"Health Seeking Behaviour among Hypertensive and Type -2 Diabetic Patient Regarding Alternative Medicine Care Services in Selected District"

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ABSTRACT

Background: The act of seeking medical attention plays a critical role in determining treatment outcomes. The increasing global burden of non-communicable illnesses has made it more crucial than ever to understand patient preferences. People seek AMC for a variety of reasons such as side effects, dissatisfaction and a desire for more. Patient-centered care is necessary to address the diverse needs and preferences of patients, and effective integration of alternative medicine into conventional healthcare systems. The aim of this study was to explore the health-seeking behavior of hypertensive and type-2 diabetic patients towards alternative medicine care services in selected districts.

Methodology: This prospective study was conducted at the Hypertension and Research Centre in Rangpur, Bangladesh. A convenient sampling technique was used to select the participants.1000 patients aged 18 and above who were diagnosed with hypertension and administered antihypertensive medication following an initial evaluation. All hypertension patients who visited the Hypertension and Research Center between March 1st and October 31st, 2023 were included in this study, with a 9-month follow-up period after registration.

Results:1000 participants were included and interviewed. Majority (44.8%) belonged to 46-60 years. Here about 51% were female,63.8% lived in rural area, most (27.4%) of them were educated up to secondary level. About 46.1% respondents were housewife followed by 17.7% were service holder. The most common comorbidity reported 17.4% had BEP then IHD (16.7%) and DM (14.6%). Maximum (63.9%) took their drug regularly & 65.7% were come for regular follow-up. About 48.3% respondents do not exercise. Only 36.1% used AMC. We found a higher utilization of homeopathy (47.64%) where 42.39% took AMC regularly & 21.33% use of AMC occasionally.

Conclusions: We identified sex, age, and education as predictors of AMC utilization. Periodic surveys are important to monitor population-level AMC use. Use of government-sponsored health surveys may enhance robustness of population-based estimation. It is recommended to plan and implement various Information, Education and Communication (IEC) activities in the study area to increase the level awareness to stick with mainstream treatment & reducing AMC seeking behavior.

Keywords: health-seeking behaviors, type 2 diabetes mellitus, health seeking.

INTRODUCTION

The act of seeking health care, particularly for those with long-term medical illnesses such as type 2 diabetes and hypertension, is crucial in determining treatment outcomes and patterns of healthcare consumption. Understanding patient preferences and options surrounding alternative medicine   care services has become increasingly   important   as   the   worldwide   burden   of   non-communicable illnesses continue to climb. This has attracted the attention of researchers, legislators, and healthcare practitioners alike. In order to shed insight on the attitudes, motives, and experiences of patients with hypertension and type 2 diabetes, this article was examined how they seek out alternative medicine care services within particular districts[1].

Complementary and alternative medicine (CAM), another name for alternative medicine, is a broad term that refers to a variety of therapeutic modalities, such as herbal medicines, traditional practices and dietary supplements. The decision-making process around the integration of alternative medicine services into the entire healthcare regimen is still intricate and multidimensional, even with the growing availability and consumption of these services[2].

People's decisions to seek care from alternative medicine practitioners are influenced by a variety of factors, such as cultural norms, perceived effectiveness, accessibility, financial concerns, and contentment with traditional medical services. Furthermore, research indicates that patients with chronic illnesses frequently turn to complementary or alternative therapies in addition to traditional treatments. These decisions are made in response to various factors, including perceived side effects, discontent with existing therapies and a desire for a more all-encompassing approach to health care[3].Comprehending the intricacies of health-seeking behavior pertaining to alternative medicine care services among patients with type 2 diabetes and hypertension is imperative in order to educate healthcare legislation enhance patient-provider communication and improve overall treatment outcomes. This study intends to add significant insights to the body of knowledge by investigating the preferences and experiences of patients in particular districts. This was aid in the development of focused interventions and strategies to meet the various healthcare needs of people with chronic conditions[4].

The activities people do to keep themselves healthy or seek medical attention when they are unwell are referred to as health seeking behavior. To effectively construct healthcare services that meet the needs of patients with hypertension and type 2 diabetes, including care using alternative medicine, it is imperative to comprehend their health-seeking behavior. The current research on hypertension and type 2 diabetes patients' health-seeking behavior is reviewed in this literature review with particular attention to the patients' views and preferences for alternative medicine care services[5].

Furthermore, a systematic review by Harris et al. (2019) examined studies from various countries on health seeking behavior among hypertensive and diabetic patients. The review found that while many patients used conventional treatments, a substantial number also sought alternative medicine care services often due to perceived effectiveness or cultural beliefs. The review highlighted the importance of integrating alternative medicine into mainstream healthcare systems to better meet patients' diverse needs[6].

Furthermore, a study conducted in 2020 by Iddrisu et al. examined the health-seeking behavior of individuals with type 2 diabetes and hypertension in Malaysia and discovered that perceived efficacy, affordability, and accessibility were important influences on patients' decisions to seek out alternative medicine care services. The study emphasized how crucial it is to give patients thorough information and assistance on various treatment options[7].

Overall, the research to date indicates that patients with type 2 diabetes and hypertension frequently show a desire to consider complementary and alternative medicine care options in addition to traditional therapy. In this sense, cultural attitudes, perceived efficacy and accessibility are important variables influencing patients' health-seeking behavior. Addressing patients' varied needs and preferences requires patient-centered care and the integration of alternative medicine into traditional healthcare systems.

METHODOLOGY

This prospective study was conducted at the Hypertension and Research Centre in Rangpur, Bangladesh. A convenient sampling technique was used to select the participants.1000 patients aged 18 and above who were diagnosed with hypertension and administered antihypertensive medication following an initial evaluation. All hypertension patients who visited the Hypertension and Research Center between March 1st and October 31st, 2023 were included in this study, with a 9-month follow-up period after registration. The primary endpoint was the satisfaction of the criterion for dropout from follow up. A structured prepared questionnaire was used to investigate age, gender, level of education, occupation, smoking status, duration of hypertension at admission into the study, co-morbidity, complications of hypertension, and causes of dropout throughout the follow-up period. The dropout patients were interviewed over the telephone to determine causes of dropout from follow

up. After approval from the ethic committee, the study was explained to all the patients and written informed consent was taken in each subject.

Selection Criteria: The nature and objective of the study was described in detail. Throughout the duration of the investigation, secrecy was maintained. Detailed instructions for completing the questionnaire were developed.

a. Inclusion requirements

- Those who were mentally and physically active participate voluntarily.
- Hypertensive patients of both sexes with or without co-morbid conditions such as diabetes, cardiovascular disease, chronic kidney disease, dyslipidemia, aneurysm, etc.

b. Exclusion requirements

- Patients who had an illness such as mental, emotional etc.
- Those who were not willingly participate.
- Women who were pregnant or nursing.

Data Collection Procedure: Interviews were conducted with a subset of participants from the Hypertension and Research Centre in Rangpur to acquire data. In order to capture data, a pre-tested questionnaire was utilized in a face-to-face interview. Before commencing the investigation, written consent was obtained. Initially, participants were informed of the purpose of the study and its specific procedures. They were given a written agreement that their data would not be shared. For the purposes of maintaining confidentiality and anonymity, each participant was assigned a unique identification number. After conducting the interview in Bangla, it was translated into English. The data was encoded and stored in a secure cabinet in written format. Only research personnel were permitted access to the data. The information could only be accessed for research purposes.

Data Management and Analysis

After completing the data collecting questionnaire, a database was created using any statistical software, with SPSS 26 being used. The respondent's data was collected and manually checked for gaps or contradictions. Data was rechecked prior to analysis once it had been submitted. Using descriptive statistics, each variable's mass values and any anomalous values in the data set were identified. The errors were then repaired with a physical copy of the questionnaire and, if necessary, by contacting the responder. After addressing all of these concerns, the data was ready for final analysis. For categorical data, frequency and percentage determinations were employed, whilst mean and standard deviation (for symmetric data) were utilized for quantitative data. For asymmetric data, median and interquartile range were used. PSS version 26 was use for analysis.

RESULT

The mean age was 51.20 ± 12.03 and the youngest and oldest participants was 18 & 88 years respectively. Out of 1000 respondents most (44.8%) were between 46-60 years of age followed by those who were between 31 to 45 years of age (30.5%) and who were between 61 to 75 years of age (18.7%). Among 1000 respondents who participated in this study, about 51% were female and 49% were Male. So, male female ratio was almost 1:1. Majority (63.8%) of respondents were lived in rural area followed by about 26.4% lived in urban area. Only (9.8%) lived in sub urban area. Out of 1000 respondents most (27.4%) of them were educated up to secondary level followed by illiterate (20.1%), primary (15.9%), higher secondary (11.5%), graduate (10%) and post-graduate (9.7%). Among 1000 respondents 46.1% respondents were housewife followed by 26.5% were service holder, 12.1% were businessmen and 11.7% were agricultural workers.

Among 1000 participants only 25.4% had family history of Hypertension followed by Cardio-vascular disease (23.2%) and Diabetes mellitus (23%). About 14.2% had no family history of diseases. About 48.3% respondents do not exercise (30min walking) and out of 1000 respondents about 19.8% & 32% walk for 30

min in a day regularly & irregularly respectively. Out of 1000 respondents only 29.4% lived sedentary lifestyle. About the distribution of Mean Systolic & Mean Diastolic blood pressure of the study subjects. The mean SBP was 160.66 ± 21.14 mmHg and the mean DBP 100.38 ± 3.95mmHg and mean HbA1c level was 6.9 ± 1.3 %. Regarding the respondents' distribution of the duration of hypertension. Most (50.3%) of the respondents has hypertension for 5 to 10 years followed by 33.5% (>10 years) & 16.2% (<5 years). distribution of the respondents by their Drug intake (in known HTN & DM) and follow up. Among 1000 respondents maximum (63.9%) took their drug regularly (in known hypertensive & DM patients and about 65.7% were come for regular follow-up out of 1000 respondents.

Table:01: Distribution of the respondents by their age group

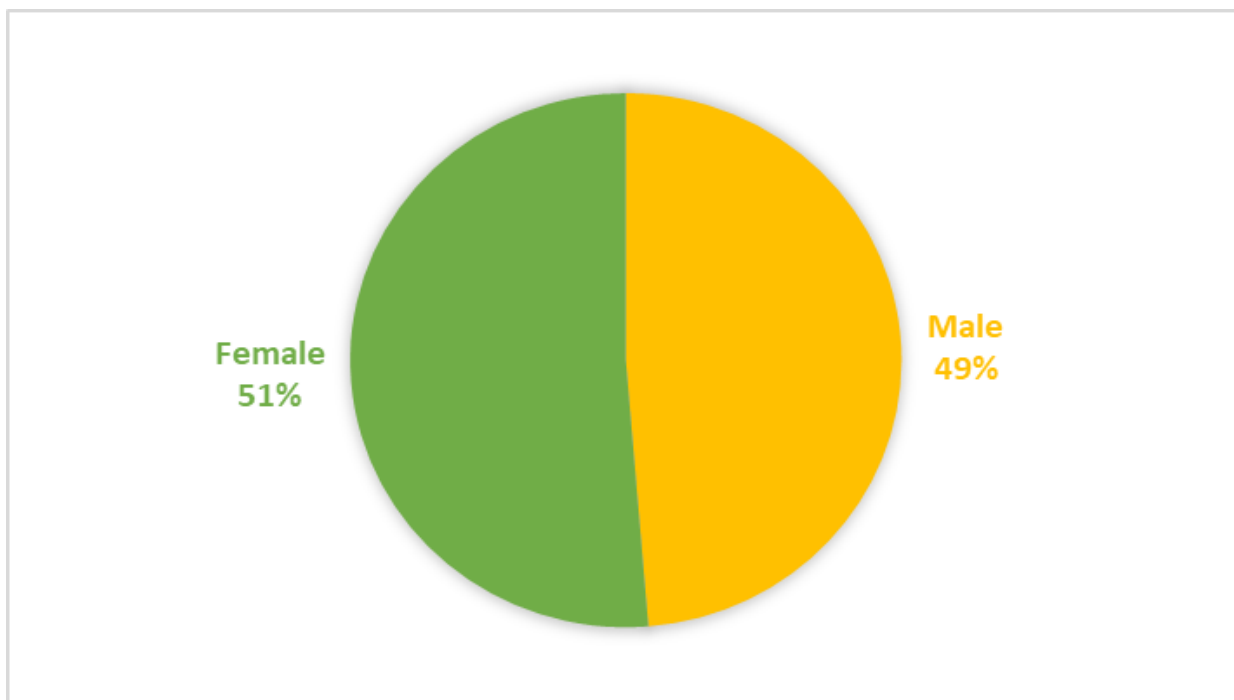| Age group	Frequency	Percentage (%)
≤30 years	36	3.6
31-45	305	30.5
46-60	448	**44.8**
61-75	187	18.7
≥76	24	2.4
Total	1000	100
Mean & SD	51.20 ± 12.03	
Minimum	18	
Maximum	88	

Figure no 1: Distribution of the respondents by Sex

Table:02: Distribution of the respondents by their residence

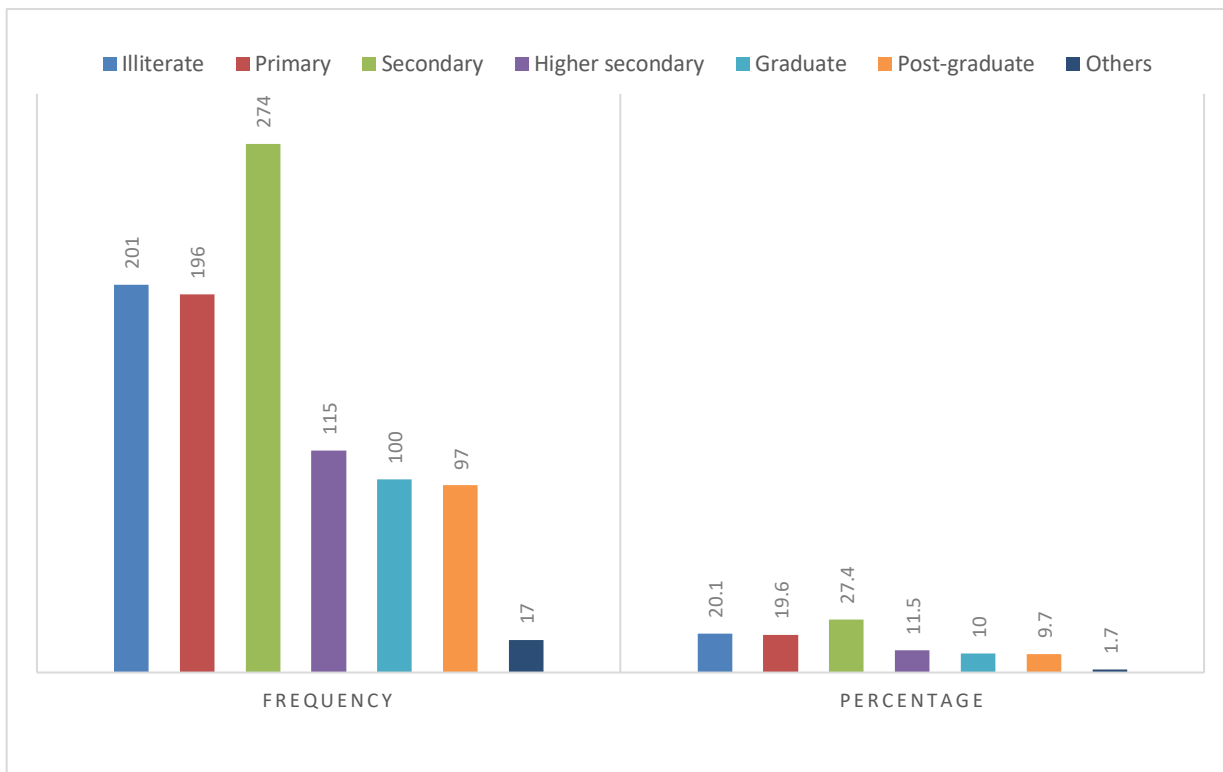| Residence	Frequency	Percentage (%)
Urban	264	26.4
Rural	638	**63.8**
Sub urban	98	9.8
Total	1000	100

Figure no 2: Distribution of the respondents by their Level of education

Table:03: Distribution of the respondents by their Occupation

Occupation	Frequency	Percentage (%)
Service	177	17.7
Business	121	12.1
Agriculture	117	11.7
Housewife	461	**46.1**
Teacher	37	3.7
Student	7	.7
Unemployed	10	1.0

Retired	60	6.0
Others	10	1.0
Total	1000	100

Table 04: Distribution of the participant by their Family H/O

Family history	Frequency	Percentage (%)
Hypertension	254	**25.4**
CVD	232	23.2
MI	52	5.2
Sudden death	38	3.8
DM	229	22.9
Others	53	5.3
No Family history	142	14.2
Total	1000	100

Table:05: Distribution of the respondents by Exercise 30 min walking

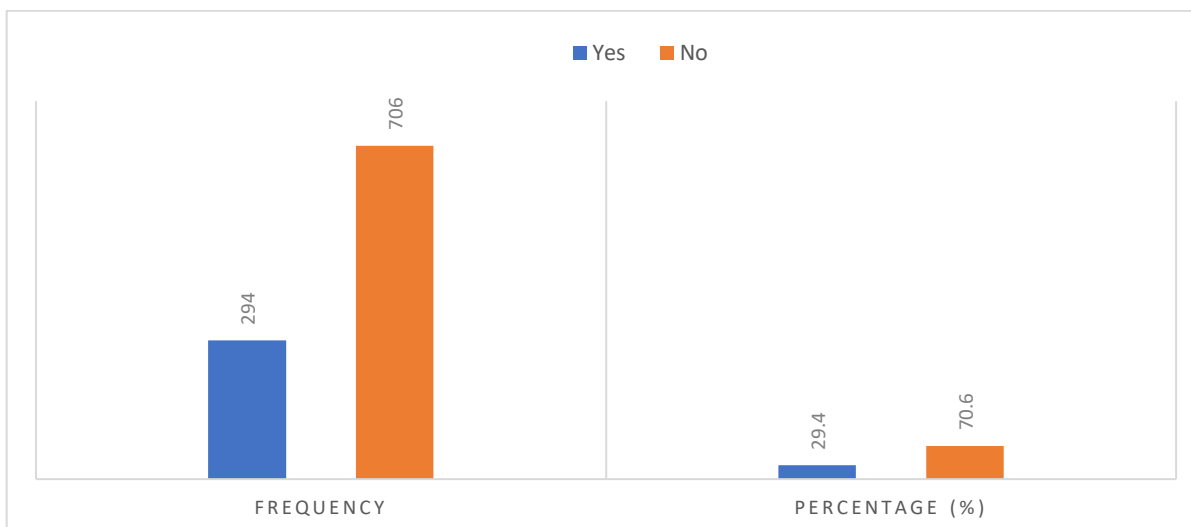| Exercise 30 min walking	Frequency	Percentage (%)
Regular	198	19.8
Irregular	319	31.9
No	483	**48.3**
Total	1000	100

Figure no 3: Distribution of the respondents by their Sedentary life style

Table:06: Distribution of Mean Systolic & Mean Diastolic blood pressure and HbA1c level of the study subjects

Parameters	Mean
Systolic BP	160.66 ± 21.14
Diastolic BP	100.38 ± 3.95
HbA1c level	6.9 ± 1.3

Table:07: Distribution of the respondents by their Duration of Hypertension (Years)

Duration of Hypertension (Years)	Frequency	Percentage (%)
<5	162	16.2
5 to 10	503	**50.3**
>10	335	33.5
Total	1000	100

Table:08: Distribution of the respondents by their Drug intake (in known HTN & DM) and Follow-up

	Regular	Irregular	Total
Drug intake (in known HTN & DM)	639 (63.9%)	361 (36.1%)	1000 (100%)
Follow up	657 (65.7%)	343 (34.3%)	1000 (100%)

Table:09: Distribution of the respondents by following diet plan

Following the diet plan	Frequency	Percentage (%)
Yes	627	**62.7**
Irregular	137	13.7
No	236	23.6
Total	1000	100

Table:10: Distribution of the participants by their Comorbidity

Comorbidity	Frequency	Percentage (%)
Asthma	91	9.1
DM	146	14.6

CLD	23	2.3
Pregnancy	15	1.5
COPD	62	6.2
Dyslipidemia	54	5.4
BEP	174	**17.4**
IHD	167	16.7
LVH	52	5.2
CKD	13	1.3
Stroke	38	3.8
PAD	24	2.4
Retinopathy	19	1.9
Others	25	2.5
No comorbidity	97	9.7
Total	1000	100

Table:11: Distribution of the respondents by their Alternative Medicine Care

Alternative Medicine Care	Frequency	Percentage (%)
Yes	361	36.1%
No	639	**63.9%**
Total	1000	100

Table:12: Distribution of the respondents by Types of AMC they used (n=361)

Types of AMC	Frequency	Percentage (%)
Ayurvedic	116	32.13
Unani	73	20.22
Homeopath	172	**47.64**
Total	361	100

Table:13: Distribution of the respondents by Frequency of AMC (n=361)

Frequency of AMC	Frequency	Percentage (%)
Regular	153	**42.39**
Occasional	77	21.33
Previous	131	36.29
Total	361	100

Above table shows distribution of the respondents by following the diet plan. Most (62.7%) of the respondents follow the diet plan but out of 1000 respondents only 13.7% follow the diet plan irregularly. Regarding distribution of the participant by their Comorbidity. Among 1000 participants about 17.4% had BEP followed by IHD (16.7%) and DM (14.6%). Above table shows distribution of the respondents by their Alternative Medicine Care. Majority (63.9%) of respondents had no Alternative Medicine Care, only 36.1% used AMC. Above table shows distribution of the respondents by types of AMC they used. Out of 361 respondents who took Alternative Medicine Care, most (47.64%) of them took Homeopath followed by Ayurvedic (32.13%) & Unani (20.22%). Above table shows distribution of the respondents by Frequency of AMC. Out of 361 respondents who took Alternative Medicine Care, about 42.39% took AMC regularly followed by previous history of taking AMC (36.29%) & occasional use of AMC (21.33%).

DISCUSSION

The purpose of the study was to find out how patients with type 2 diabetes and hypertension sought out alternative medical care. Every participant with hypertension expressed a shared concern about their future health: the possibility of developing diabetes. The results of the current study indicated that, of the 1000 participants, the majority (44.8%) were between the ages of 46 and 60, with a mean age of 51.20± 12.03. In a related study, the majority of participants (44%) were older than 65[8]. Similar findings were found in another cross-sectional study, which revealed that the majority of participants (66%) who use complementary and alternative medications were between the ages of 40 and 59[15]. The male to female ratio in the current study was nearly 1:1 (49% & 51%), however in a study that was similar, the ratio was 1:2 (33.7% & 66.3%)[9].

In East Azerbaijan, a cross-sectional survey was conducted, and out of the 1139 respondents, the majority (88%) lived in an urban area[9]. In the current study, the majority of respondents (63.8%) were housewives, roughly 46.1% were from rural areas, and the majority of respondents (27.4%) had only completed secondary education. Comparably, another study carried out in Western Jamaica revealed that while the majority of respondents (78%) were unskilled, the majority (52%) had completed secondary, college, or university education[10]. In an additional survey, the majority (79.8%) were unemployed or retired, whereas roughly 34.9% had completed high school[11].

In this study among 1000 participants only 25.4% had family history of Hypertension and about 23% had Diabetes mellitus. In a related study, people who utilized complementary and alternative medicine (CAM) made up roughly 22.7% of the urban Nigerian community with a family history of hypertension[12]. In community-based cross-sectional descriptive research of 109 participants, nearly half (46.8%) reported a family history of diabetes, among patients diagnosed with DM in an urban Pondicherry area[11].

Regarding comorbidities, of the 1000 patients in the current study, approximately 17.4% had BEP, followed by IHD (16.7%) and DM (14.6%). In a comparable study on diabetes, out of 825 patients, roughly 46% also had hypertension, roughly 28% also had ischemic heart disease, 10% also had cancer, and just 7% had both COPD and diabetes[8]. In a related study, out of 1139 participants, the majority (76.1%) had co-occurring conditions[9].In a related study by Chen Y et al., 562 subjects with hypertension and diabetes had mean SBP, DBP, and HbA1c

values of 138.0 ± 17. mmHg 4, 82.8 ± 9.3 mmHg, and 6.9 ± 1.3%, respectively[13]. The study's average SBP was 160.66 ± 21.14 mmHg, average DBP was 100.38 ± 3.95 mmHg, and the average HbA1c level was 6.9 ± 1.3%. In both investigations, the mean HbA1c level was almost the same.

According to the present majority (63.9%) of respondents didn't use alternative Medicine Care, only 36.1% used AMC and those who used Alternative Medicine Care, most (47.64%) of them took Homeopath followed by Ayurvedic (32.13%) & Unani (20.22%). Among 361 Alternative Medicine Care used about 42.39% took AMC regularly followed by previous history of taking AMC (36.29%) & occasional use of AMC (21.33%). Herbal medicine listed first among CAM methods used by participants with hypertension (72.1%) in a similar cross-sectional study on patients with type 2 diabetes mellitus and hypertension conducted in Western Jamaica. Other CAM methods that participants with HTN used included diet modification (46.6%), exercise (40.1%), nutritional supplements (15.4%), relaxation techniques (9.3%), spiritual healing (6.5%), and manual techniques (0.8%). Herbal medicine accounted for 65.9% of all CAM methods reported for T2DM; it was followed by dietary changes (52.9%), physical activity (41.2%)[10]. A maximum of 91.8 percent of the 237 respondents had ever utilized modern medication, and 122 (47.2 percent) were doing so at the time. Of those surveyed, over half (144) (56.2%) had previously utilized alternative medicine, and over one in four (28.6%) currently doing so. Of those who were taking alternative medications at the time, half were just doing so to treat their hypertension. Herbal medicines were the majority of the alternative medication used, according to 73/74 (99%). 99 individuals (38.4%) with hypertension were not getting any kind of medication, modern or alternative[14].

CONCLUSION

This study's findings emphasize how critical it is to comprehend how people with type 2 diabetes and hypertension seek out alternative medical care. The results emphasize how important it is for medical professionals to understand and respect patients' preferences and options when it comes to receiving care, including alternative therapies. Future studies ought to concentrate on examining the results, safety, and efficacy of alternative medicine interventions in the treatment of chronic illnesses, as well as methods for incorporating them into traditional healthcare delivery systems. Overall, this study highlights the significance of patient-centered approaches in healthcare delivery and offers insightful information about the intricate dynamics of healthcare decision-making among patients with chronic diseases.

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