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ORIGINAL ARTICLE

A Review of Theses on Complementary and Supportive Medicine Practices for Patients with Type 2 Diabetes Mellitus: A Systematic Review

Tip 2 Diabetes Mellitus'lu Hastalar ile İlgili Yapılan Tamamlayıcı ve Destekleyici Tıp Uygulamalarını İçeren Tezlerin İncelenmesi: Sistematik Derleme

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ABSTRACT

Aim: The aim of this study was to examine nursing theses on complementary and supportive medicine practices for patients with Type 2 Diabetes Mellitus (Type 2 DM) in Turkey and to guide future related studies and nursing practices.
Materials and Methods: The data in the study were obtained by searching the keywords "diabetes", "complementary", "supportive treatment", "holistic complementary and supportive treatment", "integrative treatment", "nursing", "acupressure", "massage", "aromatherapy", "reflexology", "reiki", "yoga", "herbal treatment" in the database of the National Thesis Center of the Council of Higher Education after a literature review. As a result of the search, 11 theses written between 1994 and 2023 in the Institute of Health Sciences, Department of Nursing were identified, and the information of the theses were accessed.
Results: According to the results of the study, complementary and supportive medicine practices were found to be effective in the symptoms of individuals diagnosed with diabetes mellitus (neuropathic pain, sleep and quality of life, anxiety, hope, cognitive functions, lowering/stabilizing blood glucose levels, psychological relief).
Conclusion: It was concluded that complementary and supportive medicine practices such as acupressure, aromatherapy (inhalation/scent), reflexology foot massage), herbal therapy were used in patients with Type 2 DM. These practices were found to have positive effects on blood sugar regulation, neuropathic pain, sleep and quality of life, anxiety, hope, cognitive functions, and psychological relaxation.

Keywords: Complementary and supportive medicine, patient, thesis, Type 2 DM

ÖZ

Amaç: Bu çalışmanın amacı Türkiye'de Tip 2 Diabetes Mellitus'lu (Tip 2 DM) hastalara yönelik tamamlayıcı ve destekleyici tıp uygulamalarına ilişkin hemşirelik tezlerini inceleyerek gelecekte yapılacak ilgili çalışmalara ve hemşirelik uygulamalarına yol göstermektir.
Gereç ve Yöntemler: Çalışmada veriler, literatür taraması sonrasında Yükseköğretim Kurulu Ulusal Tez Merkezi veri tabanında "diyabet", "tamamlayıcı", "destekleyici tedavi", "bütüncül tamamlayıcı ve destekleyici tedavi", "integratif tedavi", "hemşirelik", "akupres", "masaj", "aromaterapi", "refleksoloji", "reiki", "yoga, "bitkisel tedavi" anahtar kelimeleri taranarak yapılmıştır. Tarama sonucunda Sağlık Bilimleri Enstitüsü Hemşirelik Anabilim Dalında 1994-2023 yılları arasında yazılmış 11 tez belirlenmiş ve tezlerin bilgilerine ulaşılmıştır.
Bulgular: Çalışma sonuçlarına göre tamamlayıcı ve destekleyici tıp uygulamalarının Diyabetes Mellitus tanılı bireylerin (nöropatik ağrı, uyku ve yaşam kalitesi, kaygı, umut, bilişsel fonksiyonlar, kan şekeri düzeyini düşürmek/dengelemek, psikolojik rahatlama gibi) semptomlarında etkili olduğu bulunmuştur.
Sonuç: Tip 2 DM'lu hastalarda akupres, aromaterapi (inhalasyon/koku), refleksoloji ayak masajı), bitkisel tedavi gibi tamamlayıcı ve destekleyici tıp uygulamalarının kullanıldığı sonucuna ulaşıldı. Kullanılan bu uygulamaların; kan şekeri düzenleme, nöropatik ağrı, uyku ve yaşam kalitesi, kaygı, umut, bilişsel fonksiyonlar, psikolojik rahatlama gibi olumlu etkilerinin olduğu saptandı.

Anahtar kelimeler: Hasta, tamamlayıcı ve destekleyici tıp, tez, Tip 2 DM

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Introduction

Type 2 Diabetes Mellitus (Type 2 DM) is a public health problem associated with energy metabolism; carbohydrate, fat and protein management in the organism, which has a significant economic burden and causes premature deaths [1, 2]. Factors such as the development of industrialization in the world, sedentary life, stress, and increased obesity lead to an increase in chronic diseases such as Diabetes Mellitus (DM) [3]. Type 2 DM is seen in approximately 90% of all diabetics [4].

"Type 2 diabetes mellitus is associated with a higher risk of mortality from cardiovascular disease and with increased insulin resistance [5]. Moreover, patients often experience emotional stress and depression, face difficulties in achieving glycemic control, and suffer a decline in quality of life [6, 7]. Failure to achieve glycemic control in DM patients is known to lead to vascular complications affecting large (macrovascular) and small (microvascular) vessels or both. Nephropathy, neuropathy and retinopathy are microvascular complications, while coronary and peripheral artery disease, cerebrovascular disease and heart failure are macrovascular complications [8]. Metabolic control in DM requires a healthy diet, regular physical activity, blood glucose monitoring and regular use of prescribed medications [9]. The increase in the prevalence of DM population and the relationship between decreasing patient and medication compliance lead to the preference of complementary and supportive (CST) non-pharmacologic treatments in addition to pharmacologic treatments for the management of disease complications [10, 11]. Complementary and supportive therapy (CST) practices are based on ancient Chinese and Ayurvedic medicine [12]. Among non-pharmacological methods; diet, exercise, acupuncture, acupressure, reiki, massage, yoga, herbal medicines have been reported to play an important role in lowering blood sugar [13-16]. It is reported that type 2 DM patients use CST at rates ranging from 13.5% to 71.6% [17-19]. When the theses conducted by nurses with master's and doctoral degrees on the use of CST by Type 2 DM patients in the literature are examined; it is seen that there were not enough randomized controlled studies on some CST applications (such as aromatherapy, acupuncture, acupressure, reflexology, massage, yoga, reiki) [19-25]. The analysis of master's and doctoral theses on this subject can reveal the results, prevalence, and effectiveness of CST methods that are applicable to DM patients. It is thought that this scientific research article will help Type 2 DM patients to manage their disease and treatment processes effectively and guide future studies on this subject. Therefore, the aim of this study was to examine master's and doctoral theses on complementary and supportive medicine practices in patients with DM.

Meterials and Methods

Study Design

The data were collected through a literature review. The keywords "Diabetes Mellitus", "complementary", "supportive treatment", "integrative treatment", "nursing","acupressure","massage","aromatherapy", "reflexology", "herbal treatment", "yoga" were searched in the literature and the National Thesis Center database of the Council of Higher Education. As a result of the search, 11 theses written between 1994 and 2023 in the Department of Nursing at the Institute of Health Sciences were identified and the credentials of these theses were obtained [18-25] (Tablo 1).

Study results

Considering the status of the theses according to the distribution types, it was determined that 3 of them were master's theses, 6 of them were doctoral theses (Table 1) and most of them were conducted within the last 2 years (Table 2). The most frequently used complementary and supportive medicine practices in the theses were determined as reflexology (3 theses), acupressure (1 thesis), aromatherapy (inhalation) (1 thesis), and herbal treatment (4 theses), respectively (Table 1).

Table 1. Theses by Distribution Types (n=11)

Types of Theses	n	%
Master's Thesis	4	33.0
Doctoral Thesis	7	67.0
Total	11	100.0

Table 2. Distribution of Complementary and Supportive Medicine Practice Theses with Type 2 DM Patients by Year (n=11)

Years Number of theses	Years Number of theses	%
2012	1	11.1
2015	1	11.1
2018	1	11.1
2020	1	11.1
2022	3	33.4
2023	4	22.2
Total Number of Theses Reached	11	100.0

Among the theses examined, nurses conducting master's and doctoral studies evaluated the effectiveness of different complementary and supportive practices such as acupressure application for pain and sleep quality for different symptoms experienced by patients with Type II DM, aromatherapy (by inhalation) application for cognitive functions, sleep quality and anxiety levels, reflexology application for quality of life, pain severity, hope levels, lowering / balancing blood sugar, psychological relaxation, advice or media information [18-25] (Table 3).

Table 3. Distribution of Theses on Problems Experienced by Type 2 DM Patients and Complementary and Supportive Methods Applied for These Problems (n=11)

Complementary and Supportive Methods	Application Area	Conclusion
Acupressure	Pain (neuropathic)	Effective
Aromatherapy (Inhalation)	Sleep Quality	Effective
Reflexology	Cognitive Functions	Effective
Massage	Sleep Quality	Effective
Herbal Treatment	Anxiety	Effective
Laughter Yoga	Quality of Life	Effective

Type 2 DM and Acupressure

Acupressure applied in patients with Type 2 Diabetes has been found to reduce pain associated with polyneuropathy and improve sleep quality [21] (Table 4).

Type 2 DM and Aromatherapy (Inhalation)

Aromatherapy application (lavender and rosemary inhalation) was found to have a positive effect on cognitive functions, anxiety and sleep quality in diabetic elderly [22] (Table 4).

Type 2 DM and Massage

Geriatric massage applied to individuals with type 2 diabetes was found to reduce diabetes symptoms and improve blood parameters [26] (Table 4).

Type 2 DM and Reflexology

It was found that reflexology massage and foot bath applied to diabetic individuals with neuropathic pain had positive effects on the pain scores and quality of life of patients [23], Foot reflexology applied to diabetic patients with neuropathic pain was found to increase the quality of life and hope levels of patients, [25], and reflexology massage applied for diabetic neuropathic pain was found to reduce the severity of pain and increase the quality of life of patients [27] (Table 4).

Type 2 DM and Herbal Treatment

In the treatment of diabetes, it was found that patients' compliance with treatment and their attitudes towards CST methods were at a moderate level (24), 71.6% of patients with DM used medicinal plants [20], disease duration, treatment status and complication status of patients with DM were not an effective variable in the use of CST, while the use of CST increased in patients with additional chronic diseases and 74.0% of them used herbal treatment [18]. It was found that there was no relationship between CST use and DM attitudes and 67.3% of the patients preferred herbal applications (Table 4).

Type 2 DM and Laughter Yoga

Laughter yoga in patients with type 2 DM was found to lower postprandial blood glucose levels, improves disease perception and reduce stress levels [28] (Table 4).

Table 4. Summary of Nursing Theses on Complementary and Supportive Methods in Type 2 DM Patients (n=11)

Thesis Types Thesis Author Publication Year	Thesis Title	Complementary and Supportive Methods Used	Objective	Methods/Scale Used	Conclusion
Master's Degree Thesis Yakupcebioğlu F.N. 2012	Determination of Complementary and Supportive Treatment Utilization Status of Patients with DM	13.5% used CST and 74% preferred herbal treatment. Reasons for Using CST -Keeping blood sugar under control -Providing psychological relief -Recommendation from patients who have benefited -Information from the media	Diabetes Mellitus (DM) Complementary and Supportive Treatment (CST) use status of patients It was made for the purpose of determination.	✓ Descriptive Study ✓ n=200 Type 2 DM patients ✓ No scale used. ✓ Data Collection Form	Type of DM, duration of disease, treatment status and complication status is not an influential variable was detected. Patients with an additional chronic disease other than DM had TAT methods were found to be more preferred.
Master's Degree Thesis Kaynak I. 2015	Complementary and Supportive Medicine for Patients with Diabetes Mellitus Relationship with Treatment Utilization and Diabetes Attitudes	48.1% of the patients used CST and 48.1% of them 67.3% were found to use only herbal applications. Reasons for Using CST -Lowering/stabilizing blood sugar -Prevent complications of diabetes	This study was conducted to determine the relationship between the use of complementary and supportive therapies and diabetes attitudes of patients with diabetes mellitus.	✓ Descriptive, cross-sectional study. ✓ n=285 patients. ✓ Diabetes Attitude Scale (DAS)	No relationship was found between CST use and diabetes attitudes of patients with diabetes mellitus.
PhD Thesis Topuz S. 2018	Patients with Diabetes Mellitus Complementary and Supportive Treatment Use Status and Healthy Lifestyle Impact on Behavior	It was found that the majority (71.6%) of the patients who stated that they used CST used medicinal plants.	Complementary and supportive treatment of patients with diabetes mellitus to determine the effect of usage status on healthy lifestyle behaviors for the purpose of.	✓ It was a descriptive, correlational and cross- sectional study. ✓ n=1007 patients. ✓ Healthy Lifestyle Behaviors Scale	Duration of DM, DM treatment, duration of DM treatment, information about DM and the reasons for finding this information sufficient and the scores of using CST difference was found to be statistically significant.

PhD Thesis Gündüz Oruç F. 2020	The Effect of Acupressure on Polyneuropathy-Related Pain and Sleep Quality in Type 2 Diabetes Patients	Acupressure	It was conducted to determine the effect of acupressure on pain and sleep quality associated with polyneuropathy in type 2 diabetes patients.	✓ ✓ ✓ ✓	A randomized controlled experimental study with pretest-posttest application. 42 Experimental, 42 Control Group, Total n= 86 patients. "Pain Quality Assessment Scale" "Pittsburg Sleep Quality Index"	Acupressure was found to reduce pain associated with polyneuropathy and improve sleep quality in patients with Type 2 Diabetes.
Master's Degree Thesis Demir E. 2022	Diabetes Patient Compliance with Complementary and Supportive Treatment Investigation of Attitudes Towards	Patients' attitudes towards CST were found to be above the positive intermediate level. Reasons for Using CST -Regulate blood sugar,	Complementary and supportive therapies with patient compliance in diabetes treatment to determine attitudes towards treatment.	✓ ✓ ✓ ✓ ✓ ✓	It was conducted as a descriptive study. It was conducted with N= 150 patients. "Individual Introduction Form"," Holistic Complementary Supportive Medicine Attitude Towards Attitudes Scale (ATAS)" "Patient Compliance Scale for Type 2 Diabetes Treatment (Type 2 DMHAS)"	As a result of this study, it was found that the attitude of the patients was positive and above the moderate level according to the total score of BTATÖ, compliance with Type 2 Diabetes Treatment was at a moderate level, and the variables of education, treatment methods applied to the patients, treatment duration of the patients, the status of receiving information about diabetes and measuring blood glucose regularly affected the scores.
PhD Thesis Can S. 2022	The Effect of Aromatherapy Application on Cognitive Functions, Anxiety and Sleep Quality in Elderly with Diabetes	Aromatherapy (inhalation)	To determine the effect of aromatherapy application on cognitive functions, anxiety and sleep quality in elderly people with diabetes	✓ ✓ ✓	A Randomized Controlled Experimental study. 21 Intervention 1, 21 Intervention 2, 21 Control It was conducted with a total of 63 patients. Lavender Inhalation was applied to Intervention 1 Group and Rosemary	In both intervention groups, statistically significant scores were obtained in post- intervention state anxiety, sleep quality scale total score and sleep quality scale all subcomponent scores compared to the control group. No significant
PhD Thesis Gündüz Oruç F. 2020	The Effect of Acupressure on Polyneuropathy-Related Pain and Sleep Quality in Type 2 Diabetes Patients	Acupressure	It was conducted to determine the effect of acupressure on pain and sleep quality associated with polyneuropathy in type 2 diabetes patients.	✓ ✓ ✓ ✓	A randomized controlled experimental study with pretest-posttest application. 42 Experimental, 42 Control Group, Total n= 86 patients. "Pain Quality Assessment Scale" "Pittsburg Sleep Quality Index"	Acupressure was found to reduce pain associated with polyneuropathy and improve sleep quality in patients with Type 2 Diabetes.
Master's Degree Thesis Demir E. 2022	Diabetes Patient Compliance with Complementary and Supportive Treatment Investigation of Attitudes Towards	Patients' attitudes towards CST were found to be above the positive intermediate level. Reasons for Using CST -Regulate blood sugar,	Complementary and supportive therapies with patient compliance in diabetes treatment to determine attitudes towards treatment.	✓ ✓ ✓ ✓ ✓ ✓	It was conducted as a descriptive study. It was conducted with N= 150 patients. "Individual Introduction Form"," Holistic Complementary Supportive Medicine Attitude Towards Attitudes Scale (ATAS)" "Patient Compliance Scale for Type 2 Diabetes Treatment (Type 2 DMHAS)"	As a result of this study, it was found that the attitude of the patients was positive and above the moderate level according to the total score of BTATÖ, compliance with Type 2 Diabetes Treatment was at a moderate level, and the variables of education, treatment methods applied to the patients, treatment duration of the patients, the status of receiving information about diabetes and measuring blood glucose regularly affected the scores.

PhD Thesis Can S. 2022	The Effect of Aromatherapy Application on Cognitive Functions, Anxiety and Sleep Quality in Elderly with Diabetes	Aromatherapy (inhalation)	To determine the effect of aromatherapy application on cognitive functions, anxiety and sleep quality in elderly people with diabetes	✓ ✓ ✓	A Randomized Controlled Experimental study. 21 Intervention 1, 21 Intervention 2, 21 Control It was conducted with a total of 63 patients. Lavender Inhalation was applied to Intervention 1 Group and Rosemary	In both intervention groups, statistically significant scores were obtained in post- intervention state anxiety, sleep quality scale total score and sleep quality scale all subcomponent scores compared to the control group. No significant

Discussion

Non-adherence to treatment is frequently observed in type 2 DM patients due to min or and major complications caused by chronic disease [29]. In the literature, it is stated that the majority of DM patients show non-adherence to treatment [24, 30]. Improving the quality of life of DM patients is possible by increasing their compliance with treatment. Complementary and supportive medicine practices can be used in combination with pharmacological treatment to improve the quality of life of DM patients, increase their compliance with treatment, and minimize the negative symptoms of the disease and treatment [31-34].

When the thesis studies in the literature were examined; it was determined that acupressure reduced the severity of pain and improved sleep quality in individuals receiving DM treatment (Table 4). Acupressure is a method used to stimulate acupuncture points using hands or fingers with technical or mechanical pressure [33, 35]. It is a traditional Chinese therapy based on the principle of redistributing Qi, the life energy derived from acupuncture, which is believed to accelerate the healing process [35, 36]. It also has the same working principle as Acupuncture by stimulating the 14-meridian system to balance the bioenergy between yin, yang and qi in the body [33]. In addition, acupressure therapy aims to relax the body, balance hormones in the body, increase blood circulation and muscle mobility, strengthen immunity and improve physical health [35]. Acupressure stimulates the release of neurotransmitters that carry signals along nerves or through glands. It then activates the hypothalamus and then the pituitary-adrenal axis to regulate the function of the endocrine gland [36]. When other studies involving the effectiveness of acupressure in Type 2 DM patients are examined in the literature; it is stated that it can lower blood sugar [13], reduce stress and fasting blood sugar [36], and may be effective in reducing glycated hemoglobin [35].

When thesis studies in the literature are examined, it has been determined that aromatherapy improves sleep quality, reduces anxiety levels and positively affects cognitive functions in patients with DM [22] (Table 4). Aromatherapy is one of the complementary and supportive medical practices and nurses are the most suitable professional group to include aromatherapy in healthcare [37, 38]. However, when the literature is examined, it is seen that aromatherapy applications are not sufficiently included in nursing education and care [37-39]. The presence of many theses and reviews on aromatherapy applications in postgraduate nursing education in Turkey shows that the interest in aromatherapy is gradually increasing. In the studies evaluating the effectiveness of aromatherapy in patients with Type 2 diabetes in the literature; It has been stated that lavender aromatherapy lowers blood glucose levels [39], rose aromatherapy and spiritual care-based mindfulness meditation therapy reduces stress and blood pressure [38], Benson relaxation exercise and aromatherapy are effective in lowering glucose levels [40], the use of bitter orange extract inhalation in aromatherapy relieves anxiety and fatigue in patients with Type 2 DM [31], aromatherapy massage with lavender oil helps reduce neuropathic pain and improves quality of life two to four weeks after the intervention, and nurses can use it safely [34], inhaled lavender oil can improve the quality and quantity of sleep, quality of life, and mood of diabetic patients with insomnia, while it has no significant effect on metabolic status [32]. Despite these developments, it is seen that the number of studies on the use and integration of aromatherapy with nursing care practices in the world and in Turkey remains limited [31, 37-39]. Based on the study results; It is thought that aromatherapy can be used as a nursing intervention to improve blood sugar, sleep quality and mood.

When thesis studies in the literature were examined, it was found that reflexology reduced the severity of pain in patients with DM, positively affected their hope levels and increased the quality of life (Table 4). When other studies in the literature were examined, it was found that foot reflexology; it is stated that it may be effective in improving diabetic peripheral neuropathy in diabetic elderly patients and in providing glycemic control (lowering HbA1C and blood sugar [37, 41]. In their studies to verify the effect of the lateral and medial gastrocnemius muscle on electrical muscle activity in patients with type 2 DM and to examine plantar pressure body sway, it was concluded that it affected some variables of within-group plantar distribution and within-group surface Electromyography (EMG) [42]. In another study examining the Effect of Foot Reflexology Technique on Health Outcomes of Diabetic Neuropathy Patients; It was concluded that reflexology was effective in improving the quality of life and neuropathy sensation of diabetic neuropathic patients, reducing blood glucose levels and improving peripheral circulation [15]. Buerger Allen have shown that their exercises can be effective in reducing lower extremity perfusion and pain against Reflexology [43]. It is stated that reflexology applied to the palm pancreas region in patients with type 2 DM is somewhat effective in lowering blood sugar [44]. Based on the study results; It is thought that reflexology has positive effects on individuals with type 2 DM (Table 3) and can be used as a supportive and complementary treatment in addition to the pharmacological treat-

ments of patients.

When thesis studies in the literature were examined; a nursing thesis study examining the effects of reiki on Type 2 DM patients could not be reached. However, a limited number of articles examining the effects of reiki on DM patients were reached in the literature [14, 45, 46].

In their studies, Aprilyadi et al., (2025) stated that they reached the conclusion that reiki therapy reduced anxiety and fatigue in DM patients after 4 weeks [45]. Similarly, in their studies, Aprilyadi et al., (2023) emphasized that reiki therapy provided an average decrease of 15 mg/dl in blood sugar levels in DM patients and that reiki can be applied independently by patients at home [14]. In addition, it was stated that both reiki and Qi-gong therapy techniques were effective in improving negative emotional states such as anxiety, depression and stress in diabetic patients during eight sessions [46]. In line with these results, it may be recommended that reiki be included in the disease management of patients with Type 2 DM.

When thesis studies in the literature are examined; It has been shown that massage is effective in alleviating diabetes symptoms and improving blood parameters (Tables 3 and 4). Massage is defined as the implementation of touch for a planned purpose. Massage involves stimulating manipulations that affect physiological, psychological parameters in the body [47]. One of the main objectives of care in diabetes is to determine the symptoms to ensure glycemic control [29]. When the studies are examined; It is seen that foot and back massage in diabetic patients is effective in alleviating foot symptoms [48], increases their sleep quality and relieves symptoms [49], accelerates foot wound healing and relieves neuropathic pain (Sunarmi, 2021), reduces glucose values [41]. In studies conducted with Type 2 DM patients in the literature; It is stated that 88.0% of the patients used CST, 29.9% of them turned to massage, and the use of CST did not affect their compliance with the treatment [3].

When thesis studies in the literature are examined; it was found that herbal treatment/medicinal plants lower/balance blood sugar in patients with DM, provide psychological relaxation, and that people who benefit and information obtained from social media are recommended (Table 4). The most frequently used method as a type of CST was determined to be 71.6% medicinal plants. When the studies on this subject in the literature are examined; it was found that 27.6%-48.1% of the patients used CST [17, 50-53], the diabetic attitudes of those who used CST did not change, and glycemic control was worse compared to those who did not use due to high HbA1c values [17]. It is important for nurses, who have important roles in diabetes management, to question CST usage status of DM patients and to identify any negative behaviors and inform patients about this issue [53]. As a result of these studies, it is thought that the majority of DM patients use CST applications as herbal methods and dietary support and the purpose of use is to lower blood sugar and reduce the negativities caused by the disease.

When thesis studies in the literature were examined; It was found that Laughter Yoga reduced postprandial blood sugar levels, improved disease perception and reduced stress levels in patients with Type 2 DM [28] (Table 4). Gelotology or the science of laughter; is developing as a complementary medical field. It is stated that laughter yoga has multifaceted physiological and endocrine benefits and is used as a supportive treatment in the management of various chronic diseases [54]. Yoga can be a supportive type of exercise for both Type 2 DM prevention and Type 2 DM patients because the potential superiority of adding yoga intervention to standard treatment and the benefits of yoga on muscle strength and cardiovascular fitness are reported [16, 55]. Kurian et al. (2021) emphasize in their studies that lifestyle changes are important in the prevention of Type 2 DM and disease management [56]. When other studies on Yoga in Type 2 DM patients are examined in the literature; In a systematic meta-analysis study examining the effect of Yoga on oxidative stress; it was stated that it reduces fasting plasma glucose and HbA1C and therefore may be useful in the disease management of Type 2 DM patients as a complementary treatment [57], and in a 12-week laughter yoga intervention study in which 43 individuals with Type 2 DM participated; it was stated that laughter yoga improved glycemic control, provided positive affect and improved sleep duration [58].

Conclusion and recommendations

The conclusion drawn from the study is that complementary and supportive medical practices have clearly become one of the important areas of interest for nursing research in recent years. It can be said that nurses who continue their master's and doctoral educations turn to these practices in their studies in order to relieve symptoms such as pain, insomnia, anxiety, hopelessness, psychological relaxation and increase the quality of life of patients with Type 2 DM. It has been concluded that acupressure can reduce blood sugar levels in patients with Type 2 DM. It has been concluded that foot reflexology helps reduce the severity of neuropathic pain and positively affects the quality of life in patients with diabetic neuropathic pain. Although the effects of aromatherapy have been proven in many studies, it has been determined that randomized controlled studies with a high level of evidence are needed regarding the effects of various symptoms in individuals with DM.

Our recommendations in line with these results; the independent role of nurses is to provide regular training to patients with type 2 diabetes, to investigate the methods of using CAM, to identify risk groups and provide counseling, to routinely perform neuropathic screening, to provide blood sugar control, to increase foot care and neuropathy awareness. It is very important to facilitate the participation of nurses in educational programs for complementary and supportive therapies, including reflexology, aromatherapy, reiki, acupressure, massage, yoga and herbal therapy. Because the participation of nurses can contribute significantly to the advancement of studies in these areas.

Conflict of interest

The author declares that there is no conflict of interest.

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