

Health and Quality of Life among Workers from a Great Food Supplier Company in Sao Paulo (Sp), Brazil

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Abstract: Lifestyle and quality of life decisively interfere on risk for chronic non-transmissible diseases and the prevalence of affective and self-esteem disorders. The objective of this work was to evaluate health and quality of life aspects among permitted chandlers from CEAGESP in São Paulo, Brazil. All 79 chandlers from Sao Paulo headquarters were evaluated. The quality of life and lifestyle were evaluated by the “WHOQOL-bref” questionnaire. Sedentary behavior, alcoholic drinking and eating habits were evaluated by a 5-category food frequency questionnaire. Among men 85% won 5 minimum salaries (MS) and at least 42% had completed the high school. 61% of men slept less than 8 hours per day. About 9% of men had frequent negative feelings such as sadness, anxiety and depression. About 7% of men were unsatisfied with their body shape and 16% with their sleeping quality. Physical pain was more frequent among women than men (28 vs. 22%), whereas smoking prevalence was higher among women (28% vs. 19%). Women had higher educational level but perceived lower salaries. Among women, 52% slept less than 8 hours and 16% presented negative feelings. 16% of women were discontent with their sleep. In summary, quality of life of those workers should be improved.

Key words: Exercise • Sedentary behavior • Anxiety and stress • Smoking • Quality of life

INTRODUCTION

Health and quality of life of workers have been improved in the last decades [1], especially due to the actions and efforts of both governmental and non-governmental organizations and the creation of a sanitary agenda to Brazil [2]. Following the same approach, the quality of life of workers has also been focused by science investigations realized among the Research Institutes and Universities.

There are many quality of life concepts and some of them considered human as a bio-psycho-social individual that presents life expectations 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 [3, 4].

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 [3, 5-12].

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 populations. In Brazil, the WHOQOL, in wide (100 questions) and in reduced forms (26 questions) was validated to the Portuguese language [13].

Objective: This work was carried out to evaluate the quality of life and lifestyle factors (diet, alcohol drinking,

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smoking, sleeping and physical activity) of permitted sellers from CEAGESP (SP), Brazil constituted the main of this research.

MATERIALS AND METHODS

Born in 1969, the Ceagesp, “Sao Paulo General Company of Food Storage and Supplying”, is the third most important commercial center of foods in the world. Its main building place has 700.000m² localized at the Vila Leopoldina (SP), Brazil. The permitted chandlers sell more than 15.000 ton of foods *per* day and more than 50.000 ton of flowers *per* year. The CEAGESP is responsible for 60% of food supply to the Sao Paulo’s Metropolitan Area that comprises more than 35 million people.

The permitted chandlers are the owners of the food selling into the CEAGESP.

All of the 79 permitted chandlers from the CEAGESP headquarters in Sao Paulo were evaluated. Quality of life and lifestyle factors were evaluated by the questionnaire “WHOQOL-bref” (WHO Quality of Life, bref version) [13, 14]. The sedentarism, alcohol drinking and some dietary habits were evaluated by a frequency questionnaire containing five categories [15, 16]; the smoking habit was also evaluated. In Brazil the income is based on minimum salaries. A MS is of R\$465 corresponding to US\$217.99. All participants were asked to firm the free and clarified term and the study protocol was approved by the ethical committee on research of the Sao Paulo City University (Prot. N°3677-07).

RESULTS

The age of male chandlers varied from 20 to 71 years-old with a mean of 33.73 years. Among female chandlers age varied from 20 to 48 years-old with a mean of 26.21 years-old.

Considering the males 85% of them received about five minimum salaries (MS) and the rest got between 2 and 3MS; 42% had at least completed the high school. The socio-economic profile of women was little different, since although they had higher educational level (68% with at least the high school), they received lower salaries compared to the men (72% received 5MS and 20% from 2 to 3MS).

Considering sleep duration, 15% of men sleep up to 5 hours a day and 46% had done up to 7 hours/day; and 37% had 8 to 9 hours of sleep. Among women, 4% sleep up to 5 hours/day, 48% had done up to 7 hours/day and 44% got sleep from 8 to 9 hours *per* day.

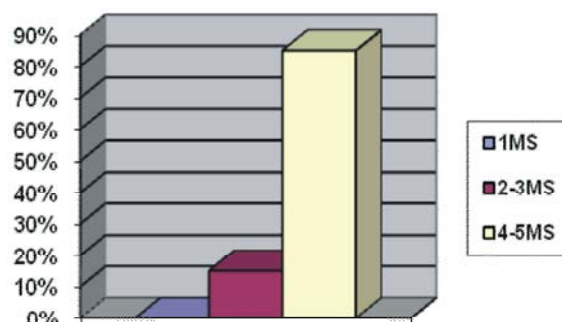


Fig. 1: Month family income of male chandlers (*in* MS).
*both are significantly different ($p < 0.05$)

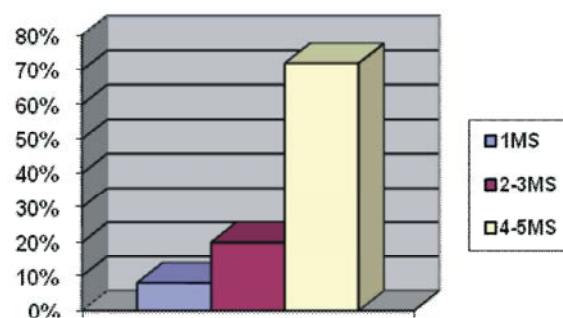


Fig. 2: Month family income of female chandlers (*in* MS).
*both are significantly different ($p < 0.05$)

Regarding the presence of negative feelings such as sadness, anxiety and depression, 9% of men reported being too much affected by such feelings which were even more frequent among women (16%).

Another important point of WHOQOL is the quality of life (QOL) perception. In this regard, 4% of men considered bad, while 50% were satisfied and 20% were very satisfied. The women perceived as better their QOL, once they did not considered bad and 56% reported having satisfaction with QOL and 24% having high satisfaction.

Self perception of health was not satisfactory for 4% of men, while 52% of them considered their health satisfactory and 31% very satisfactory. Among women, 76% were satisfied with their health condition and 8% were very satisfied; no women had considered their health unsatisfactory.

Physical pain in daily living was more frequent among women than men (28% vs. 22%) and 29% of the chandlers, from both genders, declared had not sufficient energy to realize their daily activities.

16% of chandlers from both genders considered that sleep quality was not satisfactory.

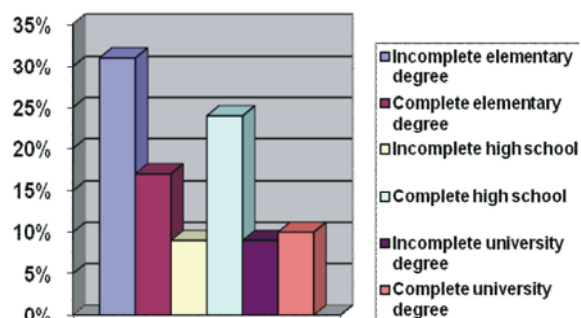


Fig. 3: Educational level of male chandlers
*except for column 5, others are significantly different ($p < 0.05$)

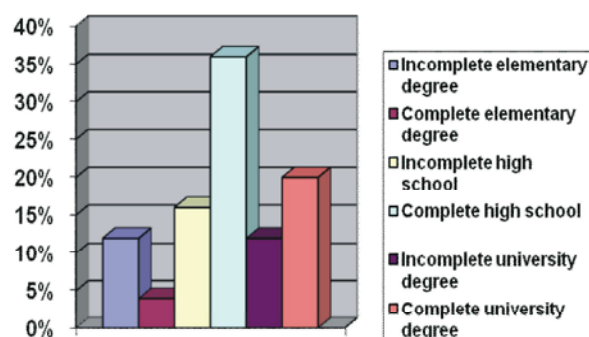


Fig. 4: Educational level of female chandlers
*except for column 5, others are significantly different ($p < 0.05$)

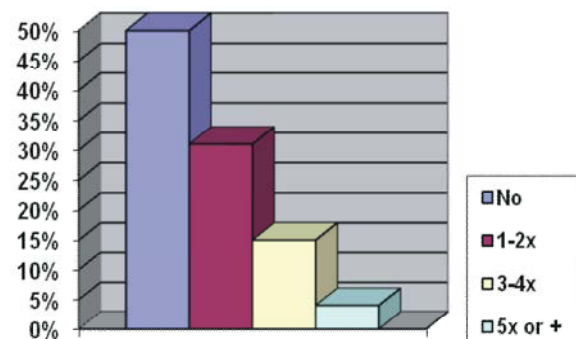


Fig. 5: Weekly physical activities frequency of men chandlers
*both are significantly different ($p < 0.05$)

Regarding body satisfaction, 7% of males and 8% of females reported being not satisfied with their body physical appearance and shape.

The weekly dietary intake of fat, junky and fried foods was high, considering that 74% and 80% of men and women, respectively, done it at least 4 times *per week*.

Alcoholic drinking habit was different among genders with high weekly frequency for men. Among them, 43%

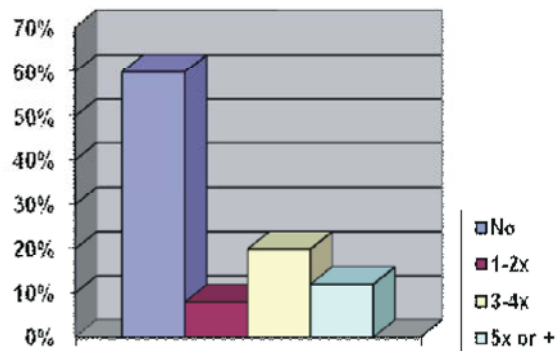


Fig. 6: Weekly physical activities frequency of women chandlers
*both are significantly different ($p < 0.05$)

did not drink, 28% ingested alcoholic drinks once *per week*, 13% drunk from 2 to 3 days/*week*, 7% done from 4 to 5 days/*week* and 9% declared drinking alcohol every day. Between women, 40% did not drink and 52% and 8% drunk alcoholic beverages once or 2 to 3 times *per week*, respectively.

Unexpectedly, smoking habit was higher among women in relation to the men (28% vs. 19%).

The sedentarism got 96% of men, because only 4% were engaged in regular aerobic physical activities (PA) 5 days or more *per week* according to the recommendations of the American College of Sports Medicine (ACSM) and the Center for Control and Prevention of Diseases (CDC/Atlanta). Contradicting the expectations, regular practice of physical activities was 4-fold higher among women, because 12% of them had at least 5 days *per week* of regular practice of physical activities.

DISCUSSION

In the spite of having higher educational level, women chandlers in this study perceived lower salaries, which is in agreement with the literature that has been showed gender differences of salaries among the same occupational positions.

Interestingly, smoking prevalence was higher among women compared to men chandlers (28% vs. 19%), contradicting studies with workers in Japan, Brazil and Argentina [17-19]. Smith *et al.* [20] reported that smoking prevalence among men was 1,73-fold higher than women in Japanese rural nurses. Nakata *et al.* [19] observed a 2,52-fold higher smoking prevalence among men compared to women workers in Tokyo; they also reported a positive association between both passive and

active smoking and the occurrence of depressive symptoms. A study with industrial Greek workers revealed that smokers had lower visual acuity than non-smokers [10].

In this study, 52% of women chandlers and 61% of men chandlers sleep less than the recommended 8 hours to maintain health.

Therefore, 22% and 28% of men and women, respectively, declared the physical pain significantly affected their lives. A Brazilian study conducted with workers from the State University of Londrina, Parana State, reported a prevalence of 52.2% of chronic pain for men and 69.2% for women [21]. Another study, with 540 health workers from 10 primary health care units of the partnership of Israel Albert Einstein Hospital reported prevalence of musculoskeletal pain of 56.57 and 38.24% for women and men, respectively [22]. A Japanese study reported a similar high prevalence of chronic low back pain for both genders (62.8 and 63.1% for men and women, respectively) [23]. The same study reported a positive association between smoking and chronic low back pain.

Moreover, the presence of negative feelings was 9 and 16% among men and women chandlers, respectively. This was in accordance with various studies which demonstrated that women are more affected by affective disorders than men do [24-26]. In a Brazilian study with textile workers [3] it was observed a high prevalence of sleeping problems (70%), muscle pains (35%), tension and anxiety symptoms (30%) that were noted in this study. The sleep deprivation increases hunger appetite and induces changes into the neuroendocrine glycemic control as well as enhances cortisol levels, increasing the risk of type 2 diabetes mellitus and obesity [27, 28]. Data from The Japan Collaborative Cohort Study (JACC) showed that 7 hours of sleep was considered the best for maintaining health and that both shorter and longer sleep duration increased the risk of all-cause of mortality [29]. Shortening of sleeping duration has also been linked to increased risk of obesity and the metabolic syndrome [30, 31]. In a Japanese study, workers with sleep lacking (two days or more/week) and lower sleeping hours (<5 hours) had two to three-fold risk of acute myocardial infarction than normal sleeping individuals [32]. A study in a Japanese telecommunication company revealed that workers with shorter sleep duration or difficult maintaining sleep had 96 and 88%, respectively, increased risk of hypertension compared to normal sleepers [33]. This means that 15 of men and 4% of women chandlers of this study were at increased risk of acute

myocardial infarction. Anxiety, depression and sleeping disorders potentially increase the risk of cardiovascular disease and all-cause of mortality [25]. Depression has also been found related to increased risk of diabetes [34]. The meta-analysis performed by Knol *et al.* [35] has found that depression increased by 37% the risk of *diabetes mellitus*.

In this study the dietary intake of fatty and junkie foods (fried, salted) was high. 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 [36-43]. A study with Brazilian Japanese descendants reported a positive correlation between dietary fat intake and the risk of metabolic syndrome [44].

In relation to drinking of alcoholic beverages, 9% of men referred daily drinking, whereas no women reported daily drinking. In a study with industrial workers from Santa Catarina, South of Brazil, it was demonstrated that alcohol abuse was more common amongst men (57.2%) compared to women (18.8%) [17].

In the present study, 50% of men and 60% of women did practice no physical activities during their leisure times. The study of Barros and Nahas [17] sedentarism was 34.8 and 67% between men and women, respectively. The regular practice of physical activities 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 [45, 46]. Far beyond, regular practice of physical exercise also helps to decrease the risk of diabetes, obesity, metabolic syndrome and osteoporotic bone disease [39, 47, 48].

In conclusion, among this population, sleeping problems were very frequent. Beyond, dietary intake of fatty foods was high among both sexes. Furthermore, sedentary habits were commonly found among both genders, whereas affective problems were more seen among women. Contradicting common expectation, women were more prone to smoke than men. Drinking habit was high among men.

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