

Spiritual Diabetes Self-Management Health Coaching Against Psychological Well-Being and Self-Management Compliance in Diabetes Mellitus Patients

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KEYWORDS

Diabetes Mellitus, Psychological Well-Being, Self-Management Compliance, Spiritual Diabetes Self-Management Health Coaching

ABSTRACT

Introduction: For patients with diabetes to keep being consistent with self-management, they should build their psychological well-being and feeling of direction in life through a progression of intricate and tedious errands. **Aim:** This examination looked to inspect the impacts of Spiritual Diabetes Self-Management Health Coaching on psychological health and self-management conduct. **Method:** The study utilized a quasi-trial research design, using a basic irregular sampling method to decide the sample based on inclusion and exclusion rules. A sum of 126 respondents were remembered for the sample, with 63 respondents each in the intervention and control groups. Ryff's Psychological Well-Being (RPWB) and a Questionnaire on Compliance with Diabetes Self-Management (QCDSM) were the instruments utilized in this study. A t-test with $p < 0.5$ was used in the statistical analysis. **Results:** The findings demonstrated that the normal psychological well-being in the intervention bunch was 174.22 both when the intervention, and the typical compliance with self-management was 47.56. Pre-and post-intervention averages for psychological well-being and self-management compliance in the control bunch were 144.62 and 19.32, respectively. A p-worth of 0.000 between spiritual diabetes self-management compliance and psychological well-being is uncovered by information analysis. **Conclusion:** Spiritual Guidelines for Overseeing Diabetes Patients with diabetes mellitus can profit from long-term health coaching to upgrade their psychological health and compliance with self-management.

1. Introduction

Diabetes mellitus is a severe and multi-layered metabolic illness that affects a person's physical, social, and mental well-being as well as the psychological health of others who are closest to them. (Kalra et al., 2018; Winkley et al., 2020). Throughout recent decades, the pervasiveness of diabetes mellitus has increased to endemic proportions; 463 million individuals overall are estimated to be impacted by the disease. (Alkaff et al., 2021). Indonesia is evaluated fifth all around the world in terms of the quantity of individuals living with diabetes mellitus. The East Java Area in Indonesia has the highest occurrence of diabetes mellitus, and it is normal that this condition would influence more individuals year. (Badan Penelitian dan Pengembangan & Kementerian Kesehatan RI., 2018)(Kusnanto, 2016). Observations and interviews with thirty DM patients at the Islamic Hospital in Surabaya's Short-term Facility uncovered that 86% of them had poor psychological well-being and 84% had unfortunate compliance with self-management.

Psychological well-being is basic for patients with diabetes mellitus to accomplish ideal glycemic control, as it significantly impacts adherence to self-management. (Gurmu et al., 2018; Hatmanti, 2017; PERKENI, 2015; Winkley et al., 2020). Most of diabetes treatment guidelines, in any case, disregard the psychological requirements of their patients for early management that is fundamentally focused on the clinical components of the disease. (Hatzir et al., 2023; Kalra et al., 2013). Depression, non-adherence to diabetic self-management, uncontrolled glucose levels, higher mortality, functional limits, increased healthcare expenditures, lost efficiency, and a lower personal satisfaction are at last welcomed on by untreated psychological issues. (Abuhegazy et al., 2022; Alkhormi et al., 2022; Sridhar, 2022).

The limit of individuals with diabetes mellitus to treat and control their condition on their own is an essential aspect of long-term care (Alamer et al., 2023). The findings of the study of Almulhim et al., (2022) demonstrate how health coaching supports individuals in successfully dealing with their diabetes. In addition, Eseadi et al., (2022) guaranteed that there is a close relationship between spirituality, psychology, and the use of self-management in individuals with diabetes. Diabetes patients' psychological issues relating to carrying out spiritual components and health coaching into their self-management are addressed by diabetes spiritual self-management, which is established on health coaching and emphasizes a continual process. (Conn & Curtain, 2019; Onyishi et al., 2021; Sari et al., 2021; Wong-Rieger & Rieger, 2013). Regular spiritual self-management training based on health coaching can help people with chronic diseases (DM) cope with their condition, create a supportive environment, highlight the value of spirituality and health coaching in enhancing mental health, and keep people with DM on track with their diabetes treatment plans. (Chrvala et al., 2016; Conn & Curtain, 2019; Darvyri et al., 2018).

This study sought to ascertain what diabetic self-management health coaching meant for individuals with diabetes mellitus' psychological well-being and compliance with self-management. The spiritual application of diabetic self-management based on health coaching in DM patients is the pressing requirement for this research (Sofiene et al., 2024). Self-management compliance and psychological well-being can both be upgraded by DM patients rehearsing self-management under great direction and execution (Bobir et al., 2024). It is necessary to conduct study on diabetic self-management techniques that integrate spiritual components and health coaching that is focused on psychological well-being and self-management compliance, as these topics have never been inspected. The essential research plan is being executed in under a year.

2. Methodology

Design and Sample

A quasi-exploratory research strategy was employed in this study, which included subordinate pre-and post-test samples as well as an untreated control bunch. Two groups of participants were used in the study: one was the control group and the other was the intervention group. The focus group for this research consisted of all diabetic patients who were residents of the Islamic Hospital's Short Term Polyclinic in Surabaya. In all, 126 people will make up the anticipated sample. Also, there were a total of fifty participants; sixty-three were assigned to the treatment group and sixty-one to the control group. A simple random sampling procedure will be used to select the sample in accordance with the inclusion and exclusion criteria. Patients undergoing treatment for diabetes mellitus (DM) with fasting blood sugar (GDP) > 126 mg/dl and preprandial blood sugar (GDPP) > 200 mg/dl, as well as those between the ages of 18 and 65 who are mobile, have excellent verbal communication skills, can read and write, and have had DM for at least a year. Additionally, the patient must have gotten fast action insulin treatment (customary insulin) or oral hyperglycemic medications. The accompanying patients are barred from consideration: those with diabetes mellitus (DM) who are physically, intellectually, or intellectually disabled (visually impaired, hard of hearing, slow-witted); those with DM who have complications (chronic kidney disappointment, cardiovascular breakdown, visual debilitation); and those who are getting other integral therapies.

Data collection procedures

Psychological well-being, the study instrument, will be assessed using Ryff's Psychological well-being (RPWB) from Ryff, 1989 (Ryff, 1989) and Self-Control The Questionnaire on Compliance to Diabetes Self-Management (QCDSM) will be used to measure compliance. Kim et al., (2013) (Kim et al., 2013). In May and July of 2023, the research was completed (Neelima et al., 2024). The

intervention group will receive spiritual diabetes self-management health coaching, while the control group will receive standard hospital therapy. The Spiritual Diabetes Self-Management Health Coaching intervention phase will last for one month and consist of five stages: Registration, Pre-Visit, Visit, Post-Visit, and Between visits. Each stage will last for approximately half an hour.

Starting with the Registration phase, the intervention phase identifies information about diabetes mellitus and diabetes mellitus self-management, factors blocking the implementation of self-management, and evaluates psychological well-being and self-management compliance (using a questionnaire and structured interviews as the technique). Pre-visit stage: physical examination (important bodily functions and blood sugar levels), assessment of information on diabetes mellitus self-management programs, including education, diet, exercise, and drug interventions, blood sugar testing, and creation of self-management schedules (technique: structured interviews with observation sheets, discussions with booklet media tools). Visit stage: upgrading patient understanding of the concept of diabetes mellitus self-management; improving psychological well-being and self-management compliance through a coaching way to deal with address experienced and saw issues joined with spiritual components (petition, dhikr); and selecting a self-management program suitable for the patient's sort of diabetes mellitus (methods: structured interviews, observation sheets, discussions with media booklets). Action plans, medication adherence, food compliance, athletic activities, arrangement reminders, and center visit preparation are among the topics covered in the meantime through phone calls and daily messages provided to patients. Education continues in the post-visit stage based on the implemented curriculum, although there are still obstacles. Methods: Structured interviews, observation sheets, conversations with printed media aids, and planning and evaluating the program that will be finished later are also part of the process. (Zoom, WhatsApp, Wire, Phone).

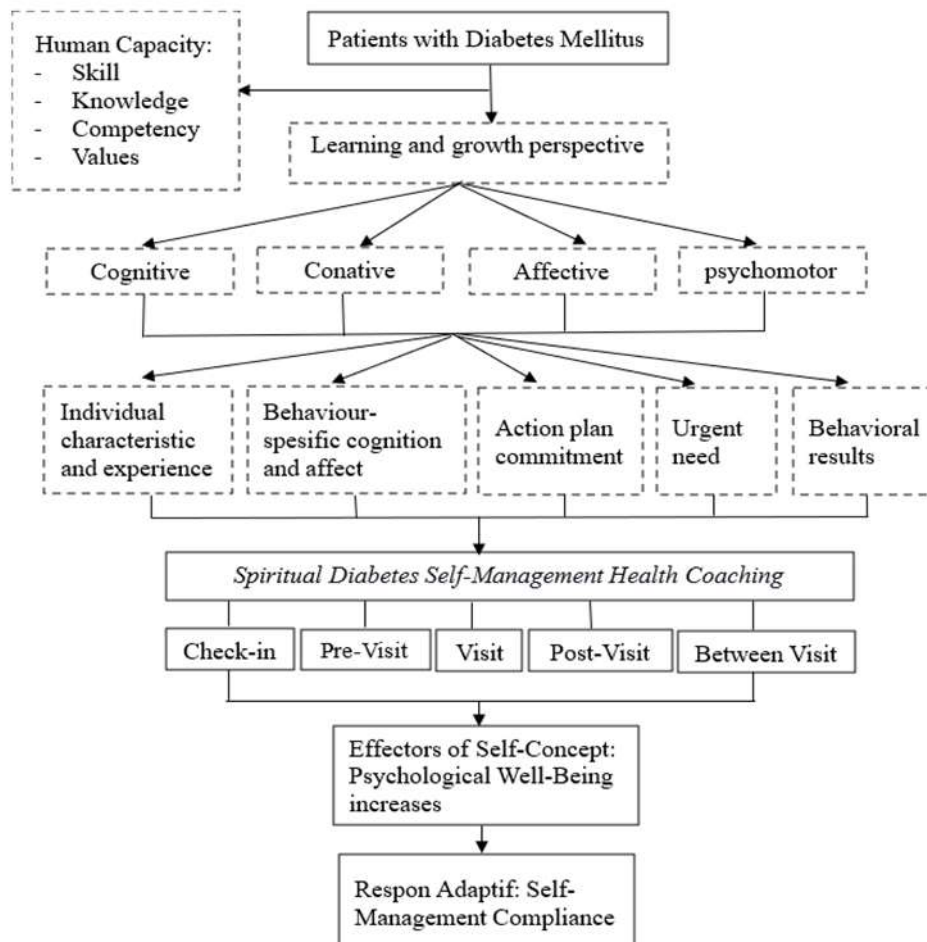


Figure 1. Conceptual Structure: Spiritual Diabetes Psychological Well-Being and Self-Management Compliance via Self-Management Health Coaching

Ethical Consideration

The Cakhra Brahmanda Lentera Institute's Ethics Advisory group gave its endorsement for this study with number 034/016/V/EC/KEP/LCBL/2023.

Data analysis

Matched testing and free sample t-tests with $p < 0.05$ sample t were used to test the information analysis.:

3. Results and discussion

Results

Tabel 1 Subjects' Characteristics

Characteristic	Intervention Group (n=63)		Control Group (n=63)		p-value
	f	%	f	%	
Age (Years)					0.929
Early adulthood (26-35)	10	15.9	8	12.7	
Late adulthood (36-45)	18	28.6	17	27	
Early old age (46-55)	18	28.6	25	39.7	
Late old age (56-65)	17	27	13	20.6	
Sex					0.200
Male	27	42.9	20	31.7	
Female	36	57.1	43	68.3	
Education					0.480
Basic	27	42.9	20	31.7	
Intermediate	29	46	38	60.3	
High	7	8.3	5	7.9	
Profession					0.611
Civil servants	7	11.1	4	4	
Entrepreneur	30	47.6	35	35	
House Wife	25	39.7	20	20	
Does not work	1	1.6	4	4	
Long DM					0.711
1-3 years	21	33.3	22	34.9	
4-5 years	32	50.8	27	42.9	
>5 years	10	15.9	14	22.2	
Comorbidities					0.116
No	14	22.2	22	34.9	
Yes	49	77.8	41	65.1	

Lavene's test was used to decide

if the characteristics of respondents in the intervention bunch and the control bunch were homogeneous. Age (0.929), sex (0.200), education (0.480), profession (0.611), long DM (0.711), and comorbidities (0.116) were completely shown to have p-values.

Tabel 2 Psychological Health and Self-Control Compliance with the control group before and after the intervention

Variable	Group	Pre	Post	t	n	p-value
		Mean ± SD	Mean ± SD			
Psychological Well-Being	Intervention	149.90 ± 28.82	174.22 ± 39.38	-8.099	63	0.000

	Control	145.02± 25.97	144.62 ± 27.51	0.749	63	0.456
Self-Management Compliance	Intervention	20.35 ± 3.66	47.56 ± 6.06	- 31.86 0	63	0.000
	Control	19.33 ± 4.13	19.32± 4.28	0.207	63	0.837

That's what table 2 shows, before the action, the intervention gathering's typical psychological well-being was 149.90, and following the action, it increased to 174.22. It was discovered that in the Self-Management Compliance intervention bunch, the typical worth was 20.35 before the intervention and 47.56 following it, with a p-worth of 0.000. It indicates that in the wake of getting the Spiritual Diabetes Self-Management Health Coaching program, an important increase in Psychological Well-being and Self-Management Compliance. In contrast, the typical psychological well-being of the control bunch was 145.02, and following the intervention, it increased to 144.62 with a p-worth of 0.456. In the in the mean time, Self-Management Compliance had a typical worth of 19.33 before the intervention and 19.32 following it, with a p-worth of 0.837, demonstrating that there was no way to see an addition in Self-Management Compliance or Psychological Well-Being in the control bunch.

Table 3 The significance of variations in self-management and psychological well-being Pre- and post-intervention compliance in the experimental group and the control group

Variable	Group	Mean ± SD	n	t	p value	
					Pre	Post
Psychological Well-Being	Intervention	174.22± 39.38	63	4.89	0.319	0.000
	Control	144.62± 27.51	63			
Self-Management Compliance	Intervention	47.56 ± 6.06	63	30.81	0.147	0.000
	Control	19.32 ± 4.28	63			

Table 3 illustrates how information analysis results uncovered that, following the intervention, self-management compliance and psychological well-being had p-values of 0.000. Psychological Well-Being had a typical worth of 174.22 in the intervention bunch when the action, while Self-Management Compliance had a typical worth of 47.56. Psychological Well-Being had a typical worth of 144.62 in the control bunch when the action, while Self-Management Compliance had a typical worth of 19.32.

Discussion

It is a known truth that uncontrolled blood sugar levels can prompt consequences from diabetes mellitus. Keeping up with ideal glycemic control is in this way the significant target of care for individuals with diabetes mellitus to postpone and stay away from complications up to the risk of death. Individuals who don't follow to self-management practices (education, diet, exercise, medication adherence, and blood sugar monitoring) will cause blood sugar levels to become unstable and significantly raise their possibility creating microvascular or macrovascular problems. (Dimore et al., 2023; Ohanson & Pretorius, 2023; Sari et al., 2021). Patients with diabetes who neglect to completely finish self-management can't separate their perspective on the disease from its etiology, progression, control, and cause and impact, which exacerbates nervousness and depression and lowers psychological well-being. (Małachowska et al., 2022; Ohanson & Pretorius, 2023). On the off chance that nervousness and low psychological well-being are not treated, depressive symptoms, an absence of enthusiasm for the future, and a decrease in self-confidence will happen. (Kalra et al., 2018). This is in accordance with the findings of a study that demonstrated that virtually all individuals with diabetes mellitus (77.8%) were in the intervention bunch, and the larger part (65.1%) who also had co-morbidities expressed outrageous nervousness and depression. This diminished



psychological well-being because the individuals believed that the disease would worsen and cause complications, which made them less propelled and confident. Additionally, they found it challenging to rehearse appropriate self-management because they were not supported by their environment to continue rehearsing self-management when their emotional state was not ideal. According to Aceves et al., (2021) said that social support from family and clinical professionals has a significant job in assisting patients with conquering tension and sadness and keep up with their motivation and enthusiasm, which will positively influence their adherence to self-management.

Following Spiritual Diabetes Self-Management, Table 3 demonstrates a statistically significant contrast between the intervention bunch and the control bunch. Diabetes mellitus patients' psychological well-being and compliance with self-management have been found to increase with health coaching. This was additionally certified by the findings of the observations and interviews; practically every one of the participants in the intervention bunch detailed that they felt supported and directed in choosing which diabetes self-management program to follow, which assisted them with conquering feelings of confusion, nervousness, and depression. properly to boost motivation and self-assurance, the two of which have a positive impact on change in behavior patterns to beat barriers and stick to diabetic mellitus self-management. Most of respondents in the control bunch, on the other hand, accepted that they couldn't complete self-management on their own and habitually needed clearness while selecting the best self-management program, prompting their disobedience in rehearsing self-management. Health coaching is unbelievably valuable and plays a significant job in assisting patients in procuring the information, abilities, and self-assurance necessary to play a functioning job in their consideration, ensuring that they continue to be consistent in rehearsing self-management and keeping up with their health. (Sari et al., 2021; Yan et al., 2023). Health coaching helps patients deal with their diabetes by assisting them with setting goals for glycemic control, choose a fitting eating regimen and exercise program that they can follow, and make sure to accept their medication as prescribed. This way, patients can deal with their diabetes on their own and arrive at their goals. (Chen et al., 2019; Conn & Curtain, 2019; Sari et al., 2021).

Spiritual Self-Management for Diabetes The application of health coaching to improve psychological well-being and self-management Open communication, acknowledgment of health coaching, and effectively overseeing diabetes mellitus in a way that is suitable, condition-specific, and program-specific are necessary for compliance. The showed patient's enthusiasm and motivation in adhering to dietary guidelines, exercising habitually, and consistently monitoring blood sugar levels are key indicators of compliance. To start and sustain the desired way of behaving, patients could profit from health coaching by having their confidence constructed and increased. Additionally, health coaching gives individuals the drive to obviously characterize their goals for their health and concoct undeniable cases of their own. (Conn & Curtain, 2019; Lin et al., 2021). This is in line with research from Fortmann et al., (2021) It claims that when health supervisors are associated with program compilation and oversight of diabetic mellitus care, individuals with diabetes mellitus are undeniably more consistent with their self-management.

Diabetes patients experience spiritual direction and a sense of closeness to God through the implementation of Diabetes Self-Management, which is supported by health coaching and additional spiritual elements (prayer). This helps patients feel less anxious and unsure and gives them expect a superior future. The patient's assertion that discussing Dhikr and listening to and recounting passages from the Koran offers harmony and wisdom serves as proof for this. The patient fights back in his life

to keep up with submission in successfully dealing with his diabetes. The treatment program's prayer component affects "Psychological Reversal," which has a significant effect on psychological health and will deliver trust, courage, and wisdom in addition to social aspects, killing emotions and decreasing uneasiness to improve the patient's psychological well-being. (Aftrinanto et al., 2018; Javanmardifard et al., 2020; Ryff, 2014). This is supported by the results of research from Shahin et al., (2019) It found a correlation between diabetes mellitus patients' degree of adherence to treatment regimens and their spiritual and religious beliefs. Research from Choi & Hastings, (2019); de Diego-Cordero et al., (2022); Onyishi et al., (2021) It claims that those in great spiritual health and who have a strong connection to a definitive power would have a more noteworthy sense of importance and purpose in life as well as stronger resistance to their illness. Integrating spirituality into the intervention can enhance its effectiveness by fostering sincerity, positive self-awareness of the illness, faith in the healing process, and the ability to learn lessons that will change behavior to prioritize self-management in the fight for physical health.

4. Conclusion

By receiving spiritual diabetes self-management health coaching, patients with diabetes mellitus can improve their psychological well-being and increase their compliance with self-management. Patients with diabetes mellitus were enrolled in a Spiritual Diabetes Self-Management Health Coaching program and its implementation was included into the discharge planning process in the subsequent study. These patients approached hospital-possessed applications, such as telemedicine and telenursing, which they could use to design their discharge.

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Conflict of interest

The authors declare there is no conflict of interest in this paper.

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