith may provide patients a perceived outside resource of help, giving a sense of greater personal control over their disease and treatment that might enhance well-being.*

acuity, race, gender, age, religion, and years with diabetes as well as his or her responses to adherence questions (questions 11–15). Again, because of the multiple analyses of the well-being questions, we used a modified Bonferroni correction

## SURVEY RESULTS

A total of 307 patients filled out the survey. We included 299 patients in data analysis who identified themselves as being of the Christian faith or religiously nonadherent (religious, but not identifying with a specific



Table 3 demonstrates the mean results of the well-being questions (questions 1–9) organized by the religious adherence scores (questions 10–15). There was a statistical difference in the level of well-being based on the frequency of each activity ( $p < 0.001$ ). For each activity question (questions 10–14) the more frequently a religious activity was performed, the better the patient’s well-being (lower numeric value for questions 1–8). Further, question 15 (knowledge question) also indicated that those people believing basic Christian

beliefs (“When I die I will go to heaven”) demonstrated better well-being scores ( $p < 0.001$ ).

all levels of adherence to faith-based activities, or knowledge of basic dogma, believed their healthcare

*The more frequently a religious activity was performed, the better the patient’s well-being.*

In contrast, the results from question 9 indicated that patients across

providers were trying to help them (after a modified Bonferroni correction  $p \geq 0.025$ ).

The greater the number of questions ( $\geq 2$  questions) for which a patient was most adherent (most active choice on religious adherence questions 10–14 or answering yes on the knowledge question), the progressively greater the self-reported benefit (highest ranking) on each well-being question was shown (questions 1–8);  $p < 0.001$ . The one exception again was for question 9 for which a greater adherence to faith-based activities did not contribute to greater well-being ( $p = 0.04$ ). These results are shown in Table 4.

The results also demonstrated that prayer was independently associated to a better well-being in all of the well-being questions ( $p \leq 0.007$ ) except questions 2 (peace) and 9 (physician trying to help diabetes). In contrast to the nonsignificance of the ANOVA test for question 9, patients who were most active in fellowship with other believers were independently associated with the belief that his or her doctor was trying to help him or her (after Bonferroni correction  $p = 0.002$ ).

## RELIGION/DISEASE OUTLOOK CONNECTIONS

The purpose of this survey was to evaluate the impact of diabetic patients’ depth of religious level on their outlook toward their disease and

**Table 2: Patients’ Visual Acuity, Years With Diabetes, and Complications From Diabetes (N = 299)**

Visual Acuity	OD (Right Eye)		OS (Left Eye)	
	n	%	n	%
20/20–20/40	218	72%	211	69%
20/50–20/90	34	11%	42	14%
20/100–20/190	7	2%	5	2%
20/200–20/390	11	4%	12	4%
20/400–above	25	8%	24	8%
Blank	9	3%	10	3%
<b>Years with diabetes</b>	<b>n</b>	<b>%</b>		
0–10	118	39%		
11–20	102	34%		
21–30	42	14%		
31–40	24	8%		
41–50	6	2%		
51–above	3	1%		
Blank	9	3%		
<b>Complications with diabetes</b>	<b>n</b>	<b>%</b>		
Ocular	179	34%		
Peripheral and cardiovascular	123	23%		
Neurologic	88	17%		
Renal	36	7%		
Gastric	16	3%		
Dermatologic	8	2%		
Other (diabetic retinopathy 1, liver 1, vitreous hemorrhage 1)	3	1%		
None	51	10%		
Blank	26	5%		

**Table 3: Mean Scores for “Well-being” Questions (1–9) Based on Responses to “Adherence” Questions (10–15)**

	“Adherence” Questions	Patients*	“Well-being” Questions (see Table 1 for list of questions)								
			1	2	3	4	5	6	7	8	9
10	Every day	124	0.9	0.8	0.9	1.0	0.6	0.7	0.8	0.7	0.4 <sup>a</sup>
	Every week	83	1.2	1.1	1.0	1.1	0.9	1.1	0.9	1.0	0.7
	Every month	32	1.4	1.4	1.4	1.5	1.4	1.6	1.7	1.5	0.9
	Every year	8	2.4	2.6	2.5	2.6	2.0	2.0	2.3	2.5	1.1
	Other	37	1.6	1.7	1.7	1.8	1.9	2.2	2.1	2.1	0.5
11	Every day	91	0.7	0.6	0.7	0.7	0.4	0.5	0.5	0.6	0.4 <sup>b</sup>
	Every week	95	1.2	1.2	1.2	1.2	0.9	1.1	1.0	1.0	0.6
	Every month	34	1.7	1.6	1.7	1.8	1.4	1.6	1.5	1.4	0.7
	Every year	12	1.2	1.3	1.3	1.4	1.4	1.4	2.0	1.1	0.8
	Other	37	1.8	1.8	1.6	2.1	2.0	2.2	2.4	2.3	0.7
12	Every day	232	1.0	1.0	1.0	1.1 <sup>c</sup>	0.7	0.9	0.8	0.8	0.5 <sup>b</sup>
	Every week	21	2.0	1.8	1.8	1.5	1.9	2.0	2.1	1.9	0.9
	Every month	9	2.0	1.6	1.7	2.4	1.9	1.9	2.3	2.2	0.8
	Every year	5	2.6	2.8	2.6	2.4	3.6	3.8	3.8	3.8	1.6
	Other	17	1.8	1.9	1.9	2.1	2.6	3.0	3.0	3.0	0.0
13	Every day	231	1.1 <sup>c</sup>	1.0	1.1 <sup>c</sup>	1.1 <sup>c</sup>	0.7	0.9	0.8	0.8	0.5 <sup>b</sup>
	Every week	27	1.5	1.5	1.4	1.4	1.7	1.9	1.8	1.4	0.9
	Every month	10	1.7	1.7	1.6	1.4	1.2	1.5	1.9	2.2	0.3
	Every year	4	2.8	3.5	1.8	2.5	2.0	2.3	2.8	2.0	0.8
	Other	13	2.2	2.5	2.5	2.7	4.0	4.1	4.6	4.8	0.8
14	Every week	128	0.8 <sup>c</sup>	0.7	0.8	0.6	0.5	0.6	0.5	0.6	0.4 <sup>b</sup>
	Every month	42	1.5	1.3	1.5	1.8	1.0	1.2	1.3	1.2	0.8
	Every year	15	1.5	1.4	1.5	1.5	0.9	1.3	1.6	1.1	0.8
	Every 5 years	6	1.5	2.0	1.5	2.0	1.7	1.7	2.3	2.2	1.3
	Other	57	1.5	1.5	1.5	1.7	1.8	2.0	1.9	2.1	0.7
15	Yes	251	1.1 <sup>c</sup>	1.0	1.0	1.2 <sup>c</sup>	0.8	1.0	0.9	0.9	0.6 <sup>b</sup>
	No	3	2.0	2.3	3.0	3.0	5.0	4.0	4.0	4.0	0.0
	Unsure	30	2.0	2.0	2.2	1.8	2.4	2.6	2.7	2.6	0.9
	Other	5	1.8	1.8	2.0	2.6	3.0	3.3	2.7	2.7	1.0

<sup>a</sup>p-Value > 0.05.

<sup>b</sup>p-Value < 0.05 but not significant after the Bonferroni correction.

<sup>c</sup>p-Value > 0.001.

\*Blanks were excluded.

treatment. The results revealed that patients most involved in their religious faith and demonstrating at least a basic knowledge about the faith (adherence questions) reported greater personal well-being related to their life in general and their diabetic treat-

ment specifically. Well-being was manifested by a sense that the patients were happy, had purpose, peace, and were satisfied with life (questions 1–9).

Patients most adherent to their religion also showed a positive atti-

tude toward their diabetic treatment, manifested by a sense that God cared about their disease, God assisted with their treatment, and God helped them cope with the disease and have a positive attitude (questions 5–8). The one exception was that almost all





patients, regardless of their level of adherence, believed their healthcare providers were trying to help them.

An additional increased sense of well-being was shown in patients who reported the most activity in their faith and were knowledgeable

God, teaching others about the faith, and confidence in salvation identified those who were slightly more likely to have confidence in their healthcare providers' desire to help them.

In contrast to the nonsignificance of the ANOVA test for question 9

independently associated to better well-being in all of the well-being questions except questions 2 (peace) and 9 (physician trying to help diabetes). Previous studies have linked the practice of prayer to improved well-being in patients with a number of different illnesses (Boudreaux, O'Hea, & Chasuk, 2002; Koenig et al., 2012).

*Patients most adherent to their religion also showed a positive attitude toward their diabetic treatment, manifested by a sense that God cared about their disease, God assisted with their treatment, and God helped them cope with the disease and have a positive attitude.*

## IMPLICATIONS FOR PRACTICE

Our survey results are consistent with previous literature supporting that religious people generally are happier. However, this survey adds to the literature by offering information about ophthalmology and specifically diabetic patients. In addition, these findings found a further benefit to the sense of well-being in patients more active and knowledgeable about their religion.

The reasons why the well-being of our diabetic patients in our survey was so strongly related to their religious faith was not apparent by our results. Several reasons may exist for this. First, as these patients were generally older, any benefit from their long-standing personal faith would have been more easily transferred to coping with their diabetes. Second, the exercise of faith may provide patients a perceived outside resource of help, giving a sense of greater personal control over their disease

regarding basic dogma. This finding may indicate that the more serious a person is about the practice of his or her religion, the greater the sense of well-being derived in relationship to one's diabetic disease and treatment.

The exception to the above findings was question 9, which demonstrated that all patients, regardless of their level of religious adherence, were confident that their healthcare providers were attempting to help them with their diabetes. Nonetheless, several questions including studying the Scriptures, praising

(physician trying to help my diabetes), patients who were most active in fellowship with other believers and praise were most likely to believe their physician was trying to help. Why these two activities would help patients' attitudes toward their physician is not clear. It may be that the positive emotional support of other positive people supports greater trust in a physician and/or better interpretation of his or her words and actions in a less negative or suspicious light.

The multivariate linear regression analysis demonstrated that prayer was

**Table 4: Number of Adherent\* Responses to "Adherence" Questions**


"Adherence" Questions (10-15)	Patients (n)	"Well-being" Questions (1-9, see Table 1 for list of questions)								
		1	2	3	4	5	6	7	8	9
<b>p-Values</b>		>0.001	>0.001	>0.001	>0.001	>0.001	>0.001	>0.001	>0.001	0.04
<b>None</b>	19	2.2	2.4	2.4	2.4	3.2	3.4	3.6	3.5	0.9
<b>Any 1</b>	26	1.4	1.7	1.3	1.6	2.0	2.1	2.8	2.5	0.7
<b>Any 2</b>	35	1.5	1.2	1.4	1.5	1.6	1.6	1.6	1.4	0.8
<b>Any 3</b>	63	1.3	1.3	1.3	1.6	1.1	1.5	1.1	1.3	0.7
<b>Any 4</b>	53	1.5	1.2	1.3	1.6	0.7	0.9	0.9	0.8	0.7
<b>Any 5</b>	53	0.7	0.7	0.7	0.7	0.4	0.6	0.5	0.5	0.3
<b>All 6</b>	50	0.5	0.5	0.6	0.4	0.2	0.3	0.3	0.3	0.3

\*Adherence is defined by the patient choosing the most active response (i.e., every day) for questions 10-14 and "yes" for question 15.

and treatment that might enhance well-being.

This survey is helpful clinically because the information helps physicians and nurses know better how to assist patients in coping with their diabetes. If a patient indicates he or she is a religious person adhering to the Christian faith, the provider may have some confidence that this patient can draw on religious coping skills to better cope with his or her diabetes and treatment. In addition, the provider, if comfortable, could encourage the patient further by relating God's concern for his or her life generally, and for diabetes specifically. In contrast, if a patient has indicated no religious interest but is discouraged with his or her disease and/or life, the provider could encourage the patient, as appropriate, to seek a greater spiritual basis for life or for coping with diabetes.

These survey results are limited in that we did not assess the validity and

reliability of the survey instrument, nor did we evaluate patients who are not Christian. Information is needed from other religions (e.g., Judaism, Islam, Hinduism) to determine how other faiths might impact well-being and attitude toward diabetes and treatment. We also only surveyed patients at one point in time; long-term evaluation is needed to explore the impact of religion/spirituality on diabetic patients' lives and treatment outcomes. Finally, we did not assess the use of religion/spirituality in health-care counseling of patients to help them cope. As many of the healthcare providers in this office are Christian, that may have impacted survey responses. However, our survey results suggest religion and spirituality may be a positive coping mechanism for diabetic patients, impacting their overall well-being and attitude toward their diabetes and treatment. 

---

Barna Group. (2013). *How post-Christian is U.S. society?* Retrieved from <http://www.barna.org/culture-articles/613-how-post-christian-is-us-society>

- Boudreaux, E. D., O'Hea, E., & Chasuk, R. (2002). Spiritual role in healing. An alternative way of thinking. *Primary Care, 29*(2), 439–454.
- Curlin, F. A., Sellergren, S. A., Lantos, J. D., & Chin, M. H. (2007). Physicians' observations and interpretations of the influence of religion and spirituality on health. *Archives of Internal Medicine, 167*(7), 649–654.
- Geisler, N. (2004). *Systematic theology, Volume 3: Sin, salvation*. Minneapolis, MN: Bethany House.
- Koenig, H. G. (2004). Religion, spirituality, and medicine: Research findings and implications for clinical practice. *Southern Medical Journal, 97*(12), 1194–1200.
- Koenig, H. G., King, D. E., & Carson, V. B. (2012). *Handbook of religion and health* (2nd ed.). Oxford, UK: Oxford University.
- Murphy, P. E., & Fitchett, G. (2009). Belief in a concerned God predicts response to treatment for adults with clinical depression. *Journal of Clinical Psychology, 65*(9), 1000–1008.
- Parsons, S. K., Cruise, P. L., Davenport, W. M., & Jones, V. (2006). Religious beliefs, practices and treatment adherence among individuals with HIV in the southern United States. *AIDS Patient Care and STDS, 20*(2), 97–111.
- Ryrie, C. (1981). *Basic theology: A popular systematic guide to understanding biblical truth*. Colorado Springs, CO: Victor.
- Stewart, W., Sharpe, E., Kristoffersen, C., Nelson, L., & Stewart, J. (2011). Association of strength of religious adherence to attitudes regarding glaucoma or ocular hypertension. *Ophthalmic Research, 45*(1), 53–56.



## Appendix: Religious Adherence and Patient Well-Being/Attitudes Toward Diabetes Survey

Initials

*This information to be completed by healthcare staff.*

Visual acuity OD 20/  OS 20/

No complications from diabetes are apparent

The following complications from diabetes exist

Ocular

Peripheral and  
cardiovascular

Renal

Neurologic

Other (e.g.,  
dermatologic  
gastric, etc.)

**Dear Patient:**

***The goal of this survey is to explore the impact of your religious faith on your attitude about diabetes. The results are intended for publication in an ophthalmic scientific journal. Please do not identify yourself in any way on this survey.***

I am:

African American     Asian     Caucasian     Hispanic     Other

Christian     Muslim     Jewish     Humanist     Hindu     Other

Female

Age

Years with diabetes

Male



Initials 

--	--	--

**Mark on the scale how accurately the statement reflects your life.**

**0 = completely accurate**

**6 = completely inaccurate.**

1. I am satisfied with life.

0	1	2	3	4	5	6
Satisfied			Not satisfied			

2. I have peace.

0	1	2	3	4	5	6
Peace			No peace			

3. I am happy.

0	1	2	3	4	5	6
Happy			Not happy			

4. I have purpose.

0	1	2	3	4	5	6
Purpose			No purpose			

5. God cares about my diabetes.

0	1	2	3	4	5	6
Cares			Does not care			

6. God helps my treatment for diabetes.

0	1	2	3	4	5	6
Helps			Does not help			

*(Continued)*



**Appendix: Religious Adherence and Patient Well-Being/Attitudes Toward Diabetes Survey (Continued)**

Initials 

--	--	--

7. My faith helps me cope with my diabetes.

0	1	2	3	4	5	6
Helps					Does not help	

8. God helps me with my attitude toward my diabetes.

0	1	2	3	4	5	6
Helps					Does not help	

9. I believe my physicians are trying to help my diabetes.

0	1	2	3	4	5	6
Try to help					Do not try to help	

***For the following questions, mark the single best response or explain under "other."***

10. I associate with other members of my faith.

Every day    Once a week    Once a month    Once a year    Other

11. I study the Holy Scriptures, either through personal study or through my religious congregation.

Every day    Once a week    Once a month    Once a year    Other

---

Initials 

--	--	--

12. I pray to God.

- Every day    Once a week    Once a month    Once a year    Other

--

13. I praise God.

- Every day    Once a week    Once a month    Once a year    Other

--

14. I teach others about the truths of my faith.

- Once a week or more    Once a month    Once a year    Once every 5 years    Other

--

15. When I die I will go to heaven.

- NO, I will not be admitted.  
 NO, there is no heaven.  
 I am unsure.  
 YES, my good works outweigh my bad.  
 YES, God forgives me because of my good works.  
 YES, God forgives me by faith because of Christ's death on the cross.  
 OTHER

--

***Thank you for completing this survey!***