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Lifestyle and its relation with the nutritional status of the workers of the Instituto Politécnico de la Salud, UNAN-Managua

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SUMMARY

In order to evaluate the lifestyles and their relationship with the nutritional status of the workers of the Instituto Politécnico de Salud, POLISAL, a descriptive, correlational and analytical study was carried out. The data on the sociodemographic characteristics, nutritional status and lifestyles were analyzed, among them; eating habits, activity and physical exercise, sleep patterns and stress management and use of toxic substances, such as alcohol and tobacco. The carried out statistical analyzes were: descriptive, non-Parametric V correlation tests of Cramer. From the obtained analysis and discussion of the results, the following conclusions were reached: 86% presented overweight or some degree of obesity, a situation that is sharpened in the 96% of teachers. A food pattern composed of 10 foods: pepper, oil, onion, tomato, rice, sugar, beans, coffee, chicken and bread, with a little diverse diet, their main source of caloric intake are fats, 74% do not exercise physically, 67% have good stress management, low alcohol and tobacco consumption, there is no a significant association between lifestyles and nutritional status with a $p=0.42$.

INTRODUCTION

The global burden of non-contagious, chronic diseases continues rising, to low or reduce this situation is a challenge for governments. Current data reveals that in 2005, these diseases caused around 35 million deaths, mainly deaths from cardiovascular diseases, diabetes and cancer, mostly register in low and middle income countries (WHO, 2011). Several studies have concluded that this situation can be prevented and that it is closely related to the modification of lifestyles, as one of the changeable risk factors. The healthy lifestyles are cataloged as the set of positive behaviors that every human being must perform to maintain a state of health that allows to obtain the complete state of physical, mental and social wellbeing according to Elliot (cited in Pastor, 1998), and these healthy behaviors include physical exercise, adequate nutrition, adequate sleep patterns and no abuse of harmful substances.

In Nicaragua, health problems related to lifestyles have been increasing in recent years, where 9.7% of the population suffers from Chronic Non-Contagious Diseases (NCDs) grouping the largest number of cases in the urban area and since the non-poor population is the most affected, according to the Nicaraguan Foundation for Economic and Social Development (FUNIDES, 2012), this situation has led to the development of prevention-oriented strategies within the health policies of the state.

Based on this approach, there is a concern that in Nicaragua there are few studies on how are the lifestyles of different population groups? and how is the behavior of workers towards the care of their health? situation that is also unknown in the academical environment. It is important that the Instituto Politécnico de la Salud- POLISAL, as a training unit for professionals related to health and as part of the healthy university, identify their lifestyles, since through this it will be possible to detect in a timely manner the influence they have on the development of chronic non-contagious diseases that come to limit the performance of their functions due to the deterioration of their health.

The purpose of this study is to evaluate lifestyles and their relationship with the nutritional status of POLISAL workers. This will allow, in turn, to develop strategies, within the framework of healthy universities, that help the academical community to choose lifestyles that preserve their health.

MATERIAL AND METHOD

According to the research method, the present study is observational, descriptive of correlational type. According to the time of occurrence of the facts and registration of the information is retro-prospective; for the period and sequence it is transversal and according to the analysis and scope of the results it is analytical, under the mixed approach, with a non-

experimental observational design with predominance in the quantitative approach. The study area is constituted by the Instituto Politécnico de la Salud (POLISAL) Luis Felipe Moncada of the Universidad Nacional Autónoma de Nicaragua UNAN-Managua.

The universe is composed by the 77 full time workers of the POLISAL, distributed as follows: 46 teachers and 31 administrative staff. For the quantitative data no sample was calculated nor probabilistic sampling was carried out. The sample consisted of 57 workers who wanted to be part of it, who were administered a survey and 5 who were given an observation guide. For the qualitative data, an interview was conducted with 7 key informants such as: decision makers and experts on the subject. The total number of individuals included in the present investigation was 69 subjects, who achieved the inclusion criteria.

For the collection of quantitative data, the instrument used was a questionnaire and the survey method, which was composed of three sections: Sociodemographic characteristics, nutritional and health status, which includes sub-categories on anthropometric data and pathological personal history and style of life which focused on identifying physical activity, type of food, tobacco and alcohol consumption and sleep and stress management hours. In order to identify the most consumed foods and preparations, a structured observation guide was used. To determine the food pattern, a food consumption frequency of seven days was used, quantified with the purpose of estimating the caloric intake of the different food groups and being able to determine their caloric adequacy. The qualitative data was collected through a semi-structured interview containing five open questions, which are the guide for the development of the subject (Bracker, 1998).

From the collected data, the corresponding database was designed, using the statistical software SPSS, v. 20 for Windows. Once the quality control of the registered data was carried out, the statistical analyzes adequate to the study variable were prepared. According to the nature of each of the quantitative variables for each of the specific objectives, the descriptive analyzes corresponding to the nominal variables were carried out, among them; Frequency analysis, descriptive statistics of central tendency, for nonparametric variables, contingency analysis was performed (crosstab analysis). For the association objective, contingency analysis was performed for the nonparametric variables and the Cramer V association relationship test was applied.

RESULTS AND DISCUSSION OF THE RESULTS

In the carried out research, it was found that the average age is 38 years; among these, 82% reside in the urban area. When evaluating the nutritional status through the BMI, only 14% was found in normal state, 86% suffers overweight or some degree of obesity. When evaluated by work area, 96% of teachers suffer from this pathology. These findings are related to the situation

that occurs all over the country where 30 % of the adult population suffers from this condition, and similarly, reside in urban areas (PAHO, 2006). Similar data was shown in a study conducted by Aranceta et al (2005) on the prevalence of obesity in Spain in which 54.7 % of the population between 25 and 64 years old was found to have the same situation.

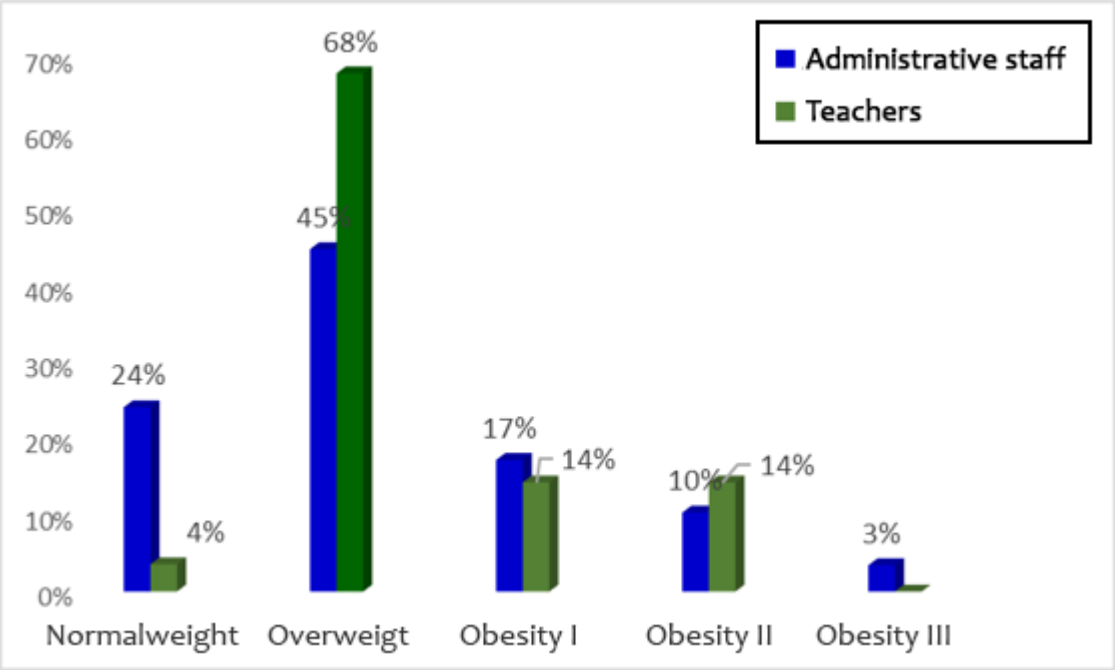

Figure 1. Body mass index of POLISAL workers according to working area

Palomares (2014) presents the same trend in the study in Lima, in health workers in which 68 % of the professionals were overweight or obese. If these three studies are compared, it can be identified that the tendency towards weight gain is worrisome in which more than half of this population meets one of the variable risk factors for the development of diseases that may have a course irreversible towards the damage to health.

It is important to note that, among workers who have a BMI above 25, 8.8 % suffer from a CNCD, including diabetes and hypertension. FAO (2014) reports that this problem is a trigger for the development of this pathology and that worldwide, its age of appearance is increasingly in the young adult population, in this study the population with this nutritional classification is much higher than the figures at the national level and in comparison with the research carried out by González (2009) in Barcelona.

When analyzing the dietary habits of workers, among the inadequate practices, 88 % never realize the 5 or 6 meal times; 84 % always add salt to food; and 95 % never avoid the consumption of industrialized soft drinks. However, among the best practices it was found that 53 % consume 6 to 8 glasses of water per day; 61 % bring food from home; and 95 % ingested

water with meals. Likewise, it was possible to identify, through the quantified food frequency method, that the workers' food pattern consists only of 10 types of food.

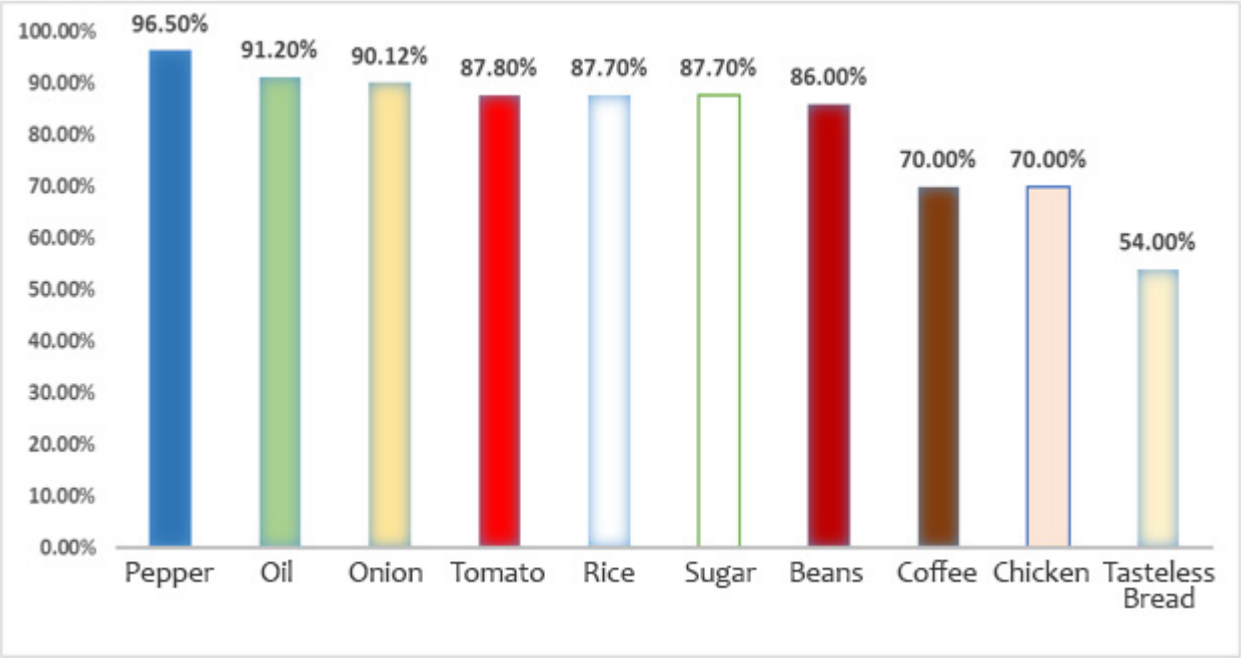

Figure 2. Food pattern of POLISAL workers

This figure shows the diet represented by five carbohydrate sources, of which two are simple carbohydrates (sugar and breads), three are foods that provide vitamins and minerals and no food sources of fiber. This diet is found with less variety compared to the pattern at the national level which is made up of 21 foods (FAO, 2007), showing a greater deficit in diversity, which leads to the distribution of the caloric source gets reduced to a few products thus causing an energy imbalance.

In this sense, the study by Ratnar et al (2008) in which the food habits of workers of public and private companies in Chile were characterized, identifying a low consumption of fruits, vegetables, fish and dairy products and a high consumption of fat and sugar. When analyzing the main source of caloric acquisition, fat excels, in which more than 75 % of the population oscillates between 38.8 % and 55.5 %, which comes mainly from the fried food acquired in the different bars of the university.

The second caloric source comes from proteins which oscillates between 29.7 % and 47.9 % derived from pork, beef and cheese. The contribution that comes from carbohydrates is between 11 % and 15.8 %, which shows that the distribution of its calorie sources is not adequate, since it has to be mainly from carbohydrates.

Among the factors that directly affect the nutritional status is the physical activity, which, according to the OMS (2010) for adults it should be performed at least 150 minutes a week with

moderate intensity and to obtain better results it must increase up to 300 minutes to be healthy. In Figure 3 it can be seen that 74 % of workers do not practice any type of programmed exercise.

If these results are compared with those of the study in health professionals from Colombia conducted by Sanabria, González and Urrego (2007), when evaluating the level of physical activity they found that 85.6 % of doctors and 94.1 % of nurses had little healthy habits. It can be observed that this activity is practiced less frequently every day, which has a negative impact on the nutritional status and health in general, because, as this activity increases, there is a tendency to significantly reduce weight, blood pressure, glycemia and improves the general condition according to data from a study conducted in Chile by Salinas (2005).

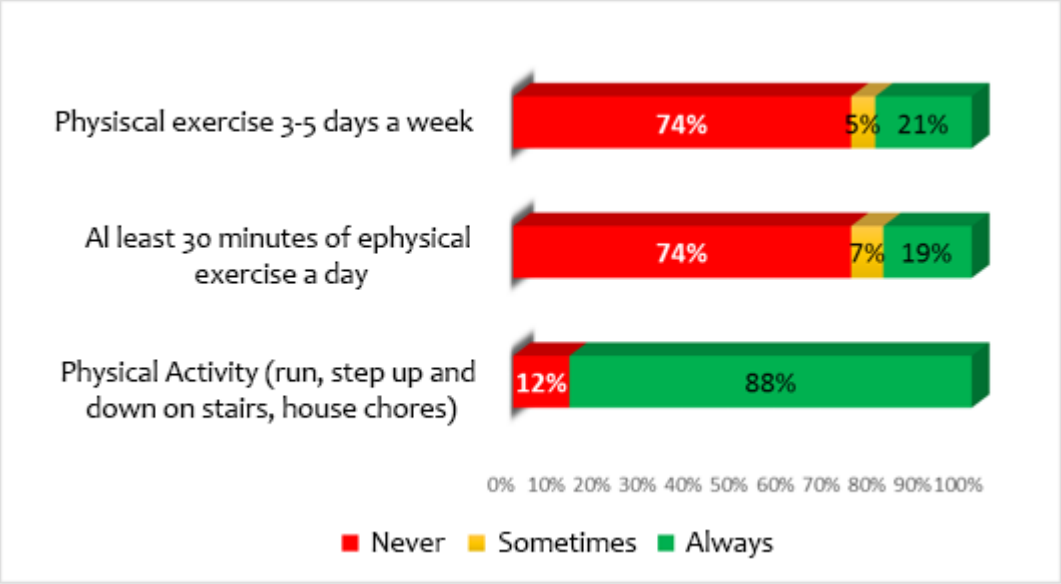

Figure 3. Frequency of workers usually performing physical activities

The data to evaluate the behavior related to the management of stress and sleep hours show that 70 % of workers present an adequate practice, finding the rest with another risk factor that is predisposing them to have problems with their weight. A study by Duran (2012) on the relationship between nutritional status and sleep concludes that sleep restriction is a factor associated with the presence of obesity in the sample studied.

Regarding the consumption and use of toxic substances, such as alcohol and tobacco, only 16 % was found to have an inadequate practice, a situation that puts their health at risk because alcohol consumption is closely related to vascular and liver diseases. poor absorption of nutrients and due to its high energy content contributes to excess weight problems, even more, if this practice is accompanied by smoking habit (Carmena, 1999).

Table 1 shows that in the population studied with the collected data, there is no statistically significant relationship between lifestyles and nutritional status with $p = 0.420$, since regardless of their lifestyle, more than three fourteen parts of workers are overweight or

obese. A similar case was observed in the study by Torrejón (2012), in the older adult in which more than half of the sample presented an unhealthy lifestyle and the standard nutritional status l, which also did not present a statistically significant relationship.

Table 1. Relationship of the nutritional status of the respondents and the Lifestyle

			Lifestyle		
			Inadequate	Adequate	Total
Nutritional status of respondents	Normal weight	Counting	5	3	8
		% of the total	8.8%	5.3%	14.0%
	Overweight	Counting	17	15	32
		% of the total	29.8%	26.3%	56.1%
	Obesity I	Counting	3	6	9
		% of the total	5.3%	10.5%	15.8%
	Obesity II	Counting	2	5	7
		% of the total	3.5%	8.8%	12.3%
	Obesity III	Counting	1	0	1
		% of the total	1.8%	0.0%	1.8%
Total		Counting	28	29	57
		% of the total	49.1%	50.9%	100.0%

		Symmetric measurements	
		Value	Sig. approximate
Nominal by nominal	Phi	.261	.420
	V from Cramer	.261	.420
N of valid cases		57	

CONCLUSION

This study shows data that had not been investigated before in a population of teachers and administrative workers of a higher education unit that trains professionals related to health. The present investigation has allowed to obtain the following conclusions:

a. Regarding sociodemographic conditions, more than half of the workers are between the ages of 21 and 48; the genre that predominated was the feminine and its majority belongs to the urban helmet.

b. More than three parts of the workers were overweight or some degree of obesity. The teachers were more affected than the administrative staff. Regarding this health condition and those that are normal, they do not present any associated pathology.

c. Within eating habits, it is demonstrated inadequate practices such as: add salt to food and consume industrialized soft drinks. The consumption pattern is made up of 10 foods showing a different diet. The main source of caloric acquisition are fats and proteins, finding an imbalance in caloric adequacy. Almost three parts of the workers do not practice any type of programmed exercise, they have good management of free time and stress, little alcohol and tobacco consumption.

d. According to the inferential statistical analysis in this case and with these data, there is no statistically significant relationship between the lifestyles and the nutritional status of POLISAL workers.

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