

A study to assess the knowledge and reported practice on use of Herbal complementary therapies among patients with type II Diabetes mellitus residing in a selected urban area in Bangalore city

Mrs. Soniyan Naik,

Asst.Professor, Community Health Nursing Dept,
RV College of Nursing, Bangalore-560011
E Mail: Soniya.naik246@gmail.com, Mob;7406120008

Abstract

Diabetes mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health globally. Diabetes is a serious public health concern for a country such as India facing the dual challenge of high population growth and the poor insurance coverage for the majority. A descriptive research design was selected in this study. The study was conducted in selected urban communities at Bengaluru among 133 Type II Diabetes mellitus patients. The demographic data was obtained by using questionnaire. Knowledge questionnaire was administered to assess the knowledge Reported practice assessed by using Likert Scale and open-ended questions. The collected data was analyzed using descriptive and inferential statistics.

In the present study which was conducted among 133 subjects a majority 42 (31.5%) of the subjects were in the age group of 45-54 years; followed by 38 (28.57%) who were 55-64 years, 34 (25.56%) who were 30-44 years, and 19 (14.28) were 65-73 years. Among the study participants 67 (50.4) were females and 66 (49.6) were males with type II diabetes. Based on the knowledge questionnaire, out of 133 subjects 61(50%) reported adequate level of knowledge on herbal complementary therapies (HCTs); 55 (41.4%) had moderate knowledge and 17 (12.8%) had inadequate knowledge regarding use of HCT. The study results also indicate that, despite type II diabetes patients having good knowledge on HCT, they had least knowledge on the effect of HCT. Among 133 subjects 42 (31.5%) reported currently practicing herbal complementary therapy along with modern medication to control sugar of which 22 (52%) were males and 20 (48%) females. In spite of having knowledge rest 91 subjects are not practicing.

The study findings indicate that despite a good knowledge about the HCTs their actual practice is limited and demands a structured awareness program by community health workers to convert HCT knowledge into meaningful real-life applications.

Key words: HCT; CAM; FBS

Introduction

In recent decades, modernization driven lifestyle changes have manifested significant implications to our health and social wellbeing .

Unfortunately, due to bad food habits, physical inactivity, wrong body posture, and disturbed biological clock there is an increasing burden of lifestyle driven chronic diseases such as Diabetes Mellitus.

Based on International Diabetes Federation (IDF) estimates, India had 72 million cases of diabetes during 2017 and is projected to reach 101.2 million by 2030, impacting the health and wellbeing of many of the poorest of the Indian population.

This makes Diabetes mellitus one of the fastest growing threats to public health in almost all major cities of India.

Type 2: People with type 2 diabetes, usually produce their own insulin, but not enough or they are unable to use it properly. This form comprises some 90% of all diabetes cases.

The type II diabetes leads to non-compliance with long term management of type II diabetes resulting in serious negative effects on health systems, individuals, and families.

Community nurses can play a pivotal role in educating patients and encouraging Type II Diabetes patients to manage their disease through the effective use of herbal complementary therapies along with prescribed medications.

Need for the Study:

As per WHO estimates about 80% of diabetes deaths occur in low and middle-income countries and projects that such deaths will double between 2016 and 2030. The disease is now the seventh-most common cause of death in India, up from 11th rank in 2005. In 2015, 3,46,000 people died of diabetes alone, accounting for 3.3% of all deaths that year. Prevalence of diabetes in Bengaluru was 12.33% and of pre-diabetes was 11.57% during 2015 (as per a research paper on Journal of Family Medicine). Typically in India 90% of all diabetes among older adults is type 2 and can

potentially be treated with alternate therapies with recommended medications.

In the past few decades, relatively large numbers of clinical trials have been conducted in the Asian region to evaluate effectiveness/ hypoglycemic effects of common herbs such as cinnamon, fenugreek in diabetic patients and health volunteers. The results from some of these clinical trials with type 2 diabetic patients support the claim that herbal complimentary therapy have positive hypoglycemic effects.

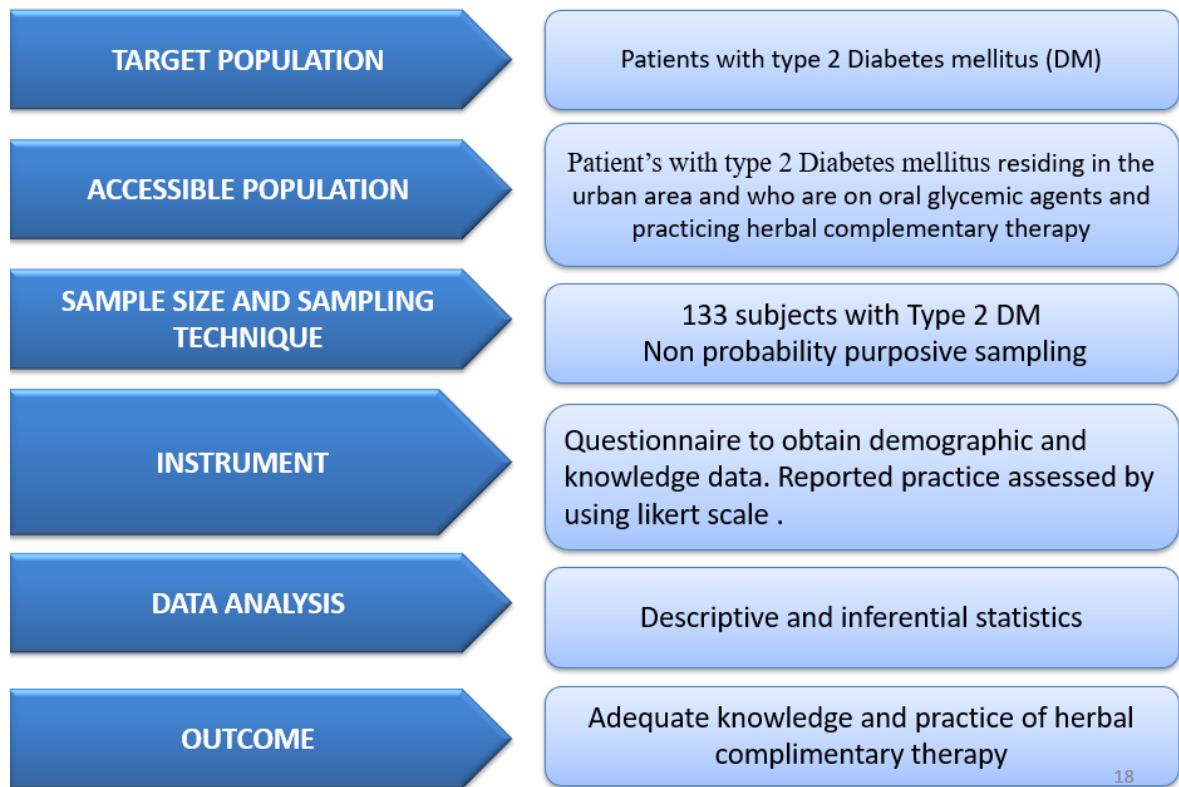
Objectives of The Study:

- To assess the knowledge on herbal complementary therapies among patients with type 2 Diabetes mellitus
- To assess the reported practice on use of herbal complementary therapies among patients with type 2 Diabetes mellitus
- To assess the correlation between knowledge and reported practice of patients with type 2 Diabetes mellitus regarding herbal complimentary therapy.

Hypotheses:

- **H₁:** There will be a significant correlation between the knowledge and reported practice scores of patients with type 2 DM on use of herbal complimentary therapy
- **H₂:** There will be a significant association of knowledge with selected baseline variables
- **H₃:** There will be a significant association of reported practice regarding use of herbal complimentary therapies with selected baseline variables.

Research Methodology:



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Conceptual framework:

The conceptual framework used in this study is developed on the basis of revised Pender's Health Promotion Model.

Organization of findings:

SECTION A: Description of baseline variables

SECTION B

- a. Findings related to knowledge of type II DM patients regarding herbalcomplementary therapy
- b. Findings related to reported practice of herbal complementary therapy among type II DM patients

SECTION C

- a. To assess correlation between knowledge and reported practice of type IIDiabetes patients regarding herbal complementary therapy.

SECTION – I: Description of Baseline Variable**Table 1(a): Distribution of Type II Diabetes patients according to their baseline variables**
n=133

Sl.No.	Baseline Variables	Frequency (n)	Percentage (%)
1	Age in years		
	30-44	34	25.56
	45-54	42	31.5
	55-64	38	28.57
	65-73	19	14.28
2	Gender		
	Male	66	49.6
	Female	67	50.4
3	Religion		
	Hindu	51	38.3
	Muslim	42	31.6
	Christian	40	30.1
4	Type of Family		
	Joint Family	59	44.36
	Nuclear Family	66	49.62
	Extended Family	08	06.02
5	Education Status		
	Primary	40	30.08
	High School	36	27.07
	Intermediate	38	28.57
	Graduate	12	09.02
	PG	07	05.26
6	Occupation		
	Business	15	11.28
	Clerical	7	7.52
	Farmer	5	3.76
	Professionals	18	13.53
	Semi-Skilled Worker	25	18.80
	Skilled Worker	13	9.77
	Un-skilled Worker	47	35.34
7	Family household income per month		
	Lower Middle Class	7	5.26
	Middle Class	40	30.08
	Upper Middle Class	28	21.05
	Upper Class	58	48.61

SECTION – II:

1. Findings Related to Knowledge of Type II Diabetes Patient Regarding Herbal Complementary Therapy (HCT)

Table 2 (1.a): Knowledge score of total 133 Type II Diabetes patient regarding HCT
N=133

Variable	Observation	Median	Standard Deviation	Range
Knowledge	133	10	2.31	4-14

Table 2 (1.b): Frequency and Percentage Knowledge score based on categories
n=133

Knowledge	Frequency (n)	%
Adequate Knowledge ($\geq 75\%$)	61	45.9
Moderate Knowledge (51% - 74%)	55	41.5
Inadequate Knowledge ($\leq 50\%$)	17	12.8

Above table shows that among 133 Type II Diabetes patients 61 (45.9%) had adequate knowledge and 55 (41.4%) had moderate knowledge regarding use of HCT. Among the subjects about only 17 (12.8%) had poor knowledge regarding the use of HCT.

Findings Related to Reported Practice of Herbal Complementary Therapy Among Type II Diabetes Patient

Table 2 (2.a) Reported practice of herbal HCT among Type II Diabetes patients
n=42

Variable	Observation	Median	Median (%)	Range	Inter-quartile Range
Practice	42	12.50	39.06	4-25	7-21

Table 2(2.b): Frequency and percentage of practice score
n=42

Practice	Frequency (n)	%
Regular	8	19
Occasionally	21	50
Rarely	13	31

The above table depicts that 50% of Type II Diabetes patients' occasionally practice HCT.

Figure 2©: Distribution of subjects by types of HCTs

n=42

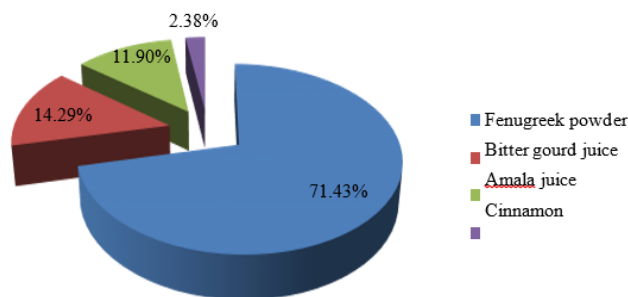


Fig 4: Shows that 30 (71.4%) of the subjects used fenugreek powder; 6 (14.2%) bittergourd juice; 5(11.9%) amala juice; and only used 1 (2.3%) cinnamon. Rest 91 subjects are not practicing.

Section – III: Correlation Between Knowledge And Reported Practice of Type2 Diabetes Patients Regarding Herbal Complementary Therapy

H₁: There will be a significant correlation between the knowledge and reported practicescores of Type II Diabetes Patients on use of herbal complementary therapy

Table 3: Correlation between knowledge and practice of Type IIDiabetes patients regarding herbal complementary therapy

Variable	Observation	Median	Inter-quartile Range	R	P Value
Knowledge	6-13	10.0	9-11	0.435	0.004
Practice	4-25	12.5	7-21		

This table shows that there is negative correlation between knowledge and practice of Type II Diabetes patients

Findings of The Study

The result of the study showed that among 133 Type II Diabetes patients 61 (45.9%) had adequate knowledge and 55 (41.4%) had moderate knowledge regarding use of HCT.

Among the subjects about only 17 (12.8%) had poor knowledge regarding the use of HCT. Among 133 subjects 42 subjects reported practice of herbal HCT with Median % 39.06. Among 42 subjects 50% of type II Diabetic Mellitus patients occasionally practice HCT. There is negative correlation between knowledge and reported practice for HCT among type II diabetic patients.

Recommendations

- A similar study can be replicated in rural setting.
- The patients who are newly diagnosed with Diabetes mellitus can be educated on use of HCT by health workers.
- A comparative study can be undertaken to compare the findings of the rural and urban Diabetes.

Conclusion:

Diabetes is fast gaining the status of a potential epidemic in India which demands a holistic approach both at individual and community level to create awareness about preventive measures, healthy lifestyles, and complementary therapies and natural remedies beyond costly medications to control sugar levels to prevent adverse events in the long-term. As there are evidences of type II Diabetes Mellitus being controlled with proper attention towards diet and elements in diet like herbal supplements or well-known medicinal spices, patients should be educated and encouraged to manage their disease through the effective use of herbal complementary therapies along with prescribed medications

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