REVISTA O MUNDO DA SAÚDE

Factors associated with the use of Complementary and Integrative Practices by hypertensive and diabetic patients

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Abstract

Complementary and Integrative Practices (CIPs) are used by hypertensive and diabetic patients and contribute to the quality of life of this population. The dissemination of knowledge about CIPs can contribute to expanding the offer of these services and providing a more comprehensive health care. The aim of this study was to identify the prevalence and factors associated with the use of CIPs by hypertensive and/or diabetic patients. This was a cross-sectional survey. 124 individuals who identified themselves as having hypertension and/or diabetes and living in the city of Rondonópolis, MT, participated in this study. Data were collected in the respondents' homes and logistic regression models were used for data analysis. The prevalence of the use of CIPs was 22.22%, with medicinal plants being the most used practice (71.43%). The majority (66.44%) of respondents used CIPs as indicated by family members. The use of CIPs was associated with education (PR: 0.35; 95%CI 0.14 – 0.89) and anxiety (PR: 4.4; 95%CI 1.34 -14.43). Hypertensive and diabetic patients with a higher education are less likely to use CIPs and those with anxiety are more prone to these practices. The data point to a reduced prevalence of use of CIPs and the need to expand the offer of integrative practices to the population.

Keywords: Complementary therapies. Chronic disease. Prevalence, Health.

INTRODUCTION

Complementary and Integrative Practices (CIPs) are known as traditional and alternative medicine, which include therapeutic approaches that encourage natural mechanisms for disease prevention and health recovery through effective and safe technologies[1]. The proposal of CIPs comes with the idea of complementation, expanding access to health actions from the perspective of comprehensive care, which involves the multiple dimensions of public health problems and of people[2].

In Brazil, the CIPs were incorporated into the Unified Health System (UHS) through Ordinance GM/MS No. 971, of May 3, 2006, which deals with the National Policy on Complementary and Integrative Practices (NPCIP)[2]. Currently, NPCIP includes 29 practices, including homeopathy, medicinal plants, herbal medicine, traditional Chinese

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medicine (body practices and acupuncture), social thermalism, art therapy, ayurveda, biodance, circular dance, meditation, music therapy, naturopathy, osteopathy, chiropractic, reflex therapy, reiki, shantala, integrative community therapy, yoga and anthroposophical medicine, Laya Yoga and TRE® (Tension and Trauma Releasing Exercises)[3].

Systemic Arterial Hypertension (SAH) and Diabetes Mellitus (DM), Chronic Non-Communicable Diseases (CNCDs), are considered public health problems of great magnitude[4]. The population of people with DM in Brazil is estimated at 13 million and the country occupies the 4th position in the world ranking. Between 2006 and 2017, data from the Chronic Disease Surveillance by Telephone Survey showed an increase in cases of the disease of 54% among men and 28% among women, highlighting the increase in people over 65 years of age[5]. SAH affects 32.5% (36 million) of adult individuals and more than 60% of the elderly, contributing directly or indirectly to 50% of deaths from cardiovascular disease in the country[6]. DM and SAH, together with their complications, have a high impact on the loss of work productivity and family income[7].

The use of CIPs in health systems is recommended in order to expand therapeutic options to complement the conventional treatment of CNCDs. Being of a continuous, humanized, and integrated nature, they are a recommended strategy within the main lines of care of the Ministry of Health, such as care for people with chronic diseases, especially DM and SAH[8]. Data on the prevalence of using these practices in hypertensive and diabetic patients are scarce in the national and international literature. Information related to this theme can contribute to the expansion of technical-scientific knowledge about the CIPS, subsidize the adoption of strategies that seek to expand the offer of these services, especially in the UHS, as well as strengthen the NPCIP. In this context, the objective of this study was to identify the prevalence and factors associated with the use of CIPs by hypertensive and/or diabetic patients.

MATERIALS AND METHODS

This was a descriptive quantitative study with data on hypertensive and/or diabetic patients who participated in the survey "Use of Complementary and Integrative Practices by Professionals and Users of the Unified Health System in a Municipality in the State of Mato Grosso", conducted with adults (20-59 years old) and elderly individuals (≥ 60 years old) residing in the urban area of the municipality of Rondonópolis, MT. The study was approved by the Research Ethics Committee of the Federal University of Mato Grosso, CAAE: 74021417.8.0000.8088; respecting all ethical aspects of research with human beings, in accordance with Resolution No. 466/2012.

The probabilistic sample of the survey corresponded to the population aged 20 years or over, with an unknown prevalence of 50%, a confidence level equal to 95%, a sampling error of 5%, and an expected proportion of 0.50.

The sampling process was carried out in clusters, divided into two stages: census sector and household. In the first stage, 37 census sectors were drawn with a probability proportional to size, expressed by the number of households in each of them, according to the Brazilian Institute of Geography and Statistics. In the second stage, a systematic sampling of households was drawn from each census sector, based on the list of households previously enrolled. In households with more

than one individual present at the time of data collection, random numbers were drawn.

For the present study, all household survey participants who informed a diagnosis of hypertension and/or diabetes were considered, which resulted in 124 individuals, where 83 were hypertensive, 9 were diabetic, and 32 were both hypertensive and diabetic.

Data were collected through home visits from January to March 2018. A semi-structured form-type instrument was used, consisting of questions related to sociodemographic and clinical aspects and the use of CIPs. To ensure standardization in data collection, the researchers received training on how to approach the participants and how to record information on the form, as well as a pre-test of the questionnaire with 20 individuals in census sector not sampled for the study. The objective of the research was explained to each participant, making it clear that their participation was voluntary. The researcher read each question on the form aloud and recorded the answers in a standardized way. All research participants signed the Informed Consent Form.

The dependent variable of the study was the use of self-reported CIPs. The 2017 NPCIP was considered which includes the following modalities: acupuncture, homeopathy, medicinal plants and phytotherapy, social thermalism/crenotherapy, anthroposophical medicine, art therapy, ayurveda, biodanza, circular dance, meditation, music therapy, naturopathy, osteopathy, chiropractic, reflex therapy, reiki, shantala, integrative community therapy, and yoga[9].

The independent variables were divided into the following categories: sociodemographic (age, gender, education, marital status, self-reported color, work status and income) and clinical (overweight, depression, anxiety, stroke, arthritis, hypercholesterolemia, and polypharmacy).

The collected data were tabulated in Microsoft Excel 2013. Statistical analysis was performed using the R program. Logistic regression models were developed to verify the impact of independent variables on the dependent variable, with an estimated prevalence ratio (PR) and range of confidence. To verify the degree of significance of each coefficient of the logistic equation, including the constant, the Wald test with 95% significance was used. It was verified whether each estimated parameter is significantly different from zero (testing the hypothesis that a given coefficient is null).

RESULTS

Among the research participants, 53.23% were 60 years old or more, 72.58% were female, 55.64% had up to 8 years of education, 61.29% had a partner, 46.77% considered themselves brown, 71.58% did not work (retired or were not in the labor market), and 68.55% had a monthly income of up to 2 minimum wages.

The analysis of the clinical profile of the studied population showed that 33.87% were overweight, 11.29% had depression, 41.13% had anxiety, 5.65% had heart attack history, 16.13% had arthritis, 30.65% had hypercholesterolemia, and 13.71% declared polypharmacy.

The results of the logistic regression analysis are shown in Table 1 and Table 2. Regarding sociodemographic characteristics, higher education level was negatively associated with the use of CIPs (PR: 0.35; 95%CI 0.14 – 0.89); that is, individuals with more than 8 years of schooling are less likely to use CIPs. As for clinical characteristics, it was observed that self-reported anxiety was a factor strongly

associated with CIPs (PR: 4.4; 95%CI 1.34 -14.43). Individuals who reported having an anxiety disorder were more likely to use CIPs. The other variables studied did not show a significant association.

The prevalence of CIP use among hypertensive and/or diabetic patients was 22.22% (n=91). A frequency of 66.44% of respondents claimed to use CIPs according to family recommendations, 18.05% by health professionals, and 6.94% by choice. The professionals who indicated the use of CIPs were physicians (78.57%), pharmacists (14.29%), and physiotherapists (7.14%). Among the most used CIPs, medicinal plants (71.43%) and homeopathy (16.48%) stood out. Table 3 describes the CIPs used by hypertensive and/or diabetic patients.

Table 1 – Association between use of Complementary and Integrative Practices and sociodemographic variables of hypertensive and/or diabetic patients. Rondonópolis, Mato Grosso, 2018.

Variables	Gross PR (IC95%)	Adjusted PR (IC95%)	P* value
Age			
20 to 59 years old	1.00		
≥ 60 years old	0.96 (0.47 – 1.96)	0.72 (0.21 – 2.5)	0.604
Sex			
Male	1.00		
Female	1.57 (0.71 – 3.48)	1.09 (0.33 – 3.67)	0.884
Education			
Up to 8 years old	1.00		
More than 8 years	0.45 (0.22 – 0.93)	0.35 (0.14 – 0.89)	0.027
Marital Status			
With partner	0.98 (0.47 – 2.04)	1.07 (0.4 – 2.88)	0.889
Without a partner	1.00		
Color			
White	1.00		
Brown	0.89 (0.42 – 1.91)	0.56 (0.18 – 1.77)	0.322
Black	1.59 (0.48 – 5.27)	2.48 (0.4 – 15.34)	0.327
Works			
Yes	1.00		
No	1.13 (0.51 - 2.51)	0.7 (0.23 – 2.15)	0.535
Income in minimum wages			
Up to 2	1.74 (0.81 – 3.75)	2.36 (0.73 – 7.65)	0.152
More than 2	1.00		

PR: prevalence ratio; 95%CI: 95% confidence interval; *Wald test for the logistic regression model

Table 2 – Association between the use of Complementary and Integrative Practices and clinical variables of hypertensive and/or diabetic patients. Rondonópolis, Mato Grosso, 2018.

Variables	Gross PR (IC95%)	Adjusted PR (IC95%)	P* value
Overweight			
Yes	1.1 (0.51 – 2.33)	1.13 (0.37 – 3.44)	0.834
No	1.00		
Depression			
Yes	1.34 (0.42 – 4.27)	0.48 (0.09 – 2.57)	0.39
No	1.00		
Anxiety			
Yes	2.13 (1.01 – 4.5)	4.4 (1.34 – 14.43)	0.015
No	1.00		
Heart Attack			
Yes	1.87 (0.35 – 10.01)	0.52 (0.04 – 6.2)	0.603
No	1.00		
Arthritis			
Yes	2.47 (0.84 – 7.31)	2.4 (0.44 – 13.17)	0.315
No	1.00		
Hypercholesterolemia			
Yes	1.6 (0.72 – 3.53)	1.52 (0.47 – 4.87)	0.48
No	1.00		
Polypharmacy			
Yes	1.88 (0.62 – 5.71)	0.8 (0.12 – 5.2)	0.817
No	1.00		

PR: prevalence ratio; 95%CI: 95% confidence interval. *Wald test for the logistic regression model

Table 3 – Complementary and Integrative Practices used by hypertensive and/or diabetic patients. Rondonópolis, Mato Grosso, 2018.

CIP	n	%
Medicinal plants	65	71.43
Homeopathy	15	16.48
Herbal Medicines	6	6.59
Acupuncture	3	3.30
Integrative community therapy	2	2.20

DISCUSSION

CIPs promote positive impacts on the health of people with chronic diseases and encompass the psychological, physical, and emotional dimensions[10]. In this study, the prevalence of the use of CIPs in hypertensive and/or diabetic patients was 22.22%. A similar result was found in a study in the city of Curitiba, PR, where the use of CIPs was 20.7% among hypertensive patients[11]. High prevalences were found in Palestine, where 87.5% of hypertensive patients used at least one type of CIP. The high adherence to CIPs observed in this country is probably due to the encouragement of these practices within health services[12]. Nationally, scientific productions that assess the use of CIPs in public health are still incipient, especially among hypertensive and diabetic patients. Therefore, the need for more structured research on this topic becomes clear, providing greater encouragement for professionals in relation to health promotion in a more comprehensive way by aggregating the CIPs within the therapeutic plans, especially for hypertensive and diabetic patients.

Data analysis showed that individuals with a higher education have a lesser chance of using CIPs, this result may be related to the fact that the use of medicinal plants was the complementary therapeutic resource most cited by respondents. Previous research has described the relationship between the use of medicinal plants and lower education[13,14]. A household-based epidemiological survey in 63 municipalities in the state of Minas Gerais found that lower education was significantly associated with the use of medicinal plants in diabetic patients[13]. The relationship between the low level of education and the greater search for plant species may reflect a search for more economical alternatives for the treatment of diseases[14]. Furthermore, it is common for people with less education to have greater knowledge about natural resources due to more contact time and because they depend on local natural resources for their livelihood[15].

Different from our results, international studies carried out in Malaysia with people with chronic diseases and in the United States with self-declared hypertensive and/

or diabetic individuals verified that having a high school or higher education offers greater chances of using CIPs than having only an elementary education[16, 17]. These differences may reflect disparities between social and cultural patterns and possible motivations for the search for alternative methods of health care.

Anxiety is a common disorder among patients with SAH and DM and can influence treatment adherence and quality of life within this population. In addition, their psychological changes also generate physiological effects that can lead to diabetic decompensation and coronary complications[18]. Having an anxiety disorder was a factor associated with the use of CIPs in the studied population. People with common mental disorders use CIPs more often than the general population[19]. Youngstedt and Kripke state that although there is a wide variety of therapeutic approaches available for managing anxiety in chronic patients, they may prefer the use of CIPs due to the adverse effects or lack of response with medications, or simply a preference for this approach[20].

In general, CIPs help to alleviate psychological symptoms as they seek to treat the individual as a whole and consider that there is a mutual influence between organic and emotional imbalances. These aspects can result in an improvement in the biomedical indices that demonstrate the control of the underlying disease, reinforcing the holistic perspective defended by the NPCIP in the field of health[10].

The most used CIPs were medicinal plants, homeopathy, and herbal medicines. Mantovani et al. verified in a population-based study with a group of hypertensive patients that the most prevalent CIPs were herbal medicine, acupuncture, and homeopathy[11]. Dannemann et al. reported that homeopathy and medicinal plants were the most used CIPs with diabetic children in Germany[21]. The use of medicinal plants is a secular tradition that survives between generations. In addition, this practice has increased in Western countries as a complementary treatment in conjunction with conventional medicine, especially for chronic diseases such as SAH and DM[22]. Within the CIPs, medicinal plants have some advantages over other therapies, such as ease of access and low cost[23, 24].

As limitations of this study, we can mention that this is a part of a larger survey. Future studies that seek to carry out a larger sample of patients with chronic disease in the city should be carried out. Moreover, the use of CIPs and health problems were self-reported, which can generate a bias based upon confusion of memory and understanding. The study did not assess the use of CIPs specifically for the treatment of SAH or DM and their impact on users' health, which are gaps that must be answered.

In the present study, the professionals who indicated the use of CIPs were physicians, pharmacists, and physiotherapists. It is essential that health professionals are informed about CIPs and influence their use within health services, providing each user with a broader view of care, especially with regards to treatments for hypertensive and diabetic patients, as this population is frequently present in health care service centers[9].

CONCLUSION

Data indicate a low prevalence of CIP use among hypertensive and/or diabetic patients. Those with more education performed these practices less. Self-reported anxiety was a factor associated with the use of CIPs. In the municipality of Rondonópolis, it is necessary to expand actions that promote the offer of CIPs, especially for patients with SAH and DM. Future studies that seek to assess the impact of these practices on the population's health must be carried out.

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