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Utilization of Traditional Medicines among Diabetic Patients in Pyuthan Municipality, Nepal

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ABSTRACT

Introduction: Diabetes Mellitus is a non-communicable disease caused by a variety of causative factors, along with a variety of treatment options. Traditional medicine(TM) is entirely based on indigenous knowledge. Modern health care is primarily supported and administered by the public sector but is still not accessible to remote residents. Therefore, traditional healing approaches are carried out with one's efforts, knowledge, and skills. Thus, the main aim of the study was to assess the utilization of traditional medicine among diabetic patients in Pyuthan municipality, Nepal.

Methods: Descriptive cross-sectional study was conducted among 212 diabetic patients of selected wards of Pyuthan municipality after the ethical approval from the Institutional Review Committee. The study area was selected using a simple random sampling technique whereas the respondents were selected using snowball sampling. Data was collected using an interview-guided self-administered questionnaire directly from the diabetic patients after informed consent. The collected data was entered and analyzed through SPSS version 20.

Results: Nearly half of the 212 respondents (47.2%) were TM users, with the majority (95%) following the Ayurveda system of TM, owing to the fact that TM has no side effects (90 %). TM users were found to be using it along with conventional medicine (69%) without informing doctors (89.9%).

Conclusions: Traditional medicine is in increasing trend throughout the globe. Almost half of the respondents were found to be TM users which was due to no side effects of TM. However, system-based traditional healing practices should be followed with the consultation of doctors or other health personnel.

Keywords: *Diabetic patients; Nepal; Traditional medicine; Utilization.*

INTRODUCTION

Diabetes mellitus is a non-communicable disease caused by a variety of causative factors, along with a variety of treatment options.[1] In 2012, 1.5 million people died from diabetes.[2] Along with allopathic treatment, most people also turn to alternative or traditional medicine to control and treat this disease.[3] Patients with diabetes were found to use TM 1.6 times more frequently than patients without diabetes for several reasons.[4] Diabetic patients' continued reliance on traditional medicine is associated with the high cost of treatment, low response to treatment, and distrust of health care institutions.[3]

Though traditional medicine is in increasing trend throughout the globe, this area remains the most neglected one in the field of research and survey. Thus, the main aim of this research was to identify the utilization of traditional medicine among diabetic patients in the Pyuthan municipality, Nepal.

METHODS

A descriptive cross-sectional study was conducted among 212 diabetic patients at selected wards of Pyuthan Municipality (Ward no. 3, 4, and 7) after the ethical approval of the Institutional Review Committee

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of Nobel College(Ref no. EOPH349/2021). Informed consent was taken from the participants before the conduction of the study.

Diabetic patients of both genders above the age of 18 years were included in the study whereas pregnant women, those who were pre-tested, and those who were not interested to participate were excluded from the study.

Sample size calculation

The calculation of the sample size was done by using the statistical formula;

$n = z^2pq/d^2$

$= (1.96)^2 * 0.85*(1-0.85)/ (0.05)^2$

$= 3.84*0.13/0.0025$

$= 199.68$

$= 200$

Where, z= confidence interval at 95% (standard value of 1.96)

p= 84.9% (Prevalence from the study conducted in Iran [5])

q= 1-p

d= allowable error at 5% (0.05)

Considering 10% as a non-response rate, the sample size was 220. However, for the selection of the respondents this study used a snowball sampling method so, the final sample size was 212. Similarly, the study area or wards (Ward no. 3, 4, and 7) were selected through a simple random sampling technique.

A semi-structured questionnaire in a simple understandable language with a self-interview schedule was developed. The independent variables in the study were age, gender, marital status, ethnicity, educational status, occupation, family income, health insurance. The questionnaire was divided into three parts where part I consisted of questions related to socio-demographic characteristics, part II consisted of questions related to Diabetes, and part III consisted of questions related to the utilization of traditional medicines. It was prepared in both Nepali and English languages. After the collection of data, it was checked for completeness and consistency. The collected data was then edited, organized, coded, and entered into SPSS version 20 for analysis.

RESULTS

Out of the total respondents, almost half of the respondents (47.2%) were TM users. The majority of respondents (90%) reported using traditional medicine due to no side effects of TM. Likewise, the majority of participants (92.6%) were not satisfied with the conventional method of medicine which was the major

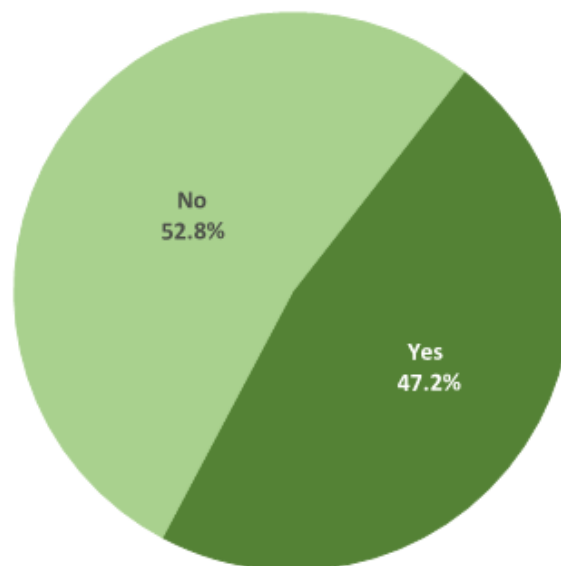reason behind choosing traditional medicine (Table 1).

Figure 1: Utilization of Traditional Medicine (n=212)

Table 1. Utilization of Traditional Medicine

Utilization of Traditional Medicine	n(%)
Reason for TM use (n=100)*	
Due to easy availability and accessibility	84 (84.0)
Due to low cost for TM	88 (88.0)
Due to traditional belief towards TM	89 (89.0)
Due to dissatisfaction with conventional therapy	18 (18.0)
Suggested by doctors	5 (5.0)
Due to no side effects of TM	90 (90.0)
Reason for not using TM (n=112)*	
Never heard of it	20(18.5)
No belief towards TM	47(43.5)
More expenses	2(1.9)
Satisfied with conventional medicine	100(92.6)
Not suggested by doctor	94(87.0)

*multiple response

Table 2 represents that out of total respondents, the majority (45.3%) of the respondents were of age group 39-59 years. More than half (55.2%) of the respondents were male. The majority (81.1%) of the respondents were married and about one-third of participants (33%) were from Chettri ethnic group. Hinduism (99.5%) was the most followed religion of the majority of participants. Data on the educational status of respondents revealed that a majority (81.1%) were literate and agriculture (31%) was the major occupation of participants. Likewise more than half of the respondents (59.4%) had family monthly income of less than NPR. 22,000.

Table 2. Socio-demographic characteristics (n=212)

Socio-demographic Characteristics	n (%)
Age(in years)	
19-39	19 (9.0)
39-59	96 (45.3)
59-79	95 (44.8)
79<	2 (0.9)
Gender	
Male	117 (55.2)
Female	95 (44.8)
Marital Status	
Married	172 (81.1)
Unmarried	1 (0.5)
Widow	39 (18.4)
Ethnicity	
Brahmin	36 (17.0)
Chhetri	70 (33.0)
Janajati	61 (28.8)
Dalit	45 (21.2)
Religion	
Hindu	211 (99.5)
Muslim	1 (0.5)
Educational Status	
Illiterate	40 (18.5)
Literate	172 (81.1)
Occupation	
Agriculture	66(31.0)
Business	53(25.0)
Government job	52(24.5)
Private job	9(4.5)
Jobless	16(7.5)
Others	16(7.5)
Family Income(NPR)	
Less than 22000	126 (59.4)
More than 22000	86 (40.6)

Table 3 shows the diabetes-related information about the patients. Among the total respondents, a majority (62.7%) of the respondents had been diagnosed with DM for less than 77 months. About 70.3% of the respondents had no family history of DM. More than two-third proportion of participants (76.4%) had oral hypoglycemic drugs. Likewise, only 22.6% of respondents had complications of diabetes mellitus, and more than one-third (37.7%) proportion of participants had health insurance.

Table 3. Diabetes Mellitus related characteristics (n=212)

Characteristics	Frequency (%)
DM duration in a month (n=212)	
Less than 77 months	133 (62.7)
More than 77 months	79 (37.3)
Family history of DM (n= 212)	
Yes	63 (29.7)
No	149 (70.3)
DM medication (n=212)	
Oral Hypoglycemic Drugs	162 (76.4)
Insulin	2 (0.9)
Both	14 (6.6)
No medication	34 (16.0)
DM complication (n=212)	
Yes	48 (22.6)
No	164 (77.4)
Health insurance (n=212)	
Yes	80 (37.7)
No	132 (62.3)

Table 4 shows the respondents' information about traditional medicine. The majority (70%) of all respondents have used TM for less than 14 months. Among the various TM methods, a vast majority (95%) of TM users practiced the Ayurveda system, while more than half (54.7%) of TM users among the various forms of Ayurveda used plant products. The majority (78%) of TM users cited family and friends as sources of information for using TM. More than two-thirds of the respondents (76%) stated the purpose of TM use was to control blood glucose. About 69% of TM users were using conventional medicines along with TM. Among them, only 10% of the respondents had disclosed the use of TM to their doctors and regarding the reason for not informing doctors, the majority of TM users (62.9%) responded that they were not asked by doctors. Likewise, more than one-third (38%) found TM very useful and the majority of participants (78%) responded that they would use TM in the future while exactly two-thirds of participants (75%) acknowledged that they would recommend TM to others.

Table 4. Traditional medicine related characteristics among diabetic patients (n=100)

Characteristics	n (%)
TM duration in month (n=100)	
Less than 14 months	70 (70.0)
More than 14 months	30 (30.0)

Characteristics	n (%)
TM methods (n=100)*	
Ayurveda	95 (95.0)
Yoga/meditation	7 (7.0)
Food supplements	3 (3.0)
Form of Ayurveda (n=95)*	
Herbal products	20 (21.2)
Powder	33 (34.7)
Juice or syrup	6 (6.3)
Tablets	10 (10.5)
Plant products	52 (54.7)
TM source of information (n= 100)	
Family and friends	78 (78.0)
Medias	17 (17.0)
Health professionals	5 (5.0)
Specific purpose for TM use (n=100)	
To cure diabetes	22 (22.0)
To control blood glucose	76 (76.0)
To control diabetic complications	2 (2.0)
TM along with conventional medicine (n=100)	
Yes	69(69.0)
No	31(31.0)
Informed to doctor (n=69)	
Yes	7(10.1)
No	62(89.9)
Reason for not informing doctor (n=62)	
Not needed	10(22.6)
Not asked by doctor	39(62.9)
Negative attitude of doctors towards TM	9(14.5)
Usefulness of TM (n=100)	
Very Useful	38 (38.0)
Limited useful	31 (31.0)
Not sure/unable to access	15 (15.0)
No useful at all	16 (16.0)
Use TM in future (n=100)	
Yes	78 (78.0)
No	18 (18.0)
Not decided	4 (4.0)
Recommend others (n=100)	
Yes	75 (75.0)
No	25 (25.0)

*multiple response

DISCUSSION

Our study reported that 47.2% of diabetic patients were using TM which is similar to the result presented by the study in the United Arab Emirates which reported that about 40% of patients were (Complementary and Alternative Medicine)CAM users.[6] Among the TM users we found out 95% of total respondents in our study followed the Ayurveda system however, a similar study conducted in a tertiary care hospital in India revealed contrasting results where only 44.5% of the CAM users followed the Ayurveda system.[7] The difference might have arisen due to different study settings.

Our study reported that only one-fifth of respondents (21.1%) used herbal products containing roots and bark. Contrary to our findings, a similar study conducted at the Civil hospital's diabetes clinic and the National Institute of Diabetes in Karachi, Pakistan found 46.7% of herbal users.[8] Likewise, a study conducted at a diabetes center in Lalitpur, Nepal found that 48.3% of respondents used TM on the recommendation of family and friends.

Additionally, a study conducted at the Kerman Diabetes Clinic found that 69% of TM users were satisfied with the complementary medicines, and 70% of users said they would recommend TM to others. The percentage of respondents who would recommend others to use TM was similar to our study, ie. 75%, but it is contrasted with the percentage of TM users satisfied with TM i.e. 25%.[9]

Similarly, a study conducted in Teaching Hospital in Ethiopia found that the majority of the respondents (87.1%) did not disclose their use of diabetes herbs to doctors.[10] This finding is similar to our study with 89.9% of the respondents not disclosing it to doctors.

CONCLUSIONS

Traditional medicine is in the increasing trend throughout the globe. Almost half of the respondents were found to be TM users which was due to no side effects of TM. Among different methods of TM, the majority of respondents were practicing the Ayurveda system. However, system-based traditional healing practices should be followed with the consultation of doctors or other health personnel.

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