

The Effect of Solution-Focused Brief Counseling on Self-Management of Diabetes Mellitus in Patients with Type 2 Diabetes Mellitus: A Literature Review

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ABSTRACT

Background: Type 2 diabetes mellitus (T2DM) is one of the most pressing global health issues, characterized by insulin resistance and relative insulin deficiency that causes disturbances in blood sugar regulation. The purpose of this study was to explore the effect of SFBC on self-management in people with T2DM through a literature review. This study used a systematic and explicit method to identify, evaluate, and synthesize relevant articles from various databases such as ProQuest, PubMed, and Science Direct between 2020 and 2025. The keywords used in the search were "Solution-Focused Brief Counseling AND Type 2 Diabetes Mellitus Self-Management." After going through the selection process, there were 10 international articles that met the predetermined inclusion and exclusion criteria. The results of this literature review show that SFBC has the potential to improve self-management in people with T2DM, both from psychosocial aspects such as stress management and physical aspects such as glycemic control. Further research is expected to expand the population and duration of follow-up to gain a deeper understanding of the long-term impact of SFBC in T2DM management.

Keywords: Solution-Focused Brief Counseling; Self-Management, Type 2 Diabetes Mellitus

INTRODUCTION

Type 2 Diabetes Mellitus (T2DM) is one of the most concerning global health issues. Insulin resistance and relative insulin deficiency are hallmark characteristics of type 2 diabetes, a condition whose incidence has sharply increased globally and places a significant burden on healthcare systems worldwide (Ibrahim & Gano, 2024). Individuals with T2DM are required to engage in self-management practices, which include managing diet, physical activity, medication adherence, blood glucose monitoring, and stress management. However, many patients still face difficulties in maintaining these behaviors consistently (Yimer & Addissie, 2025). Failure in self-management leads to poor glycemic control (uncontrolled hyperglycemia), which is a major factor contributing to both acute and chronic complications (Ataya & Soqia, 2024).

Global data from the International Diabetes Federation (IDF) estimates that by 2024, 589 million adults (aged 20-79) will be living with diabetes worldwide (Ataya & Soqia, 2024). Regional evidence from Asia shows that the average prevalence of diabetes is approximately 8.56% (CI 5.73–11.91), and pre-diabetes is about 18.99% (Ali & Alam, 2025). Previous data reveals that the prevalence of diabetes in Indonesia rose from 10.7% (2013) to 11.8% (2018), before slightly decreasing to 11.3% (2023), which equates to approximately 20.4 million people (Muharram & Swannjo, 2025). The Health Department of Central Sulawesi Province recorded a total of 16,456 cases of DM in all districts/cities, with Palu City alone accounting for 3,122 cases (Ministry of Health of the Republic of Indonesia, 2025).

Self-management in T2DM patients is crucial in preventing complications (Lamprey & Amoakoh-Coleman, 2023). Diabetes self-management refers to a patient's ability to manage symptoms, treatment, lifestyle, and the psychosocial impacts of the disease independently (Almulhim & Hartley, 2023). Previous evidence suggests that self-management practices remain low (Yimer & Ahmed, 2025). Many patients fail to implement necessary self-management practices despite understanding their importance due to various motivational and competency barriers (Berhe & Mselle, 2025). A meta-analysis found that most patients struggle to maintain long-term self-management behaviors after participating in interventions, showing that while interventions are effective, they do not always result in lasting behavior changes (Carvalho & Dunne, 2024). The most significant barriers to diabetes self-management often stem from complex non-medical aspects. The primary challenge is not just theoretical understanding of the disease, but its practical application in daily life, especially concerning long-term diet adherence, which often conflicts with deep-rooted eating habits and cultural norms (Yimer & Ahmed, 2025).

Studies have found that dietary preferences, financial constraints for purchasing healthy foods, and a lack of social support significantly hinder diet adherence (Adhikari & Devkota, 2021). Stress management is crucial as uncontrolled emotional pressure can directly affect blood glucose levels, adding to the psychological burden of daily treatment routines. Maintaining regular physical activity is often hindered by fluctuating motivation, physical limitations, lack of time, or inadequate facilities, causing many patients to struggle to integrate exercise into their schedules (Winkley & Upsher, 2020).

Successful self-management in diabetes mellitus patients requires integrated and

continuous interventions that focus not only on improving knowledge but also on building competence, confidence, and psychological readiness for behavior change. Strengthening patient capacity should be implemented through health education programs and Diabetes Self-Management Education and Support (DSME/S) services, which are systematically designed to improve health literacy, decision-making skills, blood glucose monitoring abilities, and therapy adherence (Chowdhury & Harrison, 2024). Psychosocial and motivational approaches such as motivational interviewing, cognitive behavioral therapy, and solution-focused brief counseling play a vital role in facilitating motivation internalization, overcoming psychological barriers, and fostering adaptive and sustainable self-management behaviors. These approaches are even more effective when integrated with strong social support, particularly through family involvement as a primary support system, as well as multidisciplinary healthcare team collaboration to provide consistent and responsive guidance to meet patient needs (Carter & Nalbant, 2024).

Conventionally, diabetes education often focuses on the transfer of medical information, but it does not always succeed in changing patient behavior. Solution-Focused Brief Counseling (SFBC) is a strength-based counseling approach that focuses on solutions, resources, and the patient's goals, rather than on problems (Rafie & Vakilian, 2022). This approach enhances self-efficacy, intrinsic motivation, and achievement of healthy behaviors—three key components in self-management of DM (Dong & Zhang, 2024). The aim of this research is to explore the effect of solution-focused brief counseling on diabetes self-management in patients with type 2 diabetes: a literature review.

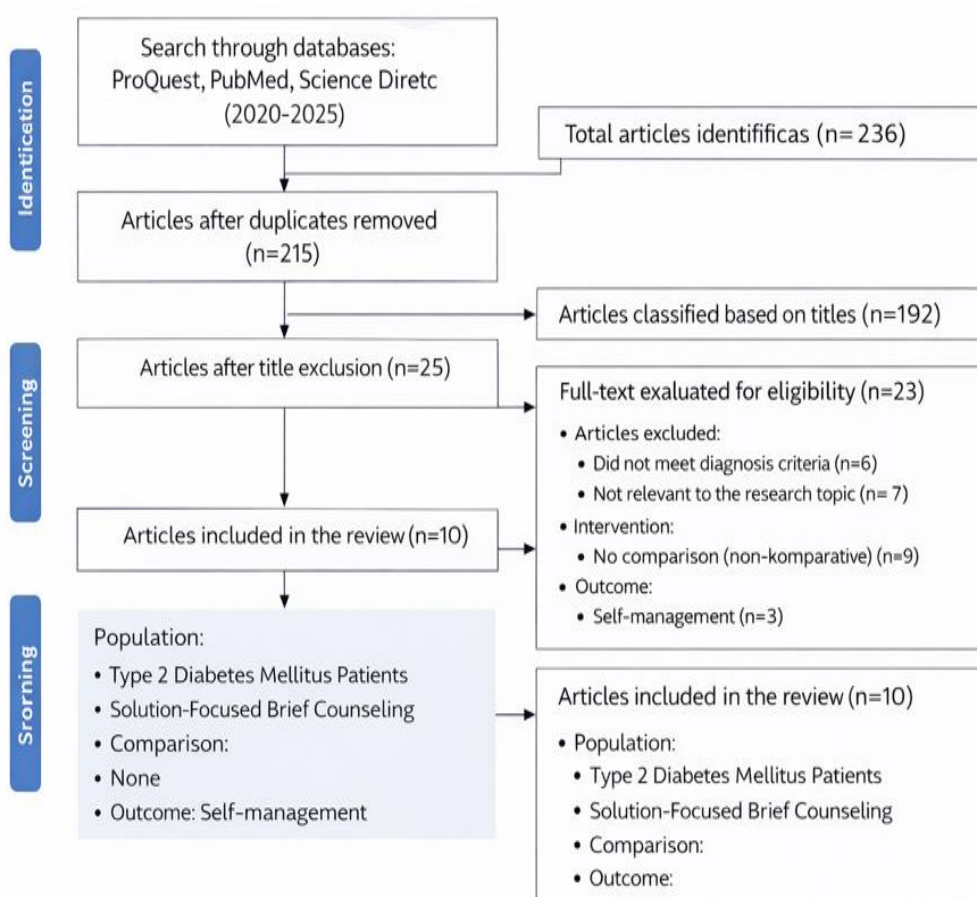
MATERIALS AND METHODS

This study is a literature review research, where a systematic, explicit, and reproducible method is used to identify, evaluate, and synthesize research and ideas generated by researchers and practitioners. The strategy employed in the literature review search is based on a framework that includes PICO; P stands for population or problem, which refers to the ineffective self-management in individuals with Type 2 Diabetes Mellitus, I stands for intervention or action, which is Solution-Focused Brief Counseling (SFBC) to support diabetes management, C stands for comparison, and O stands for outcome or results.

Keywords used in this study include "Solution-Focused Brief Counseling AND Diabetes Mellitus Type 2 Self-Management." The data obtained is secondary data

collected from previously conducted studies. The sources retrieved are articles or journals relevant to the topic, obtained through the search databases: ProQuest, PubMed, and Science Direct. All the articles obtained were published between 2020-2025 in English and discuss the impact of SFBC on the effectiveness of self-management in individuals with Type 2 Diabetes Mellitus. After gathering these articles, selection was carried out using inclusion and exclusion criteria. Inclusion criteria include subjects being individuals with Type 2 Diabetes Mellitus who received SFBC and full-text manuscripts that align with the research topic, while exclusion criteria include abstracts and manuscripts that are inaccessible or literature that does not match the topic. Based on the results obtained that met the inclusion criteria, there are 10 international articles published within the specified time frame.

Figure 1. Prisma Flow



RESULTS

Table 1 : Results of the Review of Articles Obtained

No	Author(s) (Year)	Objective	Methodology	Results	Database
1	Yehualashet et al. (2024)	Evaluate the feasibility, acceptability, and fidelity of coaching (client-centered, solution-focused) in primary care for T2DM	Design: Mixed-methods RCT feasibility; Sample: T2DM adults HbA1c \geq 7% (local Ethiopia); Intervention: 12-week Diabetes Self-Management Coaching (client-centered/solution-focused) + usual care	Program feasible & acceptable; signals improvement in self-management; good retention & adherence	ProQuest, PubMed, Science Direct
2	Cooper et al. (2024)	Test whether SFBT reduces depression and improves comorbid health conditions (including diabetes/HbA1c)	Design: RCT; Sample: patients with depression + chronic conditions (n=80); Intervention: 3 sessions of SFBT + TAU vs TAU	SFBT significantly reduces depression & anxiety; trend of improvement in several physical parameters (HbA1c reported as an outcome)	PubMed
3	Dong & Zhang (2024)	Evaluate the effect of SFBT on self-care, self-efficacy, and glucose in elderly T2DM	Design: Quasi-experimental pre/post; Sample: elderly T2DM; Intervention: Brief SFBT (several structured sessions); Analysis: paired t, effect size	Reported improvement in self-care scores and reduction in glucose; limitations of non-random and short follow-up	Science Direct
4	Kerr & Ahn (2024)	Map evidence on the effectiveness of brief digital interventions on T2DM self-management	Design: Scoping/systematic landscape review; Sample: RCTs/cohort digital DSM studies; Intervention: apps, SMS, telehealth brief modules	Digital brief interventions incorporating BCT (goal-setting, self-monitoring) can improve self-management and modestly lower HbA1c	PubMed
5	Franklin & Ding (2023)	Evaluate the effectiveness of SFBT across community settings	Design: Meta-analysis of RCTs SFBT; Sample: diverse conditions (psychosocial); Intervention: SFBT 1-8 sessions; Analysis: random-effects meta-analysis	Moderate effect on psychosocial & behavioral outcomes; consistent effectiveness of SFBT in short-term outcomes	ProQuest
6	Pirzadi et al. (2023)	Assess the effects of SFBT on depression and quality of life in cancer patients (brief SFBT intervention model)	Design: RCT; Sample: post-mastectomy women; Intervention: 8 sessions of SFBT	SFBT reduces depression & improves QoL	Science Direct

7	Aamu & Merzah (2025)	Assess the effects of DSME/DSMES on glycemic control & self-management	Design: Systematic review & meta-analysis (2021–2025 literature); Sample: RCTs & quasi-RCTs DSME; Analysis: random effects meta-analysis	DSME/DSMES moderately effective in lowering HbA1c & improving self-care	PubMed
8	Dahmudi (2021)	Evaluate DSM program including counseling & goal-setting for DM patients with foot ulcers	Design: Quasi-experimental pre/post; Sample: DM patients with DFU; Analysis: paired tests	Improvement in self-care & QoL; reduction in DFU severity	ProQuest
9	Galindo & Trujillo (2023)	Review the role of behavioral interventions & coaching in T2DM management	Design: Narrative review; Sample: literature 2020–2023	Emphasizes the need for integrating brief/solution-focused approaches & coaching for improved T2DM outcomes	Science Direct
10	Greenwood (2020)	Explore PWD responses to solution-focused approach	Design: Mixed methods/qualitative analysis (social media insights); Sample: tweets/participant responses	Qualitative evidence that SFBT increases focus on solutions, motivation & small, repeated action plans	PubMed

DISCUSSION

Based on the data analysis, this study began with a literature search from databases such as ProQuest, PubMed, and Science Direct for articles related to self-management in patients with Type 2 Diabetes Mellitus (T2DM) with the intervention of Solution-Focused Brief Counseling (SFBC). From a total of 236 identified articles, 215 articles remained after duplicate removal, and 25 articles were filtered based on relevant titles. After further review, 23 articles were evaluated for eligibility. The selected articles must meet the inclusion criteria, which include a population of T2DM patients receiving SFBC, focusing on self-management with no non-comparative comparison. Out of the 23 articles evaluated, 10 articles met the criteria to be included in the literature review.

Research on self-management of Type 2 Diabetes (T2DM) highlights the importance of solution-based approaches in improving patient self-management. Yehualashet et al. (2024) evaluated the feasibility, acceptability, and sustainability of a client-centered and solution-focused coaching program for T2DM patients in primary care in Ethiopia. This study showed that the program was well-accepted and feasible, improving self-management with good adherence rates. The program provided positive signals for

improving diabetes management, though the results were more focused on the implementation aspect in primary care rather than clinical outcomes like glycemic control or HbA1c. Similar results were found in Cooper et al. (2024), who examined whether Solution-Focused Brief Therapy (SFBT) could reduce depression and improve comorbid conditions such as diabetes. The study showed that SFBT significantly reduced depression and anxiety and showed improvement in some physical parameters, including HbA1c, highlighting the potential of SFBT in managing comorbid conditions in diabetes.

Dong & Zhang (2024) assessed the effects of SFBT on self-care, self-efficacy, and glycemic control in elderly T2DM patients. Their findings indicated that SFBT improved self-care and reduced blood glucose, though the study had limitations due to its non-random design and short follow-up duration. Additionally, Kerr & Ahn (2024) stated that brief digital interventions, such as apps and telehealth, can improve self-management and modestly lower HbA1c. They also showed that combining face-to-face solution-focused approaches with digital follow-up can sustain behavior changes in diabetes management. Franklin & Ding (2023) in their meta-analysis evaluated the effectiveness of SFBT across community settings. They found that SFBT had moderate effects on psychosocial and behavioral outcomes, with good consistency in short-term results, opening up opportunities for applying SFBT to diabetes self-management. On the other hand, Pirzadi et al. (2023) assessed the effects of SFBT in post-mastectomy women, and their results showed that SFBT reduced depression and improved quality of life (QoL), providing an example of how this brief psychotherapeutic approach can be applied to T2DM management, especially in improving self-regulation. Aamu & Merzah (2025) conducted a meta-analysis on Diabetes Self-Management Education and Support (DSME/DSMES) and found that this intervention was moderately effective in lowering HbA1c and improving self-care.

This supports the use of brief, goal-focused interventions to enhance diabetes management. This finding is consistent with Dahmudi (2021), who evaluated a DSMES program for patients with diabetic foot ulcers (DFU) and found that it effectively improved self-care and QoL and reduced DFU severity. Meanwhile, Galindo & Trujillo (2023) in their narrative review stated that behavioral interventions and coaching play an essential role in T2DM management, emphasizing the need to integrate brief and solution-focused approaches. Greenwood (2020) added a strong qualitative perspective regarding people with diabetes (PWD) responses to solution-focused approaches. Their

research showed that SFBT increased motivation, solution-focused thinking, and the formation of small, repeated action plans, which are key mechanisms in behavior change.

Overall, these studies underscore the importance of solution-focused approaches, whether through solution-focused brief therapy (SFBT) or diabetes management education, in improving self-management and glycemic control in Type 2 Diabetes patients. This research also demonstrates that brief psychosocial interventions can have a positive impact on quality of life and diabetes management, though further research is needed that focuses on clinical outcomes and long-term effects.

CONCLUSIONS

Of the 236 articles identified, after screening and evaluation, 10 articles met the inclusion criteria for the literature review. These articles focused on the application of Solution-Focused Brief Counseling (SFBC) in self-management among patients with Type 2 Diabetes Mellitus (T2DM). The research showed that SFBC can improve self-management in T2DM patients, although most studies did not compare this intervention with other approaches.

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