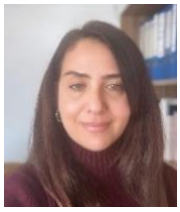
Section: Preliminary studies in Positive Psychotherapy (PPT)

A Preliminary Study on the Effects of a Group Psychoeducation Program Incorporating Concepts of Positive Psychotherapy on Patients with Diabetes Mellitus



Süreyya Geylan Gürdal
PhD Student (Nicosia, Cyprus)
Email: sureyya_geylan@hotmail.com
ORCID: 0009-0004-7076-3895

Ebru Tansel
Prof., Dr., psychotherapist, supervisor, and Master trainer of PPT
(Nicosia, Cyprus)
Email: dr.ebrutansel@gmail.com
ORCID: 0000-0002-6106-5911

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Abstract

Diabetes Mellitus (DM) is a prevalent chronic disease, and it is now widely recognized that psychological factors play an important role in its onset, progression, and treatment. This study aimed to increase patients' awareness of the relationship between psychological factors and the treatment process through a group psychoeducation program grounded in Positive Psychotherapy (PPT) concepts, and to evaluate the effects of this training. The study included nine patients diagnosed with DM who participated in weekly two-hour group sessions over five weeks. Each session addressed a different theme, focusing on both the positive and negative effects of DM on participants' lives and on the influence of psychological factors on disease management. The training aimed to support patients in adopting healthier lifestyles, recognizing signs of stress, and developing coping strategies. At the conclusion of the program, participants reported that the sessions were beneficial, particularly those on the Balance Model and stress-management techniques. These findings suggest that incorporating group psychoeducation into DM treatment may enhance treatment outcomes and that PPT methods can be effectively applied in such interventions.

Keywords: Diabetes Mellitus (DM), Positive Psychotherapy, psychoeducation

Introduction

Diabetes Mellitus (DM) is a chronic metabolic disorder resulting from the pancreas's inability to produce sufficient insulin or from the body's ineffective use of insulin, a hormone essential for regulating blood glucose levels. Consequently, glucose derived from food intake accumulates in the bloodstream rather than being used for energy through insulin-mediated uptake. DM is one of the most prevalent chronic diseases worldwide and a leading cause of morbidity and mortality.

Diabetes Mellitus is primarily classified into two types. Type 1 DM is an autoimmune disorder in which the pancreas produces little or no insulin. Type 2 DM is a metabolic condition characterized by insulin resistance and/or insufficient insulin secretion. (World Health Organization [WHO], 2023; American Diabetes

Association [ADA], 2020). Globally, the prevalence of DM is estimated at 6.1%, with projections indicating a continuing rise (WHO, 2023; Institute for Health Metrics and Evaluation [IHME], 2023). Türkiye reports the highest prevalence in Europe, with 15% (TEMD Guidelines for the Diagnosis, Treatment, and Follow-up of Diabetes Mellitus and Its Complications, 2024), a rate exceeding that of other European countries (IDF, 2019). In the northern part of Cyprus, a prevalence study involving 1,780 individuals aged 20–80 revealed rates of 11.5% for diabetes and 17.9% for impaired glucose tolerance. Prevalence increased with age but decreased with higher educational attainment in the TRNC (KADEM, 2008).

Chronic illnesses such as DM exert significant social, psychological, emotional, and economic burdens. Psychological and social factors are closely intertwined with physical conditions, and psychological distress often exacerbates disease outcomes (Alay, 2023; Sorbi et al., 2018). Patients with chronic diseases face heightened risks of depression, anxiety, and stress, all of which can impair immune function and disease management (Greenberg, 2007).

The diagnosis of DM frequently induces psychological distress, influencing social relationships, occupational functioning, and family dynamics (Wasserman & Trifonova, 2006). The adaptation process typically involves stages such as shock, denial, and disorganization (Orgen, 1996), which may culminate in a psychosocial crisis characterized by anxiety, fear, and loss of equilibrium (Sorbi, 2018; Sharma, 2022).

Depression is particularly common among patients with DM. Lifetime prevalence rates among individuals with Type 2 DM reach up to 30%, significantly exceeding rates in the general population (Eren et al., 2008; Kalat, 2008; TEMD, 2024). Depression not only diminishes quality of life but also impairs glycaemic control, although treatment of depression can improve both (Sundaram, 2007; Değer, 2023). Similarly, anxiety disorders affect up to 40% of individuals with DM, with a higher frequency compared to the general population (Bahar et al., 2006; Tuncay et al., 2008).

Because chronic illnesses require long-term adaptation, psychoeducation has been shown to enhance patients' coping strategies and stress-related perspectives (Saygılı, 2019; Tel, 2023). Studies of patients with DM demonstrate that psychoeducation positively influences disease adaptation, lifestyle, and stress management (Jung et al., 2021; Sorbi et al., 2019). Group training programs for chronic illnesses have been associated with improved coping, adaptation, and quality of life when compared to untreated control groups (Ven, 2005; Soo & Lam, 2009; Sorbi et al., 2018; Kıskaç & Rashisi, 2023; Karagöz & Beydağ, 2024). Emotional and social support following diagnosis is essential, and in some cases, psychological intervention may be necessary (Drum & Zierenberg, 1997). Effective coping strategies enhance health outcomes and overall disease management (Greenberg, 2007).

Positive Psychotherapy (PPT), developed by Nossrat Peseschkian in 1968, is a short-term psychotherapeutic method integrating psychodynamic principles, a humanistic orientation, and a transcultural framework. PPT emphasizes the importance of psychosocial norms in socialization and conflict, with a focus on personal strengths and resources. The Balance Model, central to PPT, identifies four fundamental life areas – Body/Senses, Work/Achievement, Contact/Tradition, and Future/Spirituality – each representing a dimension of human adaptation and conflict resolution. DM disrupts the Body area most directly, but this disturbance can also unbalance the other spheres. A psychoeducation program grounded in this model can help patients restore equilibrium among these areas, thereby enhancing salutogenesis.

Narratives and stories play a significant role in PPT, serving functions such as mirroring patients' experiences, providing conflict-resolution models, mediating therapeutic communication, and transmitting cultural traditions (Peseschkian, 2016a; 2016b; 2016c). By externalizing conflicts through narrative identification, patients can gain new perspectives, reduce resistance, and integrate therapeutic insights into daily life. This makes stories an effective educational tool.

The balance model provides a structured, easily understandable framework for self-reflection and goal-setting in health education. Moreover, the positive interpretation of symptoms and the resource-oriented approach of PPT provide a strong, conceptually coherent foundation for designing psychoeducational interventions. The present study investigates the effects of a group psychoeducation program

based on Positive Psychotherapy concepts on patients with Type 2 Diabetes Mellitus.

Methodology

2.1. Sample

Group members were recruited through an announcement made by the Turkish Cypriot Diabetes Association. Volunteers were required to meet the condition of being diagnosed with Type 2 Diabetes Mellitus (DM). Individuals who volunteered were invited to participate. A total of ten individuals (three male and seven female) initially participated; however, regular attendance was maintained by nine. Participants' ages ranged from 29 to 70 years.

2.2. Study Design

This study was designed as a preliminary, descriptive, single-group psychoeducational intervention study. The research was planned to last five weeks. Each week, a face-to-face session was conducted with the participants. The training sessions were held in the Güzelyurt Municipality Hotel meeting hall, with each session planned to last approximately one hour.

The training sessions generally consisted of a brief review of the previous week, followed by the delivery of the relevant psychoeducational content. Group interaction and discussion were encouraged prior to the session's closure.

The inclusion criteria for the study were a diagnosis of Type 2 Diabetes Mellitus and voluntary consent to participate. No specific exclusion criteria were defined for this study.

2.3. Setting and Content of the Sessions

The group sessions were held weekly, each lasting two hours. A total of five sessions were held, amounting to 10 hours of group work. The sessions were held in a meeting room at a hotel owned by the Güzelyurt Municipality. This venue was also regularly used by the Turkish Cypriot Diabetes Association, and thus, the participants were already familiar with the setting.

The content of the sessions was structured around Positive Psychotherapy (PPT) principles and tailored to the psychological and social challenges faced by patients with DM.

Session 1: Introduction of the group's purpose, rules, and potential benefits. Participants discussed the impact of DM on physical and psychological health, with a particular emphasis on blood glucose regulation, stress, and depression. The Balance Model was introduced, and participants created individualized models to reflect their perceptions.

Session 2: The session opened with the story "About the Courage to Risk a Test", which was used to stimulate reflection and group discussion. Stress and its physiological effects on blood glucose were discussed, and participants practiced stress-management techniques, including breathing and muscle-relaxation exercises.

Session 3: Participants reflected on the previous session and then engaged with the story "The Crow and the Parrot." This facilitated recognition of overlooked positive aspects of living with diabetes. Participants explored their feelings at diagnosis and revisited them using the Balance Model to analyse how DM had affected their lives across four spheres.

Session 4: Participants discussed the impact of DM on their personal lives, including possible positive meanings attributed to the illness. Emphasis was placed on understanding illness as a message and on the influence of family attitudes. Participants then explored their personal "model dimensions" by reflecting on family experiences.

Session 5: The final session reviewed all group experiences. Participants shared their thoughts on the knowledge gained and changes in perception. The session concluded with a guided relaxation exercise designed to promote a calm, positive closure.

2.4. Measures

Data were collected using an evaluation form. The first part of the form consisted of demographic questions. The second part, designed to capture participants' subjective experiences of the group training, consisted of ten items, including both structured and open-ended questions. Participants were asked to reflect on their feelings during the sessions, perceived changes in their perspectives, the significance and expectedness of these changes, and whether the psychoeducation program benefited their diabetes management. This approach allowed participants to articulate their experiences in their own words.

2.5. Data Analysis

In this study, data obtained from the evaluation form were analyzed using a descriptive qualitative approach. The descriptive qualitative analysis approach was preferred as it allows participants' experiences to be presented in their own words (Büyüköztürk et al., 2019).

Demographic data was collected in the first section of the evaluation form. The qualitative data obtained from the second section of the form, which included structured and open-ended questions designed to capture participants' subjective experiences of the group training, were systematically analyzed.

During qualitative data analysis, participants' written responses were read repeatedly to develop familiarity with the data. Meaningful expressions related to feelings experienced during the sessions, perceived changes in perspectives, the significance and expectedness of these changes, and the perceived contribution of the psychoeducational program to diabetes management were identified. Similar content was grouped to form a thematic structure, and the data were organized under these themes. As a result of this process, the themes of stress awareness, use of the Balance Model, and reframing of illness emerged.

2.6. Ethical Statement

Participation in the program was voluntary, and informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were assured throughout the study. The research posed minimal risk to participants. Formal ethics committee approval was not required under local and national guidelines for voluntary psychoeducational programs.

Results

The majority of participants were female, and educational attainment was relatively low, with primary school being the most common level. No significant gender differences were observed regarding education. The mean age of the participants was 49.5 years (range = 29–70) (Table 1).

Table 1. Sociodemographic characteristics of the participants

	Frequency (n)	*Valid Percent (%)*
Gender		
Female	7	77.8
Male	2	22.2
Age	49.50 (29-70)	
Education		
Primary School	5	55.6
Secondary School	2	22.2
High School	2	22.2
Citizenship		
Cyprus	5	55.6
Turkey	2	22.2
Cyprus + Turkey	2	22.2

Participants reported that the group training was beneficial in several spheres. Most highlighted an increased awareness of the relationship between psychological factors and DM, as well as the importance of stress management. Approximately 70% of participants rated the group experience as highly beneficial, with 60% attributing their positive changes specifically to participation in the sessions.

Participants valued the Balance Model for broadening their perspectives on health by integrating physical, social, professional, and future-oriented dimensions. Although no direct improvements in blood glucose levels were reported, participants indicated that they became more attentive, relaxed, and constructive in their approach to managing DM. Importantly, for many participants, the perception of diabetes shifted from a burdensome illness to a manageable condition.

No adverse effects were reported. Participants expressed satisfaction with the program's comprehensiveness and recommended that similar sessions be conducted periodically to sustain the benefits.

Conclusion

The findings of this study indicate that group training based on Positive Psychotherapy contributes positively to the psychological adjustment of individuals with DM. Participants reported improvements in stress management, illness adaptation, and overall quality of life. These findings align with prior research demonstrating the effectiveness of psychoeducational interventions in chronic illness management (Ven, 2005; Soo & Lam, 2009; Sorbi et al., 2018; Kıskaç & Rashisi, 2023).

The Balance Model was particularly valued because it encouraged participants to recognize resources across diverse areas of life. Stress management techniques, such as relaxation exercises, were considered especially relevant, given the established relationship between stress and glucose regulation (Cryer & Childs, 1996). The results are consistent with previous studies indicating that psychological interventions, including Cognitive Behavioral Therapy and group counseling, can reduce depression and hopelessness among patients with DM (Lustman et al., 1998; Kumcağız, 2007).

Furthermore, Positive Psychotherapy (PPT), by its very definition, attends to individuals' capacity to cope with conflict and focuses on their existing strengths and potential. Rather than remaining in the patient role, individuals are encouraged to concentrate on their own abilities and to act as their own and others' therapists (Peseschkian, 1996). Through the use of the Blance Model, DM patients were able to explore conflict resolution in four spheres, concretely recognize their strengths, and approach resolution in four spheres, concretely recognize their strengths, and approach problems from multiple perspectives – through the body, achievements, seeking help, or imagination – thus preventing their difficulties from being reduced to a single area. This process helps patients restore balance and reorganize their approach to life. Narrative techniques facilitate the symbolic processing of patients' experiences, enabling them to reconstruct personal meaning around chronic illness (Peseschkian, 1996; Peseschkian, 2002).

Overall, the study supports the integration of psychological and educational interventions into diabetes care. Group psychoeducation based on PPT appears to offer an effective framework for improving coping strategies, strengthening resilience, and fostering a more balanced perception of life with diabetes.

In the context of chronic illnesses, acceptance is crucial since these conditions are encountered daily, and they pose ongoing challenges. Within the self-help model, individuals restructure their illness narrative in alignment with PPT's cross-cultural storytelling and metaphorical approach. Consequently, chronic illness becomes not merely a health problem but part of a meaningful life adjustment process (Drazheva & Stamova, 2024; Manav et al., 2021; Peseschkian, 1996). PPT emphasizes balance, capacity, and meaning-seeking rather than problem-solving alone, a focus that is particularly relevant for chronic diseases such as diabetes, where adaptation and coping can be difficult (Peseschkian, 1996).

This preliminary study demonstrates that group training incorporating concepts of Positive Psychotherapy can improve outcomes for patients with Type 2 Diabetes Mellitus. Participants reported enhanced awareness of psychological factors, improved coping strategies, and a more constructive perception of their illness.

The findings highlight the importance of integrating psychological support into DM treatment protocols. Incorporating Positive Psychotherapy methods within psychoeducational group programs may improve treatment adherence, enhance quality of life, and promote more effective disease management. Future research with larger samples and controlled designs is recommended to confirm these preliminary findings and further explore the applicability of PPT in chronic illness care.

Similar to Positive Psychotherapy (PPT), psychoeducational interventions grounded in Cognitive Behavioral Therapy (CBT) have been effective in managing chronic illnesses, improving illness adaptation, stress coping, and quality of life (Lustman et al., 1998; Aksan, 2021). Furthermore, studies employing CBT have demonstrated benefits in illness adaptation, as

well as cognitive and behavioral changes related to disease management (Kahraman et al., 2022).

Regarding limitations, this study has several constraints. The small sample size (n = 9) limits the generalizability of the findings. Furthermore, the absence of a control group makes it difficult to evaluate the effectiveness of the psychoeducational intervention. The findings largely rely on self-reported data, which may increase the likelihood of response and recall biases. Furthermore, the absence of objective physiological measures, such as HbA1c, precludes corroboration with biological indicators. Finally, the study's preliminary (pilot) nature further limits the generalizability of the findings.

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