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ANTHROPOMETRIC PROFILE OF HYPERTENSIVE USERS OF A HEALTH PROGRAM FOR MEN[1]

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ABSTRACT
Descriptive, explorative and transversal study with the purpose of evaluating the anthropometric parameters of hypertensive men accompanied by a health program for men. Data collection took place between october to December 2013, through interviews with application of a structured instrument. Data were processed and analyzed using SPSS 18.0 for Windows. The results were analyzed in absolute numbers, percentages, means and standard deviations and presented in tables. Interviews were performed on 75 men, with average ages of 58,98 (±9,08) years. Predominance was for self-declared color brown (68,0%), married/common-law marriage (70,7%), elementary schooling (43,3%), active labor situation (52,0%) and family income of between 1 and 2 minimum wages (52,0%). It was verified that 84,0% of the men presented increased circumference of the waist; 89,3% were classified as moderate to very high risk for the standard of waist-hip girth ratio and 72% of the men were overweight. It is possible to conclude that hypertensive men have, in their majority, inadequate anthropometric rates for health. In order for the healthcare strategies to be effective, social context, inherent health beliefs to this gender and the perspective they have for their own care merits attention from the health professionals.

Keywords: Hypertension. Men's health. Anthropometry. Risk factors.

INTRODUCTION

Systemic Arterial Hypertension (SAH) is a clinical condition characterized by high and sustained multiple risk levels of blood pressure. Is considered as one of the major modifiable risk factors for cardiovascular diseases (CVD), reaching the adult population in the various social classes, ethnicities and cultures [(1)]. Consists of important public health problem, representing the first cause of death in Brazil [(2)]. Affects about 30% of the Brazilian population, with only 6,5% follow correctly the treatment [(3)]. As regards the global prevalence of SAH, men and women exhibit similar prevalence, however she is higher in males until the 50 years [(2)].

Profile modification of eating habits and life of the Brazilian population SAH led to a significant increase of overweight, which SAH an almost linear relationship with increased pressure [(3)]. In order to direct health care practices becomes critical to anthropometric identification with subsequent characterization of overweight in hypertensive men aiming to guide the change in lifestyle. So, knowing the risk factors, overweight and obesity in the population of men with hypertension may contribute to the advancement of knowledge in the area of human health, assist health professionals and direct practices of multidisciplinary care aimed at the control of overweight in these users.

SAH apart from being considered a cardiovascular risk factor, SAH its occurrence associated with multiple risk factors classified into modifiable and no modifiable arguments. Stand out among non-modifiable to age, gender, ethnicity and genetics and between modifiable

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environmental factors, such as socioeconomic, physical inactivity, excessive salt and alcohol intake, overweight and obesity [2].

Excess weight is a matter of multifactorial origin and one of the reasons relevant to explain the increasing burden of non-communicable chronic diseases, since it is associated with diseases such as hypertension, dyslipidemias, type 2 diabetes, osteoarthritis and certain types of cancer, being an important condition that predisposes to mortality [2]. The change in the profile of the Brazilian population in relation to food and life habits can cause significant changes in body weight and fat distribution, with progressive increase of overweight and/or obesity.

For the diagnosis of overweight and obesity, the Anthropometry is the most widely used method. It is a cheap, non-invasive method, universally applicable, with easy obtaining and applicability, low correlation with the stature and good correlation with measures of body fat, and acceptance by the population. Between the anthropometric indicators most used is the body mass index (BMI) and its big diffusion is due to its ability to express the energy reserves of individuals, using the ratio of the weight (in kg) and the square of the height (in m^2). The waist-hip ratio (WHR) and the waist circumference (CC) are the most commonly used measures to estimate abdominal fat. The combination of body weight and fat distribution is probably the best choice to fill the need of clinical evaluation[4].

The relationship between weight gain and blood pressure is almost linear, being observed in adults and adolescents. Weight loss and abdominal circumference are related to reductions in blood pressure and the improvement of metabolic changes associated with [2]. Studies report that the chance of hypertension is increased in individuals with overweight and obesity and that men exhibit more likely to have hypertension than women [3-4].

When you think in terms of genre, it is clear that men are more vulnerable to diseases, especially the serious and chronic diseases as SAH, and dying as early than women. Despite the greater vulnerability and high rates of morbidity and mortality, men do not seek, as do women, primary care services, entering the health system for outpatient and hospital attention of medium and high complexity, which SAH as a consequence the morbidity by delay aggravation on attention and higher cost for the health system.

Many harms could be avoided if the men regularly held prevention measures. This panorama can corroborate with data that depict an overall mortality rate 2,3 times higher among men than among women, reaching four times more in the younger age group. They live on average seven years less than women and have more heart disease, cancer, diabetes, cholesterol and higher blood pressure [5].

The high prevalence of SAH in men and their association to the overweight challenges the development of preventive strategies and effective control. Realizes the importance of identification of excess weight to direct care, as well as perform a follow-up of those individuals with hypertension. Immediate interventions to reduce anthropometric measurements in men (BMI reduction and measurement of waist circumference and hip) involve changes in lifestyle such as construction or expansion of physical activity and dietary re-education [6].

Considering these aspects, the aim in this study assess anthropometric parameters hypertensive men accompanied in a men's health programme.

METHODOLOGY

Descriptive, exploratory and transverse, held in a Center of reference in cardiovascular diseases by the men's Health Programme of the Ministry of health, in the city of Salvador-BA. This study was approved by the ethics and Research Committee of the nursing school of the Federal University of Bahia under the 268,722 Protocol in 4/3/2013.

The data were collected in the period from October to December 2013, through interview with application of a structured instrument consisting of two parts: the first included questions about sociodemographic conditions and closed the second was formed by items for registration of anthropometric data (weight, height, BMI, waist circumference, hip circumference and WHR).

After confirmation of the medical diagnosis of SAH no record of the individuals who would spend for medical consultation in the men's health clinic, was the same approach in the waiting room before or after medical consultation and then were received in private room. After the study and acquiescence signature of informed consent began collecting data.

For the performance of anthropometric measurements, the men used disposable and lightweight fabric clothes, made with the material Kami, and removed footwear and props such as glasses, watches, bracelets and rings.

The weight (in kilograms) was determined by means of a digital scale, portable, mark *g. Tech,* measured by InMetro, with a variation of 0, 1 kg, with a maximum capacity of 150 Kg and a minimum of 2, 5 kg. Height (in meters) measured through the stadiometer, *Alturexata* brand attached to a base.

To determine the weight to be requested from the individual who remained standing and facing the display scale, arms along the body and eyes fixed on the horizon. After gauging the weight, the height was verified using the stadiometer (being the same graduated every 0,5 cm), with the head and the back against the stadiometer ruler, below the horizontal rod, keeping the arms stretched along the body and feet on the floor. He was then asked to look forward, inspired deep and held the air [7].

By reason of the body weight by height squared of individuals, the BMI was calculated. The values of the LCI have been categorized by means of nutritional status, according to the proposal from the World Health Organization[7], following the cut-off points: normal: between the 24,99 18,5 kg/m ^{2}; overweight: 25,0 to 29,99 kg/m ^{2}; Obesity grade i: from 30,0 to 34,9 kg/m ^{2}; Obesity grade II: 35,0 to 39,9 kg/m^2; Obesity grade II above 40,0 kg/m^2.

The waist circumference was measured at the midpoint between the coastal edge and the iliac Crest, using a measuring tape of 1,50 m, flexible, extensible and not 0,5 in 0,5 cm graduated. participants were standing with your arms by your sides and feet together, in upright position, his back to a horizontal mirror and exposing the abdominal region. The measure was canceled with the end breathing normally and with the abdomen relaxed, making the reading in the normal expiration. The data were noted without rounding. At the end of the procedure, have been deleted the points marked with a cotton ball soaked in alcohol at 70%[8].

The assessment and classification for waist circumference (CC) used in the study was the International Diabetes Federation (IDF), which proposes a cutting point which differs between ethnicities [8], so it was used with reference to CC < 90 cm as recommended and not recommended ≥ 90 cm.

To measure the hip circumference, the examiner remained in a sitting position in front to the end and was the measure with the measuring tape around the maximum protrusion of the muscles of the hip, recording the values.

The relationship waist hip was determined by dividing the waist circumference (cm) for hip circumference (cm) [8] according to the following formula: WHR = waist circumference (cm)/hip circumference (cm).

The parameters for classification of the waist-hip ratio were based on Pitanga and Lane [9], presented in Figure 1.

The data were processed and analyzed in the statistical program SPSS 18.0 for Windows. The results were analyzed in absolute numbers, percentages, averages and standard deviation, being presented in the data tables absolute numbers and percentages.

Age	Low	Moderated	High	Too high
Until 29	< 0,83	0,83-0,88	0,89-0,94	> 0,94
30-39	< 0,84	0,84-0,91	0,92-0,96	> 0,96
40-49	< 0,88	0,88-0,95	0,96-1,00	> 1,00
50-59	< 0,9	0,90-0,96	0,97-1,02	> 1,02
> 59	< 0,91	0,91-0,98	0,99-1,03	> 1,03

Figure 1. Rules for the classification of the waist-hip ratio in males.
Source: Pitanga and Lane (2005).

RESULTS AND DISCUSSION

The data from Table 1 depict that the sample of the study consisted of 75 men accompanied the men's Health Programme of the reference center, mostly from Salvador and Metropolitan Region (98,6%). The minimum age was 36 and maximum of 71 years of age, the average age was 58,98 (± 9,08) years, with the age group of between 50 to 70 years (70,7%). Most of the men were in marital status married/consensual Union (70,7%) and if they declared themselves Brown (68,0%). Evaluating school identified higher proportion of men who attended to the first degree (45,4%) followed by those who attended to the second degree (44,0%). Most exercised professional activity being as or employee (52,0%), especially that of 42,7% retired, 12% was any labour activity. Monthly family income remained 1 to 2 minimum wages (52,0%) and the socioeconomic class less C1 with higher proportion of men in C2 (40%). Of the total respondents, 96,0% were themselves responsible for the family (table 1).

The analyzed sample showed an average age of 58,98 (± 9,08) years, being characterized predominantly by low education and socioeconomic condition of medium-low, drab and developed some labour activity. In general, the involvement of overpopulation occurs SAH 60 years, but study shows that high blood pressure tends to be higher among men < 50 years of age than among women of the same age group [10].

The low educational level and income have been factors associated with difficulty in the effective control of blood pressure, which can justify the higher prevalence of these factors in the study population [11]. As noted in this study, Gamma et al. [12] there was a prevalence of individuals with lower education and socioeconomic class average. Possible explanations for the influence of lower socioeconomic backgrounds in the health conditions of the population on the lack of access to health care, in addition to a lesser degree of information and knowledge about the disease, its determinants and the possibilities of adopting the practices of promotion, protection and recovery of health[13].

Knowing that are intrinsic to health sciences social sciences, socio-economic conditions of a population group have a direct effect and relevant health-disease relationship, influencing the occurrence of health problems and risk factors in the population [6]. Differences in social laminates, including the level of education, are important predictors of morbidity and mortality patterns, where the complete years of schooling have advantages against the years or the absence of these, against the health indicators [14]. In this study, 50,7% of men studied only up to the first degree.

In this context, the strengthening of human health program proposed by the Ministry of health, with regular monitoring of these men, brings greater access to health services for lower income individuals, which may present difficulties in nutritional monitoring and in conducting physical activity due to social status.

Investigations that examined the associations of iniquities in health according to race/skin color in Brazil pointed out the high occurrence of illness and death in the population of African descent, if justified by its socioeconomic condition underprivileged. It should be noted that the aforementioned racial group presents a feature on your genetic profile that determines a malfunction in the mechanism of cellular uptake of sodium and calcium, as well as in transport, and can be attributed to the presence of a gene that leads to sodium saver cell influx of sodium and the cellular efflux of calcium, making possible the sustained increase in blood pressure and Therefore the appearance of SAH. Blacks and Browns tend to have higher blood pressure, compared to whites, as well as increased severity of the disease. Accentuate a higher prevalence of SAH in that racial group [15]. In this study, 90,7% of hypertensive men if they declared themselves Brown or black color.

In relation to anthropometric characterization (table 2) it was found that most of the men showed increased waist circumference (84,0%). As regards the right waist hip were predominantly classified as moderate to high risk (89,3%), with a higher

proportion of men classified as high risk (38,7%).

About the IMC only 18,7% were in the range of normal, noting that 49,3% were overweight and 22,7% grade I obesity., therefore, 72% of men were overweight.

In relation to anthropometric data, in this study it was found that most of the men interviewed showed the measurement of waist circumference above acceptable values (84%) and high BMI indicating overweight and obesity gradeI (72%).

Table 1. Demographic Characterization of the sample. Salvador (BA)-2013.

Sociodemographic characteristics	n (75)	%
Age		
30-50 years I	15	20,0
50-70 years I	53	70,7
≥ 70 years	7	9,3
Marital status		
Married/consensual union	53	70,7
Single /without fixed companion	10	13,3
Separated/divorced	8	10,7
A widower	3	4,0
Other	1	1,3
Race/Color		
White	7	9,3
Black	17	22,7
Parda	51	68,0
Schooling		
Illiterate/sign the name	4	5,3
1st grade	34	45,4
2nd grade	33	44,0
More than incomplete/complete	4	5,3
Labour Status		
Retired	32	42,7
As	20	26,7
Employee	19	25,3
Unemployed	4	5,3
Monthly household income (SM) (*)		
Less than a	2	2,7
A	22	29,3
Two	17	22,7
Three	21	28,0
More than three	13	17,3
Responsible for family		
The respondent itself	72	96,0
The respondent's father	2	2,7
The wife of the respondent	1	1,3
Socio-economic class		
B1	1	1,3
B2	4	5,3
C1	20	26,7
C2	30	40,0
(D)	20	26,7
Origin		
Salvador and the metropolitan region	74	98,7
Other regions of Bahia	1	1,3

*Minimum wage (SM) $ 678,00,00 research.
Source: Own Elaboration.

Table 2. Percentage of anthropometric data of the sample. Salvador (BA) 2013.

Anthropometric data	n (75)	%
Waist circumference (IDF *) in cm		
Recommended (< 90)	12	16,0
Not recommended (≥ 90)	63	84,0
Waist/hip (cm/cm)		
Low risk	8	10,7
Moderate risk	19	25,3
High risk	19	25,3
Very high risk	29	38,7
BMI (weight/height) ^{2}		
Normal (18,5-24,9)	14	18,7
Overweight (≥ 25,0-29,9)	37	49,3
Obesity I (30,0-34,9)	17	22,7
Obesity II (35,0-39,9)	6	8,0
III obesity (≥ 40,0)	1	1,3

* IDF = *International Diabetes Federation*
Source: Own Elaboration.

As to why waist hip predominated individuals classified as moderate to very high risk (89,3%). Data from the study of Esperandio et al. [16] also report high prevalence of overweight or obesity in hypertensive population, it is observed in this study, a positive association between hypertension and obesity in both sexes, demonstrating a significant prevalence of hypertension in obese people, and 100% of obese men and 97,2% of obese women were hypertensive. It's worth pointing out that several studies indicate the existence of association between elevated blood pressure and changes in indicators such as BMI, waist circumference and waist hip, which reflect excess body fat[3.4].

Obesity [17-19] and waist circumference not recommended [19] are also associated with uncontrolled blood pressure, showing the influence of anthropometric measurements in the development of hypertension and blood pressure control.

The World Health Organization (who) indicates the use of anthropometric data for surveillance of risk factors for chronic diseases such as high blood pressure [7]. In adults, the weight appears as the variable that introduces greater correlation with the PA, but next to the IMC, the concentration of fat in the abdominal area also SAH been linked to increases in blood pressure levels [9]. In this study draws attention to an important portion of the sample is exposed to excess weight and, therefore, may present a greater disarray in blood pressure.

Knowing that the sample analyzed in this research showed high proportion of overweight, associated with the fact that the obesity/overweight is an important risk factor for SAH [2], and its prevalence is growing extensively, it is important to the implementation of measures of control of these risk factors. In this perspective, it is believed that promote effective strategies that seek changes in lifestyle, such as conducting regular physical activity, modification of eating habits may contribute to the reduction and control of overweight in these men.

It is understood that to establish any kind of actions and strategies to prevent and control it is essential to consider the perspective of the people about the process of getting sick and take care of themselves, so that they may know the meanings that motivate the individual and collective actions, and if you consider how appropriate the knowledge that circulates in society on health and disease and the difficulties faced to therapeutic recommendations [12]. In this regard, factors related to men like socioeconomic conditions, cultural perspectives, perception of obesity, cognitive aspects, beliefs, values and previous knowledge about the basic actions for prevention and control of overweight and need to be considered as conditions of risk in health strategies, because they can be directly involved in the recognition of the condition of

health and in the development of strategies to achieve desired life qualities.

The perception of the man about health, disease and body pattern, not always manifests itself in line with the aesthetic standard of thinness established by society. People can get fat or thin as establish realize comparisons between you, independently of their measurement in pounds [6]. In this sense, the search for weight control, may take divergent pattern established by the biomedical model and influence the participation of the individual in control of this risk factor SAH.

The weight reduction and control in hypertensive patients are critical to reduce risks of coronary and cerebrovascular events development, since the control of this risk factor also contributes to the control of blood pressure. In this context the reduction of cardiovascular morbidity and mortality rates depends, above all, the effective control of blood pressure [20].

One can see that the prevention of overweight and obesity, as well as the monitoring and control of overweight through BMI, CC and WHR, SAH an impact in reducing hypertension. It should be noted that the use of the CC is procedure of great simplicity, low cost and once incorporated as a routine evaluation of patients can bring great benefits in terms of research and possibility to control measures of nutritional status and cardiovascular risk.

In this sense, for better control or standardization on the values of anthropometric measurements and, consequently, improved blood pressure values, it becomes important to implementation of interdisciplinary care practices aimed at changing habits of life. This involves dietary re-education and regular practice of physical activities. However, we cannot lose sight of the fact that the change in behavior is no easy task and the health education requires at least that the professionals have a prior knowledge of the population who are watching and take into consideration the socio-cultural context and share with customer's watch projects the own health [12]. It is essential that individuals are assisted to understand the importance of therapy and to use the resources that have more appropriately and attractively to the prevention of diseases related to high blood pressure.

The male universe presents a major difficulty in if you let know, which further strengthens the need to broaden perspectives and resources to achieve the objective of effectively education [6]. Thus it is suggested that multidisciplinary expertise is maintained in the medium and long term by avoiding the abandonment of those subject to the care dedicated to you and seek to effectively meet your particular demands aimed at reduction of weight and blood pressure control.

CONCLUSION

The results of this study showed that men with hypertension are mostly with anthropometric indices values unsuitable for health and, therefore, exposed to greater risk of morbidity and mortality. The social context, the health beliefs of these men as well as the prospects that have to take care of themselves are elements that deserve attention by health professionals who cater to this clientele. It becomes a challenge to find health team with clients allowing measures changes in life habits aimed at the control of overweight.

As limitations of the study include the size of the sample and the sampling of convenience. Not being able to make generalizations of results, they reveal the need to expand the approach held people with systemic artery hypertension, whereas care to this population must include the approach and control of factors considered at risk for hypertension.

PERFIL ANTROPOMÉTRICO DE USUÁRIOS HIPERTENSOS DE UM PROGRAMA DE SAÚDE DO HOMEM

RESUMO

Estudo descritivo, exploratório e transversal que objetivou avaliar os parâmetros antropométricos de homens hipertensos acompanhados em um programa de saúde do homem. A coleta de dados foi realizada no período de outubro a dezembro de 2013, através de entrevista com aplicação de um instrumento estruturado. Os dados foram processados e analisados no programa estatístico SPSS 18.0 for Windows. Os resultados foram analisados em números absolutos, percentuais, médias e desvio padrão e apresentados em tabelas. Foram

entrevistados 75 homens, apresentaram média de idade de 58,98 (±9,08) anos. Predominaram autodeclarados pardos (68,0%), casados/união consensual (70,7%), escolaridade até o 1º Grau (43,3%), situação laboral ativa (52,0%) e renda familiar de 1 a 2 salários mínimos (52,0%). Verificou-se que 84,0% dos homens apresentaram circunferência da cintura aumentada; 89,3% foram classificados em risco moderado a muito alto para o padrão da razão cintura quadril e 72% dos homens estavam com excesso de peso. Conclui-se que os homens hipertensos estão, em sua maioria, com valores de índices antropométricos inadequados para saúde. Para que estratégias de cuidado sejam efetivas, o contexto social, as crenças em saúde inerentes a este gênero e a perspectiva que possuem para o cuidado de si merecem atenção dos profissionais de saúde.

Palavras-chave: Hipertensão. Saúde do homem. Antropometria. Fatores de risco.

PERFIL ANTROPOMÉTRICO DE USUARIOS HIPERTENSOS DE UN PROGRAMA DE SALUD DEL HOMBRE

RESUMEN

Estudio descriptivo, exploratorio y transversal que tuvo el objetivo de evaluar los parámetros antropométricos de hombres hipertensos acompañados en un programa de salud del hombre. La recolección de datos se llevó a cabo entre octubre y diciembre de 2013, a través de entrevistas con la aplicación de un instrumento estructurado. Los datos fueron procesados y analizados con el programa SPSS 18.0 para Windows. Se analizaron los resultados en números absolutos, porcentajes, promedios y desviaciones estándar y fueron presentados en tablas. Se entrevistaron a 75 hombres, tenían promedio de edad de 58,98 (±9,08) años. Predominaron los auto-declarados pardos (68,0%), casados/unión consensual (70,7%), con escolaridad hasta la enseñanza primaria (43,3%), situación laboral activa (52,0%) y renta familiar de 1 a 2 salarios mínimos (52,0%). Se verificó que el 84,0% de los hombres presentó circunferencia de la cintura aumentada; 89,3% fue clasificado en riesgo moderado a muy alto para el patrón de proporción cintura cadera y 72% de los hombres estaba con exceso de peso. Se concluye que los hombres hipertensos están, en gran parte, con los valores de los índices antropométricos inadecuados para la salud. Para que estrategias de cuidado sean eficaces, el contexto social, las creencias en salud inherentes a este género y la perspectiva que poseen para el cuidado de sí merecen atención de los profesionales de la salud.

Palabras clave: Hipertensión. Salud del hombre. Antropometría. Factores de riesgo.

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