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ORIGINAL

Educational intervention on arterial hypertension in bigger adults

Intervención educativa sobre hipertensión arterial en adultos mayores

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ABSTRACT

Introduction: high blood pressure is a disease with high prevalence worldwide, often with serious consequences for the lives of those who suffer from it.
Objective: to implement an educational intervention on high blood pressure in older adults at Clinic No. 58, Policlínico Primero de Enero, Consolación del Sur, during the period 2022-2024.
Method: descriptive, longitudinal study of educational intervention. Universe: Older adults registered at Clinic No. 58 (N=215). Sample: Intentional non-probabilistic (n=140), using theoretical and empirical methods and absolute and percentage frequencies as statistical measures.
Results: the predominant group was 70-79 years old (46,4 %), female (60 %), pre-university level (42,9 %), and occupationally active (62,1 %). Patients with more than 15 years of diagnosed hypertension (44,3 %), uncontrolled hypertension (55,7 %), non-adherence to treatment (52,9 %), pharmacological treatment (87,9 %), and consumption of more than one antihypertensive drug (72,1 %) prevailed. The most frequent comorbidities were heart disease (68,6 %) and diabetes mellitus (47,9 %). More than half of the sample had risk factors associated with hypertension, with a predominance of comorbidities (98,6 %) and cardiovascular risk (75 %). Initial knowledge of the subject was low (84,3 %) and increased after the strategy was implemented (87,1 %).
Conclusions: older women were more prone to uncontrolled hypertension, unhealthy lifestyles, and cardiovascular risk, which threaten their quality of life. The educational intervention increased the level of knowledge about high blood pressure.

Keywords: Educational Intervention; Hypertension; Older Adults.

RESUMEN

Introducción: la hipertensión arterial es una enfermedad de elevada prevalencia a nivel mundial, a menudo con graves consecuencias para la vida de las personas que la padecen.
Objetivo: aplicar una intervención educativa sobre hipertensión arterial en adultos mayores del Consultorio No. 58, Policlínico Primero de enero, Consolación del Sur, periodo 2022-2024.
Método: estudio descriptivo, longitudinal de intervención educativa. Universo: adultos mayores dispensarizados del consultorio 58 (N=215). Muestra: intencional no probabilística (n=140), se emplearon métodos teóricos, empíricos y como medidas estadísticas las frecuencias absolutas y porcentuales.
Resultados: predominó el grupo de 70-79 años (46,4 %), sexo femenino (60 %), nivel preuniversitario (42,9 %), activos ocupacionalmente (62,1 %). Prevalecieron pacientes con más de 15 años diagnosticados hipertensos

(44,3 %), HTA no controlada (55,7 %), no adherencia al tratamiento (52,9 %), de tipo farmacológico (87,9 %) y consumo de más de un fármaco hipotensor (72,1 %). Las comorbilidades más frecuentes fueron las enfermedades del corazón (68,6 %) y diabetes mellitus (47,9 %). Más de la mitad de la muestra presentó factores de riesgo asociados a la hipertensión arterial predominando las comorbilidades (98,6 %) y riesgo cardiovascular (75 %). Los conocimientos iniciales sobre la temática fueron bajos (84,3 %) y se incrementaron después de aplicada la estrategia (87,1 %).
Conclusiones: Los adultos mayores del sexo femenino presentaron mayor predisposición a hipertensión descontrolada, estilos de vida poco saludables y riesgo cardiovascular que amenazan su calidad de vida. Con la intervención educativa aplicada, se elevó el nivel de conocimientos sobre hipertensión arterial.

Palabras clave: Intervención Educativa; Hipertensión Arterial; Adultos Mayores.

INTRODUCTION

The aging process that has been taking off in recent decades has had a decisive impact on health policies, given the repercussions that it brings with it.[1]

In this context, there is a high prevalence of non-communicable diseases, among which arterial hypertension is one of the most worrying, taking into account the nature of this nosological entity, which leads to the progression or emergence of cardiovascular, cerebrovascular and nephropathies diseases, among others, which are among the leading causes of death worldwide.[2]

At regional, national, provincial and local levels, there are significant numbers of decompensated hypertensive patients, being the inadequate control of blood pressure figures one of the aspects to be taken into consideration, since this conditions the appearance of multiple complications, as well as major health, economic and social repercussions, and therefore the establishment of comprehensive strategies is recommended in order to solve this problem.[3]

Hypertension in adults is defined as persistent blood pressure (BP) above 120 mm/hg systolic and/or 80 mm/hg diastolic. It is impossible to use a single value to define hypertension since blood pressure (BP) increases with age and body size. BP is considered high when the figures are above 130/90 mm/hg.[4]

The World Health Organization defines it when systolic BP is equal to or greater than 140 mm/Hg and/or diastolic BP is equal to or greater than 90 mm/Hg, BP is considered high or elevated. Most people with hypertension do not show any symptoms, which is why it is known as the "silent killer".[4]

Hypertension is one of the most prevalent chronic diseases and it is not in vain that it has been called "the silent killer", since its presence is often noticed when it is too late. Its high prevalence exceeds 30 % in those under 60 years of age and twice as high in those over 60.[5]

This disease is responsible for the occurrence of 62 % of strokes, 49 % of cases of ischemic coronary heart disease. It is one of the main diseases responsible for years lost due to disability and premature mortality, which demonstrates the great personal, economic and health repercussions it has.[6,7]

PAHO's call is to contribute significantly to achieving the global goal of reducing high blood pressure by 25 % by 2025, and to ensure that at least 35 % of people with hypertension have their blood pressure under control.[8]

In the Americas, about 140 million people suffer from hypertension, 8-30 % of them in Latin America and the Caribbean. It is estimated that over the next 10 years there will be 20,7 million deaths from cardiovascular disease, of which about 2,4 million will be attributable to HT in the Americas region.[9]

In the United States of America alone there are an estimated 50 million patients and 45 million with prehypertension; in Spain the prevalence of hypertension is approximately 35 to 40 % in the middle ages and more than 60 % in those over 60 years of age. Hypertension affects approximately 10 million adult individuals.[9]

Hypertension is present in 8-30 % of adults in Latin America and the Caribbean. In Cuba, 25 % of the adult population is considered to have this condition. It is a health problem that family physicians and nurses have to deal with on a daily basis, since epidemiological studies show that about two and a half million Cubans are hypertensive. Pinar del Río is the sixth province with the highest prevalence rate up to 2020 (241,9 per thousand inhabitants, and higher than the national average of 230,2).[10,11]

Among the countries with advanced transition are the developed ones, with stable economies, where the situation of Cuba stands out, which, despite being an underdeveloped country, has shown first-world health patterns.[12]

In 34 years, aging has increased by 9,5 percentage points, with strong growth trends according to projections, which indicate that by 2030 some 3,4 million people (approximately 30 % of the Cuban population) will be older adults (MA), making Cuba the country with the highest proportion of MA in Latin America, which will imply great challenges for the different spheres of society, especially for Public Health.[12]

Most educational programs aimed at patients with HT are focused on evaluating lifestyles and how to help

them improve it through self-care, eliminating bad eating habits, alcohol and tobacco abuse, as well as physical inactivity.[13]

The control of HTN should not only be based on the identification of its figures, but should also include an adequate surveillance and attention to risk factors, where the role of new intervention actions is understood and a comprehensive strategy for the timely and continuous treatment of this entity is established on a broad platform of health education aimed at the entire population.[14,15]

In view of this, it is necessary to intensify the measures adopted, to generate new responses that are effective at the regional or local level and the commitment of all sectors of society. These measures should be aimed at raising public awareness, ensuring healthy behaviors and self-care, which will allow the control of HT and its complications, in order to have an impact on reducing mortality and improving the quality of life of these patients.[16]

Primary Health Care (PHC) has to face this health problem and its consequences from the identification and comprehensive care of the risk factors that affect the health status of individuals, families, collectives and communities to contribute to raise the development indicators of the country, which should be attended with priority and comprehensive approach to minimize, mitigate or eliminate the risk factors that cause it. It is a silent and deadly enemy for any health system in the world, therefore, it is necessary to face this challenge.[17,18]

The population of Medical Clinic No. 58 shows a percentage of hypertensive patients similar to the national average (30,8 by 30,9 %), which is considered a health problem if the percentage of decompensated patients is taken into account, which draws the attention of the health personnel who attend the population of this clinic.

This situation is even more aggravated if we take into account that a significant part of them are 60 years of age or older, since they are a vulnerable age group.

In accordance with the problematic situation addressed above, the following scientific problem arises:

With the design of an educational intervention, will it be possible to increase the level of knowledge about arterial hypertension in older adults belonging to Clinic No. 58 of the First of January Polyclinic?

Due to the relevance of the topic, it was decided to carry out this research with the objective of raising an educational intervention on arterial hypertension in older adults of Clinic No. 58, Policlinico Primero de enero, Consolacion del Sur, during the period 2022-2024.

METHOD

A descriptive, longitudinal and prospective study of educational intervention was carried out with the objective of raising the level of knowledge about arterial hypertension in older adults belonging to Consultorio No. 58 of First of January Polyclinic, municipality South Consolidation during the period January/2022 - January/2024.

Universe: 215 older adults dispensed from the clinic 58 attended in consultation during the period of study mentioned above.

Sample: 140 older adults selected by non-probabilistic intentional sampling, considering the following inclusion and exclusion criteria:

Inclusion criteria

- Patients 60 years of age or older, of both sexes, classified as hypertensive.
- Patients willing to participate in the study.

Exclusion criteria

- Patients with end-stage disease.
- Patients with dementia or cognitive impairment.
- Patients not interested in the research.

The research was conducted in four stages: the first stage of organization, the second stage of diagnosis, the third stage of design and intervention, and the fourth stage where the evaluation of the applied instrument was carried out.

The information that led to the variables studied was collected through the analysis of the Family Health Clinical Histories (HCSF) and Individual Clinical Histories (HCI), which was complemented with the application of measurements and instruments for obtaining information (questionnaire, interview).

The patient information collection form was prepared, taking into account the variables of interest for the study such as: clinical and sociodemographic characterization, comorbidities, risk factors and educational needs of the patients under study.

For the statistical analysis of this information and given its characteristics, the final results were processed and presented in frequency distribution tables for better understanding.

RESULTS

Table 1. Sociodemographic characterization of the study population

Sociodemographic characteristics	No.	%
Age groups (years)		
60-69	51	36,4
70-79	65	46,4
80 and over	24	17,2
Sex		
Female	84	60,0
Male	56	40,0
Schooling		
Primary	14	10,0
Secondary	28	20,0
Pre-college	60	42,9
University	38	27,1
Occupation		
Active	87	62,1
Inactive	53	37,9

Note: (n=140)

As shown in table 1, the sample studied was characterized by a predominance of the 70 to 79 age group (46,4 %), female sex (60 %) and an active occupational status (62,1 %).

Table 2. Clinical characterization of the study population

Clinical characteristics	No.	%
Time of diagnosis of HT (years)		
1 a 4	16	11,4
5 a 9	23	16,4
10 a 14	39	27,9
15 and over	62	44,3
Controlled HTN		
Yes	62	44,3
No	78	55,7
Adherence to treatment		
Yes	66	47,1
No	74	52,9
Type of treatment		
Pharmacological	123	87,9
Non-pharmacological	17	12,1
Hypotensive drugs consumed		
One	23	15,7
More than one	101	72,1

Note: (n=140)

Table 2 shows the clinical characteristics of the study population, with a predominance of patients aged 15 years or older diagnosed as hypertensive (44,3 %), uncontrolled hypertension in 55,7 %, poor adherence to treatment (52,9 %), mostly pharmacological (87,9 %) and use of more than one hypotensive drug (72,1 %).

Table 3 represents heart disease with 68,6 % and diabetes mellitus (47,9 %), among the most frequent comorbidities in the sample.

Table 3. Comorbidities in older adult patients with arterial hypertension

Comorbidities	Total	
	No.	%
Nephropathies	15	10,7
COPD	26	18,6
Bronchial Asthma	31	22,1
CVD	39	27,9
Cancer	44	31,4
Endocrine-metabolic disorders	53	37,9
Diabetes mellitus	67	47,9
Heart disease	98	70,0

Note: (n=140)

Table 4. Risk factors influencing the control of arterial hypertension

Risk factors	No.	%
Obesity	71	50,7
Toxic habits	75	53,6
Inadequate diet	87	62,1
Polypharmacy	97	69,3
Cardiovascular risk	103	73,6
Comorbidities	138	98,6

Note: (n=140)

As shown in table 4, more than half of the sample presented various risk factors associated with arterial hypertension, predominantly comorbidities (98,6 %) and cardiovascular risk (75 %).

Table 5. Level of knowledge about arterial hypertension in older adults before and after the educational intervention was applied

Level of knowledge	Before		After	
	No.	%	No.	%
High	13	9,3	122	87,1
Medium	9	6,4	11	7,9
Low	118	84,3	7	5,0
Total	140	100	140	100

Note: (n=140)

Table 5 shows, as a relevant result, a low level of knowledge about arterial hypertension in the initial evaluation, represented by 84,3 % of the total sample. After the educational intervention was applied, the level of knowledge on the subject rose to 87,1 % in the high category.

DISCUSSION

At the end of the year 2022, there were a total of 228,5 hypertensive patients per 1000 inhabitants in Cuba, with a clear predominance of the female sex for a prevalence rate of 246,8, which coincides with the present investigation.[10]

In the study by Hernández et al.[19] there was also a predominance of the female sex (57 %); most of the patients under study were over 60 years of age. Similarly, the results obtained by Díaz et al,[20] Guillen et al,[21] Barros[22] and Bajaña[23] who report that, as the years go by, the number of patients with HT increases.

Corresponding to the above, in the study of Hernández et al.[19], hypertensive patients were predominantly female; these authors consider that this is due to the fact that women are more concerned about their health, and at the first sign of any condition, they go immediately to the health unit to which they belong. These elements also coincide with those stated by Barros[22] and Bajaña[23] in their respective studies.

Regarding the educational level, there was coincidence with Hernández et al.[19], where most of the patients were middle-level technicians and university students, elements that show the strengths of the Cuban educational system.

Ancajima Bayona[24] In his research carried out in Peru, the average time of diagnosis with hypertension was 5 years, the average medication used by each patient was one antihypertensive. Eighty percent of the patients had low adherence to treatment and 20 % of the patients had high adherence to treatment. Twelve percent of the participants received polypharmacy other than the use of antihypertensive treatment, which coincides in part with the results obtained in the present study.

Gort Hernandez et al.[25] estimate that more than 85 % of the elderly over 65 years of age practice non-pharmacological treatments. This is due to the fact that older adults generally present more than one disease that obliges them to be evaluated by several medical specialists and they do not always achieve a good communication with these professionals, besides, many of the medicines used by elderly patients are obtained without medical prescription or, in other occasions, they choose to resort to herbal medicine because of the confidence they have in natural products and even ingest several preparations as a whole.

In the same way, in the study conducted by Garaundo Mesa[26] in which the association between knowledge about hypertension and adherence to pharmacological treatment was determined, the greatest difficulties were found in illiterate patients or those with incomplete primary education, while 78,7 % had good academic training, and it was the latter patients who best complied with medical observations and indications regarding the prevention of arterial hypertension, thus favorably affecting the results of medical work.

In the elderly, arterial hypertension deteriorates the biopsychosocial state. On the other hand, their quality of life may be influenced by the time of diagnosis, comorbidities and side effects, due to the use of drugs.[27]

In homologous research, Pajuelo Ramírez et al.[28] obtained in a sample of 620 older adults that three out of four patients presented at least one chronic non-communicable disease, most of them had arterial hypertension (56,3 %) and diabetes mellitus (49 %), in addition to metabolic syndrome (31 %), obesity (8,4 %), and hypertriglyceridemia (35,8 %).

Blood pressure increases with advancing age because the kidneys lose their capacity to retain water and salt. Therefore, treatment of the disease is essential to improve the patient's quality of life and keep comorbidities under control.[29,30]

Multiple risk factors have been identified that influence the control of arterial hypertension; demographic factors (advanced age, female sex, low educational level), and health status (frailty, comorbidities, depression). The presence of several chronic degenerative diseases, secondary to the multiple physiological changes characteristic of aging, is accompanied by an increase in the demand for services, which causes health institutions to have a limited response capacity and increases the cost of care.[25]

Ortega Laureiro et al.[31] report a predominance of risk factors present in the sample studied, with 65,7 % of patients with a sedentary lifestyle, 60 % with obesity, 52,9 % with a first-degree family history of arterial hypertension, 48,5 % with excessive salt intake, 22,9 % with excessive alcohol consumption and 15,7 % with smoking.

Achiong Estupiñan et al.[32] state as factors associated with the non-control of hypertension: little or no physical activity, obesity and/or increase above acceptable values of the body mass index (BMI), inadequate dietary patterns such as excessive consumption of fat or saturated fat, diet not low or with excess salt, low consumption of fruits and vegetables, and other behavioral aspects related to toxic habits such as smoking and alcoholism.

The response with adequate knowledge in Garaundo Mesa's study[26] was that 92,9 % knew that blood pressure can cause cardiovascular diseases, however, they had inadequate knowledge with 77,7 % not knowing that blood pressure can cause kidney problems, which does not coincide with our research.

Ortega Laureiro et al.[31] found significant differences in the initial evaluation, where only 29,3 % had adequate general knowledge and 70,7 % showed inadequate knowledge. In the final evaluation, 92,9 % showed adequate knowledge of the risk factors of arterial hypertension by answering the questions correctly, demonstrating that the application of the educational intervention strategy was of great importance in increasing knowledge of arterial hypertension in the patients evaluated in this study.

The present study coincided with that of Sonco Pino[33] in which the effectiveness of the educational intervention was corroborated, since, after its application, there was an increase of 73,3 % in the number of patients with adequate knowledge of hypertension risk factors.

After the educational intervention to modify the level of knowledge about risk factors in the frail elderly, carried out in Havana by Ruíz Álvarez et al.[34] the social participation of the elderly and the level of knowledge about risk factors such as diet, sedentary lifestyle, obesity and polypharmacy were increased.

From this, it can be inferred that before the intervention, the elderly were unaware of the different risks derived from uncontrolled arterial hypertension, being insufficient the preventive and promotional work that should be deployed to minimize this risk. After the intervention, the level of knowledge on the subject was raised.

The author considers that the result of the educational intervention is positive, since it was possible to increase knowledge about hypertension. The adequate perception of the risk of suffering from HT indicates

the need to implement strategies with educational and promotional measures to lower blood pressure, with an impact on other risk factors associated with the disease, such as lack of physical exercise, inadequate blood lipid levels, high salt intake, smoking, alcoholism and obesity.

An individual strategy is also necessary to detect and control individuals who, because they are exposed to high levels of one or more risk factors, have a high probability of suffering from the disease or are suffering from it. In both cases, the positive modification of lifestyles is a pillar to obtain these benefits. The results of the intervention have been positive because we were able to improve knowledge about healthy lifestyles to prevent the development of HT and clinical manifestations in older adults.

CONCLUSIONS

Older adults of the female sex presented a greater predisposition to uncontrolled hypertension, unhealthy lifestyles that threaten their quality of life. More than half of the sample presented risk factors associated with arterial hypertension, with a predominance of comorbidities and cardiovascular risk. Initial knowledge on the subject was low and increased after the strategy was applied.

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CONFLICT OF INTEREST

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