



RELIGIOUS COPING, MEDICATION ADHERENCE AND QUALITY OF LIFE FOR DIABETES MELLITUS PATIENTS

Made Mahaguna Putra , Kadek Siki Mariani and Ni Nyoman Ari Ratnadi

School of Health Sciences Buleleng, Bali, Indonesia

ARTICLE HISTORY

Received: 15 December 2020

Accepted: 11 February 2021

CONTACT

Made Mahaguna Putra
md.mahagunaputra@gmail.com
School of Health Sciences
Buleleng, Bali, Indonesia

ABSTRACT

Introduction: Diabetes mellitus is a major public health issue particularly in the elderly. Religion may affect the Quality of Life in such patients, mediated by factors such as religious coping and medication adherence. This study aimed to investigate the impact of religious coping and medication adherence on quality of life.

Method: Diabetes mellitus is a major public health issue particularly in the elderly. Religion may affect the Quality of Life in such patients, mediated by factors such as religious coping and medication adherence. This study aimed to investigate the impact of religious coping and medication adherence on quality of life.

Result: there is a significant relationship between Religious Coping and adherence to treatment in Diabetes Mellitus patients with a value of $r = 0.266$ ($p = 0.00$) and quality of life ($r = 0.216$; $p = 0.00$).

Conclusion: Religious coping has an important influence and relationship on treatment adherence to diabetes mellitus sufferers and can provide motivation for sufferers in carrying out medication.

Keywords

diabetes; medication adherence; quality of life; religious coping

Cite as:

Putra, M. M., Mariani, K. S., & Ratnadi, N. Y. A. (2021). Religious Coping, Medication Adherence and Quality of Life for Diabetes Mellitus Patients. *Indonesian J. of Community Health Nurs.*, 6(1), 18-21. [Doi: 10.20473/ijchn.v6i1.26663](https://doi.org/10.20473/ijchn.v6i1.26663)

INTRODUCTION

Diabetes Mellitus is a chronic disease characterized by blood sugar levels that exceed normal limits and a disruption in carbohydrate, fat and protein metabolism caused by a lack of the hormone insulin. The number of people with diabetes mellitus in the world reached 422 million people, in 2015 the prevalence of diabetes mellitus was 415 million. Indonesia ranks seventh in the world in 2015 with a total of 10 million sufferers. Based on the results of Basic Health Research in 2016, diabetes mellitus has increased by 6.9% from 2013. The prevalence of diabetes mellitus in Indonesia is projected to increase threefold in 2030 (Jayaningrum, 2016).

There are several irreversible complications associated with diabetes mellitus, such as nephropathy, retinopathy, atherosclerosis, and diabetic foot which can all negatively impact health-

related quality of life (HRQoL) and increase the risk of premature death in these patients (Hawthorne, 2012). In addition, there are several studies reporting that HRQoL among diabetic patients is significantly lower than that of the general population (Golicki et al., 2015; Landman et al., 2010). However, good adherence to medication can prevent patients with diabetes mellitus from complications and increase their HRQoL (Alfian et al., 2016). Treatment adherence has been recognized as the most influential factor in disease management in diabetic patients (Chew, 2015). Half of the diabetic patients did not take the drug as prescribed and a large number of patients changed the drug dose without a doctor's guidance (Saleh et al., 2014). This problem may occur among the elderly especially in developing countries because many are illiterate with inadequate self-care knowledge or skills for chronic diseases, such as diabetes, or are affected by several comorbid

physical and mental illnesses that may affect their ability to manage their health.

Previous studies have examined the contribution of religiosity, religious coping, and spiritual belief to disease management in diabetic patients (Casarez et al., 2010; Rivera-Hernandez, 2016). The relationship between this concept and diabetes management, coping abilities, well-being, emotional stress, HRQoL, and glycemic control has been investigated, and an overall positive correlation has been found (Jafari et al., 2014; Newlin et al., 2010; Watkins et al., 2013). People who have religious / spiritual beliefs have better adaptations for their illness and medication adherence (Watkins et al., 2013). There is limited literature on religious coping, medication adherence and quality of life for diabetic patients in Bali and the relationship between these factors cannot be explained. Therefore, this study is intended to investigate the relationship between religious coping, medication adherence and quality of life.

METHOD

This study used a cross-sectional design with simple random sampling. This research was conducted at Kubutambahan I Community Health Center. This study involved 154 patients with diabetes mellitus. The variables in this study were respondent characteristics, religious coping, medication adherence and quality of life. Respondent characteristics such as gender, occupation and education were recorded using a questionnaire. The religious coping questionnaire consists of 19 questions related to five indicators of religiosity, namely belief, religious practice, experience, knowledge, and consequences. This questionnaire consists of 10 favorable questions and 9 unfavorable questions. Score on favorable questions given a score of 4 (Strongly Agree); score 3 (Agree); score 2 (Disagree); and score 1 (Strongly Disagree), while for unfavorable questions score 1 (Strongly Agree); score 2 (Agree); score 3 (Disagree); and a score of 4 (Strongly Disagree). The minimum value of religiosity is 19 and the maximum value is 76 ($\alpha = 0.839$). The medication adherence questionnaire used the Diabetes Activities Questionnaire (TDAQ). Quality of life using the WHOQOL-BREF instrument is a summary of the World Health Organization Quality of Life (WHOQOL), and consists of 26 question items.⁴⁵ The WHOQOL-BREF contains aspects of quality of life, including physical, psychological, and psychological dimensions. dimensions of social relations and dimensions of the environment. The analysis used in this research is Spearman rho. This research has been declared ethical by the Health Research Ethics Commission of STIKes Buleleng No: 023 / EC-KEPK-SB / III / 2020.

RESULTS

Based on table 1, it is found that the gender of the respondents in the study was male 30% and female 70%. Based on the education level 36% are not in

Table 1. Distribution of respondent characteristics, religious coping, medication adherence and quality of life

Indicator	n	%
Gender		
Female	105	70
Male	45	30
Education		
No school	54	36
Elementary school	58	39
Junior high school	23	15
Senior high school	11	7
Higher education	4	3
Occupation		
Private employees	12	8
Government employees	8	5
Entrepreneur	79	53
Farmer	37	25
Unemployment	14	9
Religious Coping		
Moderate	27	18
High	117	78
Very high	6	4
Medication adherence		
Less	6	4
Enough	18	12
Good	126	84
Quality of life		
Poor	18	12
Good	83	55
Very Good	49	33

Table 2. Bivariate analysis of religious coping, treatment compliance and quality of life for patients with diabetes mellitus

Variable	Correlation coefficient	p
Medication adherence	0.266	0.00
Quality of life	0.216	0.00

school, 39% are Elementary school, 15% Junior high school, 7% senior high school and 3% higher education. 8% of respondents' jobs are private employees, 8% are Government employees, 53% are Entrepreneur, 25% are farmers and 9% are unemployed. The respondents in this study were 78% of high religious coping, 84% of good medication adherence and 55% of good quality of life. Table 2 shows that there is a significant relationship between Religious Coping and adherence to treatment in Diabetes Mellitus patients with a value of $r = 0.266$ ($p = 0.00$) and quality of life ($r = 0.216$; $p = 0.00$).

DISCUSSION

This study found that women had more diabetes mellitus. This happens because the majority of respondents in this study are female. Inadequate treatment due to cultural practices in Bali also causes female patients to experience uncontrolled diabetes. This finding is supported by Julaiha, 2019 which stated that the majority of female diabetes mellitus patients who did not adhere to treatment were 48.9% while male patients who were not adherent were 25.4%. Research (Wadja et al., 2019) found that

women have a risk of developing diabetes mellitus 3 times greater than male respondents. In addition, in women, low muscle mass can reduce the use of glucose in the body, causing the amount of glucose in the circulation to remain high, which will lead to chronic impaired glucose tolerance. (Mauvais-Jarvis, 2015).

This study found 36% of respondents did not go to school and 39% of respondents had an elementary level of education. Respondents with secondary / tertiary education levels are mostly adherent to the recommended diet so that the more educated a person is, the more adhere to the recommended dietary behavior. Individuals with a high level of education have a better ability to receive the information provided and will indirectly increase their knowledge and motivation to behave in accordance with the recommendations given by health workers (Isnaeni et al., 2018).

Religious coping is the most important factor for diabetes mellitus patients because in the implementation of diabetes management it aims to improve self-management and reduce psychological impact, high religious will encourage adherence to treatment (Yuliasari et al., 2018). Diabetic patients who have good religious faith will adhere to treatment well to achieve the desired goal, namely controlling sugar levels so that they can be minimized, religious has an important influence and relationship and provides motivation in carrying out treatment (Julaiha, 2019).

Religious coping can have a good impact on health, provide higher life satisfaction and reduce feelings of anxiety, this causes an increase in the quality of life in individuals. (Shamsalinia et al., 2016). Diabetes patients who have a good quality of life must be maintained, because low quality of life and psychological problems can cause metabolic disorders, either directly or indirectly through complications. Good religious coping will get a good quality of life to achieve the desired goals (Zainuddin et al., 2015). This research cannot be generalized elsewhere, due to cultural and religious differences. The next researcher needs to add the respondent's age, place of residence and religion.

CONCLUSION

Religious coping has an important influence and relationship on treatment adherence to diabetes mellitus sufferers and can provide motivation for sufferers in carrying out medication. Good religious coping can increase medication adherence through positive self-care. Spiritually healthy diabetic patients are able to cope with illness and stress, so they tend to have a more positive outlook and good quality of life.

REFERENCES

Alfian, S. D., Sukandar, H., Lestari, K., & Abdulah, R. (2016). Medication Adherence Contributes to an Improved Quality of Life in Type 2 Diabetes

Mellitus Patients: A Cross-Sectional Study. *Diabetes Therapy*, 7(4), 755–764.

<https://doi.org/10.1007/s13300-016-0203-x>

Casarez, R. L. P., Engebretson, J. C., & Ostwald, S. K. (2010). Spiritual practices in self-management of diabetes in African Americans. *Holistic Nursing Practice*, 24(4), 227–237. <https://doi.org/10.1097/HNP.0b013e3181e903c6>

Chew, B. H. (2015). Medication adherence on quality of life among adults with type 2 diabetes mellitus: an exploratory analysis on the EDDMQoL study. *Quality of Life Research*, 24(11), 2723–2731. <https://doi.org/10.1007/s11136-015-1006-7>

Golicki, D., Dudzińska, M., Zwolak, A., & Tarach, J. (2015). Quality of Life in Patients with Type 2 Diabetes in Poland – Comparison with the General Population Using the EQ-5D Questionnaire. *Advances in Clinical and Experimental Medicine*, 24(1), 139–146.

<https://doi.org/10.17219/acem/38137>

Hawthorne, G. (2012). Diabetes Care for the Older Patient. In *Diabetes Care for the Older Patient: A Practical Handbook*. Springer London. https://doi.org/10.1007/978-0-85729-461-6_1

Isnaeni, F. N., Risti, K. N., Mayawati, H., & Arsy, M. K. (2018). TINGKAT PENDIDIKAN, PENGETAHUAN GIZI DAN KEPATUHAN DIET PADA PASIEN DIABETES MELLITUS (DM) RAWAT JALAN DI RSUD KARANGANYAR. *MPPKI (Media Publikasi Promosi Kesehatan Indonesia): The Indonesian Journal of Health Promotion*, 1(2), 40–45. <https://doi.org/10.31934/mppki.v1i2.116>

Jafari, N., Farajzadegan, Z., Loghmani, A., Majlesi, M., & Jafari, N. (2014). Spiritual well-being and quality of life of iranian adults with type 2 diabetes. *Evidence-Based Complementary and Alternative Medicine*, 2014.

<https://doi.org/10.1155/2014/619028>

Jayaningrum, F. (2016). EKTIVITAS MEDIA SMART BOOK DALAM MENINGKATKAN PENGETAHUAN TENTANG PENATALAKSANAAN DIABETES MELITUS PADA PASIEN DIABETES MELITUS DI PUSKESMAS KEDUNGUMUNDU KOTA SEMARANG. *Journal of Health Education*, 1(2). <http://journal.unnes.ac.id/sju/index.php/jhealthedu>

Julaiha, S. (2019). Analisis Faktor Kepatuhan Berobat Berdasarkan Skor MMAS-8 pada Pasien Diabetes Mellitus Tipe 2. *Jurnal Kesehatan*, 10(2), 203. <https://doi.org/10.26630/jk.v10i2.1267>

Landman, G. W. D., Van Hateren, K. J. J., Kleefstra, N., Groenier, K. H., Gans, R. O. B., & Bilo, H. J. G. (2010). Health-related quality of life and mortality in a general and elderly population of patients with type 2 diabetes (ZODIAC-18). *Diabetes Care*, 33(11), 2378–2382. <https://doi.org/10.2337/dc10-0979>

Mauvais-Jarvis, F. (2015). Sex differences in metabolic homeostasis, diabetes, and obesity. *Biology of Sex Differences*, 6(1).

<https://doi.org/10.1186/s13293-015-0033-y>

- Newlin, K., Melkus, G. D., Peyrot, M., Koenig, H. G., Allard, E., & Chyun, D. (2010). Coping as a mediator in the relationships of spiritual well-being to mental health in black women with type 2 diabetes. *International Journal of Psychiatry in Medicine*, 40(4), 439–459. <https://doi.org/10.2190/PM.40.4.g>
- Rivera-Hernandez, M. (2016). Religiosity, Social Support and Care Associated with Health in Older Mexicans with Diabetes. *Journal of Religion and Health*, 55(4), 1394–1410. <https://doi.org/10.1007/s10943-015-0105-7>
- Saleh, F., Mumu, S. J., Ara, F., Hafez, M. A., & Ali, L. (2014). Non-adherence to self-care practices & medication and health related quality of life among patients with type 2 diabetes: A cross-sectional study. *BMC Public Health*, 14(1). <https://doi.org/10.1186/1471-2458-14-431>
- Shamsalinia, A., Pourghaznein, T., & Parsa, M. (2016). The Relationship Between Hope and Religious Coping Among Patients With Type 2 Diabetes. *Global Journal of Health Science*, 8(1), 208–216. <https://doi.org/10.5539/gjhs.v8n1p208>
- Wadja, H., Rahman, H., & Supriyatni, N. (2019). Faktor-Faktor yang Berhubungan dengan Kejadian Diabetes Mellitus di UPTD Diabetes Center Kota Ternate Tahun 2018. *JURNAL BIOSAINSTEK*, 1(01), 38–45. <https://doi.org/10.52046/biosainstek.v1i01.211>
- Watkins, Y. J., Quinn, L. T., Ruggiero, L., Quinn, M. T., & Choi, Y. ku. (2013). Spiritual and Religious Beliefs and Practices and Social Support's Relationship to Diabetes Self-Care Activities in African Americans. *The Diabetes Educator*, 39(2), 231–239. <https://doi.org/10.1177/0145721713475843>
- Yuliasari, H., Wahyuningsih, H., & Sulityarini, R. I. (2018). Efektifitas Pelatihan Koping Religius untuk Meningkatkan Kesejahteraan Psikologis Pada Penderita Diabetes Mellitus Tipe 2. *Journal of Psychological Science and Profession*, 2(1), 73. <https://doi.org/10.24198/jpsp.v2i1.15024>
- Zainuddin, M., Utomo, W., & Herlina, H. (2015). HUBUNGAN STRES DENGAN KUALITAS HIDUP PENDERITA DIABETES MELLITUS TIPE 2. *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Keperawatan*, 2(1), 890–898. <https://jom.unri.ac.id/index.php/JOMPSIK/article/view/5213>