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Quality of life and Exposition to Unhealthy Lifestyle Risk Factors of Nocturnal University Students from a Greater Metropolitan City

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ABSTRACT

Quality of life is affected by many factors which are linked to psychological stress and anxiety, and unhealthy dietary and lifestyle habits. The present study had the objective of evaluate the quality of life and dietary habits of students from a private university in Sao Paulo (SP), Brazil. Quality of life was evaluated by the "WHOQOL-bref" questionnaire. Dietary habits were evaluated by a food frequency questionnaire. A representative sample of 72 students was randomly selected. Inadequate weekly dietary intake of fats (75%) and sedentary behavior were higher (55.5%). In relation to the quality of life, 7% had considered bad, and 41.7% were not satisfied with themselves. Furthermore, 14.4% reported having affective problems (anxiety, depression, bad mood, and desperate feelings) frequently or always, and 32.4%, sometimes. 8.33% were not satisfied with their body appearance. 50% reported ingested meat and meat products at least 5 times per week. Dietary intake of fruits (18%), vegetables (23.62%), and cereals (15.28%) at least 5 times per week was very lower, considering the nutritional recommendations. On the contrary, the dietary intake of legumes, specially beans, reached 44.45% at least 5 times a week. It should be concluded that sedentary behavior and dietary fat intake were higher, whereas dietary intake of fruits, vegetables, and cereals was very poor. Those students were too much afflicted by affective and self-esteem disorders.

Keywords: Quality of life; anxiety; dietary intake; fatty foods; sedentary behavior

INTRODUCTION

Adequate dietary habits and regular practice of physical activities and exercises are important components of a healthy lifestyle that are associated with decreased risk of chronic non-transmissible diseases such as type 2 diabetes, hypertension, obesity, some cancers and the metabolic syndrome (Pan et al 1997, Tuomilehto et al 2001, Manson et al 2002, Gregg et al 2003, Hu 2003, Church et al 2005, Ferrari 2007). Notwithstanding, sedentary behavior (or physical inactivity) allied to a lower intake of fruits, vegetables, cereals, and fibers, as well as higher intake of fatty, fried, salted, caloric foods, snacks, and soft-drinks have been associated with increased chronic disease risk in children and adults (Jiménez-Cruz et al 2002, Hu et al 2003, Wang et al 2003, Telford 2007, Ferrari 2008). World Health Organization (WHO) estimates 2 million deaths/year caused by physical inactivity and unhealthy eating habits (Waxman 2004). There are many quality of life concepts and some of them considered human as a bio-psycho-social individual that presents life and needs. The satisfaction of needs and human rights, as well as of health expectations, and the reduction of poverty and other socio-economic inequalities constitute crucial points in human being quality of life (Oliveira 1997, Lacaz 2000).

The quality of life, measured by different instruments and scales, has been evaluated in many countries, different ages, genders, among health workers, caregivers, smokers workers and in a great variety of disorders or diseases such as physical tiredness and chronic fatigue, chronic pain, mental disorders, cardiovascular and lung diseases (Oliveira 1997, Lacaz 2000, Morken et al 2002, Lacasse et al 2004, Li et al 2004, Dunderdale et al 2005, Chen et al 2006, Rachiotis et al 2006, Vetter 2007, Priebe 2008). The World Health Organization (WHO) had created and used the questionnaire "WHOQOL" (WHO-Quality of Life) as a valid instrument to evaluation of quality of life of human population (Fleck et al 2000).

The majority of nocturnal students in Sao Paulo Metropolitan area are also workers. Those students have been submitted to long work, homework, and studying journey which can seriously affect health, family, and social commitments (Caruso et al 2004, Gray et al 2004, Caruso 2006). Then, lacking of time to prepare and eat healthy meals and to engage on leisure-time physical activity is a matter of great concern for students in Brazil, UK, USA, and many other countries (Carelli and Santos 1998, Muramatsu and Harmer 2005). This chronic scarcity of time characteristic of urban living has been associated with inadequate dietary habits and overweight and obesity (Ostry et al 2006, Dixon et al 2007). Evaluate the dietary habits, another lifestyle factors (physical activity), and quality of life (physical appearance, presence of negative feelings, etc) of a sample of nightly students from a private university of Sao Paulo, one of the most important metropolitan world area, was the objective of this work.

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MATERIALS AND METHODS

72 university students (39 women and 33 men) from the night period of a private university in Sao Paulo (SP), Brazil had their quality of life (body satisfaction, self-satisfaction, social satisfaction, presence of negative feelings, sexual satisfaction, among other factors) evaluated by the questionnaire "WHOQOL-bref" validated in Brazil (Fleck et al 2000, Castro et al 2007). The sedentary behavior, and some dietary habits were evaluated by a frequency questionnaire containing five categories (Vieira et al 2002). All participants were asked to firm the term of free and informed consent. The study protocol was approved by the ethical committee on research of the Sao Paulo City University (Prot. N^{o}3664-07). Statistical analysis of data was performed using Epi info 6.04d program (CDC, Atlanta). Data were considered significant when $p<0.05$.

RESULTS

The physical inactivity was higher once 62 or 86.1% of students had practiced exercise at less than 3 times per week.

Considering the eating habits (Table 1), 59 or 81.8% of students ate fruits less than five days per week, whereas half of students ate red meat 5 to 7 days of week. The weekly dietary intake of milk and milky products was also higher (45.85% for at least 5 days). Dietary intake of cereals was lower considering that 20.83% of students did not eat and that 63.81% of them had done only up to 4 times per week. In respect of vegetable and legume intakes, 23.70% and 44.45% ate at least 5 times per week, respectively.

Table 1. Dietary habits of students from a private university in Sao Paulo (SP), Brazil.

Frequency/ Food groups	Do not eat	Up to once	2 to 4 days	5 days or more
Fruits	2 (2.78%)	27 (37.50%)	30 (41.66%)	13 (18.06%)
Meat and meat products	0 (0%)	5 (6.95%)	31 (43.05%)	36 (50.00%)
Milk and dairy products	1 (1.38%)	6 (8.33%)	32 (44.44%)	33 (45.85%)
Cereals	15 (20.83%)	20 (27.78%)	26 (36.11%)	11 (15.28%)
Vegetables	2 (2.78%)	6 (8.33%)	47 (65.30%)	17 (23.62%)
Legumes	0.0%	6 (8.33%)	34 (47.22%)	32 (44.45%)
Fatty foods	7 (9.72%)	11 (15.28%)	29 (40.28%)	25 (34.72%)
Sweets/candies	1 (1.39%)	3 (4.17%)	18 (25%)	50 (69.44%)

Considering fat intake, 40.3% of students ate fatty foods at least twice days per week and about 35% of them ingested fatty 5 days or more (the sum is 75%). Candies and sweets were ingested by 25.2% of students 2 to 4 times per week, whereas 69.76% of students ate candies and sweeties almost every day.

Into the analysis of quality of life 7% of students considered it as bad, whereas 21% had considered regular and 72.21% were satisfied.

About 8.4% of students were not satisfied with their bodies; and 7.2% declared not being satisfied with their social relationships.

Considering satisfaction with sexual life, 9.36% of students declared being not satisfied, whereas 10.9% declared regular satisfaction and 31.68% reported being satisfied with sexual life.

Negative feelings such as anxiety, depression and sadness affected too much our sample. 14.4% of students frequently had these negative symptoms, whereas 32.4% had experienced them sometimes and only 5.1% had never felt it.

Finally, 48.6% of students declared being unsatisfied with themselves.

DISCUSSION

In this study the dietary intake of fruits and vegetables was lower than that reported by Figueiredo et al (2008). In that study, 49% and 57% of people ate fruits and vegetables, respectively, 5 days or more per week, whereas only 18.2% and 23.7% of the students ingested fruits and vegetables, respectively, 5 or more days/week. Legume intake was higher among the students once 44.5% of them had ingested 5 days or more against 24.8% observed by Figueiredo et al (2008). Data from the Nurse's Health Study and from the Health Professionals' Follow-up Study covering 109.635 individuals of both genders had revealed that higher intake

of fruits and vegetables decreased by 12% the risk of cardiovascular disease (Hung et al 2004). In the same context, intake of fruits and vegetables has been associated with decreased risk of oropharyngeal cancer (Oliveira et al 2008). Higher intake of fruits and vegetables has been related to significant lowering risk for diabetes, venous thromboembolism and all mortality (Steffen et al 2007, Bazzano et al 2008, Trichopoulou et al 2009).

Dietary intake of cereals was lower considering that 20.83% of students did not eat and that 63.81% of them had done only up to 4 times per week. It should be emphasized that regular intake of cereals has been associated with better glycemic control, with decreased all mortality, and to lowered risk of both coronary artery disease, breast cancer, and metabolic syndrome (Steffen et al 2003, McKeon et al 2004, Bessaoud et al 2008, Misra et al 2009).

A Brazilian study had been demonstrated red meat and fried foods dietary intake associated with increased risk of breast cancer, whereas dietary intake of fruits, beans (the major legume consumed in Brazil), and dairy products had protective effect against cancer breast odds (Lima et al 2008). The ARIC study reported excessive intake of meat and fried foods had been associated with increased risk of metabolic syndrome, whereas dairy intake had decreased it (Lutsey et al 2008). Another study also demonstrated a positive association between red meat intake and the risk of inflammation and the metabolic syndrome in Iran (Azadbakht L, Esmaillzadeh 2009). Each 100g/day increment on meat intake increased 56% the risk of breast cancer (Bessaoud et al 2008). Higher intake of red and processed meats increase the risk for both hypertension and stroke (Fung et al 2004, Steffen et al 2005), whereas lower intake of those foods has been correlated to 16.6% decreased mortality risk (Trichopoulou et al 2009).

In this study the dietary intake of fatty and junkie foods (fried, salted) was high once 40.3% and 35% of students ingested fatty foods 2 or 5 or more days per week, respectively. Intake of high density energy fatty and junkie foods are responsible to adverse health effects such as breast cancer risk, oral and laryngeal cancers, prostate cancer risk, obesity, diabetes and metabolic syndrome (Ferrari 2008, Yap and Tan 1994, Boyd et al 2003, Kolonel 2001, Murakami et al 2007, Thanopoulou et al 2003, Toporcov et al 2004, Bosetti et al 2002, Dai et al 2002, Guallar-Castillón et al 2007). A study with Brazilian Japanese descendants reported a positive correlation between dietary fat intake and the risk of metabolic syndrome (Freire et al 2005).

The dietary intake of sweets, candies, and deserts was too far higher, once 69.7% of students declared ingested 5 or more days per week. Beyond the dental and oral problems associated with those foods (Khan et al 1990), they also increase the risk of obesity, metabolic syndrome, and stroke (Fung et al 2004, Yap and Tan 1994, Amin et al 2008).

In our sample of university students, 7% of them declared having poor quality of life 7%, 8.4% were not satisfied with their bodies, and 9.36% of them were not sexually satisfied.

Because of media exposure of lean, beauty, and “perfect model” of bodies, some percent of people can suffer from mental body dissatisfaction (Groesz et al 2002). In a very similar study with university students from Florianopolis, South of Brazil, body dissatisfaction accounted for 78.8% of that population (Coqueiro et al 2008) which was almost 9.5-fold higher than observed in this study.

In our study, 9.36% of students declared being not sexually satisfied. In the Asia survey about sex, 2/3 of people from 8 countries declared not being very satisfied with their sexual lives (Tan et al 2009). In the global better sex survey, following 27 countries, 48% of men declared having some type of erectile dysfunction and 65% of them were not satisfied with their sexual activities (Mulhall et al 2008). Another interesting study with medical students revealed that 63% of women had some degree of sexual dysfunction, including pain (39%), lack of orgasm (37%), lack of desire (32%), and lack of satisfaction (28%) among others (Shindell et al 2008).

Negative feelings such as anxiety, depression and sadness affected too much our sample. 14.4% of students frequently had these negative symptoms, whereas 32.4% had experienced them sometimes and only 5.1% had never felt it. This was in accordance with international studies (Maier et al 2003, Averina et al 2005, Inaba et al 2005). Anxiety, depression and sleeping disorders potentially increase the risk of cardiovascular disease and all-cause of mortality (Inaba et al 2005). Depression has also been found related to increased risk of diabetes (Kawakami et al 1999). The meta-analysis performed by Knol et al. (Know 2006) has found that depression increased by 37% the risk of diabetes mellitus. Beyond the considerable prevalence of body dissatisfaction, sexual dissatisfaction, and affective problems, 7.2% of students declared not being satisfied with their social relationships. This could explain why 48.6% of the sample reported being unsatisfied with themselves.

In the present study, 86.1% of students did not practice physical activities during their leisure times. In other study sedentary behavior was 51% of the sample (Barros and Nahas 2001). Lower levels of physical activity have been linked to increased frequency of daily drinking of soft-drinks according to a New York City study (Rehm et al 2008). The regular practice of physical activities and exercises is essential to the prevention of breast cancer. Various studies have been demonstrated regular practice of exercise reduced by 30% to 50% the breast cancer risk into the postmenopausal period (Verloop et al 2000, Moradi et al 2000). Far beyond, regular practice of physical exercise also helps to decrease the risk of depression and affective disorders, type 2 diabetes mellitus, obesity, metabolic syndrome and osteoporosis (Ferrari 2007, Ferrari 2008, Craft and Perna 2004, Dunn et al 2005, Ma et al 2009).

CONCLUSIONS

Those students have been exposed to an unhealthy urban lifestyle with poor or no opportunity to engage on leisure-time activities as well as to eat adequate healthy meals. The nightly urban living of those students limits their dietary choices to fried, fatty and sweetened foods, once fast-food systems have lower fruit, vegetable, cereal, and legume availability (Dixon et al 2007). In this sense, Inagami et al. (2009) demonstrated that fast-food neighborhood had determined the dietary behavior and obesity of a Los Angeles Community. Taken together, those facts could explain why half of the students were not satisfied with themselves and why prevalence of negative feelings was very high. Urban living of nocturnal students should be urgently improved.

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