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CARDIOVASCULAR RISK FACTORS PREVALENCE AND ASSOCIATED FACTORS IN HEALTH UNITS OF USERS

PREVALÊNCIA DE FATORES DE RISCO CARDIOVASCULAR E FATORES ASSOCIADOS EM USUÁRIOS DE UNIDADES DE SAÚDE

PREVALENCIA DE FACTORES DE RIESGO CARDIOVASCULAR Y FACTORES ASOCIADOS EN USUARIOS DE UNIDADES DE SALUD

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ABSTRACT

Objective: to evaluate the prevalence of cardiovascular risk factors in patients of basic health units. ***Method***: cross-sectional study with a quantitative approach, carried out in primary care units of Jataí-GO in the period from 06/2015 to 10/2015 with 386 participants. Data collection consisted of structured interviews with sociodemographic questions, clinical, anthropometric measurements and food and nutrition information. Data were organized with double entry in a database in Microsoft Excel® 2016, then transported to descriptive and inferential statistical analysis in SPSS software version 17.0. ***Results***: high prevalence of hypertension with 21.5%, a high number of sedentary with 69.9% and overweight and obesity with 55.7%. In addition, 31.6% were classified as high risk for getting a cardiovascular event. ***Conclusion***: it is necessary for health promotion with educational measures in this specific population. ***Descriptors***: Risk Factors; Blood Pressure; Hypertension; Prevalence.

RESUMO

Objetivo: avaliar a prevalência dos fatores de risco cardiovascular nos usuários das unidades básicas de saúde. ***Método:*** estudo transversal, de abordagem quantitativa, realizado nas unidades de atenção básica do município de Jataí-GO, no período de 06/2015 a 10/2015, com 386 participantes. A coleta de dados consistiu em entrevista estruturada por meio de questões sociodemográficas, dados clínicos, medidas antropométricas e informações alimentares e nutricionais. Os dados foram organizados com dupla entrada em um banco de dados no *Microsoft Excel*® 2016; em seguida, transportados para análise estatística descritiva e inferencial no *software* SPSS versão 17.0. ***Resultados:*** elevada a prevalência de hipertensos (21,5%), alto número de sedentários (69,9%) e sobrepeso e obesidade 55,7%. Além disso, foram classificados em 31,6% para alto risco em obter um evento cardiovascular. ***Conclusão:*** há necessidade de promoção em saúde com medidas educativas nesta população específica. ***Descritores:*** Fatores de Risco; Pressão Arterial; Hipertensão; Prevalência.

RESUMEN

Objetivo: evaluar la prevalencia de los factores de riesgo cardiovasculares en los usuarios de las unidades básicas de salud. ***Método:*** estudio transversal, de enfoque cuantitativo, realizado en las unidades de atención básica del municipio de Jataí-GO en el período de 06/2015 a 10/2015 con 386 participantes. La recolección de datos fue una entrevista estructurada por medio de preguntas sociodemográficas, datos clínicos, medidas antropométricas e informaciones alimentares y nutricionales. Los datos fueron organizados con dupla entrada en un banco de datos en *Microsoft Excel*® 2016, en seguida, transportados para análisis estadística descriptivo e inferencial en el *software* SPSS versión 17.0. ***Resultados:*** elevada la prevalencia de hipertensos 21,5%, alto número de sedentarios 69,9% y sobrepeso y obesidad fue de 55,7%. Además de eso, fueron clasificados en 31,6% para alto riesgo en obtener un evento cardiovascular. ***Conclusión:*** hay necesidad de promocióno en salud con medidas educativas, en esta población especifica. ***Descriptores:*** Factores de Riesgo; Presión Arterial; Hipertensión; Prevalencia.

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INTRODUCTION

Some cardiovascular diseases (CVD) can be considered as non-communicable chronic diseases, which increase the morbidity and mortality throughout the country and are among the leading causes of preventable deaths. Brazil has a large geographical area, and the special areas need for studies that seek answers. However, epidemiological data and projections of experts indicate that by 2020, CVD will be among the leading causes of death and disability for fatal events in different countries. Recently, studies conducted by the World Health Organization (WHO) indicate that 16.7 million people die each year as a result of CVD.[1-2]

The Factors of Cardiovascular Risk (FCR) can be classified in both modifiable factors as not modifiable. Modifiable factors are those behavioral and environmental factors such as physical inactivity, smoking, alcohol consumption and high cholesterol. The FCR not modifiable is those of genetic and biological origin, such as family history, age, and gender.[3]

Considering the variety of FCR, the co-existence of multiple risk factors in one person, may predispose to the emergence of diseases related to CVD. In this sense, the development of strategies to reduce the occurrence of the increased risk of FCR concurrency are necessary and relevant for the population, but the effectiveness depends on patient compliance. The evolution of CVD is associated with food quality and style of life in people with FCR. Therefore, health education interferes with the lifestyle.[4-5]

It is known that genetic, environmental, hemodynamic, dietary, metabolic, inflammatory and among others, can interact with each other or empower others and therefore, they are necessary identification in the population. In this sense, seeking strategies for prevention and health education as the potential benefits of seeking changes in lifestyle, such as healthy behaviors, it is a necessity given the magnitude of the problem.[6-7]

In Brazil the difference between mortality from cardiovascular events between females and males is among the lowest global rates, the FCR are accented in both genders, but males cardiac events occur early about age. Regardless of the genre, it should be emphasized the importance of preventing the FCR approach giving those who are part of the risk groups to develop CVD.[7]

Given the importance of identifying the FCR involving the study population, it is possible to program educational measures and strategies for prevention and treatment to minimize such modifiable factors and to control the non-modifiable factors found.

Thus, due to this problem, this study asks what is the main risk factors affecting the population seeking care in primary health care? To answer this question, the next goal was prepared:

- To evaluate the prevalence of cardiovascular risk factors in patients of basic health units.

METHOD

Descriptive, cross-sectional study with a quantitative approach, carried out in primary care units of the health municipal of Jataí-GO. After the care records evaluation of the people assisted, the inclusion of three greater flow units was defined to carry out the data collection in the period from July 2015 to October 2015.

The calculation of this study sample was 386 subjects, considering the confidence interval of 95% and power of 80%. These calculations were performed using the resource OpenEpi software.

After addressing the people and clarifications about the research, they were invited to participate after signing the Informed Consent Form (TCLE), in compliance with Resolution 466/2012, initiating data collection procedures. The questionnaire was developed by the researchers and validated by three experts on the subject linked to the Federal University of Goiás (UFG).

Data collection consisted of structured interviews using a script containing sociodemographic data, clinical, anthropometric measurements and food and nutrition information questions.

The analyzed sociodemographic variables were gender, age, occupation, self-declared ethnicity, and economic class. The economy class was classified according to the Economic Classification Criteria of the Brazilian Association of Research Companies 2015 ABEP, categorizing classes A-B, C, and D-E.

Anthropometric measurements collected corresponded to the weight, height and waist circumference (WC) and the body mass index (BMI) was calculated. According to World Health Organization (WHO), there were classified as obese those with BMI ≥ 30 kg/m2. The WC was measured using graduated tape measure in centimeters, positioned at the midpoint between the last rib and the iliac crest at the end of expiration. The high risk

for women was with values ≥ 88 cm and ≥ 102 cm for men.[8-9]

Systemic blood pressure (SBP) was measured with the sphygmomanometer device manual, with the subject seated after 5 minutes of rest, considering high blood pressure (hypertension), those who reported some treatment and/or presented systolic blood pressure (PS) ≥ 140 mmHg and/or PD ≥ 90 mmHg, and those with controlled SBP <139/89 mmHg.[11-12]

Data were organized with a double entry in a database in Microsoft Excel® 2016. Then, the results were taken to carry out statistical analysis using the Statistic Package for Social Sciences® software for Windows (SPSS version 17.0) for descriptive and inferential statistics. Categorical data were described with absolute frequency percentages and continuous variables, using the descriptive mean and standard deviation. The chi-square test of Pearson with a significance level of 5% (p-value <0.05) was used to evaluate the association between risk factors and socioeconomic, demographic and anthropometric variables on univariate analysis. The Shapiro-Wilk test was used to assess the normality of quantitative data. To calculate the prevalence and confidence interval was used as estimator the prevalence ratio, calculated by simple Poisson regression. The variables with a p-value ≤ 0.20 proceeded to multivariate analysis using Poisson regression.

This study had the project approved by the Research Ethics Committee/CEP of the Federal University of Goiás/UFG, with the number of protocol 1147004/2015 and CAAE: 43743315.1.0000.5083.

RESULTS

Of the 386 participants evaluated, the sample was characterized by the predominance of females 74.4% (n=287), and the mean age of all participants was 40 years (±14.7). About the socioeconomic profile, the rating of 52.1% (n=201) of participating were in social class D-E. It was found that 35.8% (n=138) were unemployed, noting significant association (p=0.000), and most of them were female corresponding to 31.6% (n=122).

The origin of the people, there were 22.5% (n=87) being from another city and of they were mostly female 17.1% (n = 66). The color self-mentioned was brown in 47.2% (p=0.017), as in Table 1.

Table 1. Prevalence of socioeconomic and demographic factors, according to gender, people seeking care in municipal health units, Jataí-GO, Brazil, 2015 (n=386).

Variables	Male (N=99)		Female (N=287)				Value P*
	n	%	n	%	n	%	
Age group							0.022*
18-29	107	27.7	23	6	84	21.8	
30-39	92	23.8	18	4.7	74	19.2	
40-49	84	21.4	25	6.5	59	15.3	
50-59	57	14.8	13	3.4	44	11.4	
≥ 60	46	11.3	20	5.2	26	6.7	
Economy class							0.707
A-B	21	5.4	7	1.8	14	3.6	
C	164	42.5	41	10.6	123	31.9	
D-E	201	52.1	51	13.2	150	38.9	
Occupation							0.000
Employed	248	64.2	83	21.5	165	42.7	
Unemployed	138	35.8	16	4.1	122	31.6	
Self-mentioned skin color							0.017
Brown	182	47.2	42	10.9	140	36.3	
White	166	43	40	10.4	126	32.6	
Black	38	9.8	17	4.4	21	5.4	
Origin							0.714
Jataí	298	77.2	77	19.9	221	57.2	
Not from Jataí	87	22.5	21	5.4	66	17.1	

*Chi-square Test of Pearson.

In Table 2, the FCR as a sedentary lifestyle and overweight were the health risks with higher prevalence, more frequent among women, followed by hereditary factors and WC. The consumption of alcohol was reported by 10.6% (n=41) of men and 8.8 (n=34) of women. Thus, these results were statistically significant (p=0.000). Smoking among men was higher 5.7% (n=22) than in women (p=0.000).

As for BMI, 34.2% (n=132) of people included in the study were overweight and with them, 25.6% (n=99) were female. In addition to this result, a large number of women, 53.1% reported being sedentary (n=205). Regarding the anthropometric factors, there was a prevalence of participants with WC classified as high risk 24.1% (n=93) and WC high risk 31.6 (n=122).

Table 2 shows other clinical variables of importance to the outcome of CVD. There was a prevalence of family history of reports of cerebrovascular accident (CVA), about 27.2% (n=105) and these results were significant between the proportion of evaluated men and women (p=0.002). These reports were more common among women 23.3% (n=90). The occurrence of cases of Acute Myocardial Infarction (AMI) was 38.9% (n=150). As the occurrence of diabetes mellitus (DM) in the study population identified in 8% (n=31) of the sample, 4.1% of them were male demonstrating significance between evaluated men and women (p=0.001). SAH composed 21.5% (n=83) of the sample.

Table 2. Prevalence of cardiovascular risk factors according to gender in patients with primary care in the municipal of Jataí, 2015 (n=386).

Variables			Male (N=99)		Female (N=287)		Value P*
	n	%	n	%	n	%	
Sedentary lifestyle							0.280
No	116	30.1	34	8,8	82	21.2	
Yes	270	69.9	65	16.8	205	53.1	
Smoking							0.000
No	347	89.9	77	19.9	270	69.9	
Yes	39	10.1	22	5.7	17	4.4	
Alcohol consumption							0.000
No	311	80.6	65	16.8	246	63.7	
Yes	75	19.4	41	10.6	34	4.4	
BMI							0.526
Low weight	13	3.4	3	0.8	10	2.6	
Eutrophic	158	40.9	46	11.9	112	29	
Overweight	132	34.2	33	8.5	99	25.6	
Obesity	83	21.5	17	4.4	66	17.1	
Heritability of stroke							0.002
No	281	72.8	84	21.8	197	51	
Yes	105	27.2	15	3.9	90	23.3	
Heredity of Sudden Death							0.372
No	316	81.9	84	21.8	232	60.1	
Yes	70	18.1	15	3.9	55	14.2	
Heredity of Kidney Disease							0.106
No	351	90.9	94	24.4	257	66.6	
Yes	35	9.1	5	1.3	30	7.8	
Heredity of Acute Myocardial Infarction							0.399
No	236	61.1	57	14.8	179	46.4	
Yes	150	38.9	42	10.9	108	28	
Waist circumference							0.018
Adequate	171	44.3	52	13.5	119	30.8	
Elevated risk	93	24.1	27	7	66	17.1	
High risk	122	31.6	20	5.2	102	26.4	
Diabetes Mellitus							0.001
No	355	92	83	21.5	272	70.5	
Yes	31	8	16	4.1	15	3.9	
Hypertension							0.181
No	303	78.5	73	18.9	230	59.6	
Yes	83	21.5	26	6.7	57	14.8	

*Chi-square Test of Pearson.

Table 3. Multivariate regression analysis and prevalence ratio of socioeconomic and clinical factors by gender in people seeking care in municipal health units, Jataí, Brazil, 2015.

Variables	PR (IC95%)	P
Age		
18-29	1.43 (0.86-2.36)	0.162
30-39	1.53 (0.92-2.55)	0.100
40-49	1.34 (0.82-2.19)	0.239
50-59	1.41 (0.85-2.32)	0.179
≥ 60	1	
Occupation		
Employed	0.74 (0.58-0.95)	0.019
Unemployed	1	
Self-mentioned skin color		
Brown	1.28 (0.81-2.04)	0.281
White	1.24 (0.78-1.99)	0.350
Black	1	
Smoking		
Yes	1	
No	1.42 (0.85-2.39)	0.174
Alcohol consumption		
Yes	1	
No	1.36 (0.96-1.93)	0.076
History of stroke in the family		
No	0.86 (0.66-1.11)	0.249
Yes	1	
History of kidney disease in the family		
No	0.93 (0.63-1.37)	0.718
Yes	1	
WC		
Adequate	0.95 (0.70-1.29)	0.763
Elevated risk	1	
High risk	1.15 (0.85-1.58)	0.379
Diabetes Mellitus		
No	1,57 (0.90-2.73)	0.105
Yes	1	
SAH		
No	1.03 (0.73-1.46)	0.884
Yes	1	

In Table 3, all of these factors did not remain associated to the differences between men and women. The occupation variable remained associated with the differences between the gender (p=0.019 and PR=0.74, IC:0.58 to 0.95). However, the PR showed a lower value than one and likewise the IC. Therefore, it was not statistically significant for the gender difference. It is noteworthy the high frequency of overweight and obesity, high alcohol consumption among participants, sedentary lifestyles, WC ranked high and high risk to a predisposition to CVD, in addition to cases of people with hypertension according to figure 1. These risk factors are among the display cases that contribute to a greater magnitude to the cause of death and decreased life expectancy.[13]

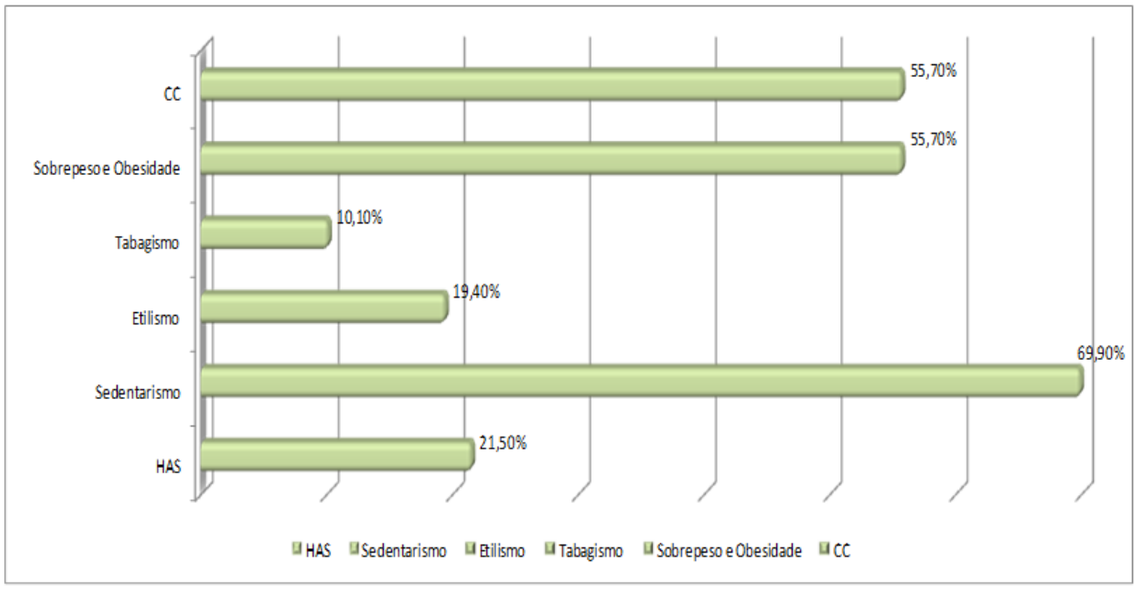

Figure 1. Cardiovascular risk factors prevalent among users of primary care in the municipal of Jataí, 2015.

DISCUSSION

This study assessed the prevalence of multiple FCR in patients seeking care in primary health care. The rates of overweight, obesity, and physical inactivity are increasing progressively. In this study, a population with high rates of modifiable risk factors was identified, which 69.9% were classified as sedentary. Overweight and obesity index totaled 55.7% of the study population, and of them, 42.7% were female. Similar results were found in other studies, which also showed a high prevalence of overweight and obesity in women, associated with biological factors and the higher energy imbalance in the female.[13] This high number relates to the social changes and style life; technology has brought comfort and consequently included the sedentary lifestyle. Eating habits are changed daily, and the consumption of canned, and sugars routinely grows which may be associated with physical inactivity and overweight[14-15].

Changes in people´s lifestyle reflect the epidemiological changes that have occurred over time, that is, chronic degenerative diseases are taking place in society. In the population studied, 21.5% reported having hypertension, and this morbidity is one of the FCR of those who control properly. In 8% of the sample reported having DM, the association between hypertension and DM according to the stratification of global cardiovascular risk fits the individual in an additional high risk of developing a cardiac event. Health over the years has ceased to be curative, highlighting the preventive care and health promotion to generate quality of life for individuals[16-17].

In addition to these morbidities, sedentary lifestyle was an important FCR in the study. In a survey conducted[15], 319 participants in a cohort of university servers of which 72.1% came sedentary, corroborating our results, reinforcing the high inactivity in the population. In this regard, regular physical activity and proper nutrition become essential in the effectiveness of CVD prevention and prevention of premature death among men and women.[18]

Among the non-modifiable variables, there was the prevalence of cases of family history, such as myocardial infarction 38.9% and stroke 27.2%. These family histories are important diseases in people exposed to other FCR. The FCR concurrency predisposes to undesirable clinical outcomes and worsens the prognosis of cardiac events. About alcohol consumption and smoking both have a higher prevalence in males, and 10.6% consumed alcohol and 5.7% were smokers. The use of illicit drugs has been continuously spreading, the use of alcohol and tobacco are modifiable and FCR solution insusceptible. However, developing reversible or no damage. Smoking is still a major public health problem, the Public Policies against smoking of the Federal Government demonstrated efficiency and may be determined to reduce this habit. However, tobacco use is still common among the population. Currently about 17% of the population uses cigarettes.[19]

It is noteworthy the prevalence of inadequate values for WC, highlighting the prevalence among females which amounts to 43.5% of the total sample of 55.7%. The WC is an important marker for identifying the accumulation of body and visceral fat and are directly related to the risk of CVD. The observed changes suggest the predisposition of individuals to the development of hypertension and metabolic diseases[16-20-21].

It is important to emphasize the role of the Center of Support for Family Health (NASF), which consists of a multidisciplinary team working together with the professionals of Family Health Teams (FHT) supporting health practices in the pursuit of prevention and health promotion, based on local needs[22].

With the current health context, nursing actions along with other professionals can contribute to the prevention of CVD. Thus, the nurse must have knowledge of the FCR. The nurse plays an important role in the development of health education strategies for the prevention of CVD, in addition, to promoting educational programs such as group activities, hiking, individualized guidance during nursing visits[23].

This cross-sectional study was conducted with a random sample, so despite identifying differences in the bivariate analysis between male and female about exposure variables, it was not possible to establish a causal association. However, the data reveal the coexistence of multiple FCR in the same person, which may favor the emergence of CVD.

CONCLUSION

The results showed that among the predominant FCR, those subject to change such as sedentary lifestyle, obesity, and waist circumference were highlighted. Despite the differences observed between men and women in the univariate analysis, a multivariate regression model was not possible to establish a causality to the exposure factors between genders. However, the study was important and showed simultaneity of FCR in the same person.

It is up to the healthcare professional the educational measures in the prevention and incentive actions on the changes in lifestyle, in search of healthy lifestyle habits. Strategies to change the prevalent FCR should include guidelines for a healthy diet, combined with physical activity routine. Therefore, the permanent health education, actions together with a focus on prevention of risk factors are necessary, strengthening education and health promotion measures.

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