

# Spousal Involvement in Collaborative Management and Glycemic Behavior Change among Patients with Diabetes Mellitus: A Systematic Review

SAGE Open Nursing  
Volume 10: 1–16  
© The Author(s) 2024  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/23779608241245196  
journals.sagepub.com/home/son



Ika Nur Pratiwi, SKep, Ns, MKep<sup>1</sup> , Nursalam Nursalam, MNurs (Hons)<sup>2</sup> ,  
Ika Yuni Widayati, SKep, Ns, MKep, SpKepMb<sup>2</sup>, and Vimala Ramoo, RN, MN, PhD<sup>3</sup>

## Abstract

**Introduction:** The marked increase in the number of individuals with diabetes mellitus (DM) worldwide each year has resulted in the importance of the spouse's contribution to the promotion and support of patient self-management programs.

**Objectives:** This study aimed to systematically explore the role or involvement of spouses in collaborative management and glycemic behavior change in DM.

**Methods:** Five databases including Scopus, PubMed, Cumulative Index of Nursing and Allied Health Literature, SAGE, and Web of Science were reviewed for relevant articles retrieved from 2017 to 2022. Literature search used keywords, including "Spouse," "Support," "Self-management," "Glycemic Control," and "Diabetes mellitus." The Joanna Briggs Institute guidelines were used for appraisal review of journals. The component of partner support in the self-management of patients with DM is associated with an increase in the patient's glycemic level.

**Results:** Twenty-five studies were identified that describe the different spousal roles and strategies in the promotion and support of DM management. Overall, spouses' involvement positively impacted healthy diets, higher self-efficacy, improved quality of psychological well-being, increased perceived support, and changes in glycemic-influenced behavior. Adaptation in the spouse patient relationship including maintaining cohesiveness can result in positive coping is essential in normalizing and contextualizing the chronic condition of DM. Partner-based collaboration is important for diabetes management, overcoming management barriers, and generating communal coping.

**Conclusion:** This systematic review observed that the involvement of a spouse is important in improving collaborative management and results in better glycemic behavior in patients with DM. A better understanding of the relationship between spousal involvement, coping strategies, and adherence in daily management and the subsequent use of this information are highly useful for creating targeted and effective interventions.

## Keywords

diabetes, spousal involvement, self-Management, glycemic control

Received 7 August 2023; Revised 1 February 2024; accepted 15 March 2024

## Introduction

The global trend toward increasing cases of diabetes mellitus (DM) occurs in almost all countries. To date, approximately 425 million adults have DM, and this number is expected to continue to increase until 2045, with the number reaching 629 million, which is equivalent to a 48% increase (International Diabetes Federation, 2021). Spouses have a 26% increased risk of developing diabetes, highlighting the importance of collective effort to optimize healthy diet and

<sup>1</sup>Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

<sup>2</sup>Advanced Nursing Department, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia

<sup>3</sup>Faculty of Medicine, University Malaya, Kuala Lumpur, Malaysia

### Corresponding Author:

Ika Nur Pratiwi, Faculty of Nursing, Universitas Airlangga, Campus C Universitas Airlangga Surabaya, Mulyorejo street, Surabaya, 60115, Indonesia.

Email: [ikanurpratiwi@fkip.unair.ac.id](mailto:ikanurpratiwi@fkip.unair.ac.id)



physical activity (Gupta et al., 2019). Compared with age, urbanization level, and comorbidities (all  $P < .05$ ), spouses contributed the highest (5.19%,  $P < .0001$ ) to improving conditions in patients with diabetes (Wang et al., 2017).

Self-management behavior is critical and positively contributes to efforts for treating DM and preventing potentially fatal complications, particularly in type 2 DM (T2DM) (Rostampour et al., 2020). Management efficacy refers to consistent effective attitudes and efforts to improve the patient's quality of life, as well as elaborating medical management, psychological conditions, and behavioral compliance (Roberts et al., 2019). The long-term quality of life of patients with DM is markedly influenced by positive disease management, not only associated with physiological indicators but also minimal risk of complications (Hunt, 2015). One of the obstacles in the management behavior of patients with DM in studies conducted in developed countries such as Singapore, Canada, the United States, and the United Kingdom is low family support (Chithambo & Forbes, 2015; Compeán-Ortiz et al., 2018; Poole et al., 2020). Some research results have stated that interventions involving families particularly motivational support from spouses (Withidpanyawong et al., 2019) considerably improve management activities in DM. A powerful factor for the health of the couple that must be considered and utilized in disease management is the marital relationship (Liao et al., 2020). Patients with T2DM who receive spousal support have higher adherence to treatment (71%) than those who do not receive spousal support (52%) ( $P = .03$ ,  $\chi^2$ ) (Haines et al., 2018). Positive coping mechanisms influenced by a spouse emerge when the patient's chronic illness as a source of stressor can be viewed as a shared problem (Helgeson et al., 2017). Positive coping from the spouse can contribute to reducing the distress experienced by the patient, and joint efforts are made in managing the disease and improving the patient's self-efficacy (Helgeson et al., 2020; Liljeroos et al., 2021).

The limited support from the spouse that the patient receives will impact ineffective self-management (Soriano et al., 2021). As individuals who live in a family, all family members including the spouse have been shown to play a vital role in contributing to DM management (Tu et al., 2021). Moreover, partner relationship quality is associated with better glycemic control among individuals with diabetes (Helgeson et al., 2017). A spouse's contribution to self-care for T2DM affects the stability of glycemic levels in patients with T2DM ( $P = .041$ ) (Soriano et al., 2021). Comanagement efforts with spouse participation are hypothesized to produce effective and sustainable outcomes in diabetes management (Seidel et al., 2012). Living with a spouse plays an important role in the positive implementation of DM management. This study aimed to systematically explore the role or involvement of partners in collaborative management and glycemic behavior change in patients with DM.

## Methods

### Design

This review describes the role or involvement of partners in collaborative management and glycemic behavior change in patients with DM. The type of research used was a systematic review through searching for articles in four databases, including Scopus, PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), SAGE, and Web of Science (WOS). A systematic review involves finding, reading, understanding, and forming conclusions about the published study and theory and presenting it in an organized manner (Brink et al., 2012). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist was used in developing this review (Supplementary) (Arya et al., 2021). This systematic review has been registered with PROSPERO (registration number CRD42023470510).

### Eligibility Criteria

The search used four databases, including Scopus, PubMed, CINAHL, SAGE, and WOS, which were reviewed for relevant articles retrieved from 2017 to 2022. Literature search was performed using keywords that are adjusted to the Medical Subject Headings (MeSH), including “Spouse” OR “Couple” AND “Diabetes” OR “Diabetes mellitus” OR “Type 2 Diabetes mellitus” AND “collaboration” OR “support” AND “Self-management” OR “Self-care” AND “Glycemic Control” OR “Blood glucose.” The following were the inclusion criteria of the articles: (a) published in English, (b) original research, and (c) published in a peer-reviewed journal. We excluded studies that did not discuss the role or involvement of partners in collaborative management and glycemic behavior change in patients with DM.

### Study Selection

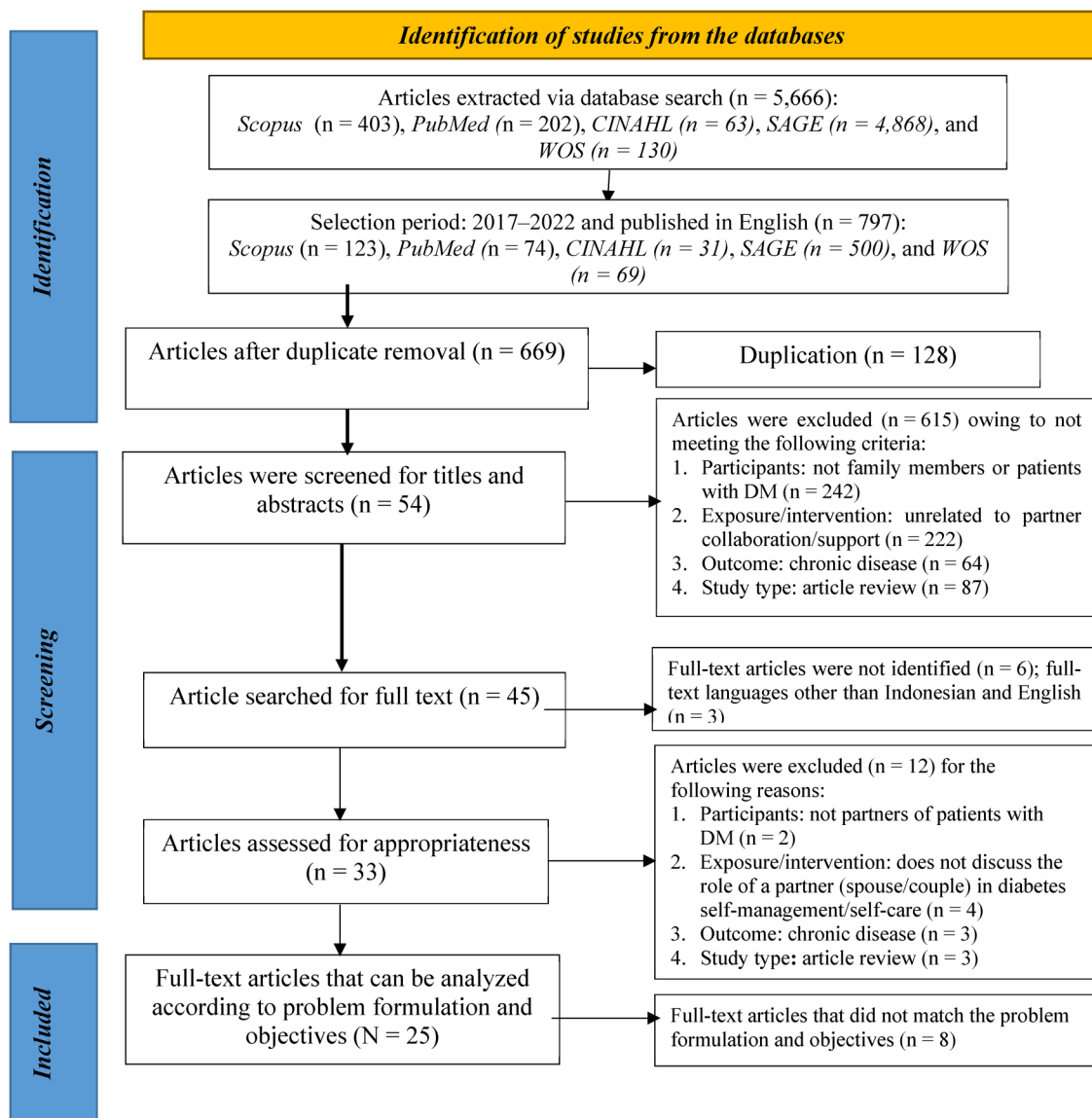
Based on the results of a literature search on four databases using keywords that have been adapted to MeSH, the researchers identified 5,666 articles. Three reviewers (IN, NN, and IYW) independently screened the articles by applying the inclusion criteria, resulting in 797 articles, including Scopus ( $n = 123$ ), PubMed ( $n = 74$ ), CINAHL ( $n = 31$ ), SAGE ( $n = 500$ ), and WOS ( $n = 69$ ). Next, the four databases were searched for duplicates ( $n = 128$ ), followed by eligibility by excluding titles and abstracts whose study participants were not family members or patients with DM ( $n = 242$ ), exposure/intervention were not related to partner collaboration/support ( $n = 222$ ), outcomes were related to chronic disease ( $n = 64$ ), and the study type was article review ( $n = 87$ ); finally, 54 article titles and relevant abstracts were obtained. Subsequently, the availability of full-text articles was searched, and full-text articles wherein participants were not partners of patients with DM ( $n = 2$ ), did not

discuss the role of partners (spouse/couple) in diabetes self-management/self-care ( $n=4$ ), the outcome was chronic disease ( $n=3$ ), and the study type was article review ( $n=3$ ) was excluded (Figure 1) (Page et al., 2021). If any discrepancy or disagreement is noted between the reviewers during the screening process, it will be discussed until a consensus is reached.

### Methodological Quality Assessment

The authors identified research quality by considering the risk of bias by assessing the methodological quality of a study and determining the extent to which a study addressed possible biases in its design, implementation, and analysis. For this purpose, this systematic review uses the Joanna

Briggs Institute (JBI) Critical Appraisal tool, which follows the research design used (The Joanna Briggs Institute, 2023). Three reviewers (IN, NN, and IYW) independently assessed the articles that met the inclusion criteria by assessing the validity of the methodology before being included as a review using the critical appraisal review assessment from the JBI for several types used, including cross-sectional studies (Moola et al., 2017), cohort studies (Joanna Briggs Institute, 2017), randomized controlled trials (RCTs) (Barker et al., 2023), and qualitative studies (Lockwood et al., 2015). The JBI-based checklist lists several questions to assess the quality of the study. The JBI for cross-sectional studies includes eight questions regarding inclusion criteria, study participants and settings described, exposures measured, standard criteria used for condition measurement,



**Figure 1.** Preferred Reporting Items for Systematic Reviews and Meta-Analyses search article according to the criteria.



the 25 articles achieved a score of >50%, fulfilling the critical appraisal, by which the data will subsequently be analyzed.

The results obtained by 25 articles published from 2017 to 2022 and published in English comprising 16 articles with cross-sectional studies, one article with cohort studies, four articles with RCTs, and four articles with qualitative studies are presented in Table 2. Of the articles, 17, 3, and 2 were conducted in the United States, China, and the United Kingdom, respectively. One article each was conducted in Ireland, Thailand, Portugal, and Canada.

### ***Role or Involvement of Partners in Collaborative Management and Glycemic Behavior Change in DM***

Of the 25 articles that met the assessment criteria, all agreed that support in the form of collaboration and consistent spouse involvement in the daily management of patients with DM had an effect on patient compliance management and the ability to maintain good glycemic behavior. Spouse involvement is associated with assistance in the daily management of DM, including diet compliance, monitoring physical activity levels, monitoring blood glucose, monitoring medication or insulin therapy, and providing psychological support to patients (August et al., 2021; Berg et al., 2020; Berry et al., 2018, 2020; Fincham et al., 2018; Haines et al., 2018; Helgeson et al., 2017, 2020, 2021, 2022; Kelly et al., 2020; Lafontaine et al., 2020; Lee et al., 2019; Liu et al., 2021; Pereira et al., 2019; Reaney et al., 2018; Soriano et al., 2021; Trief et al., 2019; Tu et al., 2021; Van Vleet et al., 2019; Withidpanyawong et al., 2019; Wooldridge et al., 2019; Wooldridge & Ranby, 2019; Yue et al., 2019; Zajdel et al., 2018) (Table 2).

When DM is initially diagnosed, the patient's perception of the importance of positive support contributes to better blood glucose monitoring compliance later in life. However, it is also associated with the emergence of a spouse's perception in the form of positive support in communicating about treatment and chronic disease programs that are needed by patients openly and vice versa (Berry et al., 2018; Helgeson et al., 2022; Pereira et al., 2019; Van Vleet et al., 2019; Yue et al., 2019). Spouse involvement relates to daily diabetes outcomes, including influencing self-regulation, self-care, mean blood glucose, and perceived coping effectiveness (Berg et al., 2020; Fincham et al., 2018; Soriano et al., 2021; Yue et al., 2019). Important constructions in maintaining and strengthening self-efficacy in DM management are associated more with the role of the spouse in collaboration to achieve the expected intervention targets in patients with DM, achieving relationship satisfaction, and the support of health care providers (Berry et al., 2018; Fincham et al., 2018; Helgeson et al., 2017, 2020, 2022; Lafontaine et al., 2020; Lee et al., 2019; Trief et al., 2019; Wooldridge & Ranby, 2019).

### ***Coping Strategies***

Adaptation in the spouse-patient relationship including maintaining cohesiveness can result in positive coping, which is essential in normalizing and contextualizing the chronic condition of DM, especially for diabetes management and overcoming management barriers known as communal coping (Helgeson et al., 2022; Liu et al., 2021; Van Vleet et al., 2019; Zajdel et al., 2018). A communal coping environment was associated with lower feelings of depression, higher feelings of happiness, and lower periods of anger. Communal care between patients and partners was associated with better adherence to diet and medication management. By providing psychological support for illness and increasing adherence in disease management, daily communal care can help patients and spouses adapt positively to diabetes conditions (Helgeson et al., 2017; Van Vleet et al., 2019; Zajdel et al., 2018). Spouses' more communal interaction and collaborative support represent disease management; such interactions are essential in a constructive strategy of overcoming perceived problems through more positive interactions. However, several studies have also reported that spouse communal coping is more consistently linked as a form of support only; however, long-term positive changes will occur if communal coping is also present in the patient (Van Vleet et al., 2019).

### ***Discussion***

This study identified 25 studies that described the different roles and strategies of partners in the promotion and support of DM management. All of the included studies agreed that support in the form of collaboration and consistent spouse involvement in the daily management of patients with DM had an effect on patient compliance management and the ability to maintain good glycemic behavior. Although existing literature supports the relationship between the effect of spousal support and subjective indicators of disease management (Craddock et al., 2015), whether there are significant clinical changes because of spousal support remains unclear. Several studies have examined the effect of spousal support in DM and hemoglobin A1c (HbA1c) management and have reported mixed results (Faizah et al., 2020; Fajriyah et al., 2020; Mayberry et al., 2019). The HbA1c is an indicator of DM glycemic control that reflects the portrait of blood glucose levels in the last 8–12 weeks in blood vessels. It is used as the main indicator for assessing the variability of body glucose levels. Variability is used for predicting the final complications of DM, both microvascular and macrovascular complications (Ganetsky et al., 2022; Vigersky et al., 2018).

Furthermore, this literature review noted that spousal perceptions of positive support play a role in medication and diabetes control adherence following DM diagnosis, whereas the increase in disease chronicity and negative perceptions

**Table 2.** Results of the Literature Search.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
1	Berry et al. (2018)	Cross-sectional study	Ireland	A total of 75 couples (patients with T2DM and their spouses) and retested 12 months later on 45 couples (patients with T2DM and their spouses)	To explore the role of spouse's beliefs on the patient's DM condition in the long term	Clinical Parameters questionnaire, Diabetes Distress Scale (DDS), and Revised Illness Perception Questionnaire (IPQ-R)	Prevention of complications, predictability of DM symptoms, and disease chronicity are factors that play an important role in the spouse's belief in DM disease pressure. No differences were noted in stress levels or spouse perceptions of DM over time. Perceptions of disease influence communication and understanding of diabetes control and chronicity and negative perceptions of diabetes symptoms among spouses.
2	Woodridge and Ranby (2019)	Cross-sectional study	United States of America	A total of 104 adult couples (patients with T2DM and their spouses)	To explore factors that positively contribute to DM self-management and self-efficacy	Investment Model Questionnaire, Health-Related Social Support Questionnaire, Partner Investment Questionnaire, Self-Efficacy for Diabetes Management Questionnaire, and Diabetes Self-Care Activities questionnaire	In an effort to maintaining self-efficacy in DM management is important to consider in the management of chronic diseases; it requires strengthening of support factors from health services and the contribution of the spouse in daily management that is balanced with the harmony of the couple's relationship.
3	Withidpanyawong et al. (2019)	Randomized controlled trial	Thailand	A total of 196 patients with T2DM who were assisted by their families in the daily management of DM were divided into the intervention ( $n = 98$ ) or control groups	To determine the effectiveness of family-based interventions in DM management on glycemic stability	Measurement of HbA1c, lipid profile, blood pressure and BMI, Diabetes Family Behavior Checklist, Medication Adherence Scale, Diabetes Self-Care Activities, and Self-Efficacy for Diabetes questionnaire	Family support means a lot to patients with diabetes to achieve better diabetes outcomes. Couples have the greatest potential for disease control; therefore, their role needs to be encouraged in diabetes control. Partner involvement especially the wife has a positive effect on increasing glycemic stability.

(continued)

Table 2. Continued.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
4	Reaney et al. (2018)	Qualitative study	United Kingdom	Six individuals with T2DM, three of whom had a partner and three more did not	To explore the role of spouses in foot care for T2DM and their perceived vulnerability	Deep interview	Not all individuals with type 2 diabetes mellitus (T2DM) believed that they are vulnerable; however, partners feel a greater vulnerability toward patients. Most individuals with T2DM and their partners engage in behavior to identify problems or protect their feet, whereas some are rarely involved. The attitude and behavior of the partner influence the patient's behavior. Sometimes, partner support is positively and negatively perceived.
5	Pereira et al. (2019)	Cross-sectional study	Portugal	A total of 224 couples (patients with T2DM and their spouses) newly diagnosed (T1) and 4 months after being diagnosed with T2DM	To predict factors associated with treatment adherence in newly diagnosed patients with T2DM	Self-care Activities Measure questionnaire, Medication Adherence Report Scale, Family Evaluation Scale, Revised Dyadic Adjustment Scale (RDAS) questionnaire, and Multidimensional Diabetes Questionnaire (MDQ)	Early in diagnosis, the patient's and spouse's perceptions contribute considerably and are internalized in positive support for the patient's glucose monitoring.
6	Soriano et al. (2021)	Cohort study	United States of America	Sixty-three couples (patients with T2DM and their spouses)	To identify factors of a spouse's condition that can hinder glycemic control in patients with T2DM	Dexcom G4 CGM for blood glucose measurement, Health-Related Social Control Tactic Scale, Diabetes Distress Scale, and Quality of Marriage Index (QMI)	The results show that the factors that predispose patients to glycemic instability are the stressful conditions experienced by patients and the low quality of relationships with their partners.
7	Yue et al. (2019)	Qualitative study	China	Twenty patients with T2DM living in Chinese communities	To explore family factors affecting patient self-management behavior	Semistructured interviews and audio recordings	Obstacles that impede the patient's self-management behavior include the family's experience of dieting, harmonious cooperation in finding food for the extended family, living in an "empty house," and the financial burden on the family. Health

(continued)

Table 2. Continued.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
8	Berg et al. (2020)	Cross-sectional study	United States of America	A total of 199 couples (patients with type I DM who received insulin therapy for >1 year and their spouses)	To assess the most beneficial collaborative and supportive strategies in patients with type I DM and their partners	HbA1c measurement, Couples Satisfaction Index, and Daily Diary Scale	care workers can develop appropriate interventions in the cultural context and adapt to the patient's perception of family responsibilities, experiences, activities, and resources. Supportive strategies and greater collaboration in couples with type I DM will contribute to better self-management and stability of blood glucose levels. Aspects of religiosity are critical in forming coping partner involvement in daily activities in DM management and are significantly associated with good glycemic control.
9	Fincham et al. (2018)	Cross-sectional study	United States of America	Eighty seven couples (patients with T2DM and their spouses)	Analyzing the role of religious coping in the daily management of DM	Measurement of glycemic control, Religious Coping in Partnering Support Scale, and Revised Dyadic Adjustment Scale General Health Questionnaire (GHQ)	Communal coping is associated with lower feelings of depression, higher feelings of happiness, and lower anger among patients with DM, which is linear with adherence to medication and diet. The majority of couples assess DM as their joint problem so that both take a role in controlling and monitoring the patient's glycemic status. Lack of information and understanding about the disease is associated with more negative support. The female partner is more active in
10	Zajdel et al. (2018)	Cross-sectional study	United States of America	Patients with DM diagnosed for >5 years and their partners (n = 123 partners)	To explain the relationship of the emotional response that is felt with the formation of communal coping, especially in relation to the DM management behavior and the daily mood of the couple	Communal coping questionnaire, Self-care behaviors questionnaire, and Perceived emotional questionnaire	Communal coping is associated with lower feelings of depression, higher feelings of happiness, and lower anger among patients with DM, which is linear with adherence to medication and diet. The majority of couples assess DM as their joint problem so that both take a role in controlling and monitoring the patient's glycemic status. Lack of information and understanding about the disease is associated with more negative support. The female partner is more active in
11	Tu et al. (2021)	Qualitative study	China	Eleven partners (patients with T2DM and their spouses)	To explore the assessment of older adult couples in Tonghua and perceived barriers to DM management	Semistructured interviews and audio recordings	DM as their joint problem so that both take a role in controlling and monitoring the patient's glycemic status. Lack of information and understanding about the disease is associated with more negative support. The female partner is more active in

(continued)



Table 2. Continued.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
12	Kelly et al. (2020)	Cross-sectional study	United States of America	Patients with type 1 diabetes mellitus (N = 199).	To explore factors associated with high pressure or stressors in DM management and partner collaboration-based and supportive role in DM management	Experiences in Close Relationships-Revised scale (ECR-R), Diabetes-related collaboration and support scale, Diabetes Distress Scale (DDS), Self-Care Inventory (SCI) questionnaire, and HbA1c measurement	managing her husband, who has DM. Higher anxiety attachment and avoidance because of higher diabetes pressure is more toward daily stress. Influence of the occurrence of anxiety related to lower self-care. Efforts are needed to design interventions that reduce diabetes-related distress.
13	Helgeson et al. (2022)	Cross-sectional study	United States of America	A total of 193 couples (patients with type 1 DM and couples with a non-Hispanic white majority)	To analyze the effect of partner collaboration based on the perceptions of support providers	Self-Reported Collaboration Questionnaire, Video Coding Questionnaire, Mood Questionnaire, and Emotional support questionnaire	In collaborating couples related to feelings of happiness and increased perceived support. Where a female spouse can contribute more management support to their male counterpart with DM.
14	Van Vleet et al. (2019)	Cross-sectional study	United States of America	A total of 123 couples (patients with newly diagnosed T2DM and their spouses)	To analyze the process of forming communal coping through the involvement of spouses through a larger source of support	Communal coping scale, observation of patient and partner behavioral interactions, self-care activities questionnaire, and diabetes distress scale	Communal coping is formed from a series of interaction processes between partners as support providers that lead to shared perceptions regarding chronic disease conditions and efforts to complete the expected joint management.
15	Helgeson et al. (2021)	Cross-sectional study	United States of America	A total of 207 couples (patients with T2DM and their spouses)	To observe how romantic partners share for diabetes management in patients with DM	Post-Discussion Questionnaire, Patient and Partner Warmth Questionnaire, and 14-day daily diary patient self-care	Harmony in relationships is evaluated through discussions, resulting in several positive influences in the management of patients' illnesses. However, the couple experienced more negativity, which was linear with the high intensity of anger, thereby reducing dietary adherence.
16	Lee et al. (2019)	Cross-sectional study	United States of America	A total of 199 couples (patients with type 1 DM and their spouses)	To investigate the effect of we-talk on health and relationships among couples	Couples Satisfaction Index, Perceived Stress Scale, Multidimensional Diabetes Questionnaire, and Spouse	The group of couples involved in we-talk had better self-efficacy, relationship quality, and caring behavior. Spouse revealed

(continued)

Table 2. Continued.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
17	Lafontaine et al. (2020)	Cross-sectional	Canada	Forty-six couples (patients with T2DM and their spouses)	To determine the relationship between partner perceptions related to self-efficacy support in patients with DM with harmonious relationships and management abilities	Diabetes-Specific Emotional Support Questionnaire Perceptions of Spousal Support Efficacy Scale and Dyadic Adjustment Scale-4	greater stress reduction and increased relationship satisfaction. Patients with DM who have harmony in relationships are positively correlated with the level of confidence in self-management abilities and become a source of commitment between the two. The development of a partner collaboration model for overcoming obstacles and supporting DM management is expected to prevent the emergence of chronic diseases in healthy couples.
18	Liu et al., 2021	Randomized controlled trial	China	Patients with DM and their partners (N = 18 partners)	To develop and analyze the effect of couple-based collaborative management on spouses and patients with DM	Measurement of HbA1c, fasting blood glucose, lipid profiles, and body mass index (BMI) and fill out the questionnaire	Female partners are predominantly involved in providing persuasive support to control the diet in male patients with DM. Other factors that influence marriage are the quality of marriage, perception of responsibility in helping to regulate diet, and race/ethnicity. The psychological aspects experienced by patients with T2DM include feelings of helplessness, limitations, struggles in self-management, and acceptance of DM. Communal coping is implicitly associated with greater sources of support, acceptance, self-care behaviors, and the quality of relationships between partners. The interventions provided can increase relationship
19	August et al. (2021)	Cross-sectional study	United States of America	A total of 148 couples (patients with T2DM and their spouses)	To analyze the reciprocal relationship in providing support (persuasion or control) from partners and the type of involvement that is performed in controlling the diet	Big Five Inventory questionnaire, Diet-Related Spousal Support Scale, and Diet-Related Spousal Control Scale	
20	Berry et al. (2020)	Qualitative study	United Kingdom	Twenty two couples (patients with T2DM who live together in at least one house with husband/wife/partner/family)	To analyze the relationship between emotional distress experienced by patients with DM and the perceptions of their partners and health care providers	Semistructured interviews and audio recordings	
21	Helgeson et al. (2017)	Cross-sectional study	United States of America	Seventy couples (patients with T2DM and their spouses)	To analyze the relationship between patients with DM's communal coping and their partners' health and rational functioning	Explicit communal coping scale, Quality of Marriage Index (QMI), Diabetes Family Behavior Checklist, and Diabetes Self-Care Activities questionnaire	
22	Trief et al. (2019)	Randomized controlled trial	United States of America	A total of 268 couples	To analyze the effect of the telephone couple's behavior	Measurement of body weight, body mass index (BMI), blood	

(continued)

Table 2. Continued.

No.	First author and year	Design	Country	Participants	Objective	Instruments	Key findings related to spouse involvement
23	Wooldridge et al. (2019)	Randomized controlled trial	United States of America	Forty couples (patients with DM and their spouses)	intervention on the glycemic control of patients with type 2 DM who routinely and not routinely take medication To analyze service outcomes and test implementation intentions (IIs) on physical activity (PA) of patients with type 2 DM	pressure (BP), and questionnaires related to diabetes, dyadic adjustment, fat screening, and physical activity Physical Activity Questionnaire, Attitudes About Planning Scale, Self-Efficacy Scale, Partner Investment Scale, and measurement of HbA1c and body mass index	satisfaction and reduce pressure due to disease conditions. Couples who performed collaborative intervention had the effect of increasing physical activity reported in several conditions.
24	Helgeson et al. (2020)	Cross-sectional study	United States of America	Two hundred couples (patients with T2DM and their spouses without DM and have been married for at least 2 years)	To analyze the relationship between communal coping and the psychological function of the partner of a newly diagnosed patient with T2DM	Quality of Marriage Index, Personal Assessment of Intimate Relationships (PAIR) scale, Depression Scale, and Positive and Negative Affect Scale (PANAS)	Couples who have communal coping especially in male patients with wives without DM will be more useful in increasing role interaction and improving psychological conditions.
25	Haines et al. (2018)	Cross-sectional study	United States of America	A total of 128 patients with DM	To analyze the role of spouses in diabetes control and management	HbA1c measurement, Medication Adherence Scale, Diabetes Self-Care scale, and self-reported exercise questionnaire	In patients with DM who receive partner support, adherence to treatment is affected; however, no difference in physical activity, diet, and changes in HbA1c levels was noted.

of diabetes symptoms among spouses can reduce DM management adherence (Costeira et al., 2022; Morris & Sanders, 2018; Weitkamp et al., 2021). To maintain and strengthen self-efficacy in diabetes management, several studies associated relationship satisfaction factors with partner collaboration in contributing to target achievement and support from health care providers as a construct (Szabó-Bartha & Mirmics, 2021; Wooldridge et al., 2019; Wooldridge & Ranby, 2019). An understanding of related theory is important as a foundation for effectively collaborating with a spouse in a self-management intervention in a behavioral context (Pamungkas et al., 2017).

In this review, we observed partner-based collaboration for diabetes management, overcoming management barriers, and generating communal coping. Overall, spouse involvement resulted in consistent improvements in self-efficacy, dietary adherence, psychological well-being, glycemic control, and sources of support. To normalize and contextualize the chronic condition of DM, adaptation in a marital relationship including maintaining cohesion between partners is significant (Helgeson et al., 2022; Liu et al., 2021; Van Vleet et al., 2019; Zajdel et al., 2018). A communal coping environment was associated with lower feelings of depression, higher feelings of happiness, and lower periods of anger. Communal care between patients and partners was associated with better adherence to diet and medication management. By providing psychological support for illness and increasing adherence to disease management, daily communal care can help patients and spouses adapt positively (Helgeson et al., 2017; Van Vleet et al., 2019; Zajdel et al., 2018). Management behavior that refers to long-term management and compliance plays an important role in maintaining and supporting treatment efforts and maintaining the psychological well-being of patients. Adherence to self-management in patients with long-term DM will improve their quality of life and is not limited to controlling physiological indicators (Hunt, 2015; Pratiwi et al., 2018; Thojampa et al., 2020). Studies conducted in developed countries such as the United States, Canada, the United Kingdom, and Singapore have reported common barriers to management, one of which is the lack of family support (Chithambo & Forbes, 2015; Compeán-Ortiz et al., 2018; Poole et al., 2020). Some research results have stated that interventions involving families particularly motivational support from partners (Withidpanyawong et al., 2019) significantly improve management activities in DM. A powerful factor for the health of the couple that must be considered and used in disease management is the marital relationship (Liao et al., 2020).

A spouse's more communal interaction and collaborative support represent disease management; such interactions are essential in a constructive strategy of overcoming perceived problems through more positive interactions. However, several studies have reported that spouse communal coping is more consistently linked as a form of support only;

however, long-term positive changes will occur if communal coping is also present in the patient (Van Vleet et al., 2019). Comanagement efforts with partner participation are hypothesized to produce effective and sustainable outcomes in diabetes management (Seidel et al., 2012). In addition to preventing microvascular and macrovascular complications in patients with T2DM, self-management also has challenges in terms of limited sources of support, particularly in efforts to maintain timely intervention (Indarwati et al., 2019; Pratiwi & Purwaningsih, 2019; Soriano et al., 2021). The spouse plays an important role in self-management because in the context of the nuclear family, the spouse is referred to as the unit closest to the patient (Luthfa et al., 2020; Sinawang et al., 2020; Tu et al., 2021; Wulandari et al., 2020). Furthermore, among patients with diabetes, partner relationship quality is associated with better glycemic control (Helgeson et al., 2017).

### *Strengths and Limitations*

In general, the study highlighted that spousal perceptions of positive support play a role in medication adherence and diabetes adherence control following DM diagnosis. To maintain and strengthen self-efficacy in DM management, several studies have agreed that spouse collaboration in achieving the desired targets in interventions, relationship satisfaction, and support from health care providers are constructs influencing DM management. Notably, the findings obtained in this review are valuable information for health care workers, especially in providing education for spouses regarding the importance of collaboration and how to achieve positive coping in disease management interactions through positive perceptions that lead to solving the challenges experienced by patients with DM.

This review mostly included cross-sectional studies (16 studies), which may not establish a causal relationship between spousal support and the coping strategies used. More concrete relationship patterns must be elaborated with respect to spouse support and positive communal coping development strategies in the longitudinal study design. Some aspects of concern in the articles obtained for review include the possibility of publication bias arising from the dominance of research with proven hypotheses compared with unproven ones. Researchers do not have access to primary data owing to several reasons, one of which is the variability of the study design; therefore, a meta-analysis is not conducted and only a narrative description is performed. Therefore, we are unable to thoroughly explain the effect sizes of each study outcome.

### *Implications for Practice*

The findings obtained in this systematic review can support the implementation of patient spousal empowerment intervention programs by nurses in self-management. The

spouse empowerment program is expected to facilitate mutual support between partners in disease management, increase patient compliance and quality of life, maintain healthy lifestyle changes in the long term, and prevent complications and disease worsening for patients. The formation of positive perceptions that will result in positive coping from spousal support will result in positive collaboration strategies in daily DM management. Daily communal coping can help patients and spouses psychologically adjust to illness and improve patient self-care behaviors. The implementation of this intervention program can be performed in the hospital when the patient is an inpatient or outpatient.

## Conclusions

This systematic review noted evidence that positive spouse collaboration is crucial in maintaining good management behavior and will impact controlled glycemic conditions in patients with DM. Adaptation in the spouse–patient relationship including maintaining cohesiveness can result in positive coping, which is essential in normalizing and contextualizing the chronic condition of DM, particularly for diabetes management and overcoming management barriers known as communal coping. A better understanding of the relationship between spousal involvement and adherence in daily management and the subsequent use of this information are highly useful for creating targeted and effective interventions.

## Acknowledgment

The authors would like to acknowledge the authors of the sources used in this study.


## Declaration of Conflicting Interests


The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iDs

Ika Nur Pratiwi  <https://orcid.org/0000-0001-5868-9355>

Nursalam Nursalam  <https://orcid.org/0000-0002-9052-6983>

## Supplemental Material

Supplemental material for this article is available online.

## References

- Arya, S., Kaji, A. H., & Boermeester, M. A. (2021). PRISMA reporting guidelines for meta-analyses and systematic reviews. *JAMA Surgery*, *156*(8), 789–790. <https://doi.org/10.1001/jamasurg.2021.0546>
- August, K. J., Kelly, C. S., & Markey, C. H. (2021). Reciprocity and personality in diet-related spousal involvement among older couples managing diabetes: The role of gender. *Journal of Social & Personal Relationships*, *38*(1), 363–383. <https://doi.org/10.1177/0265407520962850>
- Barker, T. H., Stone, J. C., Sears, K., Klugar, M., Tufanaru, C., Leonardi-Bee, J., Aromataris, E., & Munn, Z. (2023). The revised JBI critical appraisal tool for the assessment of risk of bias for randomized controlled trials. *JBI Evidence Synthesis*, *21*(3), 494–506. <https://doi.org/10.11124/JBIES-22-00430>
- Berg, C. A., Helgeson, V. S., Tracy, E. L., Butner, J. E., Kelly, C. S., Van Vleet, M., & Litchman, M. L. (2020). Daily illness appraisal and collaboration in couples with type 1 diabetes. *Health Psychology*, *39*(8), 689–699. <https://doi.org/10.1037/hea0000871>
- Berry, E., Davies, M., & Dempster, M. (2018). Managing type 2 diabetes as a couple: The influence of partners' beliefs on diabetes distress over time. *Diabetes Research & Clinical Practice*, *141*, 244–255. <https://doi.org/10.1016/j.diabres.2018.05.020>
- Berry, E., Davies, M., & Dempster, M. (2020). Exploring the perceptions of emotional distress among couples living with type 2 diabetes and among diabetes healthcare providers, and consideration of support needs. *Diabetic Medicine*, *37*(10), 1669–1678. <https://doi.org/10.1111/dme.14052>
- Brink, H., Van der Walt, C., & Van Rensburg, G. (2012). Fundamentals of research methodology for health care professionals.
- Chithambo, T., & Forbes, A. (2015). Exploring factors that contribute to delay in seeking help with diabetes related foot problems: A preliminary qualitative study using interpretative phenomenological analysis. *International Diabetes Nursing*, *12*(1), 20–26. <https://doi.org/10.1179/2057331615Z.0000000006>
- Compeán-Ortiz, L. G., Trujillo-Olivera, L. E., Valles-Medina, A. M., Reséndiz-González, E., García-Solano, B., & Pérez, B. D. A. (2018). Obesity, physical activity and prediabetes in adult children of people with diabetes. *Revista Latino-Americana de Enfermagem*, *25*, e2981. <https://doi.org/10.1590/1518-8345.2102.2981>
- Costeira, C., Dixe, M. A., Querido, A., Vitorino, J., & Laranjeira, C. (2022). Coaching as a model for facilitating the performance, learning, and development of palliative care nurses. *SAGE Open Nursing*, *8*, 23779608221113864. <https://doi.org/10.1177/23779608221113864>
- Craddock, E., vanDellen, M. R., Novak, S. A., & Ranby, K. W. (2015). Influence in relationships: A meta-analysis on health-related social control. *Basic & Applied Social Psychology*, *37*(2), 118–130. <https://doi.org/10.1080/01973533.2015.1011271>
- Faizah, R., Efendi, F., & Suprajitno, S. (2020). A systematic review of foot exercises with group support to improve the foot health of diabetes mellitus patients. *Jurnal NERS*, *15*(1Sp), 129–134. <https://doi.org/10.20473/jn.v15i1Sp.18996>
- Fajriyah, N., Sudiana, I. K., & Dwi Wahyuni, E. (2020). The effects from physical exercise on the blood glucose levels, HbA1c and quality of life of type 2 diabetes mellitus patients: A systematic review. *Jurnal NERS*, *15*(1Sp), 486–496. <https://doi.org/10.20473/jn.v15i1Sp.20517>
- Fincham, F. D., Seibert, G. S., May, R. W., Wilson, C. M., & Lister, Z. D. (2018). Religious coping and glycemic control in couples

- with type 2 diabetes. *Journal of Marital & Family Therapy*, 44(1), 138–149. <https://doi.org/10.1111/jmft.12241>
- Ganetsky, V. S., Shea, J. A., Szapary, C., Ikechi, R., Keddem, S., Kaufman, S. T., & Long, J. A. (2022). Exploring barriers and facilitators to glycemic control and shared medical appointment engagement in underserved patients with diabetes. *Journal of Health Care for the Poor & Underserved*, 33(1), 88–103. <https://doi.org/10.1353/hpu.2022.0008>
- Gupta, L., Khandelwal, D., Lal, P. R., Gupta, Y., Kalra, S., & Dutta, D. (2019). Factors determining the success of therapeutic lifestyle interventions in diabetes—role of partner and family support. *European Endocrinology*, 15(1), 18–24. <https://www.ncbi.nlm.nih.gov/pubmed/31244906>. <https://doi.org/10.17925/EE.2019.15.1.18>
- Haines, L., Coppa, N., Harris, Y., Wisnivesky, J. P., & Lin, J. J. (2018). The impact of partnership status on diabetes control and self-management behaviors. *Health Education & Behavior*, 45(5), 668–671. <https://doi.org/10.1177/1090198117752783>
- Helgeson, V. S., Jakubiak, B., Seltman, H., Hausmann, L., & Korytkowski, M. (2017). Implicit and explicit communal coping in couples with recently diagnosed Type 2 diabetes. *Journal of Social and Personal Relationships*, 34(7), 1099–1121. <https://doi.org/10.1177/0265407516669604>
- Helgeson, V. S., Naqvi, J. B., Gary-Webb, T., & Korytkowski, M. (2021). Observed couple interactions among white and black persons with type 2 diabetes. *Journal of Family Psychology*, 35(8), 1117–1127. <https://doi.org/10.1037/fam0000857>
- Helgeson, V. S., Naqvi, J. B., Seltman, H., Vaughn, A. K., Korytkowski, M., Hausmann, L. R. M., & Gary-Webb, T. L. (2020). Links of communal coping to relationship and psychological health in type 2 diabetes: Actor-partner interdependence models involving role, sex, and race. *Annals of Behavioral Medicine*, 54(5), 346–359. <https://doi.org/10.1093/abm/kaz052>
- Helgeson, V. S., Zajdel, M., Tracy, E. L., Allen, N. A., Kent de Grey, R. G. K., Litchman, M. L., & Berg, C. A. (2022). Observed dyadic collaboration among couples coping with type 1 diabetes. *Journal of Family Psychology*, 36(1), 147–152. <https://doi.org/10.1037/fam0000763>
- Hunt, C. W. (2015). Technology and diabetes self-management: An integrative review. *World Journal of Diabetes*, 6(2), 225–233. <https://doi.org/10.4239/wjd.v6.i2.225>
- Indarwati, R., Pratiwi, I. N., & Yuniarsih, N. (2019). Playing cards using the “tepek nyamuk” method improves cognitive function and social interaction in the elderly. *Indian Journal of Public Health Research & Development*, 10(8), 2575–2579. <https://doi.org/10.5958/0976-5506.2019.02255.1>
- International Diabetes Federation (2021). IDF Diabetes Atlas Tenth edition 2021 (Diabetes facts & figures). <http://www.diabetesatlas.org/resources/2015-atlas.html>
- Joanna Briggs Institute (2017). Checklist for qualitative research. The Joanna Briggs Institute, 6. [http://www.joannabriggs.org/assets/docs/critical-appraisal-tools/JBI\\_Critical\\_Appraisal-Checklist\\_for\\_Qualitative\\_Research.pdf](http://www.joannabriggs.org/assets/docs/critical-appraisal-tools/JBI_Critical_Appraisal-Checklist_for_Qualitative_Research.pdf)
- Kelly, C. S., Berg, C. A., & Helgeson, V. S. (2020). Adult attachment insecurity and associations with diabetes distress, daily stressful events and self-management in type 1 diabetes. *Journal of Behavioral Medicine*, 43(5), 695–706. <https://doi.org/10.1007/s10865-019-00111-7>
- Lafontaine, M. F., Bélanger, C., Jolin, S., Sabourin, S., & Nouwen, A. (2020). Spousal support and relationship happiness in adults with Type 2 diabetes and their spouses. *Canadian Journal of Diabetes*, 44(6), 481–486. <https://doi.org/10.1016/j.cjcd.2020.05.006>
- Lee, J., Helgeson, V. S., Van Vleet, M., Tracy, E. L., de Grey, R. G. K., Zajdel, M., & Berg, C. A. (2019). Implications of we-talk for relationships and health among patients with type 1 diabetes and their spouses. *Journal of Social & Personal Relationships*, 37(1), 345–354. <https://doi.org/10.1177/0265407519865613>
- Liao, J., Wu, X., Wang, C., Xiao, X., Cai, Y., Wu, M., Liu, Y., Chen, X., Wu, S., Yang, Y. J., & Xu, D. R. (2020). Couple-based collaborative management model of type 2 diabetes mellitus for community-dwelling older adults in China: Protocol for a hybrid type 1 randomized controlled trial. *BMC Geriatrics*, 20(1), 123. <https://doi.org/10.1186/s12877-020-01528-5>
- Liljeroos, M., Milberg, P., Krevers, B., & Milberg, A. (2021). Dying within dyads: Stress, sense of security and support during palliative home care. *PLoS ONE*, 16(9), e0257274. <https://doi.org/10.1371/journal.pone.0257274>
- Liu, Y., Xiao, X., Peng, C., Zhao, T., Wu, Y., Yu, W., Ou, L., Chen, X., Wu, X., Xu, D. R., & Liao, J. (2021). Development and implementation of couple-based collaborative management model of type 2 diabetes mellitus for community-dwelling Chinese older adults: A pilot randomized trial. *Frontiers in Public Health*, 9, 686282. <https://doi.org/10.3389/fpubh.2021.686282>
- Lockwood, C., Munn, Z., & Porritt, K. (2015). Qualitative research synthesis: Methodological guidance for systematic reviewers utilizing meta-aggregation. *International Journal of Evidence-Based Healthcare*, 13(3), 179–187. <https://doi.org/10.1097/XEB.0000000000000062>
- Luthfa, I., Aspihan, M., & Lathif, M. R. (2020). The relationship between family support and quality of life improvement of patients with diabetes mellitus in Semarang. *Jurnal NERS*, 14(3), 327–330. <https://doi.org/10.20473/jn.v14i3.17175>
- Mayberry, L. S., Berg, C. A., Greevy, R. A., & Wallston, K. A. (2019). Assessing helpful and harmful family and friend involvement in adults’ type 2 diabetes self-management. *Patient Education and Counseling*, 102(7), 1380–1388. <https://doi.org/10.1016/j.pec.2019.02.027>
- Moola, S., Munn, Z., Tufanaru, C., Aromataris, E., Sears, K., Sfetcu, R., Currie, M., Qureshi, R., Mattis, P., Lisy, K. M. P. F., & Mu, P. F. (2017). Checklist for analytical cross sectional studies. Joanna Briggs institute reviewer’s manual, pp. 1–7. <http://joannabriggs.org/research/critical-appraisal-tools>
- Morris, R. L., & Sanders, C. (2018). Critical moments in long-term condition management: A longitudinal qualitative social network study. *Chronic Illness*, 14(2), 119–134. <https://doi.org/10.1177/1742395317714033>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Revista Española*

- de *Cardiología*, 74(9), 790–799. <https://doi.org/10.1016/j.rec.2021.07.010>
- Pamungkas, R. A., Chamroonsawasdi, K., & Vatanasomboon, P. (2017). A systematic review: Family support integrated with diabetes self-management among uncontrolled type II diabetes mellitus patients. *Behavioral Sciences*, 7(3), 1–17. <https://doi.org/10.3390/bs7030062>
- Pereira, M. G., Pedras, S., Ferreira, G., & Machado, J. C. (2019). Family and couple variables regarding adherence in Type 2 diabetes patients in the initial stages of the disease. *Journal of Marital & Family Therapy*, 45(1), 134–148. <https://doi.org/10.1111/jmft.12281>
- Poole, L., Hackett, R. A., Panagi, L., & Steptoe, A. V. C. (2020). Subjective well-being as a determinant of glycosylated hemoglobin in older adults: Longitudinal findings from the English Longitudinal Study of Ageing. *Psychological Medicine*, 50(11), 1820–1828. <https://doi.org/10.1017/S0033291719001879>
- Pratiwi, I. N., Pawanis, Z., Hidayati, L., Widyawati, I. Y., Ni'Mah, L., Sukartini, T., Bakar, A., & Mariyanti, H. (2018). The role of a healthy-eating educational module during Ramadan in a community health centre. *Journal of Diabetes Nursing*, 22(2). <https://diabetesonthenet.com/wp-content/uploads/pdf/dotnd91294d10bc26d47859a1e586f094e7c.pdf>
- Pratiwi, I. N., & Purwaningsih, S. R. (2019). The correlation between family support and quality of life in mothers with positive HIV in Surabaya. *Indian Journal of Public Health Research & Development*, 10(8), 2703–2707. <https://doi.org/10.5958/0976-5506.2019.02278.2>
- Reaney, M., Chmiel, N., & Churchill, S. (2018). Foot care, 'spousal' support and type 2 diabetes: An exploratory qualitative study. *Psychology & Health*, 33(9), 1191–1207. <https://doi.org/10.1080/08870446.2018.1481215>
- Roberts, S., Eaton, S., Finch, T., Lewis-Barned, N., Lhussier, M., Oliver, L., Rapley, T., & Temple-Scott, D. (2019). The year of care approach: Developing a model and delivery programme for care and support planning in long term conditions within general practice. *BMC Family Practice*, 20(1), 153. <https://doi.org/10.1186/s12875-019-1042-4>
- Rostampour, S., Arghavanian, F. E., Kordi, M., Shakeri, M. T., Akhlaghi, F., & Nekah, S. M. A. (2020). The effect of couples' supportive counseling on self-care behavior in women with insulin-treated gestational diabetes: A randomized clinical trial. *Hayat*, 26(1), 58–71. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090696264&partnerID=40&md5=0ba883f1bc67344a2a842c410f581625>
- Seidel, A. J., Franks, M. M., Stephens, M. A., & Rook, K. S. (2012). Spouse control and type 2 diabetes management: Moderating effects of dyadic expectations for spouse involvement. *Family Relations*, 61(4), 698–709. <https://doi.org/10.1111/j.1741-3729.2012.00719.x>
- Sinawang, G. W., Kusnanto, K., & Pratiwi, I. N. (2020). Systematic review of family members in improving the quality of life of people with T2DM. *Jurnal NERS*, 15(1Sp), 107–112. <https://doi.org/http://doi.org/10.20473/jn.v15i1Sp.18975> <https://doi.org/10.20473/jn.v15i1Sp.18975>
- Soriano, E. C., Lenhard, J. M., Gonzalez, J. S., Tennen, H., Chow, S. M., Otto, A. K., Perndorfer, C., Shen, B. J., Siegel, S. D., & Laurenceau, J. P. (2021). Spousal influence on diabetes self-care: Moderating effects of distress and relationship quality on glycemic control. *Annals of Behavioral Medicine*, 55(2), 123–132. <https://doi.org/10.1093/abm/kaa038>
- Szabó-Bartha, A., & Mirnics, Z. (2021). Representations of chronic illness in patients and their partners. *Psychiatria Danubina*, 33(suppl 4), 432–440. <https://pubmed.ncbi.nlm.nih.gov/34718261/>
- The Joanna Briggs Institute (2023). Critical appraisal tools | JBI. Critical Appraisal Tools | JBI. <https://jbi.global/critical-appraisal-tools>
- Thojampa, S., Sarnkhaowkhom, C., Khankhajhon, S., Boonpracom, R., Puraya, A., & Sahattecho, W. (2020). Self-efficacy of exercise in older adults with diabetes: A concept analysis. *Jurnal NERS*, 15(1), 105–112. <https://doi.org/10.20473/jn.v15i1.19184>
- Trief, P. M., Fisher, L., Sandberg, J., Hessler, D. M., Cibula, D. A., & Weinstock, R. S. (2019). Two for one? Effects of a couples intervention on partners of persons with type 2 diabetes: A randomized controlled trial. *Diabetic Medicine*, 36(4), 473–481. <https://doi.org/10.1111/dme.13871>
- Tu, J., Liu, Y., Wu, X., Xu, D., & Liao, J. (2021). Dyadic appraisal and coping with illness among older Chinese adults with type 2 diabetes mellitus: A qualitative study. *Age & Ageing*, 50(3), 928–935. <https://doi.org/10.1093/ageing/afaa245>
- Van Vleet, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2019). An examination of the communal coping process in recently diagnosed diabetes. *Journal of Social & Personal Relationships*, 36(4), 1297–1316. <https://doi.org/10.1177/0265407518761226>
- Vigersky, R. A., Shin, J., Jiang, B., Siegmund, T., McMahon, C., & Thomas, A. (2018). The comprehensive glucose pentagon: A glucose-centric composite metric for assessing glycemic control in persons with diabetes. *Journal of Diabetes Science & Technology*, 12(1), 114–123. <https://doi.org/10.1177/1932296817718561>
- Wang, J. Y., Liu, C. S., Lung, C. H., Yang, Y. T., & Lin, M. H. (2017). Investigating spousal concordance of diabetes through statistical analysis and data mining. *PLoS ONE*, 12(8), e0183413. <https://doi.org/10.1371/journal.pone.0183413>
- Weitkamp, K., Feger, F., Landolt, S. A., Roth, M., & Bodenmann, G. (2021). Dyadic coping in couples facing chronic physical illness: A systematic review. *Frontiers in Psychology*, 12(October), 722740. <https://doi.org/10.3389/fpsyg.2021.722740>
- Withidpanyawong, U., Lerkiatbundit, S., & Saengcharoen, W. (2019). Family-based intervention by pharmacists for type 2 diabetes: A randomised controlled trial. *Patient Education and Counseling*, 102(1), 85–92. <https://doi.org/10.1016/j.pec.2018.08.015>
- Wooldridge, J. S., & Ranby, K. W. (2019). Influence of relationship partners on self-efficacy for self-management behaviors among adults with Type 2 diabetes. *Diabetes Spectrum*, 32(1), 6–15. <https://doi.org/10.2337/ds17-0069>
- Wooldridge, J. S., Ranby, K. W., Roberts, S., & Huebschmann, A. G. (2019). A couples-based approach for increasing physical activity among adults with Type 2 diabetes: A pilot feasibility randomized controlled trial. *The Diabetes Educator*, 45(6), 629–641. <https://doi.org/10.1177/0145721719881722>
- Wulandari, I., Kusnanto, K., Wibisono, S., & Puspitasari, T. (2020). Family experience of caring for a diabetes mellitus patient: A

- qualitative study. *Jurnal NERS*, 15(1Sp), 75–81. <https://doi.org/10.20473/jn.v15i1Sp.19010>
- Yue, P., Lamb, K. V., Chen, X., Wang, Y., Xiao, S., Feng, X., & Wu, Y. (2019). Identification of family factors that affect self-management behaviors among patients with type 2 diabetes: A qualitative descriptive study in Chinese communities. *Journal of Transcultural Nursing*, 30(3), 250–259. <https://doi.org/10.1177/1043659618793713>
- Zajdel, M., Helgeson, V. S., Seltman, H. J., Korytkowski, M. T., & Hausmann, L. R. M. (2018). Daily communal coping in couples with Type 2 diabetes: Links to mood and self-care. *Annals of Behavioral Medicine*, 52(3), 228–238. <https://doi.org/10.1093/abm/kax047>