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Relation the lifestyle and subjective well-being in nursing students

Claudia Chaves^{a*}, Joao Duarte^a, Sofia Campos^a, Maria Conceição Martins^a,
Manuela Ferreira^a, Emilia Coutinho^a

* Corresponding author: Claudia Chaves, claudiachaves21@gmail.com

^aHealth School, Polytechnic Institute of Viseu, Rua D. João Crisóstomo Gomes de Almeida, n° 102, 3500-843 Viseu, Portugal

Abstract

Habits of healthy living, including adequate food, avoiding tobacco and alcohol consumption, regular practice of physical activity along with general preventive behaviours, have demonstrated positive effects on the health of students in higher education. The objective of this study was to identify the contextual variables of lifestyles that interfere with the subjective well-being of nursing students; Descriptive, correlational and analytical methods were used to study a non-probabilistic sample of 404 nursing students. A questionnaire on socio-demographic and academic characteristics, dietary restriction range; the International Physical Activity Questionnaire (IPAQ – Short Version); the Positive and Negative Affect Scale (PANAS); Nicotine Dependence Scale (FTQ) were used. The sample was predominantly female (87.4%), aged 18-24 years. Prevalence of 4th year students (37.4%) mostly male had a higher index of weight fluctuation and food restriction; younger students revealed concerns with their diet; men (37.3%) practiced more intense physical activity, while women engaged in moderate physical activity (69.7%). The students had a higher dependence on nicotine where men showed more positive affect and women more negative affect; younger students, residing in rural areas, living with their families in the 3rd year were slightly physically active, overweight, not addicted to nicotine and have more positive affect. The results point towards promoting health training activities and education sessions, in order to inform and educate more students of all the factors that may be associated with a psychologically rich and healthy life.

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1. Introduction

A healthy lifestyle is considered to be a set of behavioural patterns or habits that maintain a strong relationship with a person's state of health, including preventive behaviours in the field of physical and mental health as well as social and spiritual life (Finotti, 2014). Risk lifestyles can be defined as a set



of behavioural patterns that are established as a threat, particularly to physical and mental well-being, and that can have negative consequences for the student's health and development (Loureiro, 2012). Most risk factors can be modified by changes in students' individual behaviour. Establishing healthy living habits, including adequate food, avoiding tobacco and alcohol consumption, regular practice of physical activity along with general preventive behaviours, have demonstrated positive effects on the health of students in higher education (Loureiro, 2012). For Lopez, Campbell and Watkinsl (2010), among the areas that make up lifestyle, conduct and preferences were included. These are related to the type of diet, physical activity, alcohol and tobacco consumption, responsibility for health, recreational activities, interpersonal relations, labour activities and consumption patterns.

Students' lifestyles have very particular characteristics, mainly because of increased decision-making power and autonomy in choices about their own way of life (Silva, Brito, & Amado, 2011). This transition period may affect the factors related to lifestyles, particularly diet, exercise, consumption of alcohol, tobacco and other drugs and sexual behaviour. The same authors, in their study with 4315 students in the central region of Portugal, observed that 29.3% were male and 70.7% were female. From the analysis conducted between sex and lifestyles, they found differences in all areas assessed by the "Fantastic lifestyle" questionnaire (family and friends; physical activity/associations; nutrition; tobacco; alcohol and other drugs; sleep/stress; job/personality type; self-examination; other behaviours).

Currently, lifestyles are possibly one of the most important determinants of student health in higher education. However, despite access to health information, behavioural studies demonstrate that the students reveal new risk behaviours and definitions of lifestyle (Joia, 2010). It is also important to point out that the students are increasingly encouraged to enter the nocturnal establishments through various policies of low prices and special offers, including, lower minimum consumption for those who come in before a certain time, free drinks and the appearance of well-known musicians or live music concerts (Loureiro, 2012). In view of the above, we formulate the following research question: what contextual determinants to lifestyle influence the subjective well-being of nursing students? Attending higher education places both academic and social demands upon students with an effect on their psychological well-being. Based on the research question formulated, we outlined the following objective: to identify the contextual variables that affect lifestyles in the subjective well-being of nursing students.

2. Research Methods

We carried out a descriptive, correlational and analytical study. In this study the researchers decided that being a student of a nursing degree and an age limit of 25 years (young adult) were criteria for inclusion. As the data collection instrument was released online, after approval by the Ethics Committee of Health School of Viseu (No 1/2014). 505 nursing students participated in this study, having agreed to participate after being contacted by email. After validating the duly completed questionnaires and correctly applying the inclusion criteria, the sample was comprised of a total of 404 nursing students. Since we do not know the size of the population, the theoretical sample required would be 1068 for a significance level of 95% with a margin of error of 3.0%. However, since the

sample has 404 participants, for the same level of confidence, the margin of error will be of 4.8% for our study. In order to collect the data we used a questionnaire on socio-demographic and academic characteristics, dietary restriction range; the International Physical Activity Questionnaire (IPAQ – Short Version); the Positive and Negative Affect Scale (PANAS); and the Nicotine Dependence Scale (FTQ).

The scale of food restriction (SFR) has been validated for the Spanish population by Silva and Urzúa-Morale (2010) and for the Portuguese population by Martins, Chaves and Duarte (2014). This is a brief, self-report with 10 items grouped into two subscales in order to obtain an indicator of the construct of food restrictions. The subscale “concern with diet” assesses the propensity of an individual to restrict their feeding and fear of gaining weight. This group includes items that relate frequency of diets, concern for weight and fear of weight gain. The subscale “weight changes/fluctuations” measures the change in weight, covering items that assess weekly changes in weight and items relating to maximum weight gain or loss. Together, the variations and the SFR scores, especially its high levels are associated with a chronic tendency to restrict food through diets related to an exaggerated fear of weight gain. Thus, high scores in the SFR mean that the person will always be called a restrained eater or a chronic dieter (Silva & Urzúa-Morale, 2010).

The International Physical Activity Questionnaire, IPAQ, was developed by investigators appointed by the World Health Organization to build an instrument to allow internationally comparable measures of physical activities to be achieved. In 1996, this group carried out research in the early development of the IPAQ in its different versions and conducted studies in 12 countries (Australia, Canada, Finland, Guatemala, Italy, Japan, Portugal, South Africa, Sweden, England, United States and Brazil) in the year 2000, with a sample of over 2000 people, in order to find the reliability and validity of the instrument. Portugal was part of this study, with a participation of 196 people evenly distributed by sex. In 2001, the executive committee in charge of developing the IPAQ published a partial report of the experimental application mentioned above. They reported the questionnaire expressed acceptable psychometric characteristics for use in prevalence studies on participation in physical activities (Craig et al, 2003).

As for the Fagerström test for nicotine addiction, it is a measure of tobacco dependence created by Karl Fagerström (1978) as the Fagerström Tolerance Questionnaire (FTQ). The original version consisted of eight questions, whose aim was to obtain a measure which was short and self-reporting of nicotine addiction. However, over the years it has undergone changes, mostly because of psychometric limitations being found. This led Heatherton et al. (1991) to present an amended version later, called the Fagerström Test for Nicotine Addiction, consisting of 6 original issues. A review of the questions' scores was also performed regarding the time of day the first cigarette was smoked and the number of cigarettes smoked per day. In order to respond to this test, each respondent selected one response to the 6 questions with a corresponding score, which is added in the end. Its end result is included in a specific degree of dependence to nicotine. In Portugal, the study of this test was by Ferreira, Quintal,

Lopes, and Taveira (2009), who had a goal of constructing of a validated version for the Portuguese population.

The study of subjective well-being was processed with the use of the Positive and Negative Affect Scale, whose original name is "Positive and Negative Affect Schedule" (PANAS; Watson, Clark & Tellegen, 1988) adapted to the Portuguese population by Galinha and Ribeiro (2005). It consists of a measuring instrument of the affective dimension of exclusive subjective well-being and its aim is to check how individuals feel positive and negative emotions in the present. The Portuguese version includes a set of words that describe different feelings and emotions shared by two subscales with 10 items each, called positive affect and negative affect, arranged in a five-point scale, where 0 (zero) corresponds to "nothing or very slightly" and 4 "extremely". The adjectives which concern positive affects are as follows: interested, excited, pleasantly surprised, warm, enthusiastic, proud, delighted, inspired, determined and active. For its part, the negative affects are expressed through the following adjectives: upset, distraught, guilty, scared, disgusted, angry, remorseful, nervous, trembling and scared. This scale is scored through the arithmetic average of the 10 items on each scale. The affective balance is also calculated by subtracting negative affect scale from the positive affect scale. Response times used by authors range from "now, that is, at the moment", "today", "over the last week", "over the last few weeks", "over the last year" and "generally, that is, on average". In this study, "this week" was the response time chosen.

3. Results

The statistics show that the minimum age is 18 years and the maximum is 24 for male students, who represent 12.6% of the total sample, with a mean age of 20.96 ± 1.57 . For females, who represent the majority of the sample (87.4%), the minimum age is 17 years and the maximum is 24, with a mean age of 20.54 ± 1.47 . The age group which stands out (46.0%) is that of students between the ages of 20-21 years. It should be noted that 26.6% of female participants are 22 years of age or older, as are 37.3% of male students. Both females (99.2%) and males (96.1%) are predominantly single. In the total sample, students reside mostly in urban areas (71.3%), including 72.0% of female students and 66.7% of the males (51.8%). Students who cohabit with friends/colleagues (52.2%) prevail. It is worth highlighting that 43.9% of women and 51.0% of men live with their families.

The statistics on the students' Body Mass Index (BMI) show a minimum of 16.90 and a maximum of 37.13 BMI, with a mean value of 21.97 ± 3.26 . As for the BMI value for the male students, there is a minimum index of 18.29 and a maximum of 37.13, with a mean value of 23.88 ± 3.69 . For female students the minimum is 16.90 and the maximum is 36.73, with a mean of 22.37 ± 3.15 . With regard to the BMI values in accordance with sex, 75.2% of the subjects have normal body weight; 75.9% of this group are women and 70.6%, men. This is followed in terms of percentage by 14.2% women and 17.6% men who are pre-obese.

We infer that obese students have a higher mean order in positive affects compared to the other groups, suggesting that they are that have more positive affect, followed by those who are pre-obese and normal weight. In terms of negative affect, the highest mean value fell on participants who are pre-

obese, followed by those who are obese, showing lower subjective well-being. Students with normal weight show more differences of affect, followed by those with low weight.

The minimum index for food restriction is 3.33% and the maximum 83.33% for the overall sample. This is found by the mean index of 26.81% ($\pm 15.5\%$) of respondents restricting food.

With regard to concern with diet, the minimum and maximum rates are respectively 0.0% and 93.33%, with a mean worth noting of 35.4% ($\pm 19.15\%$ standard deviation) of the students caring about their diets. As for weight fluctuations, a slightly lower mean percentage was recorded ($X=23.32\% \pm 17.92\%$) with a range between 0.0% and 93.75%. The variation coefficients show high dispersion around the mean value.

We want to determine the influence sex has over concern about diet, weight fluctuations and food restriction. Males compared to females have a lower index of concern with diet, but higher for weight fluctuations and food restriction. The Mann-Whitney U test showed that among the groups there is a statistical significance for the concern about diet and weight fluctuations.

Concern with the diet was observed in younger students, with older students reporting less concern. Weight fluctuation, on the other hand, has a greater impact on older students and these who register a higher mean index on (overall) food restriction.

Applying the Kruskal-Wallis test, it is possible to say that the concern with diet is mostly observed in pre-obese individuals. Weight fluctuation is more present in participants with obesity ($OM=353.93$) as well as food restriction with the differences being statistically significant.

The post hoc Tukey test shows that for concern with diet, the differences lie in all groups except between those with normal weight and with pre-obesity with normal weight. For weight fluctuations, statistical significance was not found among participants with low weight and normal weight and pre-obesity with obesity. For (overall) food restriction only, there are no differences in the groups with pre-obesity and obesity.

For the statistics related to physical activity of the whole sample, the minimum index is 10 minutes and the maximum is 180 minutes gauging. The mean index indicates that 69.28 (± 38.42) of respondents do vigorous exercise.

As regards the minutes practicing moderate physical exercise, the minimum and maximum rates are 5 minutes and 180 minutes respectively with a mean which denotes that 69.93 (± 43.13) of students do moderate exercise.

As for the number of minutes walking, we recorded a mean percentage slightly lower than the data analysed above ($X= 44.91; \pm 29.01$) with a range between 10 minutes and 140 minutes. The coefficients of variation show high dispersion around the mean value. The statistics relating to the time that students are sitting down show that the minimum time is 1 minute and the maximum time is 17 for the entire sample, with a mean of 6.10 ± 2.97 .

Considering the cross-section groups established for intense physical activity, moderate activity and walking, we tried to determine the type of activity performed by students. For this purpose we obtained a score ranging from 0 to 9 that was classified again afterwards. We believe those who have scored between 0 and 2 would have light physical activities, moderate physical activity would be scored in the 3 to 6 range and intense activity would have a score greater than or equal to 7.

As regards the results of subjective well-being as a function of the type of physical activity, we found that in terms of positive emotions students who do light physical activity stand out, and in terms of the difference of affect, those who practice moderate physical activity reveal more negative affects with statistical significance. This was corroborated by the post hoc Tukey test ($p=0.042$).

Referring now to the results for subjective well-being according to nicotine addiction, we found that non-smoking students show more positive affect and greater difference of affects, unlike smokers who express more negative affects with statistical significance for negative affects ($p=0.04$).

Students who started smoking between the ages of 16-17 years are those who have more positive affects, followed by those who started smoking aged 18 years or older. In relation to negative affects the students who began smoking aged 16-17 years stood out as showing greatest difference of affections. We confirmed the existence of significant differences through the post hoc Tukey test, which revealed that they are found among students who started smoking at the age of 15 years or younger and that this situation occurred between the ages of 16-17 years ($p=0.021$).

4. Discussion

According to the research question we sought to know which contextual determinants of the lifestyle influence nursing students' subjective well-being. We found that, in terms of positive affects as well as at the level of difference of affections, students who engage in light physical activity stood out. Those who engage in moderate physical activity reveal more negative affects with statistical significance ($p=0.042$). According to Sousa Vieira (2014), there is a relationship between subjective well-being and the practice of physical activity; that is, physical activity has a positive effect on subjective well-being due to the release of endorphins, social interaction and experiencing success and self-efficacy. In his study with higher education students, this author has observed a positive correlation between the practice of physical activity and increased positive affect, as well as a reduction in negative affect, thus recognizing its contribution to increasing the indices of students' subjective well-being.

As for the results concerning subjective well-being according to nicotine addiction, we found that students who are not smokers reveal more positive affects and greater difference of affects, contrary to smokers who expressed more negative affects with statistical relevance in negative affects ($p=0.04$). We also found that the students who started smoking at the age of 16-17 years reveal more negative affects as well as also revealing difference of affects. These results can be explained with what Saraiva (2015) mentioned, stating that smokers have been penalized or discriminated against for consuming tobacco in their social interactions and this condition may result in a decrease in positive affect.

We also conclude that male students have a lower index of concern with their diet, but a higher one for the presence of weight fluctuations and food restriction. Concerns with the diet are mainly observed in younger students. On the other hand, weight fluctuation has a greater impact on older students and these who register a higher mean index on (overall) food restriction. Moreover, concern with the diet occurs mostly in students who are pre-obese, while weight fluctuation as well as the food restriction are more present in participants with obesity. Similarly, we found that men participate more in intense physical activity than women, who mostly undertake moderate physical activity.

5. Conclusions

In view of the results obtained, we believe it would be important to develop, in the context of higher education, health education and training sessions, so that they can be informed and more aware of all the factors that might be associated with a psychologically rich and healthy life. They would also be informed that certain conditions to which they are exposed are directly related with their subjective well-being. Therefore, it is possible that planned changes in their lifestyles can influence their levels of well-being and consequently determine more desirable academic conduct, with the presence of positive affects, an important factor for their academic success with personal benefits.

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