



Experiences of Patients on Natural Herbal Treatments for Diabetes Mellitus at the Diabetes Clinic in Base Hospital - Matara, Sri Lanka

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Abstract

The prevalence of diabetes mellitus has become a global public health issue. Natural herbal treatments for type 2 diabetes mellitus have been widely used in traditional societies but has recently become popular among western societies as well. The aim of this study was to explore the experience of type 2 patients with diabetes mellitus who are currently on natural herbal treatment. A qualitative, phenomenological design has been used. Twelve participants from both males and females, aged between 25 and 75 years, who were on medical treatment, were selected for sampling. In-depth interviews were conducted at the diabetes clinic in a selected hospital in southern Sri Lanka. The thematic analysis was conducted, and 6 themes were derived. The majority of participants (75%) were motivated to use natural herbal treatments other than oral glycemic therapy. Experiences have been identified as the most influential factors in the use of natural herbal treatments. The need for educational interventions on natural herbal treatments and to propose the integration of herbal medicine into current medical systems is recommended.

Keywords

type 2 diabetes mellitus, natural herbal treatments, patients' experiences

Introduction

Diabetes mellitus (DM) is one of the global public health concerns according to World Health Organization (WHO). (1) Noninsulin-dependent DM (Type II DM) is considered to be the commonest cause for this trend and need optimal control which is still not possible. Persistent hyperglycemia or uncontrolled diabetes has the potential to cause serious complications as well (1,2).

Chaudhry et al (3) reviews that most of the diabetes patients are known to be using herbal medicines with antidiabetic properties in addition to their mainstream drug treatments. This may further develop either a benefit or a potential risk to effective management of their disease (3).

Metformin, sitagliptin, saxagliptin, dulaglutide, glimiperide, glicazide, glyburide and types of insulin such as humulin, novolin, lantus, and lispro are some of the common hypoglycemic agents (4).

Moringa leaves and seeds, soursop leaves, black plums, okra, avocado seeds, lemon grass, aloe vera, and cinnamon are some of the commonly used herbal materials for diabetes (5).

Natural herbal treatments in the treatment and prevention of diabetes have a long history compared to conventional medicine (6). Many patients with DM believe natural herbal treatments over conventional medicine due to higher treatment costs and a large number of side effects of western medicine (7). Ayurvedic treatments recommend multiple herbal-mineral preparations in the treatment of diabetes that can have appropriate characteristics to manipulate risk factors to bring

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physiological homeostasis back into the state of normal equilibrium (8). According to WHO the use of herbal medicines is well established and widely acknowledged to be safer and effective and may be accepted by national authorities as well (1). Hasanzade et al (9) confirms that complementary medicine could be effective for diabetes patients and they effectively decrease blood glucose levels in the human body using different mechanisms that could be helpful in patient care and to enhance the quality of life.

Globally, plant-based medicines are gaining popularity because of safety and effectiveness perceptions (10). Rivere et al (11) demonstrates that there are >400 traditional plant treatments have been reported. The WHO has listed 21 000 plants, which are used for medicinal purposes around the world. Further WHO estimated that 65% to 85% of the world population uses herbal medicines as their primary form of treatment (12). The use of herbal remedies throughout the world exceeds that of conventional drugs by two- to three-folds (13). Diabetes is 1 condition in which herbs are frequently given as they are expected to have a major role in the treatment of the disease (14). There are many herbal remedies suggested for diabetes and diabetes complications as treatments (15). The WHO expert committee on diabetes has recommended that traditional medicinal herbs be further investigated to treat diabetes. According to literature countries like the United States of America, China, Africa, Kenya, India, and Sri Lanka are found to be using herbal medicines in treating diabetes (11,15–20,22).

Sri Lanka is placed among the countries with the highest diabetes prevalence rates in the world (22,23). The rise in the prevalence of diabetes would correspondingly lead to an increase in the number of patients who are seeking treatments in hospitals (22). Sri Lanka, being a lower-middle-income developing country lacks both financial and human resources to manage this increased load of diabetes patients (24). A patient with diabetes needs lifelong care to prevent complications which further impose a significant burden on the country's expenditure on health care (24). There are a lot of oral hypoglycemic drugs and insulin injections available around the world and in Sri Lanka which have a lot of side effects (25). Sri Lanka has a long history of medical traditions and the traditional learning of plant remedies for many diseases including DM, persisting even now (22). Sri Lankan traditional and Ayurvedic physicians are capable of successfully controlling many diseases, including DM with herbal medicine, (22) and 90% of the patients are being treated with herbal plant extracts as dietary remedies to treat diabetes with or without prior advice from a physician (1).

Most people tend to use natural herbs in treating DM and have stated their expectations on them such as easy accessibility, acceptability, availability, and affordability (26). Further to support evidence Ali et al, (27) have pointed out several expectations of diabetes patients about using natural herbs. This was further supported by Ayyanar et al (28). They found diabetes is an inherited chronic disease and it is reasonable to expect that a strong traditional

knowledge of the use of herbs already exists. Most of the participants believed that herbal medicines control and cure DM. They believe that natural herbs are the safest method than western medicine (11). Economic, educational, and cultural influences play an important role in one's understanding and positive experiences on using natural herbs in treating DM (29).

The main aim of this study is to explore the experiences of patients who are undergoing natural herbal treatments for DM. The 3 specific objectives of the study were to identify psychological experiences, identify physical experiences and discuss socio-economical experiences of the patients who are undergoing natural herbal treatments for DM.

Materials and Methods

This is a qualitative phenomenological study. An in-depth interview was used to collect data on patients' experiences on using natural herbal treatments for DM. A sample of 12 participants was selected purposively based on the purposive sampling method from the attendees of the diabetes clinic of the selected hospital.

Both male and female patients between the ages 25 and 75 years were requested to be volunteered. All the patients were being treated for diabetes for over 1 year and were also using natural herbs as medicines in parallel to the drug treatments from the clinic in treating diabetes. Mentally disabled patients, patients with more complicated disease conditions and pregnant women were excluded during the sampling. Data were analyzed using the thematic analysis method. Six main themes were generated from 3 major aspects, psychological, physical, and socio-economical experiences of patients. Voluntary participation was encouraged and informed written consent was taken from every selected participant before commencing an in-depth interview. Interviews were conducted using an interview guide prepared based on 3 identified main aspects. After transcribing and coding, 6 main themes were derived from data as findings.

Results

Six main themes were derived from the experiences of patients as financial constraints, high availability and easy access, family member's encouragement, availability of information through media, favorable attitudes and beliefs on herbs and safety of the body.

Financial Constraints Towards the Usage of Herbal Medicine

Most participants in the study were from remote areas and in low-economic status. Sometimes they happened to spend money to purchase drugs. Cost effectiveness was the reason for a majority of the participants to prefer using natural herbs.

I could buy natural herbs for a cheaper price. I have no money to spend for western medicine

(Participant 2)

I can't go to hospital monthly because of the lack of money

(Participant 1)

High Availability and Easy Access of Herbal Medicine

Patients were aware of the easy availability and accessibility of natural herbs. Most herbal plants were easy to find and prepare. Suitable natural herbs for DM could be found easily from the participants' villages. Some participants could buy herbs from herbal pharmacies or some ayurvedic centers. To buy herbal medicines from these stores, prescriptions were not needed. Hence the participants were in easy access to herbal medicines.

A lot of people preferred to visit these places and get treatment advice from these herbalists or herbal pharmacists.

I can find natural herbs easily from my home garden

(Participant 6)

I bought natural herbs from herbal pharmacy. It is very cheap. Herbalist is a very kind person. He prescribed several herbs for diabetes and the preparation of these medicines are also very easy

(Participant 10)

Family Member's Encouragement Towards the Usage of Herbal Medicine

Participants reported that support from their family members, relatives, friends, and neighbors encouraged them in using natural herbs. Most participants said that they had their family members have played an important role in terms of helping them to use these natural herbs.

My sister also has diabetes mellitus. She always encourages me to add plants and leaves to my diet which are very effective in controlling diabetes mellitus

(Participant 7)

My mother always asks us to eat green leaves as her nutritionist had recommended her to eat them more often

(Participant 6)

Information Availability Through Media

Some were more aware of natural herbs. Details were said to be gathered from different Media. A few participants were interested in using the internet. The majority of the participants watched television programs and listened to radio programs where the programs about DM were being telecasted.

The majority was interested in reading newspaper articles on diabetes and its treatments. Participants were interested to gather information about natural herbal treatments

I always refresh my knowledge using the internet. It helps me to identify my disease condition and it provides me with a variety of details about diabetes treatments

(Participant 11)

I get Sunday newspapers every weekend. Firstly, I read medical articles. I read more carefully about traditional medicine and discussions with ayurvedic doctor's articles. It adds a lot of things to my knowledge about treating diabetes with a natural herbal treatment.

(Participant 5)

Favorable Attitudes and Beliefs on Herbs

Emotional events and changes of the emotional state strongly affects treatments of DM. Natural herbs were more affordable, and some participants believed that they were more effective than western drug medicines at lowering blood glucose level. Participants were afraid of the side effects and complications of western medicines. Participants believed that western medicine damaged their internal organs such as liver, kidney, eyes, and nervous system. These attitudes result due to the lack of beliefs in western medicines among participants. Subsequently, participants started to believe in natural herbs. Most of the participants were using herbs such as thebu (*Costus speciosus*), bittergourd (*Momordica charantia*) and amberella (*Spondias dulcis*) to control their blood glucose and believed that they could lower the blood glucose in the body.

Western medicines and drugs are not good for the kidney and they damage the kidney. So, I am scared to take western medicines and drugs continuously for diabetes. Sometimes I stop taking western medicine and try to control my diabetes with natural herbs for a few days.

(Participant 9)

I eat thebu twice a week as salad. I think it is a really good treatment for diabetes mellitus

(Participant 3)

Physiological Effect on Lowering the Blood Glucose Level

Several participants expressed their physical experiences after taking natural herbs. One of the patients said that she ended up with faintishness, sweating and discomfort after using some of the natural herbs. Some participants stated that they stopped their western medicines for 1 or 2 weeks then they started natural herbs as treatments for DM. They further mentioned that during those periods they experienced hypoglycemic symptoms.

I used to drink kothalahimbatu (*Salacia reticulata*) once per day. Then I experienced faintishness and vertigo. So, it was clear for me that these natural herbs definitely reduced my blood glucose level

(Participant 11)

Discussion

DM is one of the most common metabolic diseases that can be treated with natural herbs. Few of the participants in this study had achieved good control over their disease who were not of high economic status. These financial problems directly affected their treatment. These situations lead them to follow the cheapest methods of treatment available. Because of this situation, people tend to use natural herbs to cure diabetes

Moreover, the availability and easy accessibility of herbs increase the consumption and control of DM. Many people in the current society may feel that they should be more into controlling their own health care since herbal medicine does not require a prescription or a physician visit every time (27). Further evidence was supported by Shang (8) and found out that most of the patients in the community are willing to take herbal medicines mainly due to the availability and easy accessibility. They further explored that the socioeconomic status of the patients has a high impact on diabetes treatments for DM. Most participants using medicinal herbs relived upon the advice of family and relatives. Most of the users were persuaded to use medicinal plants after listening to the positive experiences of others. Senadheera et al (26) stated that influence from family members, friends and traditional healers becomes a main reason among patients to use natural herbs for DM.

Majority of participants revealed that they gather information through newspapers whereas some of them mentioned that watching television and listening to the radio to find information about natural herbs and those details are very important. Abdulrehman et al (20) supported this fact and stated that the information collected through public media helps to increase community awareness of the benefits of herbal treatments for diabetes.

Several participants expressed hypoglycemic symptoms following the use of natural herbs to treat DM. One participant said that he experienced physical symptoms that could lower the blood glucose level. Some studies have experimentally demonstrated the hypoglycemic activity of some plants, such as *Aegle marmelos* and *Anacardium occidentale* (22).

Conclusion

Patients' experience with the use of herbal treatments was identified in 6 themes. Financial constraints, high availability and easy access, encouragement of family members, media availability, favorable attitudes and beliefs about herbs and their physiological effect on lowering blood glucose levels.

Physical experience has shown that most participants experienced dizziness, sweating, and fiendishness due to a lowering

effect of blood glucose levels. Most participants tend to use natural treatments rather than drug treatments because they cost less, the other reason for this is the high availability and easy accessibility of herbal treatments. Most of the participants were motivated to try herbal treatments based on the encouragement and experience of family members. They may have developed their positive attitudes and positive social experiences in the field of herbal medicine and their safety in the body. Besides, psychological experiences such as fear and stress have taken place.

It is therefore recommended that there be an urgent need for educational interventions on herbal treatment in the training of health workers and herbal medicine to be integrated into the conventional medical system.

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Declaration of Conflicting Interests

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

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Ethical Statement

Ethical approval for the study was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Ruhuna, Sri Lanka.

Informed Consent

An interview was conducted among the sample after giving a complete oral explanation as well as a written information sheet to each participant. Informed written consent was taken from all the participants after giving both oral and written information regarding the study.

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Supplemental Material

Supplemental material for this article is available online.

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