Original Article
2025, 15(2): 38-45
DOI: 10.22038/EBCJ.2025.84073.3062

Received: 17/11/2024
Accept & ePublished: 03/05/2025

Evidence Based Care Journal
http://ebcj.mums.ac.ir
Online ISSN: 2008-370X

Effect of Dignity Therapy on Dignity and Fasting Blood Sugar in Diabetic Patients: A Quasi-Experimental Study

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Abstract

Background: Diabetes is a chronic condition that leads to significant health complications, including blood sugar management, emotional distress, and challenges to personal dignity. Dignity therapy is a promising intervention to enhance psychological well-being and self-worth.

Aim: The present study was conducted with aim to investigate the effect of dignity therapy on dignity and fasting blood sugar in patients with diabetes.

Method: This quasi-experimental study was conducted on 60 diabetic patients in Fars Province, Iran in 2023-2024. Participants were randomly assigned to the control and intervention groups. The intervention group received dignity therapy in three sessions over 10 days. Dignity and Fasting blood sugar levels were assessed before, immediately after, and one month following the intervention by Patient Dignity Inventory (PDI) and fasting blood sugar (FBS) check list. Data were analyzed using SPSS software (version 15) and descriptive statistics, independent tests and one single repeated measures ANOVA. $p<0.05$ was considered statistically significant.

Results: Dignity-related distress was significantly reduced in the intervention group compared to the control group, immediately after and one month after the intervention ($p=0.001$). While no significant difference was observed in fasting blood sugar immediately after the intervention, however, a significant reduction was found in the intervention group one month later ($p=0.001$).

Implications for Practice: Healthcare providers should incorporate dignity therapy into diabetes management, particularly for patients experiencing psychological distress. Dignity therapy by addressing emotional well-being can lead to better long-term outcomes, such as lower fasting blood sugar levels one month after the intervention. This holistic approach prioritizes both physical and emotional needs, fostering a supportive healthcare environment.

Keywords: Diabetes, Dignity related-distress, Dignity therapy, Fasting blood sugar, Human dignity

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Introduction

Human dignity is a fundamental right and essential to ethical healthcare. The 1948 Universal Declaration of Human Rights by the United Nations highlights that all individuals deserve inherent respect and value (1). However, chronic diseases like diabetes can present unique challenges that threaten a patient's sense of dignity, impacting their overall well-being (2).

Diabetes, a chronic disease affecting millions globally, poses a significant challenge to individuals' physical and psychological health (3). Statistics show that there are 415 million people with diabetes worldwide, of whom more than 35.4 million people live in the Middle East and North Africa (4). This number will increase to 72.1 million people by 2040 (5). According to the International Diabetes Federation, over 4.6 million people in Iran have diabetes. The prevalence among those aged 20-79 years is 8.5%, with an annual cost of $636 per person (6). The disease often leads to lifestyle changes, emotional distress, and a sense of control loss, which can negatively impact a patient's sense of dignity (7). Individuals with type 2 diabetes face significant challenges as they navigate the struggle between living in the moment and planning for the future. They must balance self-trust with the need for support from others, while trying to maintain a sense of normalcy amid the changes brought on by their condition (8). These challenges highlight the need for interventions which promote dignity and well-being in diabetic patients.

Dignity therapy, a brief and tailored psychotherapeutic intervention, emerged as a promising approach to address the emotional and existential distress associated with serious illness (9). This intervention helps individuals reflect on their lives, values, and hopes, promoting a sense of agency and purpose amidst challenging circumstances (10). While dignity therapy has shown benefits for individuals facing end-of-life care, its potential impact on individuals with chronic conditions like diabetes remains unclear (11).

Chronic illnesses like diabetes can lead to emotional distress and undermine individuals' sense of dignity, affecting their overall well-being. Despite the importance of dignity in managing chronic illnesses, there are limited research on dignity therapy outside end-of-life care. It is crucial to address this gap, as dignity-focused interventions can enhance both psychological and physical health outcomes. Additionally, examining the cultural context of dignity therapy in Iran could broaden global insights into its benefits in chronic disease management. Therefore, the present study was conducted with aim to evaluate the effect of dignity therapy in improving the sense of dignity and potentially aiding metabolic control for diabetic patients in Iran. The central research question is whether dignity therapy can effectively reduce dignity-related distress and impact fasting blood sugar (FBS) levels. This research seeks to demonstrate the value of dignity therapy in enhancing the quality of life for individuals living with diabetes and promoting a holistic approach to healthcare that addresses both emotional well-being and metabolic health.

Methods

This quasi-experimental study was performed with a before-and-after measurement approach. This design was chosen to minimize the risk of bias while allowing for the investigation of the effects of dignity therapy on human dignity and FBS levels in patients with diabetes. Data collection was conducted over a six-month from August 2023 to January 2024. The study was conducted in Nyriz, Fars Province. The researchers chose the public clinics with both outpatient and inpatient care. The clinics provide comprehensive care for individuals with type 1 and type 2 diabetes. The sample size was estimated according to the results of a previous study (12) with a total of 70 participants, assuming a power analysis, with a confidence level of 95% and a power of 80% and a test error of 5% (α). Before the intervention, 10 participants dropped out, and 60 participants completed the study (Figure 1).

The inclusion criteria were ability to read and write and diagnosis of diabetes for at least six months. The exclusion criteria were cognitive or mental disorders, any other disabling underlying disease (except hyperlipidemia and hypertension), and missing more than one session for any reason. Participants were randomly selected from a check list consisting of the name of all patients, based on the inclusion and exclusion criteria. After providing the informed consent, participants were randomly assigned to either the control group (n=30) or the intervention group (n=30) using a checklist. However, the researchers randomly selected a number from the checklist and placed one in the intervention group and the other in the control group, respectively. All participants completed the

Patient Dignity Inventory (PDI) and their FBS levels were measured at baseline. The intervention group received dignity therapy in three sessions over 10 days, delivered by qualified therapist who had received specialized training in the field of dignity therapy. To decrease the confounding effects associated with the presence of different therapists in our study, the researchers implemented several strategies. They employed a single therapist who was thoroughly trained in the therapy method to ensure consistency in intervention delivery. Additionally, they developed a detailed therapist manual that outlined specific techniques, terms, and interventions to be used during sessions, further standardizing the approach.

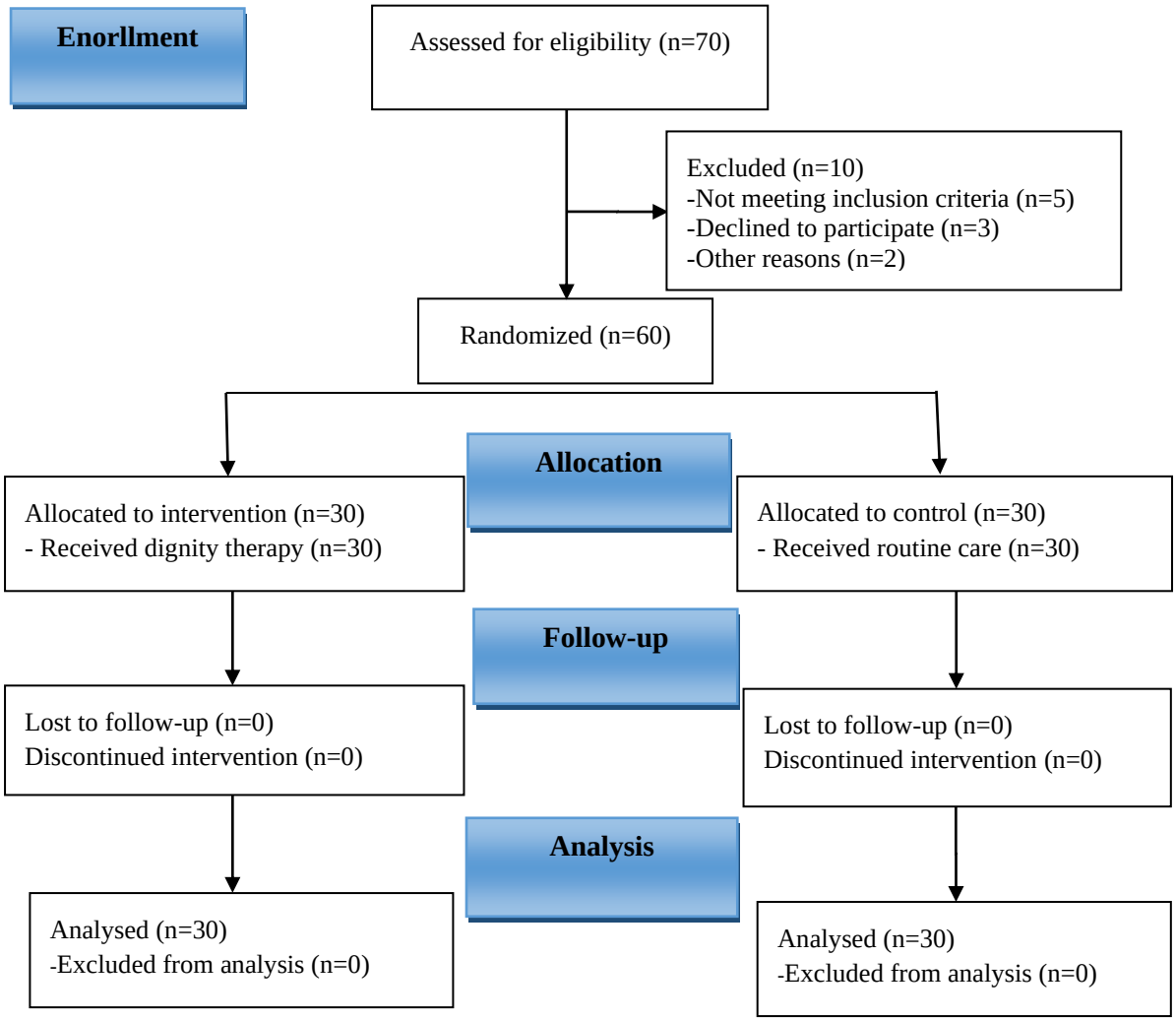

Figure 1. Flowchart of the effect of dignity therapy on dignity and fasting blood sugar in diabetic patients

The researchers identified the eligible participants. The participants in the two groups signed the informed consent before the intervention and filled out the questionnaires. The intervention group received dignity therapy along with routine care. This intervention needed three 45-60 minute sessions. At the first session, the researchers clarified the objectives of dignity therapy and set the time and place of the next session.

The second session was held 24 to 48 hours later in the diabetes clinic or anywhere else the participants liked. The researcher and the participants had a friendly conversation. The researchers used open-ended questions during the interview to help participants express their experiences in more detail. They asked some questions about history of life, special issues that patients want their families know about them, and the most important roles the participants played in their life. The researchers recorded the participants' voices and tried to preserve the participants dignity and worth regarding their thoughts, speeches, and feelings. Then, they asked them if they could end the session. The

researchers transcribed and edited the recorded interviews, creating a document that included the most important parts of the interview.

In the third session (2-3 days later), the researchers read the drafts to the participants, took their suggestions, and added missing data. A copy of the legacy document was given to the participants to share with whomever they liked. The document included a person's honors, which could be a lasting legacy for their families and loved ones. This document enables families and relatives of the participants to become more acquainted with their thoughts, past, and wishes and fulfil them if possible. As the participants' conditions could vary at any time, the researcher interviewed them at a suitable time. If the participants condition was unfavorable, the researcher picked another time to visit them. The researchers tried to reduce contamination interference between the two groups. Of course, the participants were not hospitalized and did not have the opportunity to interact. They also were provided detailed instructions about the importance of not discussing their interventions or experiences with others in the study. The control group received the routine care, which included monthly visits and advice on self-care practices related to diabetes management.

The PDI and FBS levels were again measured immediately after and one month after the final dignity therapy session for the intervention group and at the same time point for the control group.

The tools used in this study included the Patient Dignity Inventory (PDI) and Fasting Blood Sugar (FBS) Checklist. The PDI, which is a tool to measure the human dignity of the participants, is a 25-item questionnaire that assesses different sources of dignity-related distress among terminally ill patients. It was developed by Chochinov et al. (2002) and translated into Persian by Abbaszadeh et al. (2015), who validated it for Persian-speaking countries. The PDI has four dimensions: loss of human dignity, emotional distress and uncertainty, changes in ability and mental image, and loss of autonomy (13). Each item is rated on a five-point scale (1: not a problem, 2: a slight problem, 3: a problem, 4: a major problem, and 5: an overwhelming problem), with a higher score indicating a greater problem associated with the patient's dignity. Therefore, a score ≥ 3 indicates a major problem. The scores of this questionnaire range between 25 and 125, with a lower score meaning a greater sense of dignity and a higher score meaning a lower sense of dignity. Mehdipour et al. (2016) found that the PDI had an internal consistency of 0.93 and a test-retest reliability of 0.85 (14).

Fasting Blood Sugar (FBS) Checklist was used to measure the FBS levels of the patients. FBS levels were measured in the same hospital laboratory using a standardized procedure. A nurse recorded the FBS levels on a checklist.

The data were analyzed using SPSS software (version 15). Descriptive statistics were used to describe the demographic and dignity-related distress variables. Independent T tests and one single repeated measures ANOVA were used to compare the mean differences of the variables between the two groups before, immediately after, and one month following the intervention. The normality of the data distribution was assessed using the Shapiro-Wilk test and visual inspections of Q-Q plots. The results indicated a normal distribution. $p<0.05$ was considered statistically significant.

Ethical Consideration

The study was approved by the Ethics Committee of Kerman University of Medical Science (ethical code: IR.KMU.REC.1398.219). The researcher obtained informed consent from the research units, assuring them about the confidentiality of personal information and privacy, as well as their freedom to withdraw from the research. Moreover, trustworthiness and honesty were considered in all stages of data collection, review, analysis and publication of the results.

Results

A total of 60 participants (n=30 in each group) included in the study. Most of the participants were female. The mean age of the participants was 58.56 ± 10.22 years. The intervention and control groups did not differ significantly in terms of demographic characteristics (Table 1). The mean dignity scores in the intervention group were 40.30±10.31 at the end of the intervention and 38.40±10.61 one month later. In the control group, the mean scores were 50.92±9.13 at the end of the intervention and 47.73±10.22 one month later (Table 2 and 3).

One single Repeated measures ANOVA showed a significant decrease in dignity scores in the intervention group over time, however it showed no significant change in the control group (Table 2). This finding suggests that dignity therapy may effectively reduce dignity-related distress in the

intervention group, mitigating the negative impact of illness on perceived dignity.
FBS did not differ significantly between the two groups before and immediately after intervention. However, it differed significantly between the two groups one month after intervention (Table 4).

Table 1: Demographic characteristics in the intervention and control groups

Demographic characteristics	Intervention N (%)	Control N (%)	*P*-value
Sex			
Female	21 (70)	20 (66.67)	0.051*
Male	9 (30)	10 (33.33)	
Marital Status			
Single	7 (23.34)	8 (26.67)	0.1*
Married	23 (76.66)	22 (73.33)	
Economic Status			
Good	7 (23.34)	6 (20)	
Moderate	18 (60)	18 (60)	0.072**
Poor	5 (16.66)	6 (20)	
Education level			
Middle/high school	18 (60)	17 (56.67)	0.069*
Diploma/higher	12 (40)	13 (43.33)	
Job status			
Employed	7 (23.34)	6 (20)	0.1*
Unemployed	23 (76.66)	24 (80)	

*Chi-square; **Fisher's exact test

Table 2: Human dignity scores before, immediately after, and one month after intervention

Variable	Intervention group Mean±SD	Control group Mean±SD
Human dignity score before intervention	52.12±4.12	51.54±5.43
Human dignity score immediately after intervention	40.30±10.31	50.92±9.13
Human dignity score one month after intervention	38.40±10.61	47.73±10.22
Repeated Measures ANOVA	Group effect	F (1, 58) = 8.47 p=0.005
	Time effect	F (2, 116) = 12.35 p<0.001
	Group × Time	F (2, 116) = 4.18 p=0.017

Table 3: Dimensions of human dignity before, immediately after, and one month after the intervention

Dimensions of human dignity	Groups	Before intervention	Immediately after intervention	One month after intervention	P-value
Loss of sense of worth	Intervention	21.87 ± 8.79	15.14 ± 7.95	15.70 ± 8.01	< 0.001
	Control	20.18 ± 7.14	19.15 ± 8.20	20.14 ± 6.26	0.544
Anxiety and uncertainty	Intervention	15.76 ± 5.66	12.17 ± 7.95	10.95 ± 5.12	< 0.001
	Control	16.10 ± 4.21	15.96 ± 6.22	15.54 ± 6.26	0.150
Physical distress	Intervention	16.76 ± 4.66	11.18 ± 6.21	11.95 ± 4.81	< 0.001
	Control	16.21 ± 3.25	16.60 ± 4.61	16.01 ± 4.21	0.912
Autonomy	Intervention	4.15 ± 2.17	3.12 ± 3.20	2.95 ± 2.19	< 0.001
	Control	4.14 ± 2.70	4.89 ± 3.12	4.45 ± 2.19	0.816

Table 4: Mean FBS scores by group over time based on repeated measures ANOVA

Variable	Intervention (Mean±SD)	Control (Mean±SD)
FBS before intervention	135.8±66.4	138.8±48.4
FBS immediately after intervention	131.0±61.5	134.3±41.1
FBS one month after intervention	114.9±23.4	131.9±42.6
Repeated Measures ANOVA		
Group effect	F (1, 58)= 3.478	p=0.03
Time effect	F (2, 116)= 1.219	p= 0.30
Group × Time	F (2, 116)= 4.10	p=0.018

Discussion

The current study aimed to investigate the effects of dignity therapy on human dignity and FBS levels in diabetic patients. The findings indicate that dignity therapy not only enhances patients' sense of dignity, but also contributes to a reduction in FBS levels.

Human dignity is a fundamental aspect of nursing care (15). The World Health Organization recognizes patient dignity as a critical factor in improving health outcomes (16). A loss of human dignity can adversely affect patients' physical, mental, moral, and spiritual well-being, leading to increased stress levels (14, 17). Dignity therapy is an intervention that help mental and spiritual distress, improve quality of life, and boost the sense of meaning, purpose, and dignity among terminal patients. Dignity therapy seeks to preserve and enhance the dignity of end-of-life patients. This way, they can record the meaningful aspects of their lives and make a legacy document for their families and friends (15). The results of the current study demonstrate that dignity therapy fosters a sense of meaning, purpose, and value in life while alleviating feelings of suffering, emptiness, and futility among diabetic patients. These findings are consistent with a previous study that reported positive effects of psychotherapy on dignity, self-worth, and self-esteem (18). Johnston et al. (2016) also demonstrated that dignity therapy could enhance the quality of life, care, and dignity of patients with dementia (19). Moreover, Martinez et al. (2017) showed that dignity therapy offers benefits for patients, including a reduction in anxiety and distress, as well as an improvement in their sense of meaning and purpose (20). Dignity therapy is beneficial for patients with various types of diseases, including cancer (15), renal failure (21), mental disorders (22), neuro-motor diseases (23) end-of-life conditions (24), and healthy older adults (25). Nazar et al. (2021) showed that dignity therapy improves quality of life and knowledge in patients with diabetes (26).

The present study also showed that dignity therapy could lower FBS levels in diabetic patients. Unnikrishnan et al. (2023) demonstrated that dignity therapy can decease the level of HbA1c by 6.4% (27). This could be because when patients perceive themselves as valuable to both themselves and their families, they are more likely to take care of their health. As a result, they are more inclined to adhere to treatment plans and monitor blood sugar levels. This sense of worth may stem from the benefits of dignity therapy. Amininasab et al. (2017) showed the effect of human dignity on medication adherence in heart failure patients. They showed that human dignity had a significant relationship with medication adherence (28). The present study demonstrated that dignity therapy could enhance patients' FBS levels and improve their quality of life. This improvement may be attributed to adherence to the treatment regimen or an increased sense of self-worth, as previous studies have indicated that individuals tend to take better care of themselves when they feel valued.

The current study had some limitations, including low patient cooperation due to diverse physical and mental conditions. To build trust, the research team explained the method and its effects prior to the intervention. Patients expressed anxiety about dignity therapy, so the researcher assured them it would take place in a suitable, private clinic environment with nursing supervision. Additionally, some patients struggled to attend sessions regularly due to their illnesses and impatience. To address this, the researcher provided detailed explanations of the procedure and potential outcomes beforehand. Furthermore, some patients were reluctant to discuss their issues, but the researcher actively listened, empathized, and encouraged them to share their feelings, hopes, and dreams.

Implications for practice

The findings of this study highlight the effectiveness of dignity therapy in alleviating dignity-related distress among individuals with diabetes. It suggests that healthcare providers should incorporate dignity therapy into diabetes management, particularly for patients experiencing psychological challenges. This approach improves emotional well-being and can lead to better long-term health outcomes, evidenced by reduced FBS levels one month after the intervention. Overall, the findings advocate for a holistic treatment model that addresses the psychological and emotional needs of diabetic patients, fostering a more compassionate healthcare environment.

Acknowledgments

The researchers would like to thank the patients and nurses who helped to conduct this study.

Conflicts of interest

The authors declared no conflict of interest.

Funding

Funding support for this study was received from Kerman University of Medical Sciences.

Authors' Contributions

Saeide Ghodrati contributed to the conceptualization, investigation, formal Analysis, and writing-review & editing the study. Batool Tirgari conducted the investigation, administration, methodology, formal analysis, and writing-review & editing the manuscript. Roghayeh Mehdipour-Rabori contributed to the conceptualization, investigation, methodology, administration, writing-review & editing, and supervision. All authors read and approved the final version of the manuscript. The corresponding author had full access to all of the data in this study and took complete responsibility for the data's integrity and data analysis.

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