Factores de riesgo cardiovascular y la percepción del estado de salud en profesores de tiempo completo de la UABC, campus Mexicali

Cardiovascular disease risk factors and the perception of health in full professors of the UABC, campus Mexicali

Fatores de risco cardiovascular e percepção do estado de saúde em tempo integral do corpo docente UABC, campus Mexicali

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Resumen

El estilo de vida de la sociedad actual ha ocasionado un aumento en el riesgo de contraer enfermedades crónicas no transmisibles (ECNT) a mediano plazo. En México, las enfermedades cardiovasculares se consideran un problema de salud pública y han llegado a constituirse como la primera causa de muerte en la población adulta. La combinación de una dieta poco saludable, inactividad física y factores como el consumo de tabaco y la ingestión excesiva de alcohol, tiene un efecto acumulativo o incluso sinérgico que propicia

una mayor incidencia de ECNT. Por otra parte, el término auto-percepción del estado de salud se refiere a la información suministrada por el individuo acerca de su estado de salud. El objetivo es determinar la relación que existe entre los factores de riesgo cardiovascular y la percepción del estado de salud en profesores de tiempo completo de la UABC, campus Mexicali. Para ello se hizo un estudio cuantitativo, transversal y de correlación en 225 profesores de tiempo completo, seleccionados aleatoriamente, a quienes se les aplicó cuestionario validado, pruebas bioquímicas y antropométricas. Entre los resultados están la prevalencia de sobrepeso más obesidad en 81.3 %, hipertensión en 28 %, glucosa elevada en 26.6 %, colesterol elevado en 37.3 %, LDL elevado en 53.3 %, triglicéridos elevados en 33.3 %, HDL bajo en 76.9 %, consumo de alcohol en 14.2 %, consumo de tabaco en 60 %, actividad física vigorosa solo en 3.9 %. Por otro lado, 68.9 % se percibe físicamente sano. La mayoría de la población estudiada presentó riesgos cardiovasculares y tuvo una percepción errónea de su salud.

Palabras clave: factores de riesgo cardiovascular, percepción de salud, obesidad.

Abstract

The lifestyle of today's society has caused an increase in the risk of Chronic Noncommunicable Diseases (CNCDS) in the medium term. In Mexico, cardiovascular diseases are considered a public health problem and have come to become the leading cause of death in adults. The combination of an unhealthy diet, physical inactivity, and factors such as the consumption of tobacco and excessive alcohol intake, has a cumulative or even synergistic effect that leads to a higher incidence of CNCD. On the other hand, the self-perception of health status refers to the information provided by the individual about their health. The objective is to determine the relationship between cardiovascular risk factors and the perception of health in full professors of the UABC, campus Mexicali. For this matter a quantitative, cross-sectional and correlational was made to 225 full professors, selected randomly, who applied a validated questionnaire, anthropometric and biochemical tests. Results include the prevalence of overweight more obesity in 81.3%, hypertension in 28%, glucose high 26.6%, cholesterol elevated at 37.3%, high LDL 53.3%, triglycerides

elevated in 33.3%, low HDL 76.9%, consumption of alcohol by 14.2%, tobacco consumption by 60%, vigorous physical activity only at 3.9%. On the other hand, 68.9% perceive themselves physically healthy. Most of the studied population presented cardiovascular risks and had a misperception of their health.

Key words: cardiovascular disease risk factors, perception of health, obesity.

Resumo

O estilo de vida da sociedade moderna tem causado um aumento no risco de doenças crônicas não transmissíveis (DNT) no médio prazo. No México, as doenças cardiovasculares são consideradas um problema de saúde pública e tornaram-se estabelecido como a principal causa de morte na população adulta. A combinação de uma dieta pouco saudável, sedentarismo e fatores como consumo de tabaco e álcool, tem um efeito cumulativo, ou sinérgico que promove uma maior incidência de doenças crônicas. Além disso, o termo auto-percepção do estado de saúde refere-se às informações fornecidas pelo indivíduo sobre sua saúde. O objetivo é determinar a relação entre fatores de risco cardiovascular e percepção do estado de saúde de professores em tempo integral UABC, Mexicali campus. Isto requer um estudo quantitativo, transversal e correlação foi feito em 225 professores em tempo integral, selecionados aleatoriamente, que foram validados questionário foi aplicado, testes bioquímicos e antropométricos. Entre os resultados são a prevalência de excesso de peso ou obesidade em 81,3%, hipertensão em 28%, glicose elevada de 26,6%, colesterol elevado de 37,3%, LDL elevado em 53,3%, triglicéridos elevados em 33,3%, HDL baixo de 76,9%, o consumo 14,2% de álcool, o consumo de tabaco em 60%, a atividade física vigorosa apenas 3,9%. Por outro lado, 68,9% percebida fisicamente saudável. A maioria da população estudada apresentou os riscos cardiovasculares e tinha uma percepção equivocada de sua saúde.

Palavras-chave: fatores de risco cardiovascular, percepção de saúde, a obesidade.

Introduction

In Mexico, as in other developing countries, Non-Communicable Diseases (NCD) as the Systemic Arterial Hypertension (HTN), diabetes mellitus type 2 (DM2), Dyslipidemia, and heart disease, among others, have presented an exponential increase in the last two decades, reaching more than communicable diseases in adults (Rosas et al., 2005). Currently known NCDs are preventable and that adult Cardiovascular Disease (CVD) is the leading cause of morbidity and mortality, with a rate of 31.01% and ischemic disease of the heart with 25.89%, respectively (Martínez, 2015).

According to the forecast of the Pan American Health Organization, deaths from cardiovascular disease will continue representing 50% of deaths by Noncommunicable Diseases (NCDs) until 2020; it also reports that they are conditioned more and more by globalization, urbanization, economic and demographic impacts, eating habits, changes in lifestyles, consumption of alcohol and tobacco, sedentary lifestyle and consumption of foods high in calories and low in nutrients (Giraldo, Martínez and Granada, 2011).

In Mexico, diabetes mellitus is the leading cause of death, while the second place occupy it ischaemic diseases of the heart, which caused 82 334 deaths in 2014 (Aguirre, 2016). Whole heart diseases are the leading cause of overall mortality in Mexico; but when you ungroup as unique cause, the most prevalent of these is ischemic heart disease after diabetes mellitus.

Thus, CVD is a serious problem of public health around the world for being the first cause of morbidity and mortality in several countries. The development of this disease is promoted by several risk factors, some of which are modifiable, such as hypertension, obesity, high levels of total cholesterol and lipoprotein LDL, levels of low HDL cholesterol, smoking, diabetes and diet (Levenson, Skerrett and Gaziano, 2002).

Hypertension is one of the causes of morbidity and mortality worldwide and is a major risk factor (RF), which increases the chance of developing a wide range of cardiovascular events. The coexistence of AHT and DM2 confers much greater than any risk of cardio FR and cerebro-vascular complications in isolation, since the DM2 accelerates the natural

progression of atherosclerosis. In addition, the accumulation of abdominal fat and obesity have been added to the FR, increasing the risk of coronary heart disease (Rojas, 2012).

Moreover, self-perceived health status (APES) is a subjective indicator; however, it is a reliable approach of global health status and an important component of quality of life. The World Health Organization has recommended for conducting epidemiological studies. It has been reported that there is a direct relationship between APES and mortality. Good or excellent self-perception about health is associated with a higher survival rate, while negative APES is linked to an increased risk of mortality. The APES depends on the conditions of health, work, age and lifestyle; for example, the presence of pain, obesity and chronic diseases accompanied by negative changes in APES. By contrast, higher education, healthy lifestyles, as performing physical activity, smoking cessation and healthy diet are linked to a better perception of health status (Vladislavovna, Perez and Reyes, 2008).

Additionally, they are a favorable environment perception, adoption and practice of behavior positively associated with APES, including physical activity (Stronegger, Titza and Oja, 2010, Kamphuis et al., 2010).

In studies it reported that people with higher education have more positive assessments of their health: two out of three say their health is good or very good. The opposite happens among people of low education (Abellan, 2003, Lucumí, Grogan and Espinoza, 2013).

The aim of this study was to determine the relationship between cardiovascular risk factors and perception of health status in full-time faculty UABC, Mexicali campus.

Methodology

A quantitative, transversal and correlation study was conducted in 225 full-time teachers (PTC) of the Autonomous University of Baja California campus Mexicali, randomly selected. With the approval of Research and Ethics Committee of the School of Nursing, as well as directors of academic units and reported each participant consent, it proceeded to conduct the investigation. Appointment with each of the PTC and twelve hours of fasting was done taking blood pressure, anthropometric measurements, taking samples and

biochemical application validated questionnaire. Following this, they were given healthy life prospectus, register your measurements and balanced breakfast.

BMI was classified according to the following values: underweight less than 18.5 kg / m2; Normal 18.5 to 24.9 kg / m2; Overweight 25.0 to 29.9 kg / m2; obesity ≥30.0 kg / m2. It was considered as a risk value circumference greater than or equal to 90 cm waist (men) and greater than or equal to 80 cm (women). Blood pressure was classified as normal if it was below 120/80 mm Hg, as if recorded prehypertension 120-139 / 80-89 mm Hg and blood pressure as if it was greater than or equal to 140/90 mm Hg.

It was considered normal glycemia at the lower 100 mg / dl; cholesterol was measured with a reflective photometry technique and was classified as normal in a lower value to 200.0 mg / dl; HDL-cholesterol less than 50.0 mg / dl in men and less than 60.0 mg / dl in women; LDL-cholesterol less than 100.0 mg / dl and triglycerides of 40.0 to 160.0 mg / dl in men and 35.0 to 135.0 mg / dl in women.

Results

The sample consisted of 225 full-time teachers (PTC), 103 (45.8%) men and 122 (54.2%) women. The average age was 47.7 years (minimum 37, maximum 74 years); 148 (66.4%) subjects of the study population are married, 75.5% men and 58.7% women.

According to BMI, 86 (38.2%) were overweight; 44 (42.7%) men and 42 (34.4%) women; and 97 (43.1%) obesity; 49 (47.6%) men and 48 (39.9%) women, with a mean BMI of 29.2 kg / m2; minimum of 19 kg / m2 and a maximum of 54.4 kg / m2. The prevalence of overweight or obesity of 81.3% (90.3% in men and 74.3% in women) (Tables 1 and 2).

Regarding the waist circumference, an average was found in man of 101.9 cm (70 and minimum maximum of 133 cm) and women average 94.3 cm (minimum of 62 and maximum of 141 cm).

Table 1. Age and anthropometric prevalences in PTC UABC, Mexicali campus.

n=225

	Frecuencia %		
	Hombre (n= 103) Media/DS	Mujer (n=122) Media/DS	General (N=225) Media/DS
Edad (en años)	48.5 $\pm$ 10.9	47 $\pm$ 10	47.7 $\pm$ 10.4
IMC (Kg/m^2)	29.5 $\pm$ 4.6	29.0 $\pm$ 6.5	29.2 $\pm$ 5.7
Cc (cm)	101.9 $\pm$ 10.6	94.3 $\pm$ 14.2	97.8 $\pm$ 13.2
Peso (Kg)	88.0 $\pm$ 17.9	75.0 $\pm$ 16.7	80.9 $\pm$ 18.4
Talla (cm)	1.71 $\pm$ .051	1.60 $\pm$ .065	1.65 $\pm$ .081

IMC, Índice de Masa Corporal. Cc, circunferencia de cintura.
Fuente: cuestionario

Table 2 it can be seen that overweight and obesity are higher in men.

Table 2. IMC en PTC de la UABC, campus Mexicali.

n=225

IMC	Frecuencia %		
	Hombre F (%)	Mujer F (%)	General F (%)
Bajo peso	0	3 (2.5)	3 (1.3)
Normo peso	10 (9.7)	29 (23.8)	39 (17.3)
Sobre peso	44 (42.7)	42 (34.4)	86 (38.2)
Obesidad	49 (47.6)	48 (39.3)	97 (43.1)
Total	103 (45.8)	122 (54.2)	225 (100)

Fuente: cuestionario

28% of PTC presented arterial hypertension, 41.7% men y16.4% women. systolic average was found in the man of 125 mmHg (minimum of 80 and maximum of 199 mmHg) and 115 women mmHg (minimum of 70 and maximum 160 mmHg). Regarding the average diastolic found in man of 81 mmHg (minimum of 60 and maximum of 110 mmHg) and in women of 75 mmHg (minimum of 50 and maximum of 90 mmHg) (Table 3).

Tabla 3. Presión arterial en PTC de la UABC, campus Mexicali.

n=225

TA	Frecuencia %		
	Hombre F (%)	Mujer F (%)	General F (%)
Hipotensión	16 (15.5)	19 (15.6)	35 (15.6)
Normotensión	44 (42.7)	83 (68.0)	127 (56.4)
Hipertensión	43 (41.7)	20 (16.4)	63 (28.0)
Total	103 (45.8)	122 (54.2)	225 (100)

Fuente: cuestionario

A significant association between hypertension and sex (Pearson r -.195, p = .003), hypertension with overweight or obesity (Pearson r .296, p = .000) and hypertension with knowledge of known hypertensive found (Pearson r -.310, p = .000). Of the 63 (28.0%) PTC with hypertension, 59 (63.2%) overweight plus obesity.

Glucose, mean of 96.5 mg / dl (minimum 48 and maximum 265), in men: 102 mg / dl (minimum 48 and maximum 265), in women: 91.7 mg / dl (in biochemical tests found the following minimum 50, maximum 226); cholesterol, an average of 190.4 mg / dl (minimum 73, maximum 610), in humans: 186.7 mg / dl (minimum 73, maximum 316), in women: 193.5 mg / dl (minimum 91, maximum 610); LDL, average of 104.5 mg / dl (-37 minimum, maximum 445) in man: 103.4 mg / dl (minimum 9 maximum 210), in women: 105.6 mg / dl (-37 minimum, maximum 445); HDL, an average of 46.7 mg / dl (minimum 0, maximum of 206) in man: 44.2 mg / dl (minimum 26, maximum 79), in women: 48.9 mg / dl (minimum 0, maximum 206) ; triglycerides an average of 136.2 mg / dl (minimum 12, maximum 866) in man: 166.0 mg / dl (minimum 12, maximum 866), in women: 111.0 mg / dl (minimum 35, maximum 398) (Table 4).

Table 4. PTC biochemical results of the UABC, Mexicali campus.

n=225

Prueba bioquímica	Normal	Resultados	
	mg/dl	Hombre: n=103 Media (DS)	Mujer: n= 122 Media (DS)
Glucosa	60-100	102.1 (41)	91.7 (25)
Colesterol	<200	186.7(46)	193.5 (71)
LDL	<100	103.4 (46)	105.6 (66)
HDL	Hombre >50 Mujer >60	44.2 (11)	48.9 (21)
Triglicéridos	Hombre 40-160 Mujer 35-135	166.0 (115)	111.0 (62)

Fuente: laboratorio de la Facultad de Enfermería, UABC

26.6% of the general population has hyperglycemia, 56.6% men and 43.3% women (Table 5).

Table 5. PTC altered biochemical results of the UABC, Mexicali campus.

n=225

Prueba bioquímica		Resultados		p
	f/%	Hombre: n=103 f/%	Mujer: n= 122 f/%	
Glucosa (elevada)	60 (26.6)	34 (56.6)	24 (43.3)	ns
Colesterol (elevado)	84 (37.3)	39 (37.9)	45 (36.9)	ns
LDL (elevado)	120 (53.3)	56 (54.4)	64 (52.5)	ns
HDL (bajo)	173 (76.9)	75 (72.8)	24 (19.7)	
Triglicéridos (elevados)	75 (33.3)	44 (42.7)	31 (25.4)	.005

Fuente: cuestionario

68.9% of PTC in general have a perception of being physically healthy and 74.7% feel healthy (Table 6). 73.3% 59.8% overweight and obesity is perceived physically healthy (Pearson r 7.66, p = .05), and 76.7% overweight and 66% obese feel healthy (Pearson r 7.66, p = .053).

**Tabla 6.** Autopercepción del estado de salud, en PTC de la UABC, campus Mexicali.

n=225

		Resultados	
	f/%	Hombre: n=103 f/%	Mujer: n= 122 f/%
Percepción de estar físicamente sano	155 (68.9)	71 (68.9)	84 (68.9)
Sentirse sano	168 (74.7)	82 (79.6)	86 (70.5)

Fuente: cuestionario

Regarding vigorous physical activity (more than 7 hours a week of intense activity), 88 (39.1%) of the study population does nothing strenuous activity, 129 (57.3%) less than 7 hours a week and only 8 (3.6%) takes vigorous activity, or more than 7 hours a week; in relation to moderate physical activity (more than 7 hours a week), 7 (3.1%) of the study population does not perform moderate activity, 171 (76.0%) made less than 7 hours of moderate activity a week and 47 (20.9%) takes more than 7 hours of moderate activity a week (figure 1).

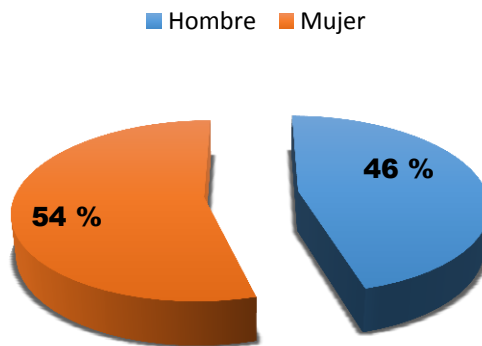Figure 1. Vigorous and moderate physical activity on PTC, campus Mexicali.
n=225
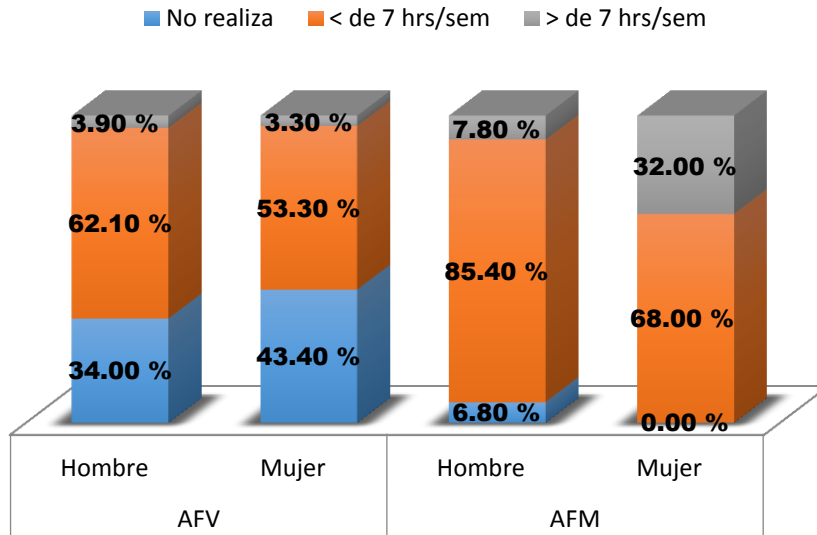
AFV: Actividad física vigorosa, AFM: Actividad física moderada

As for the consumption of snuff, 135 (60.0%) smoke; 22 (9.8%) did not smoke or did not do; 68 (30.2%) have never smoked (Figure 2).

Figure 2. Snuff consumption by sex in PTC, campus Mexicali.

n=225

Fuente: cuestionario

Moreover, a significant relationship was found regarding the self-perception of being physically healthy with knowledge of developing hypertension (Pearson r .661, p = .001), with the knowledge of diabetes (Pearson r .439, p = .001), with the knowledge of suffering from hypercholesterolemia (Pearson r .429, p = .001), as well as feel healthy (Pearson r .505, p = .001).

Discussion

Today, the leading cause of morbidity worldwide are chronic non-communicable diseases such as diabetes mellitus and hypertension, which, combined with unhealthy life styles, cause a high rate of cardiovascular mortality.

According to WHO reports, in 2012 17.5 million people died from cardiovascular diseases (CVD), which represents 31% of all deaths in the world. Of these deaths, 7.4 million coronary heart disease and 6.7 million to the AVC were due, which could have been prevented by acting on behavioral risk factors such as consumption of snuff, poor diet, obesity, physical inactivity and harmful use alcohol (WHO, 2015).

Moreover, the Organisation for Economic Co-operation and Development (OECD, 2015) reports that the prevalence in Mexico of overweight and obesity, risk factors for CVD and diabetes, is one of the highest, since the prevalence of overweight is 38.8%, the second highest in the OECD after Chile, and the prevalence of obesity is 32.4%, the second highest after the United States (OECD, 2015).

According to ENSANUT 2012 (. Gutierrez et al, 2012), an increase of 38.4% in the prevalence of obesity in the case of men, and an increase of 19.0% in the prevalence of overweight in the case of women is observed; in relation to the 2006 survey, however, there were no significant changes (p <0.05) in the period between 2006 and 2012 in the prevalence of overweight and obesity. In this comparison between surveys in 2006 and 2012, the prevalence of overweight and obesity together (BMI ≥25 kg / m2) increased 11.4 percentage points and 3.3 percentage points men and women. Comparing the prevalence of ENSANUT 2012 with those reported in the present study, we can observe a similar prevalence in overweight increased 38.2% and 43.1% obesity (Gutierrez et al., 2012)

This will have to take into account, as the average age in the study was 47, and when obesity a factor of cardiovascular risk is very important to consider its early start as it has important implications for the health of the person as well as for social, employment and economic status.

Thus, obesity associated with other risk factors such as diabetes mellitus, hypertension and dyslipidemia, can mean a serious deterioration in the quality of life, which leads to greater health care needs, disabilities by health disorders and minor working capacity.

The Spanish Diabetes Society reports that people with diabetes have a risk of 2-4 times higher than in the general population of similar age and sex cardiovascular disease risk remains after adjusting other classic cardiovascular risk factors (Arrieta et al., 2015).

In this sense, the atherosclerotic lesions in diabetic subjects are faster and earlier, more widespread and grave development, more often unstable plaques, with a similar incidence in both sexes and increased presence of silent or less clinical expression ischemia. They are considered 70-80% of all causes of death in individuals with diabetes and account for over 75% of all hospitalizations for diabetic complications (Arrieta et al., 2015).

Moreover, the proportion of adults with prior medical diagnosis of diabetes was 9.2%, according to reports from ENSANUT 2012, showing a significant increase compared to the proportion reported in the ENSA 2000 (5.8%) and ENSANUT 2006 (7%) (Gutierrez et al., 2012).

The prevalence of diabetes prior medical diagnosis in people 20 years or more in Baja California was 9.9%, higher than that reported in the ENSANUT 2006 (8.7%). The prevalence of diabetes previous medical diagnosis was slightly higher in women (10.8%) than men (9.1%), with a ratio female: male 1.2. Both men and women an increase was observed in the prevalence of previously diagnosed diabetes from the group of 40-59 years (13.5 and 19.7%, respectively) 7 (Gutierrez Rivera, Shamah-Levy, Oropeza and Hernandez 2012).

Compared with the national results, the prevalence of previous medical diagnosis of diabetes in Baja California was located above the national average (9.2%) (Gutierrez et al., 2012), so there was a higher prevalence of hyperglycemia in the this study: 26.6%.

Regarding blood pressure, the American Heart Association (Go AS, 2014) states that hypertension is the main factor percentage population risk for cardiovascular disease, with 40.6%, followed by the consumption of snuff (13.7%), food unhealthy (13.2%), physical inactivity (11.9%) and abnormal levels of glucose (8.8%) (Go AS, 2014).

The prevalence of hypertension by previous medical diagnosis in people 20 years or older in the state of Baja California was 18.8%, which decreased by 7.8% compared to the prevalence reported in the ENSANUT 2006 (20.4%). The prevalence of hypertension was 22.3% in women and 15.2% men, with a ratio female: male 1: 0.7 (Gutierrez et al, 2012.).

Both men and women an increase was observed in the prevalence of hypertension from 40 years (19.5% in men and 30.3% women), compared with the national results, the prevalence of hypertension by medical diagnosis prior in the state of Baja California it was ranked above the national average (Gutierrez et al, 2012.); however, the prevalence of hypertension in PTC was higher, reporting 28%, which is higher in men with 41.7% in women with 16.4%.

Furthermore, hypertension in patients with diabetes is very common, with a prevalence greater than 60% (Arrieta et al., 2015). In the present study can be observed a significant relationship in the PTC with obesity, high blood glucose (r Speraman 133, $p = 0.047$) and hypertension (r Speraman .295, $p = 0.001$).

The measurement of waist circumference (CC) has been raised several years ago as an easy and useful tool to use in clinical practice to evaluate the cardiovascular risk of patients are overweight or obese, as well as implement therapeutic measures or preventive intended to reduce this risk (Moreno Gonzalez, 2010).

In Mexico, to identify adults with abdominal obesity is used as a reference the classification of the Ministry of Health of Mexico (Barquera, Campos Hernandez Pedroza and Rivera, 2013) and the International Diabetes Federation (Alberti, Zimmet and Shaw, 2005), cutoff

defined as greater than or equal to 80 cm CC in women and greater than or equal to 90 cm in men.

The ENSANUT 2012, reports a CC risk of 65.5% in men and 82.8% in women, similar results are observed in women (80.3%) and men (64.5%) in this study (Barquera et al. , 2013).

Lira, Kunstmann, Knight, Gainza and Molina (2008), evaluated the association of CC with classic risk factors in 6,130 healthy Chilean women, where they found that the linear correlation of prevalence of hypertension was highly significant (Chi2 Linear Trend p 0 , 0001), both systolic hypertension (SAH) and for diastolic hypertension (HTAD), with an odds ratio of 5.04 IQ vs VQ for SAH and 5.84 for HTAD.

Moreover, a high CC is associated with hypertriglyceridemia, low HDL cholesterol and increased the proportion of LDL particles (Després, Lemieux and Prud'homme, 2001), an association observed in the present study (Pearson r .193, p = 0.004).

Today it is known that physical inactivity is the fourth most important risk factor mortality worldwide (6% of deaths worldwide). Only exceed hypertension (13%), consumption of snuff (9%) and excess blood glucose (6%).

Overweight and obesity represent 5% of the global mortality and this strongly influences the prevalence of noncommunicable diseases (Mathers, Ma Fat, 2004) and the overall health of the world's population; It is shown that physical activity practiced regularly reduces the risk of coronary heart disease and stroke, type II diabetes, hypertension, colon cancer, breast cancer and depression. In addition, physical activity is a determining factor in energy consumption, so it is critical to achieve energy balance and weight control (Mathers, Ma Fat, 2004; Mathers, Stevens, Mascarenhas, 2009; Bauman et al. , 2009; Meusel et al, 2009;. Hanifi et al, 2010)..

In order to improve cardiorespiratory function, muscle, bone health, reduce the risk of NCDs and depression, WHO recommends that adults aged 18 to 64 should accumulate at least 150 minutes per week of physical activity (PA) aerobic moderate or 75 minutes of

vigorous aerobic physical activity each week, or an equivalent combination of moderate and vigorous activities (Hanifi et al., 2010).

Thus, in the ENSANUT (2012) in the State of Baja California, it was reported that 22.2% of the population was inactive, 11.6% moderately active, ie, performed the minimum AF suggested by WHO, and 66.2% active ; compared with the results obtained in the present study we have, according to Vigorous Physical Activity (AFV), 39.1% is inactive, 57.3% moderately active and only 3.6% active (Gutierrez et al. 2012).

Moreover, consumption of snuff is traditionally linked to respiratory problems and cancer, however, also significantly increases the risk of peripheral heart, brain and vascular diseases. Because annual cardiovascular deaths related to snuff, consumption of this is a public health problem (Anzola, 2010).

The reports shown in ENSANUT (2012) in the state of Baja California, show a prevalence of snuff in the age group of 40-59 years 40.7%; 53.7% in men and 28.0% in women, being a consumption of more snuff in this study, with 60% of consumption being higher in women 54% in men 46% (Gutierrez et al., 2012).

As for the perception of health status, we have despite the subjective nature involved and according to cultural, psychological and social aspects, is an indicator present in all analyzes of the health of populations and are described as a useful measure its predictive value to assess future use of citizens regarding health care and even in terms of mortality (Miilunpalo et al., 1997).

Studies in Spain report a perception of the state of good health in 71.3% (Gavira et al., 2012), on the other hand, in Mexico, the ENED (2002) shows results consistent with that observed in other parts of the world and studies earlier in our country.

The perception of the health of Mexicans is better among men than women. In both sexes the perception of good health decreases as age increases. In summary, 62% of women over 18 years in Mexico perceive that their health is good and 70% of men feel the same (ENED, 2002).

In a study in Mexican climacteric women it reported that, of the total respondents, 3,883 women (42.8%) reported a self-perceived health status (APES) positive: 1.5% was excellent, 3% very good and 37.3% good; and 5365 (57.2%) reported negative APES: 52.2% regular perception and 5.8% with poor (Vladislavovna et al., 2008).

Moreover, in the study by Win America (2014) on obesity in America 2014, important aspects are reported relative to the self-perception of health status, 73% of people in the age group 26-45 years rate their health (healthy or very healthy) positively. Another very important aspect is the underestimation of overweight or obese, as only 44% of respondents in America claims that are overweight and a quarter of people are not aware of their obesity problem, is also another important aspect is that 55 % of people are overweight or obese is perceived very healthy or healthy (Matus, 2015; Win Americas, 2014).

Similar results were found in this study, where 73.3% of PTC overweight and 59.8% obese is perceived as physically healthy (Pearson r 7.66, p = .05). In addition, 76.7% of PTC overweight and 66.0% obese refers feel healthy (Pearson r 10.58, p = .014).

Conclusions

Most CRFs were presented significantly in a relatively young population, which forms much of the generation replacement in the faculty of the UABC.

Importantly, the study population that is obese is perceived as physically healthy 68.9% and 74.7% feel that healthy; also a mismatch occurs with the results of biochemical tests, an aspect that is very important because the PTC having no perception of their actual health status, is running a great risk of cardiovascular disease that incapacitate, or that lead to premature death.

The prevalence of high fasting plasma glucose is an alarming figure, considering that this condition has increased risk of developing diabetes in the future.

Because cardiovascular risk factors increase with age, these are the leading cause of morbidity and mortality and are potentially preventable, we hope this study is a contribution to publicize the real situation in the university community.

Thus, it is important to increase efforts to promote healthy eating focused food and traditional preparations and seek ways to guide the population to opt for healthy foods instead of industrialized, whose contents in sugar, fat, sodium and calories often high and opposed to the prevention and control of a healthy weight.

Moreover, physical inactivity in this population, own modern lifestyle, should be counteracted by moderate or vigorous activity. It is necessary to promote healthy lifestyles that favor the reduction of sedentary lifestyle, for example, avoid spending long time sitting or in front of screens, transported by bicycle or walking, sports and other physical activities regularly and eat healthy and avoid snuff consumption.

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