



RELIGIOUS FACTORS (SPIRITUALITY AND RELIGIOSITY) AS IMPORTANT ASPECTS IN IMPROVING THE QUALITY OF LIFE OF TYPE 2 DIABETES MELLITUS PATIENTS: A LITERATURE REVIEW

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ABSTRACT

Diabetes mellitus is a non-communicable and degenerative disease that causes an increase in mortality rates worldwide. This chronic disease continues to experience a rise in the count of individuals affected, making it one of the current global health problems. This study aims to identify the function of religion (spirituality and religiosity) as an important factor in improving the quality of life of patients with type 2 diabetes mellitus. The search strategy used was Google Scholar and PubMed, covering the period from 2018 to 2025. The keywords used were Spirituality, Religiosity, Quality of Life, and Type 2 Diabetes Mellitus. The Critical Appraisal Skills Program (CASP) was then conducted. From a total of 17,810 articles that were identified, there were 15 articles that met the inclusion criteria linking spirituality and religiosity with quality of life in patients with diabetes mellitus. Religious factors, namely spirituality and religiosity, significantly affect the quality of life of people with diabetes mellitus.

Keywords: quality of life; religiosity; spirituality; type 2 diabetes mellitus

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INTRODUCTION

Diabetes mellitus is one of the non-communicable diseases that contributes to the increase in global mortality rates. This degenerative disease is expected to continue to increase in prevalence. This chronic condition makes diabetes mellitus a global health problem today (Taswin et al., 2022). The World Health Organization (2022) states that there are 830 million people with diabetes mellitus. According to the International Diabetes Federation IDF (2022), the prevalence of diabetes mellitus in Southeast Asia is 463 million people, and it is estimated that by 2035 it will reach 592 million people in the 20-79 age group (Yani et al., 2025). According to the International Diabetes Federation, Indonesia ranks fifth in the world in terms of the number of diabetes sufferers. The number of cases among adults aged 20 to 79 in Indonesia has reached 20.4 million people. Obtained from data provided by the West Java Provincial Health Office in 2024, the total number of diabetes mellitus (DM) cases in the West Java region reached 645,390 people (Purwanti et al., 2025).

DM is a significant chronic condition that occurs when the pancreas fails to generate sufficient insulin (a hormone that controls blood sugar, or glucose), or when the body is unable to utilize insulin efficiently (Dewi, 2022). Hyperglycemia causes classic symptoms such as polyuria, polydipsia, polyphagia, and weight loss, accompanied by complaints of weakness, blurred vision, tingling, itching, erectile dysfunction in men, and vulvar itching in women. Poor management of diabetes mellitus can lead to microvascular, macrovascular, and neuropathic complications (Ningtiyas et al., 2023). The effects of these signs and symptoms impact the quality of life of patients by interfering with their daily activities. The duration of diabetes mellitus affects quality of life. According to the WHO quality of life is how a person views their place in life, in accordance with the culture and values of their place of residence, in relation to their interests, life goals,

expectations, and standards they wish to achieve (Asir et al., 2022) . There are various factors that affect quality of life, one of which is factors related to religion, such as spirituality and religiosity. According to Setiawan et al. (2020) in Handayani et al. (2022) Spirituality and religiosity are forms of religious therapy that greatly influence quality of life. Religion plays a crucial role in individual health and well-being. Earlier research carried out by Siallagan et al. (2023) and Ningtiyas et al. (2023) show that religious factors, including spirituality and religiosity, affect quality of life. The purpose of this study is to identify and analyze how religious factors, namely spirituality and religiosity, affect quality of life based on the findings of previous studies.

METHOD

This study uses a literature review method to draw conclusions about the influence of religious factors, particularly spirituality and religiosity, on the quality of life of people with Type 2 Diabetes Mellitus. Based on the interpretation of existing literature through the PICO framework, namely P: people with Type 2 Diabetes Mellitus, I: no intervention, C: no comparison, and O: quality of life. In this study, the search strategy was conducted using databases and keywords. The databases used were Google Scholar and PubMed. The keywords used were Spirituality, Religiosity, "Quality Of Life," and "Type 2 Diabetes Mellitus."

Eligibility Criteria:

In this research, the criteria for inclusion used were articles published between 2018 and 2025, articles in English and Indonesian, providing full text: abstract, introduction, methods, results, discussion. The selected articles focused on patients with Type 2 Diabetes Mellitus and discussed religious factors, particularly spirituality, religiosity, and their relationship with quality of life. Articles that were not relevant to the topic, did not discuss the quality of life of patients with Type 2 DM, or did not meet the article completeness criteria were excluded from the selection process.

Data Extraction:

The article search stage begins with screening according to inclusion criteria, and articles that do not match the keywords and search results will be excluded. Once obtained according to the inclusion criteria, an assessment will be carried out using the Critical Appraisal Skills Program (CASP).

The literature review for this study was conducted in three stages. In the first stage, articles were selected that were published between 2018 and 2025, written in English and Indonesian, and provided full text including abstracts, introductions, methods, results, and discussions. In the second stage, studies involving patients with type 2 diabetes mellitus as research subjects were searched for. In the third stage, the selection focused on articles discussing the relationship or influence of religious factors (spirituality and religiosity) on quality of life. The articles used were observational studies, primarily cross-sectional and correlational. Based on the PICO framework, this study defined P: patients with Type 2 Diabetes Mellitus, I: no intervention, C: no comparison, and O: quality of life.

The literature search strategy in this study was conducted through databases, namely Google Scholar and PubMed. Based on the search results using the specified keywords, a total of 17,810 articles were obtained, consisting of 17,800 articles from Google Scholar and 10 articles from PubMed. Next, an initial screening was conducted based on the titles and abstracts, leaving 95 articles that were assessed for suitability in full text. At the next stage, the articles were evaluated based on data analysis criteria, including failure to specify the age range of participants, inclusion of participants under 30 years of age, and titles that were not relevant to the focus of the study. After this selection process, 15 articles met the eligibility criteria for review.

RESULT

The author searched for articles using predefined keywords. After selection based on inclusion and exclusion criteria, the review yielded 15 articles that met the predefined PRISMA criteria. These 15 articles were then analyzed. The following is a list of the 15 articles extracted in table form:

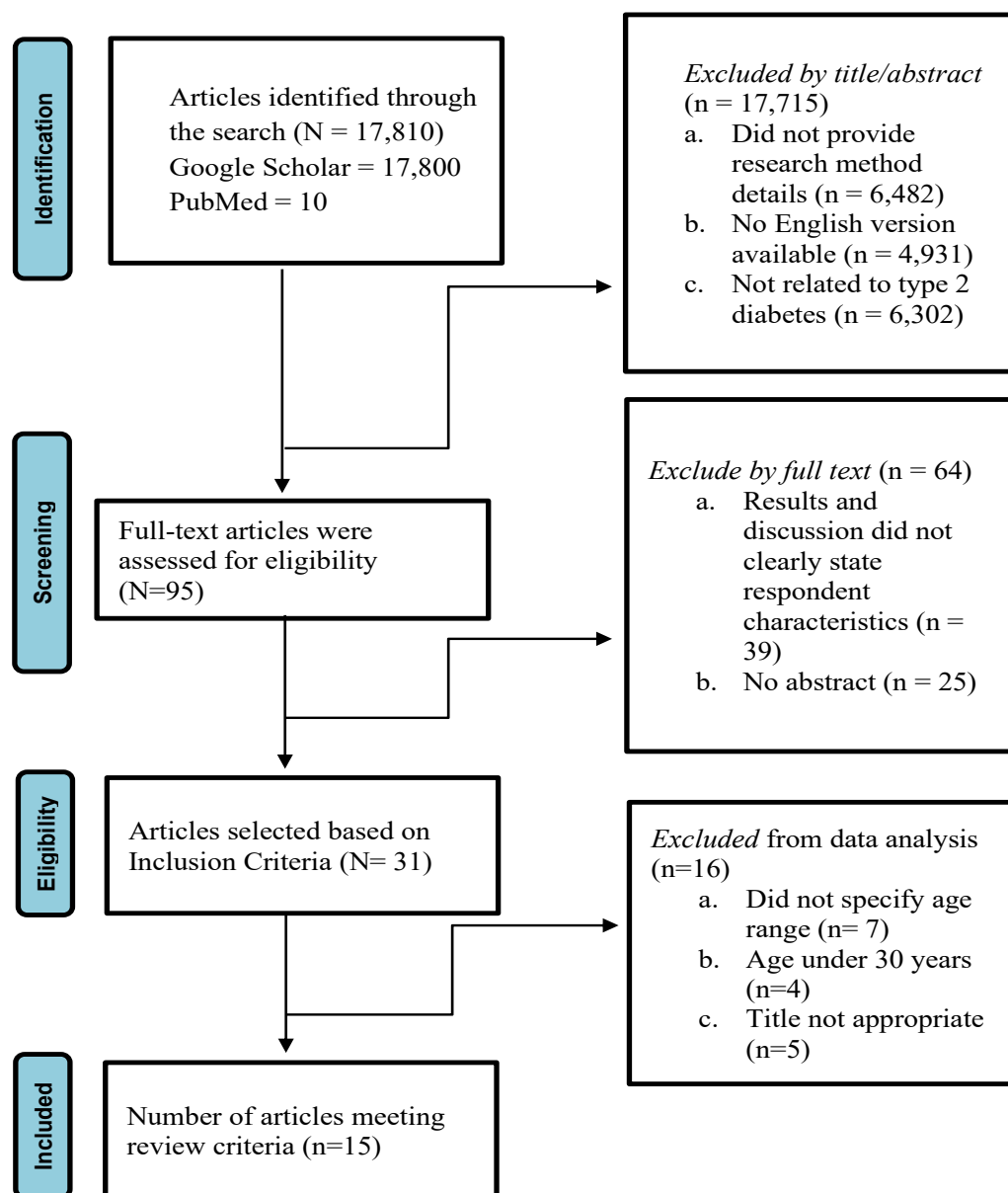


Figure 1. PRISMA flow diagram of the article selection process

Table 1.
Article Analysis

No	Title	Author & Year	Research Objective	Method	Respondents	Results
1.	The Relationship Between Stress Levels and Spirituality Levels with Quality of Life in Type 2 Diabetes Patients at the North Cilacap	(Ningtiyas et al., 2023)	To assess the correlation between stress and spirituality levels with quality of life in type 2 diabetes patients at the North Cilacap Community Health Centre	Cross-Sectional	110 respondents	This shows that most type 2 diabetes patients at the North Cilacap 1 Community Health Center have moderate spirituality (97.1%), with 65 patients (92.9%) experiencing moderate quality of life. There is a relationship between spirituality and quality of life (p value = 0.017 and r value = 0.285).

No	Title	Author & Year	Research Objective	Method	Respondents	Results
2.	Community Health Center 1					
	The Relationship Between Spirituality Levels and Quality of Life in Diabetes Mellitus Patients During the COVID-19 Pandemic	(Handayani et al., 2022)	Grasping the correlation between spiritual well-being and quality of life of patients with diabetes mellitus throughout the COVID-19 pandemic.	<i>Cross-Sectional</i>	112 respondents	This shows that at the spiritual level, the majority of respondents in the study with diabetes mellitus had a high spiritual level, with 67 respondents (55.4%) during the Covid-19 pandemic, and the majority of people with diabetes mellitus in the Rejosari Community Health Center area had a high quality of life, with 78 respondents (64.5%) during the Covid-19 pandemic. A notable correlation exists between spiritual levels and the quality of life in patients with Diabetes Mellitus during the COVID-19 pandemic (P-Value = 0.000)
	Spirituality as a Predictor of Quality of Life for Type 2 Diabetes Mellitus Patients	(Aryanti & Rosalina, 2024)	To determine whether there is a relationship between spirituality and quality of life in diabetes mellitus patients.	<i>Cross-Sectional</i>	110 respondents	The findings of this study show that there were 110 respondents, 59 (53.6%) of whom had high spiritual levels and 66 (60.0%) of whom had high quality of life. There was a significant correlation existed between the spiritual level and the quality of life among diabetes mellitus patients involved in the Prolanis program at the Gracia Ungaran Clinic (P-Value= 0.000).
	Spirituality and Quality of Life of Diabetes Mellitus Patients in the Work Area of the Balam Medan Community Health Center	(Siallagan et al., 2023)	Analyzing the correlation between spirituality and life quality in diabetes mellitus patients at the Balam Health Center.	<i>Cross-Sectional</i>	84 respondents	Diabetes mellitus patients in the Balam Medan Community Health Center working area have moderate spirituality, namely 40 people (47.6%). Diabetes mellitus patients generally have a low quality of life, namely 49 people (58.3%). There is a relationship between spirituality and the quality of life of diabetes mellitus patients. (P-Value=0.000 and r value= 0.708)
	The Relationship Between Spiritual Well-being and Quality of Life Among Type 2 Diabetes Mellitus Patients at Imanuel Clinic in Manado	(Lalimbat et al., 2025)	To determine the relationship between spiritual well-being and the quality of life of type 2 diabetes mellitus patients at Imanuel Clinic in Manado.	<i>Cross-Sectional</i>	60 respondents	The results of this study found that in the group with moderate spiritual well-being, only 3 respondents (12.5%) showed good quality of life, while the majority, namely 21 respondents (87.5%), had poor quality of life. Conversely, in the group with high spiritual well-being, there were 59 respondents (95.2%) who had a good quality of life, and only 3 respondents (4.8%) who

No	Title	Author & Year	Research Objective	Method	Respondents	Results
						showed a poor quality of life. There is a very strong and significant relationship between spiritual well-being and quality of life in patients with Type 2 Diabetes Mellitus (DM) at the Imanuel Manado Clinic (P-Value= 0.000 and $r = 0.827$).
6.	The Relationship Between Family Support and Spirituality on the Quality of Diabetes Mellitus Patients Undergoing Hemodialysis at Arifin Achmad Regional General Hospital, Riau Province	(Irwan et al., 2025)	Examining how family support, spirituality, and health perception affect the quality of life for diabetes mellitus patients receiving hemodialysis at Arifin Achmad Regional General Hospital in Riau Province.	<i>Cross Sectional</i>	100 respondents	The results show that spirituality also contributes significantly to the quality of life of patients (path coefficient 0.187; $p < 0.05$). Spirituality significantly contributes to enhancing the quality of life for DM patients.
7.	Spiritual Well-Being and Quality of Life in Diabetes Mellitus Patients in the Working Area of Tanjunganom Health Center, Nganjuk Regency	(Ardiansyah et al., 2020)	This study aims to identify the relationship between spiritual well-being and quality of life in diabetes mellitus patients in the Tanjunganom Community Health Center area, Nganjuk Regency.	<i>Cross-Sectional</i>	27 respondents	The results of the study show that nearly half of the patients with diabetes mellitus, namely 13 respondents (48.1%), have moderate spiritual well-being and nearly half, namely 12 respondents (44.4%), have moderate quality of life. The results of the study show a relationship between spiritual well-being and quality of life in patients with diabetes mellitus in the working area of the Tanjunganom Community Health Center, Nganjuk Regency (P-Value= 0.000 and $r = 0.963$).
8.	Spiritual Support Improves Quality of Life in Diabetes Mellitus Patients	(Mulyana et al., 2025)	This study aims to investigate the correlation between spiritual support and quality of life in diabetes mellitus patients at the Wonokerto Community Health Center, Malang Regency.	<i>Cross-Sectional</i>	64 respondents	The result of the study indicated that most patients with diabetes mellitus (53 participants, 82.81%) reported high levels of spiritual support, while most (44 respondents, 68.75%) reported an excellent quality of life. The results showed a significant relationship between spiritual support and quality of life in individuals with diabetes.
9.	The Effect of Religion, Self-Care, and Coping Mechanisms on Quality of	(Dewi et al., 2022)	This study aims to determine the influence of religiosity, self-care, and coping mechanisms on	<i>Cross-Sectional</i>	130 respondents	This shows that religiosity has a direct influence on quality of life ($b = 0.342$, $p = 0.000$). The results of the study show a relationship between religiosity and quality of life in patients

No	Title	Author & Year	Research Objective	Method	Respondents	Results
	Life in Diabetes Mellitus Patients		the quality of life of diabetes mellitus (DM) patients.			with type 2 diabetes (P-Value= 0.000).
10	Spirituality, Religiosity, and Quality of Life of Hypertensive and Diabetic Patients in a Referral Hospital in Pernambuco	(Paula et al., 2021)	To assess the connection between S/R and quality of life in individuals with diabetes and/or systemic arterial hypertension.	<i>Cross-Sectional</i>	40 respondents	The four quality of life domains (WHOQOL-BREF) exhibited a positive correlation with the religiosity scale (DUREL), showing statistical significance in the link between organizational religiosity and the environmental domain. When analyzed in relation to the spirituality scale (SSRS), WHOQOL-BREF indicated a positive association, with the exception of the physical domain. A positive correlation between quality of life and S/R was shown, affirming its significance for individuals with diabetes and SAH (P-Value= 0.0391).
11	A study on the relationship between spiritual health and quality of life in patients with type 2 diabetes mellitus	(Panahi et al., 2018)	This study was performed to establish the connection between spiritual health and quality of life among type 2 diabetes patients referred to the Diabetes Clinic at Tohid Hospital in Sanandaj City, Iran.	Correlation descriptive	330 respondents	Spiritual needs ($r = 0.511$) had the highest correlation with quality of life (QOL) in these patients ($P < 0.001$). The results showed that spiritual health significantly affected patients' QOL; moreover, its two dimensions, self-awareness and spiritual needs, had the greatest influence.
12	Religious Coping, Medication Adherence, and Quality of Life For Diabetes Mellitus Patients	(Putra et al., 2021)	This study aims to investigate the impact of religious coping strategies and medication adherence on quality of life.	<i>Cross Sectional</i>	154 respondents	There is a significant relationship between religious coping and medication adherence in diabetes mellitus patients with a value of $r = 0.266$ ($p = 0.00$) and quality of life ($r = 0.216$; $p = 0.00$).
13	Analysis of Spiritual Well-Being on the Quality of Life of Patients with Diabetes Mellitus in the Tambun Health Center Area	(Giyaningtyas & Elizabeth, 2024)	This study aims to analyze spiritual well-being on the quality of life of patients with diabetes mellitus.	<i>Cross Sectional</i>	38 respondents	The results of this study indicate a relationship between spiritual well-being and the quality of life of diabetes mellitus patients in the Tambun Community Health Center area. Thus, the higher the spiritual well-being of diabetes mellitus patients, the better their quality of life.
14	The effect of counseling on perception, religiosity, adherence, and quality of life	(Aristia et al., 2024)	This study aimed to determine the effect religious counseling and pill boxes on the perception,	<i>quasi-experimental</i>	72 respondents	The results showed that the treatment group had higher religiosity scores (64.28 ± 3.44) than the control group (62.17 ± 4.64), $p < 0.05$. Based on these results, it can be

No	Title	Author & Year	Research Objective	Method	Respondents	Results
	of diabetes mellitus patients		religiosity, quality of life, and adherence of DM patients undergoing outpatient treatment with oral antidiabetic medications at the Jetis 1 Community Health Center in Bantul Regency.			concluded that religious counseling and pill boxes have an effect, as indicated by improvements in perception, religiosity, quality of life, and compliance.
15	The Impact of Digital Psycho-Religious Therapy on Stress Reduction and Quality of Life in Patients with Diabetes Mellitus in Indonesia	(Dewi et al., 2025)	This study evaluated the efficacy of a digital psycho-religious therapy program in reducing stress and improving quality of life in patients with type 2 diabetes in Indonesia.	Quasi-experiment	300 respondents	Digital psycho-religious therapy is a promising intervention for reducing stress and improving quality of life in patients with type 2 diabetes, with potential for application in other resource-limited settings.

DISCUSSION

Diabetes mellitus (DM) is one of the non-communicable diseases (NCDs) that currently poses a major challenge in the world of health. Poor quality of life can worsen the progression of a disease, while spiritual and religious aspects have a important role in determining an individual's quality of life. A literature review of 15 articles showed that all articles indicated a significant relationship between spirituality and religiosity and quality of life in patients with type 2 diabetes mellitus. Consistently, all journals reviewed reported p-values < 0.05, which means that statistically there is a significant relationship. These findings indicate that the higher the level of spirituality and religiosity possessed by DM patients, the better their quality of life. This is evidenced in the journal Ningtiyas et al., (2023) , Handayani et al., (2022) , Aryanti & Rosalina, (2024) , and Dewi et al., (2022) which noted a significant relationship between spirituality and religiosity and the quality of life of Type 2 DM patients.

The consistency of this relationship remained apparent despite variations in the number of research samples. Seven journals involved ≥100 respondents, while nine journals used samples of <100 respondents. The difference in sample size did not affect the research results, as all studies continued to show a positive relationship between spirituality and religiosity with the quality of life of DM patients. One example is shown in the journal Dewi et al., (2022) with a sample size of 130 respondents, as well as Mulyana et al., (2025) with a sample size of 64 respondents.

Based on the research design, most articles used a cross-sectional method (13 journals), while two journals used a quasi-experimental design. Cross-sectional studies showed a significant relationship between spirituality and religiosity with quality of life, as shown in the journals Siallagan et al., (2023) , and Paula et al., (2021) . On the other hand, quasi-experimental studies show that religion-based interventions, such as counseling with religious nuances and digital psycho-religious therapy, can improve the quality of life of DM patients, as shown in the journal Aristia et al., (2024) and Dewi et al., (2025). When viewed from the duration of diabetes mellitus, the relationship between spirituality and quality of life was found to be good in patients with diabetes mellitus for less than five years and more than five years. The same applies to religiosity. This is demonstrated in the

journal Ningtiyas et al., (2023) , Handayani et al., (2022) , and Lalimbat et al., (2025) , which involved respondents with varying durations of the disease but still showed a significant relationship.

In addition, the relationship between spirituality, religiosity, and quality of life was found both in studies conducted during the COVID-19 pandemic and outside of the pandemic period. This is demonstrated in the journal article " , which was conducted during the pandemic, as well as " and " , which were conducted outside the pandemic period, all of which consistently reported similar results. Based on quality of life measurement instruments, studies using both the WHOQOL-BREF and Diabetes Quality of Life (DQOL) show consistent results. This is demonstrated in the journal Paula et al.,(2021) and Panahi et al.,(2018) which use the WHOQOL-BREF, as well as Ningtiyas et al.,(2023) and Putra et al.,(2021) which use diabetes-specific instruments, all of which show a positive relationship between spirituality and religiosity and quality of life.

Furthermore, several studies show that spirituality and religiosity play a role in improving quality of life through mechanisms of religious coping, acceptance of illness, and increased treatment adherence. This is demonstrated in the journal Putra et al.,(2021) and Dewi et al.,(2022) . In addition, religion-based interventions such as religious counseling and digital psycho-religious therapy have been shown to be effective in improving the quality of life of DM patients, as demonstrated in the journal Aristia et al.,(2024) and Dewi et al.,(2025) .

Spirituality affects quality of life by providing meaning, purpose, and emotional strength in coping with chronic diseases such as type 2 diabetes mellitus. Individuals with high levels of spirituality tend to have better self-acceptance of their condition, enabling them to manage stress and anxiety more adaptively. This aligns with research by ,(2023) ,(2022) , and , Aryanti & Rosalina,(2024) which demonstrates a significant relationship between spirituality levels and the quality of life of type 2 diabetes patients. Additionally, Panahi et al.,(2018) also found that spiritual health dimensions, particularly self-awareness and fulfillment of spiritual needs, have a strong correlation with patients' quality of life. Spirituality supports individuals in developing positive attitudes, increasing hope, and strengthening coping mechanisms in facing complications and the demands of long-term disease management.

Religiosity affects quality of life because consistent religious practices and beliefs can shape better health behaviors, increase adherence to treatment, and provide emotional support through religious communities. Dewi et al.,(2022) reveal that religiosity has a direct influence on the quality of life of people with type 2 diabetes. This finding is supported by Putra et al.,(2021) , who state that religious coping is significantly associated with quality of life and treatment adherence. Additionally, Paula et al.,(2021) also found a positive relationship between religiosity and all domains of quality of life based on the WHOQOL-BREF instrument. Religiosity provides a sense of calm, trust, and hope.

Overall, the results of this discussion confirm that spirituality and religiosity are important factors that play a role in improving the quality of life for people with Type 2 Diabetes Mellitus. Therefore, a holistic approach to care that considers biological, psychological, social, spiritual, and religious aspects needs to be integrated into diabetes mellitus management.

CONCLUSION

This literature study concludes that religious factors, including spirituality and religiosity, are important aspects in improving the quality of life of people with Type 2 Diabetes Mellitus. Various studies show a significant relationship between levels of spirituality and religiosity and the quality of life of patients. A diabetes care approach that incorporates spiritual and religious aspects should

be considered as part of a holistic healthcare strategy to support the improvement of quality of life for patients with Type 2 Diabetes Mellitus.

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