Patient Experiences using Complementary and Alternative Medicine for Type 2 Diabetes Mellitus in Thailand

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Abstract: The use of complementary and alternative medicine among patients with diabetes is becoming more common. However, knowledge is limited about this in Thailand. This study explored experiences of CAM use in Thai patients with type 2 diabetes. A phenomenological methodology was undertaken in the study. Thirty-one Thai patients with diabetes were interviewed in depth and data were analyzed by Colaizzi’s method. The participants’ experiences were categorized into 3 themes: seeking CAM information from various sources, CAM use patterns, and disclosing CAM use to health care providers. The participants gained knowledge of CAM from family, friends, CAM providers, and multi-media. Importantly they often did not disclose their use of alternative medicines if their health providers did not ask about them. Findings indicate that nurses should foster open communication and create a non-threatening environment where these patients will feel comfortable about CAM conversation. It is imperative that medical staff know about CAM use when other more traditional medicines are prescribed so as to avoid complications.


Keywords: Complementary and alternative medicine, Nursing, Phenomenology, Qualitative, Thailand, Type 2 diabetes mellitus

Introduction

Diabetes mellitus is a major global health problem worldwide. The World Health Organization (WHO)1 reported that type 2 diabetes comprises 90% of people with diabetes worldwide. The International Diabetes Federation2 estimated that by 2040, about 642 million people will have diabetes. In Thailand, the Bureau of Non–Communicable Diseases, Ministry of Public Health, Thailand3 reported that the rate of new patients with diabetes cases per million population has increased from 795.04 in 2010 to 1,032.50 in 2014.

Diabetes is a multifaceted chronic illness that cannot be cured and requires good adherence to medical treatment regimens. The goal of diabetes management is to maximize comfort, reduce symptoms, and avoid complications.4 To achieve these goals, patients must comply with lifestyle changes, such as exercising regularly, maintaining optimal body weight, modifying eating habits, and self–monitoring of blood sugar.5-6 However, maintaining lifestyle changes are not easy. Consequently, some patients with diabetes seek out for complementary and alternative medicine (CAM) for their care practices.7-8
CAM is defined as a group of diverse medical and health care systems and practices and products not considered part of the conventional medicine.\textsuperscript{9} CAM types can be categorized into two categories: natural products and mind and body practices. Natural products are varied and include herbs, vitamins, minerals, and probiotics. Mind and body practices include a large and diverse group of procedures or techniques administered or taught by a trained practitioner, such as yoga, and chiropractic and osteopathic manipulation. Other complementary health approaches that may not neatly fit into either of these two groups are the practices of traditional healers, Ayurvedic medicine, traditional Chinese medicine, homeopathy, and naturopathy.

The prevalence of CAM use among patients with diabetes varies from country to country, depending on CAM definition and study design. For example, the prevalence rate of CAM use among patients with diabetes was 38.1\% in Lebanon\textsuperscript{6}, 51.9\% in Palestine\textsuperscript{10}, 61\% in Taiwan\textsuperscript{11}, 62.1\% in Turkey\textsuperscript{12}, and 62.5\% in Malaysia.\textsuperscript{13} A major concern is that if patients choose to use alternative medicine instead of conventional medicine, their blood sugar level may not be controlled. In contrast, if they decide to use both methods in the same time, the risk of drug reaction or additional complications may occur.\textsuperscript{14-16}

In Thailand, a previous study by Moolasam et al.\textsuperscript{17} reported that the prevalence rate of CAM use among Thai patients with diabetes was 47.8\%. The most common types of CAM used were yoga/exercise (32.8\%), unchanged forms of herbal medicine (29.9\%), and changed forms of herbal medicine (17.8\%). More importantly, the study reported that most patients (64.4\%) who used CAM did not disclose to their health care providers about CAM use. Al–Eidi et al.\textsuperscript{18} reported that factors found to predict CAM use among patients with type 2 diabetes were age above 51 years, unemployment and the participants’ knowledge about the effectiveness of CAM products. Ul Haq et al.\textsuperscript{19} discovered that while most CAM users with diabetes believed that CAM could control their glycemic level, the rate of CAM disclosure to a physician was very low. More interestingly, a previous study by Montross–Thomas et al.\textsuperscript{20} reported that some patients were willing to pay for CAM services in the hospital. These findings may raise questions: Why do these patients make decisions regarding CAM use? What are their experiences of CAM use? Why do they not disclose CAM use to health care providers? All these questions may not be able to clearly answer the previous quantitative research. Therefore, a study explore experiences of CAM use among Thai patients with type 2 diabetes using a qualitative method was needed. The knowledge gained from this study will help to develop the effective interventions for Thai patients with type 2 diabetes using CAM.

**Purpose of Study**

To explore experiences of CAM use among Thai patients with type 2 diabetes, including: sources of CAM information, patterns of CAM use, and patterns of disclosure about CAM use to health care providers.

**Methods**

**Design**

A phenomenological approach was used in this study because its goal is a rigorous and unbiased examination of things as they appear in order to arrive at an understanding of the human consciousness and experience of the phenomena.\textsuperscript{21}

**Participants**

Participants were recruited from primary health care units in the north of Thailand using purposive sampling. The inclusion criteria were: (i) aged over 18 years old; (ii) spoke Thai; (iii) diagnosed with type 2 diabetes at least 1 year; and (iv) had experiences in CAM use.

**Data collection**

The interview guide served as a conversational framework and the observational data were obtained concerning participants’ actions during interviews.
The interviews were audiotaped. The participants were interviewed for 45 to 60 min each. Data were collected from July to August 2015. Broad, open-ended questions were used to open the interviews by focusing the participants on their CAM use experiences. For example, one opening statement was: “What are the CAM methods you use when diagnosed with DM?” “Would you please tell me what these methods look like?” The interviewer then asked questions to solicit individual thought about CAM use. Key questions included: “Could you please describe your experiences using CAM?” and “What factors influenced you to decide which CAM types you use to promote health?” The verbatim data obtained from audiotaped interviews and accompanying field notes taken during and following the participants’ interviews were transcribed.

Data analysis
Data were analyzed by using Colaizzi’s phenomenological method.22 The process began by reading each transcript several times. Then significant statements and phrases pertaining to CAM use experiences were extracted from each transcript. After that, meanings were formulated from the significant statements. Each underlying meaning was coded in one category as they reflect an exhaustive description. Finally, the process of grouping all these formulated meanings into categories that reflect a unique structure of clusters of themes was initiated. After that, groups of clusters of themes that reflect a particularly vision issue were incorporated together to form a distinctive construction of theme.

Rigor and Trustworthiness
Trustworthiness of the study was accomplished utilizing Lincoln and Guba’s concepts23 of credibility, confirmability, dependability, and transferability. Credibility and confirmability were done by member checking. Dependability was established via presentation of adequate data from the participants. For transferability, the study’s design and findings served as an exemplar for others to use when replicating the study in other similar populations.

Ethical considerations
All participants were informed about the research purposes, procedures and their rights, were assured that their information would be kept strictly confidential, and were given the copy of signed inform consent forms. The study protocol was reviewed and approved by the Ethics Committee of Boromarajonani College of Nursing Buddhachinaraj.

Findings

Demographic characteristics
There was a total of 31 participants and the average age was 60.90 years old, with 82.76% female and 17.24% male participants. About 68.96% achieved some or full completion of primary school education. About 48.28% were farmers. Most participants (89.66%) reported less than 10 years since first diagnosis of diabetes mellitus. All were Buddhists.

Participant experiences of CAM use emerged in three themes: seeking CAM information from various sources, CAM use patterns, and disclosing CAM use to health care providers. Description of each theme and its sub–themes follows:

Seeking CAM information from various sources
Regarding seeking data about CAM regimens, participants stated that they had learned from various sources before making decision to use CAM. Those sources of CAM information were categorized into three sub–themes: suggestions from family members and friends, and learning from multimedia (i.e., television or radio), and recommendations from conventional or alternative health care providers.

Suggestions from family members and friends
Most participants reported that they had learned about CAM from their family members and friends. For example, one said that she decided to take herbs because of her younger sister:

When I got diabetes, my younger sister suggested me to take this herb. At first, I took some,
but not every day. However, after I had taken this herb for a while, my blood sugar had not increased. So I decided to continue taking this herb in conjunction with conventional medicines. (Pt. 28)

Another participant said:

My wife’s younger sister-in-law bought this concentrated herbal extract powder for me. She told me that it will help me to treat diabetes and other symptoms, such as muscle ache, fatigue, or numbness. So I have taken it for more than one year. You know, if I didn’t try this one, I might not survive today. I can sleep well, not feel muscle ache, or fatigue. More importantly, my blood sugar levels are not increased. (Pt. 3)

Another used CAM because of her friend’s suggestion, even though she believed that taking herbs may lead to kidney failure:

My friend suggested me to eat eurycoma longifolia jack extract (a flowering plant in the family Simaroubaceae). She said that it can control blood sugar. So I just tried it. I heard that taking herbs may destroy your kidney. However, I just tried it. If my kidney may be affected, I will stop taking this one. That’s all. (Pt. 10)

Learning from multimedia

Radio and television were also identified as sources of knowledge about CAM. For example, three participants explained that they decided to be treated with alternative medicine because of the recommendation of a disc jockey:

At first, I heard about this supplement on the radio. He said that it is a nutritional supplement that can help our body to release energy. So I thought I have to get this one for my health. Then I called him to delivery this product for me. I have taken it for about one year. I feel energized after taking this product. (Pt. 8)

The first time, I heard about benefits of the collagen capsule on the radio. He (the disc jockey) said that it can cure many diseases, including diabetes. So I called him to buy this product. (Pt. 9)

I listened to the radio. DJ said that many types of herbs can cure diabetes. So I tried many Thai herbs. I don’t take only one type, but I have tried various Thai herbal types to control my blood sugar. I think these herbs are helpful as my blood sugar levels did not increase. I don’t have any other diseases. I saw other diabetic patients who have many diseases, such as high blood pressure or high cholesterol, but I don’t. So I think it is because I take these herbs. (Pt. 27)

Similarly, one participant stated that she decided to take herbal medicine because of the suggestion of an alternative doctor on the television.

An alternative doctor in the television said that this herbal medicine will help cure many diseases. I don’t blame conventional medicines. However, after taking the conventional medicines, I feel palpitations in my chest. In contrast, when I took this herbal medicine, I don’t have any problems. (Pt. 29)

Recommendations from conventional or alternative health care providers.

While treated with the Western medicine, some participants went to see alternative medicine providers. For example, two participants stated:

After being diagnosed with diabetes, I went to see an alternative medicine doctor. He asked what was the problem. Then he prepared the alternative medicines for me. I tried it for one year and my blood sugar levels were good. (Pt. 5)
I have learned about benefits of Thai herbs from a monk who knows about Thai herbs. Then I have tried by myself, whether it worked or not. (Pt. 25)

Some participants used CAM because of their health care providers. For example, two participants stated:

At first, I could not control my blood sugar levels. So my doctor suggested me to eat *Momordica charantia* (a tropical and subtropical vine of the family Cucurbitaceae) in conjunction with conventional medicines. He told me that it would help to reduce blood sugar. (Pt. 17)

At that time, my blood sugar level was quite high. So my doctor suggested to take *Momordica charantia* capsules in conjunction to diabetes medicines. It worked well, but I was not sure if my blood sugar decreased too much. You know, my blood sugar level decreased from 153 mg% to be 80 mg%. (Pt. 20)

**CAM use patterns**

The results of the study showed that participants used CAM in 3 different patterns: ceasing CAM if it did not work, CAM expense and negative side effects, and Taking both alternative and conventional medicine.

**Ceasing CAM if it did not work**

Participants would cease using CAM if they felt that it did not work for their health. For example, two participants said:

I bought a solution medicine from a dealer for my diabetes, but it didn’t work well. I felt heart palpitations in my chest. So I decided to stop taking one (Pt. 5).

I used to eat *Momordica charantia* for a while, but it didn’t work well. I still got the same high blood sugar levels. So I decided to stop taking this herb. (Pt. 6)

CAM expense and negative side effects

Some participants did not stop taking CAM, but changed to take other herb products. For example, one participant decided to change type of CAM product due to unaffordability.

I took the collagen capsules for three months. You know it was good. I felt relaxed as my blood sugar was at a normal level. However, the cost was so high. I could not afford it. So I had to stop taking this product and tried another one, called *Houttuynia cordata* Thunb (chameleon plant). It was cheaper. (Pt. 9)

In addition to unaffordability, some participants changed the type of CAM due to fear of negative side effects. For example, one participant said:

At first I took *Momordica charantia* capsules for a while. After that, I changed to take *Curcuma longa* (a rhizomatous herbaceous perennial plant of the ginger family). I heard that taking one type of herb for a long time is not good for your health. You need to consume various types of herbs. (Pt. 19)

**Taking both alternative and conventional medicine.**

Many participants decided to continue taking both alternative medicine and Western medicine as they believed that they both types of medicines could help to control blood sugar levels. For example, two participants stated:

I took this herbal formula in conjunction with conventional diabetes medicines, never stopped taking conventional medicine. I just take this herb as a complement to diabetes medicines (Pt. 19)

I feel comfortable after taking these herbs. You know, when I went to the hospital, my blood test was at a normal level. My blood pressure was good too. I think I will continue to take
these herbs combined with the conventional medicines to control my blood sugar. (Pt. 23)

**Disclosing CAM use to health care providers**

Regarding disclosure of CAM to health care providers, there were two sub-themes: not disclosing to doctor due to fear of blaming or never been asked, and disclosing to doctor as an important person.

**Not disclosing to doctor due to afraid of blaming or never been asked**

Most participants reflected that they never talked to their health care providers about CAM use because they never asked about CAM. For example, one participant said:

*My doctor was just surprised that my blood sugar level and blood pressure level were normal. However, he did not ask if I used to take some forms of herbs or not. So we never discussed about my CAM use.* (Pt. 18)

Some participants were reluctant to tell their health care providers about CAM use because they were afraid to be blamed.

*When my blood sugar level was 45 mg%, my doctor asked if I use herbal medicines. I said “No”. I was afraid he would blame me for doing something crazy.* (Pt. 9)

**Disclosing to doctor as an important person.**

Fortunately, some participants were willing to discuss about how to use CAM with their health care providers due to trust. For example, three participants said:

*I told my doctor that I had taken this herb and he didn’t blame me, but he suggested to take both. So I decide to continue to take them.* (Pt. 3)

*I consulted my doctor every time I change my herb product so that he can suggest me (to me) if it is good or not for my health. You know we do not know about our diseases, but the doctor knows about it. That is why we need to tell the doctor.* (Pt. 17)

*I told my doctor about herbal medicine because he had treated me. He needed to know about this.* (Pt. 21)

**Discussion**

In this study, three themes arose from analysis: *Seeking CAM information from various sources, CAM use patterns, and Disclosing CAM use to health care providers.*

Family members and friends were important persons that influenced the participants to make decisions about using CAM. This finding is consistent with other studies of sources of information about CAM for patients with type 2 diabetes, which found that relatives or family members, neighbors or friends were the main sources of information, followed by media, and health care professionals. This finding might be explained by the fact that in Thai culture, when someone in the family gets sick, family members will take on the role of providing care for the sick person. In addition, the sick person will be surrounded by their friends and neighbors. Thais believed that family members can take better care of the patients than somebody else who is not a family member. Thais also believed that it is their responsibility to help patients in every matter to make them comfortable physically and mentally. In addition, this study showed that multimedia such as radio and television were also reported as a source of CAM information by Thai patients with type 2 diabetes. This finding is consistent with a study by Chang et al., which found that many participants tended to rely on the media for their CAM information sources. Likewise, a study reported that although media provided limited information about the safety of herbal and dietary supplements, media was frequently reported as the
source of CAM information by Thai patients with chronic kidney disease. 79

The study findings demonstrated that other information sources about using CAM reported by the participants were health professionals in conventional settings and CAM practitioners. This finding is consistent with a previous study by Low et al. 26 in which health care providers such as physicians and nurses were important sources of CAM information for patients with diabetes in Malaysia. Similarly, a previous study by Atwine et al. 30 reported that the least mentioned sources of traditional medicine information for persons with type 2 diabetes in South-Western Uganda were nurses and doctors in the professional health care sector.

CAM use patterns

After using CAM for a while, the participants had three patterns of CAM use: stop taking CAM if it did not work, change to other CAM types due to its expensive and fear of negative side effects, and continue to take alternative medicine in adjunction with conventional medicine. These patterns of CAM use may be different individually and it depends on what CAM means to them. A previous study by Sirisupluxana et al. 31 reported that the meaning of complementary therapy as perceived by Thai cancer patients varied as cancer-controlling treatment, mental strengthening, mind and body therapy, self-determination, natural therapy, and conventional therapy integration. This finding is consistent with a previous study by Low et al. 4, which reported that after starting to use CAM, Malaysian patients with type 2 diabetes continued to evaluate the pros and cons and then decided whether to continue or stop using it. If they felt that there was no harm, they would keep using it. Likewise, another study. 32 reported that negative experiences of herbs and dietary supplements influenced Thai patients with chronic kidney disease to stop using them.

Disclosing CAM use to health care providers

We found that participants were more likely to not inform their health care providers about CAM use. This is consistent with a previous survey study by Moolasarn et al. 17 which reported that about 68% of patients with diabetes did not inform their physicians about their CAM use. Similarly, a study 33 reported that patients with diabetes in developing countries combined an intake of medicines along with home remedies without the knowledge of health care professionals. A previous study by Chang et al. 24 which reported that the reasons Taiwanese people with type 2 diabetes gave for not informing their doctors about their CAM use were: (a) that they never thought of it (55.8%); (b) that they feel CAM use is safe, thus there is no need to discuss its use (51.9%); and (c) that healthcare professionals do not ask about their CAM use (22.4%). Likewise, Huri et al. 15 reported that less than 20% of patients with type 2 diabetes in Malaysia declared that their physicians were aware of their CAM use for the treatment of their diabetes.

Strengths and limitations of the study

This qualitative study is one of a few known studies of CAM use in Thai patients with type 2 diabetes. Our findings can lead health care providers to better understand how these patients make decision about CAM use. However, this study was conducted in primary health care units in the north of Thailand. Further research is required to replicate these findings in other parts of Thailand or other countries so that a fuller picture and understanding of CAM use can be discovered.

Conclusion

The findings of this phenomenological study provide additional knowledge in relation to the experiences of CAM use by Thai patients with type 2 diabetes. This study showed that: Thai patients with type 2 diabetes sought out CAM information from various sources, such as family members, friends, multimedia, and conventional or alternative health care providers; They would stop taking CAM or change the CAM type if it did not fit with their health goals; and whether
they would tell their doctors about this depended on their trust relationship with them.

Implications for nursing practice

The major implication of this study is that participants were more likely to use CAM as a complement to conventional treatment without informing their health care providers. Therefore, it is essential that nurses should ask patients about CAM use and provide evidence-based information about efficacy and safety of those CAM remedies. Moreover, since family members were reported as a main source of CAM information for these patients, involving these significant persons in a conversation about CAM use between health care provider and patient will be helpful. In addition, as the potential interaction between alternative medicine and conventional medicine may occur, frequent assessment and evaluation are essential for patients who used CAM in conjunction with conventional medication. In the meanwhile, teaching, training, and researching about CAM should be recognized for nurses. More work to develop a better communication between nurses and patients regarding CAM use is needed. Finally, due to the potential benefits and possible harmful of CAM remedies, a rigorous research design such as randomized control trial to examine the efficacy of CAM treatments that are currently being used by Thai patients with type 2 diabetes is needed.

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References


ประสบการณ์ผู้ป่วยในการใช้การแพทย์ทางเลือกสำหรับเบาหวานชนิดที่ 2 ประเทศไทย

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บทคัดย่อ: การใช้การแพทย์ทางเลือกในผู้ป่วยเบาหวานเป็นสิ่งที่พบโดยทั่วไป แต่อย่างไรก็ตาม ความรู้เกี่ยวกับเรื่องนี้ยังมีข้อจำกัดในประเทศไทย การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อศึกษาประสบการณ์การใช้การแพทย์ทางเลือกในผู้ป่วยที่เป็นเบาหวานชนิดที่ 2 โดยใช้วิธีการวิจัยเชิงปรากฏการณ์วิทยา ผู้ป่วยเบาหวานจำนวน 31 รายถูกเลือกเชิงสิ่งเลือก และวิเคราะห์ข้อมูลโดยวิธีการของโคไลซี ผลการวิจัยพบว่าประสบการณ์การใช้การแพทย์ทางเลือกในผู้ป่วยที่เป็นเบาหวานสามารถแบ่งเป็น 3 แบบ คือ การค้นหาข้อมูลจากแหล่งข้อมูลที่หลากหลาย เช่น บุคคลสัมพันธ์ สื่อและบุคลากรทางสุขภาพ: รูปแบบการใช้แหล่งข้อมูลนี้ไม่ได้ผล เลือกใหม่ในช่วงเวลาหลังการรักษาและการเปิดเผยกับบุคคลที่มีความสุขภาพดี: ไม่เปิดเผยเพราะกลัวจะถูกต้องว่า การเปิดเผยจะส่งผลต่อสุขภาพ การเปิดเผยกับบุคคลที่มีความสุขภาพดี: เลือกใหม่ในช่วงเวลาหลังการรักษาและการเปิดเผยกับบุคคลที่มีความสุขภาพดี: เลือกใหม่ในช่วงเวลาหลังการรักษา


คำสำคัญ การแพทย์ทางเลือก พยาบาล วิจัยเชิงคุณภาพ ประเทศไทย ผู้ป่วยเบาหวานชนิดที่ 2