111 - HABITUAL LEVEL OF PHYSICAL ACTIVITY AND ASSOCIATED FACTORS IN PATIENTS WITH DIABETES AND HYPERTENSION, USERS OF A FAMILY HEALTH STRATEGY IN TORRES / RS

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INTRODUCTION

In recent decades, the growing number of people with sedentary behavior associated with the standard of contemporary living demonstrates a relation that has led to an increased incidence of premature deaths and illnesses related to stress. In addition to these effects, there are negative consequences on quality of life and an increase in non- communicable chronic degenerative diseases (NCDs) such as cardiovascular disease, diabetes, obesity, among others (BRASIL, 2010).

In Brazil, there are 6 million people with diabetes and that number should reach 10 million people in 2010. Due to its high burden of associated morbidity and mortality, the prevention of diabetes and its complications has now become a public health priority (WHO, 2010).

Another non-communicable condition is Hypertension (HTN), which is the most common cardiovascular disease. In Brazil, there are about 17 million people with hypertension, 35% of the aged 40-plus population, and that number is growing (OMS, 2010). According to the Brazilian Society of Hypertension (BSH), the number of hypertensive patients in developing countries like Brazil is expected to grow 80% by 2025 (BSH 2011).

Changes in lifestyle to include physical exercise (PE) are recommended for both the treatment and prevention of diabetes and hypertension. If 100 people suffering from hypertension started doing PE regularly, the Sistema Único de Saúde (SUS) would save about 36% in spending on this disease (JURAKI et al., 2010). The benefits of PE in the control of blood pressure (BP) happen for various direct and indirect factors that occur in the body. Cardiovascular, endocrine and biochemical alterations are among the most important benefits one may get (VIEIRA, 2010). PE is also one of the most effective ways to prevent and rehabilitate a diabetic patient. Glucose is the predominant source of energy in the first 30 min of exercise, so PE has a function similar to the insulin with regard to the increased use of the same substance by the cell (SBD, 2011). Regular and moderate PE associated with proper diet can reduce by 58% the deleterious effects of type 2 diabetes and reduce the dose of insulin use, besides preventing or delaying the onset of diabetes (BRAZIL, 2010).

The objective of this study was to determine the level of habitual physical activity and associated factors in patients with diabetes and hypertension, users of a Family Health Strategy in the municipality of Torres, RS.

METHOD

This is an exploratory, descriptive, cross-sectional survey, proposed to and approved by the Ethics Committee of the Universidade Luterana do Brazil in accordance with Resolution CNS 196/96, under Protocol N°. 388H-2010. The participants were 116 individuals of both genders enrolled in the Hypertensive and Diabetic group (HiperDia) registered at a Family Health Strategy (FHS) in the municipality of Torres / RS. After consent of the FHS involved, participants were selected by voluntarily joining the survey and signing an informed consent form.

In the evaluation, we adopted the following methodology: instrumentation of the evaluators, contact with the FHS, subject selection, data collection through questionnaire and anthropometric measurements. The anthropometric variables were assessed: body mass (kg) and height (m) to calculate the Body Mass Index (BMI-kg/m2), using a GETEH scale inspected by the National Institute of Metrology (INMETRO); the abdomen circumference (AC), Circumference (WC) and hip (HC) were measured with a Sanny elastic anthropometric band, adopting the cutoff points suggested by the World Health Organization (WHO, 1998). To assess the level of habitual physical activity (HPAL), we used the International Physical Activity Questionnaire (IPAQ), n° 8 long version of a usual week, validated for the Brazilian population (Benedetti et al., 2004). The study has demonstrated the predictive power of the patterns of physical activity (PA) (walking, moderate, vigorous) in its different domains: work, travel, recreation and domestic activity. In order to classify the HPAL, we considered as physically active the individuals who perform at least 150 minutes of physical activity five or more days per week, and as sedentary those who perform less than 10 minutes daily of physical activity. To evaluate the conditions of life and health, we used an exploratory descriptive questionnaire containing questions about gender, marital status, education, occupational and socio-economic status, and health indicators.

The analysis adopted for the treatment of the data was descriptive statistics, Pearson correlation (r), using the capabilities of SPSS ® version 14.5, and estimated confidence intervals for $p \geqslant 0.05$ (ZAR, 1999).

RESULTS AND DISCUSSION

The mean age of the subjects was 61.4±10.2 years, of which 77 (66.4%) were women, 52 married, and 33.6% men, 31 married. It was observed in the male sample, that 24 (20.7%) are illiterate or have not finished elementary school; eight (6,9%) have a primary school education, but have not finished high school; seven (6.0%) have finished junior high school, but have not finished high school. With reference to women, it was found that 42 are illiterate or have not finished elementary school; 23,3% have only finished elementary school, but have not finished junior high; eight have finished junior high, but not high school. The same results were observed in studies of Gomes et al. (2007) and Coqueiro et al. (2007) regarding minimum education.

Regarding the perception of general health, 47 individuals considered it from fair to good; 18,1% consider their health poor; only one considered it excellent. This information is consistent with Miranzi et al. (2008), where self-perception of health was positive for approximately 53,3%. The main complaint was in relation to health with musculoskeletal disorders, 47 subjects (40.5%), followed by heart disease, 29 subjects (25%). With respect to drugs, 100% of the sample makes use of some type of medication, which is justified because it is a group of hypertensive and diabetic group served by the FHS HiperDia. Of that number, only 6% have health insurance while 94% depend on the Sistema Único de Saúde (SUS).

Low level of stress was observed in 41 subjects. Sleep quality was considered good for 44,8% of them, and bad for 34,5%. Dissatisfaction with body weight was present in 43.1% of women and 50 of them would like to reduce weight, unlike men, of whom only 17,2% claimed to be satisfied with their weight. These data corroborate those of Gomes (2007), whereby 80,3% said they had low levels of stress, 81.1% had good quality sleep, and 62.9% were dissatisfied with body weight.

As to smoking, we found that 76 had never smoked, 28 subjects had stopped smoking for more than 2 years, and 6 smoke more than 20 cigarettes per day. Concerning alcohol consumption, one can say that it is low, as 84.4% of the subjects said they did not consume any dose. Yet, 12,1% of the subjects admitted that they consume less than 3 drinks per week and 3,4% admit taking 4 to 5 servings per day.

We considered as overweight or obese those individuals with a BMI ⩾ 25.0 kg/m2, which was observed in 99 subjects of the study (Table 1). However, there was no significant relationship between the variable BMI and age (r = 0.35, p>0.710), which can be justified on the basis of a physiological characteristic associated with aging, when there is a redistribution of body fat from the members to the trunk (SPIRDUSO, 2005). Maintaining an adequate nutritional status is very important because, on the one hand, there is low-weight, which increases the risk of infection and mortality, and on the other hand, there is overweight, which increases the risk of chronic diseases such as hypertension and diabetes (CABRERA, 2010). In contrast, there was a significant association between age and AC (r=0.180, p>0.050) and age and WHR (r =0.297, p>0.001).

With this alarming scenario and considering that the prevalence of overweight and obesity is increasing in all regions of the country (IBGE, 2010), maintenance of ideal weight, BMI below 25 kg/m2, should be a goal to be pursued, because we know the relationship between increased BMI and increased risk of death from cardiovascular disease. The highest rate of obesity occurs in poorer populations with lower educational levels (MONTEIRO et al., 2001). One can explain this association by a greater palatability and the low cost of energy dense foods such as sugar and fats (DREWNOWSKI et al., 2004).

The association between AC and BMI was significant (r=0.74, p>0.000), which can offer a combined form of risk assessment and help reduce the limitations of each individual assessments (RIBEIRO, 2004). In this study, we found that 71 women had favorable AC (0.87±0.07 cm) and only 6 had unfavorable AC. Among men, unfavorable results appeared in 38 individuals (1.00±0.07 cm), and favorable for one individual only. The WHR results showed that 50 women and 32 men had values above the ⩾ 88.0. We can say that these individuals are at increased risk of metabolic complications (ABES, 2009). According to Bray and Gray (1998), individuals over 40 years of age who presented values above 0.90 and 1.00 to 0.80 to 0.90 for men and women, would be among those at high risk of adverse health consequences.

Table 1. Classification of nutritional status according to gender (mean ± standard deviation) in waist circumference (WC) and waist to hip ratio (WHR).

Variable	Classification	Female	Male	General
BMI	>24.9	9	8	17
	=25.0	68	31	99
	Total	77	39	116
CA	Favorabe	71 (0.87±0.1)	1	-
	Unfavorable	6 (1.15±2.0)	38 (1.00±0.1)	-
WHR	<80	11 (74.18±4.8)	2 (73.0±5.7)	13 (74.18±4.8)
	80–87.9	16 (83.0±2.1)	5 (83.9±2.2)	21 (83.65±2.3)
	=88.0	50 (98.9±8.8)	32 (102.0±8.3)	82 (100.27±8.7)

With respect to the usual level of PA at work, it was observed that women (159.8±572.3min/week) are active on the sum of all PA patterns (walking, moderate and vigorous). The same was not observed in men (Table 2).

Table 2. Levels of habitual physical activity classified in the gender (mean ± standard deviation) and the Fields of Physical Activity (PA).

Variables	Female (n=77)	Male (n=39)
PA at work (min/wk)		
Walking	(25.5±104.2)	(42.7±199.3)
Moderate	(66.2±242.0)	-
Vigorous	(68.3±310.3)	(82.1±512.4)
Total	(159.8±572.2)	(124.8±543.2)
PA at transportation (min/wk)		
Bicycle	(16.0±44.2)	(71.3±144.0)
Walking	(60.9±102.2)	(89.1±158.6)
Total	(76.9±146.4)	(160.4±302.6)
PA at home, household chores, family care (min/wk)		
Moderate at home	(351.4±458.9)	(20.0±52.3)
Moderate in the garden	(79.8±150.9)	(106.7±189.2)
Vigorous in the yard	(72.3±182.9)	(68.1±163.0)
Total	(503.4±611.3)	(194.8±317.1)

Table 2. Levels of habitual physical activity classified in the gender (mean ± standard deviation) and the Fields of Physical Activity (PA). (Continuation).

Variables	Female (n=77)	Male (n=39)
PA recreation, sport, exercise and leisure (min/wk)		
Walking	(41.4±175.3)	(41.8±94.9)
Vigorous	(3.8±20.4)	(3.9±17.1)
Moderate	(18.5±89.2)	(11.5±42.2)
Total	(63.7±197.9)	(57.2±104.9)
Time spent sitting (min/wk)	(1400.9±764.9)	(1520.3±853.3)

Label: Physical Activity = PA; Week= wk; Minutes = min.

Concerning the transportation domain, we found that men (160.4±302.6min/week) were more active while women (76.9±146.4min/week) were considered sedentary. Studies conducted by Zaitune et al. (2007) reported similar levels of PA between men and women in their free time and at work. With respect to transportation activities, the same authors found that only 27% of men and 42% of women had more than 15 minutes a day of travel on foot or by bicycle.

In the field of PA in the home, housework and family care, we found that women spend more time (503.4±611.3min/week) than men (194.7±317.1min/week). However, in moderate activities in the garden, we observed that men are more dedicated than women. Concerning vigorous PA, we observed that either men or women do not reach the vigorous pattern.

As to PA in the field of recreation, sport, exercise and leisure, women (63,7±197,9 min/week) and men (57.2±104.9

min/week) did not meet the recommendation of 150min/wk, and were considered sedentary. This is worrying because we know the benefits that regular PA provides. In order to reduce the risk of several chronic conditions, hypertension and diabetes, PA of moderate intensity every day of the week is necessary (WARBURTON et al., 2007). Participation of PA at any level (mild, moderate or vigorous) would be a protective factor of health, even in individuals with the presence of some disease (SBH, 2011).

With regard to time spent sitting, we can observe that men outnumber women. This is because the sample is mostly comprised of retirees and elderly people who opt for activities that require no effort (Table 2).

CONCLUSION

We found that low educational levels, physical inactivity, overweight and obesity, along with hypertension and diabetes are health-compromising risk factors in both genders.

We also found that medication is the only treatment they go through, and that very few people perform some leisure or oriented PA as a means of prevention. Moreover, despite being under treatment at an FHS, the subjects have high potential to be victims of cardiovascular events, especially modular factors that must be handled correctly, considering the individual, social and economic aspects of the target population.

There should be an intervention of a professional in physical education that could encourage a change in habits and lifestyles associated with PA, thus contributing to health promotion and prevention of complications both for hypertensive and diabetic people and the population at large. In this way, the costs of curative treatment would be reduced and the main goal of the FHS, which is to create strategies for prevention of diseases, would be highlighted.

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HABITUAL LEVEL OF PHYSICAL ACTIVITY AND ASSOCIATED FACTORS IN PATIENTS WITH DIABETES AND HYPERTENSION, USERS OF A FAMILY HEALTH STRATEGY IN TORRES / RS

ABSTRACT

This study aimed to assess the level of habitual physical activity and associated factors in patients with diabetes and hypertension, users of a Family Health Strategy (FHS) of the Municipality of Torres, RS. The sample consisted of 116 individuals, 77 (66.4%) women and 39 (33.6%) men with a mean age of 61.37±10.19 years. For data collection, descriptive exploratory questionnaires were used, one for anthropometric indicators Body Mass Index (BMI), waist circumference (WC), waist hip ratio (WHR) and the International Physical Activity Questionnaire (IPAQ) N°8 long version. We identified 99 patients who had BMI ⩾ 25.0 kg/m2. AC was favorable to 71 women and unfavorable to 38 men. Regarding WHR values, 50 women and 32 men showed values ⩾ 88.0. With respect to the usual level of physical activity, we found that the subjects were most often classified as sedentary in different fields like in recreation, sport, exercise and leisure PA where women showed (63.7±197.9 min/week) and men showed (57.8±104.99 min/week). We conclude that, while undergoing treatment at an FHS, the subjects have high potential to be victims of cardiovascular events, especially modular factors that must be handled correctly, considering the individual, social and economic aspects of the target population.

KEYWORDS: Physical Activity, Hypertension, Diabetes Mellitus, FHS.

NIVEAU HABITUEL D'ACTIVITÉ PHYSIQUE ET LES FACTEURS ASSOCIÉS CHEZ LES PATIENTS DIABÈTIQUES HYPERTENDUS, UTILISATEURS D'UNE STRATÉGIE DE SANTÉ DE LA FAMILLE DE LA MUNICIPALITÉ DE TORRES / RS

RÉSUMÉ

Cette étude visait à évaluer le niveau d'activité physique habituelle et les facteurs associés chez les patients diabètiques hypertendus, utilisateurs d'une stratégie de santé familiale de (SSF) la municipalité de Torres, RS. L'échantillon se composait de 116 personnes alors qu'ils étaient 77 (66,4%) femmes et 39 (33,6%) des hommes avec un âge moyen de 61,37±10,19 années. Pour la collecte des données, questionnaires descriptifs exploratoires ont été utilisés, un pour les indicateurs anthropométriques l'indice de masse corporelle (IMC), la circonférence de la taille (CT), le ratio de la hanche (RH) et le questionnaire sur l'aptitude à l'activité physique internationale (Q-AAP) n° 8 version longue. Nous avons identifié 99 patients qui avaient un IMC ⩾ 25,0 kg/m2. La CA a été favorable à 71 femmes et défavorable à 38 hommes. Pour les valeurs RTH, 50 femmes et 32 hommes ont obtenu des valeurs ⩾ 88,0. En ce qui concerne le niveau habituel d'activité physique, on a constaté que les sujets ont été classés le plus souvent comme sédentaires dans différents domaines telle que l'AP de loisirs, sports, exercice, où les femmes (63,7±197,9 min/semaine) et les hommes (57,8±104,99 min/semaine). Il est conclu que, tout en subissant un traitement à une SSF, les sujets ont un potentiel élevé d'être victimes d'événements cardiovasculaires, en particulier les facteurs modulaires qui doivent être manipulés correctement, en tenant compte des aspects individuels, sociaux et économiques de la population cible.

MOTS-CLÉS: Activité physique, hypertension, diabète, SSF.

NIVEL HABITUAL DE ACTIVIDAD FÍSICA Y FACTORES ASOCIADOS ENPACIENTES CON DIABETES E HIPERTENSIÓN USUARIOS DE UNA ESTRATEGIA DE SALUD DE LA FAMILIA DEL MUNICIPIO DE TORRES / RS

RESUMEN

Este estudio tuvo como objetivo evaluar el nivel de actividad física habitual y factores asociados en pacientes con diabetes e hipertensión de los usuarios de una Estrategia de Salud Familiar (ESF) de la Municipalidad de Torres, RS. La muestra consistió en 116 individuos, que fueron 77 (66,4%) mujeres y 39 (33,6%) hombres con una edad media de 61,37±10,19 años. Para la recolección de datos, se utilizó cuestionarios descriptivos exploratorios, uno para los indicadores antropométricos Índice de Masa Corporal (IMC), Circunferência Abdominal (CA), Relación Cintura Cadera (RCC) y el Cuestionario Internacional de Actividad Física (IPAQ) n°8 versión larga. Se identificaron 99 sujetos con un IMC ⩾ 25,0 kg/m2, CA fue favorable para 71 de las mujeres e desfavorable para 38 de los hombres, para la RCC 50 mujeres tuvieron valores ⩾ 88,0 e 32 hombres respectivamente. Con respecto al nivel habitual de actividad física encontró que los sujetos en diferentes ámbitos con mayor frecuencia fueron clasificados como sedentarios como el AF de las instalaciones de recreación, deporte, ejercicio y de ócio, las mujeres con (63,7±197,9 min/sem) y los hombres con (57,8±104,99 min/ sem). Llegamos a la conclusión que si bien los sujetos fueron sometidos a tratamiento en un ESF, tienen grandes posibilidades de ser víctimas de eventos cardiovasculares, especialmente los factores modular que deben ser manejados correctamente, teniendo en cuenta los impactos individuales, sociales y económicas de la población objetivo.

PALABRAS CLAVE: Actividad física, hipertensión, diabetes mellitus, ESF

NÍVEL HABITUAL DE ATIVIDADE FÍSICA E FATORES ASSOCIADOS EM PACIENTES DIABÉTICOS E HIPERTENSOS USUÁRIOS DE UMA ESTRATÉGIA DE SAÚDE DA FAMÍLIA DO MUNICÍPIO DE TORRES/ RS

RESUMO

Este estudo teve por objetivo avaliar verificar o Nível habitual de Atividade Física e fatores associados em pacientes Diabéticos e Hipertensos usuários de uma Estratégia de Saúde da Família do Município de Torres, RS. A amostra foi composta por 116 indivíduos sendo eles 77 (66,4%) mulheres e 39 (33,6%) homens, com media de idade entre 61,37±10,19 anos. Para a coleta dos dados, foram utilizados questionários descritivos exploratórios, um para os indicadores antropométricos Índice de Massa Corporal (IMC), Circunfêrencia Abdominal (CA), a Relação Cintura Quadril (RCQ) e o International Physical Activity (IPAQ) versão longa n.º 8. Identificou-se 99 sujeitos apresentaram o IMC ⩾25,0 kg/m2, a CA foi favorável para 71 das mulheres e desfavorável para 38 dos homens, para a RCQ 50 mulheres apresentaram valores ⩾88,0 e 32 homens respectivamente. Com relação ao Nível Habitual de Atividade Física verificou-se que em diferentes domínios os sujeitos na maioria das vezes foram classificados como sedentários, como nas AF de recreação, esporte, exercício e lazer onde as mulheres (63,7±197,9min/sem) e os homens (57,8±104,99min/sem). Conclui-se que apesar dos sujeitos estarem sob tratamento em uma ESF, apresentam elevado potencial para serem vítimas de eventos cardiovasculares, em especial fatores moduláveis que devem ser manejados de forma correta, considerando aspectos individuais, sociais e econômicos da população-alvo.

PALAVRAS-CHAVE: Atividade Física, Hipertensão Arterial, Diabetes Mellitus, ESF.