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EPIDEMIOLOGICAL ASPECTS OF TOBACCO, ALCOHOL AND INTERNET USE ADDICTIONS AMONG PHYSICAL EDUCATION AND SPORT FACULTY STUDENTS FROM TIMIȘOARA, ROMANIA

Abstract

The purpose of this paper is the epidemiological analysis of alcohol, tobacco and Internet use addiction data among Physical Education and Sport Faculty students of the West University, Timisoara, Romania. Epidemiological investigation was conducted in May 2010 on a group of 79 students, using standardized questionnaires (CAGE, FAGERSTRÖM, AUDIT, INTERNET addiction questionnaire). Of the total students number enrolled in research, 77.22% responded to the questionnaires, with a mean age of 21.1 ± 2.252 (age limits are between 19 and 33 years), the majority (67.21%) were male and in the first year of study. Statistical data analysis was done using IBM SPSS 17.0 program, being considered statistically significant values of $p < 0.01$. In the CAGE questionnaire case 21.31% of students were identified with positive screening test, the majority (11.48%) were male and came from the first year (16.39%). FAGERSTRÖM questionnaire reveals a score of 2.76 ± 2.917 for the first year and 0.96 ± 2.121 for the third year. INTERNET addiction questionnaire reveals a score of 22.03 ± 13.16 in the first year and 15.28 ± 22.96 in the third year. AUDIT questionnaire revealed an average score of 3.45 ± 3.652 in the first year and 2.74 ± 3.048 in the third year. After comparing the INTERNET use, AUDIT and FAGERSTRÖM questionnaires results, between the first and third years of study, we obtained a $p > 0.01$ (statistically insignificant), and when comparing CAGE questionnaire results, we obtained a statistically significant p ($p = 0.01$). After analyzing the data obtained through questionnaires, we observed a predominant use of all types of addictions (alcohol, tobacco, and Internet use) among first year students and at male gender.

Key words: ADDICTION / TOBACCO / ALCOHOL / INTERNET

INTRODUCTION

It is known from literature that both excessive alcohol consumption and smoking have negative repercussions in terms of morbidity and mortality. Thus, a long period and an excess alcohol consumption can cause liver, cardio-vascular, gastrointestinal

and CNS damages and in to a lesser extent, musculo-skeletal and endocrine system impairment. (Constantinescu, Manea, & Ene, 2001)

Men are more likely than women to develop alcoholism, but women have more health problems

related to alcohol consumption, even with low alcohol consumption. Alcoholism predisposition involves social factors, genetic, physiological and psychological factors (such as impulsivity and low self-esteem). (Constantinescu et al., 2001)

Alcohol dependence implies the existence of primary and secondary symptoms. Primary symptoms include the desire to drink, increased tolerance to alcohol, long periods alcohol consumption (despite the desire to stop or control it), significant time spent on the purchase and alcohol consumption, waiver of work-related and social environment problems for alcohol consumption and continuous alcohol consumption, despite the health problems caused by it. Secondary symptoms include: from depression, insomnia, fatigue, anxiety, sexual dysfunction, mood, tachycardia, paresthesia, amnesia, poor feeding, extremities tremors, unsteady walking, to hallucinations and seizures (delirium tremens). (Constantinescu et al., 2001)

Another widespread addiction is to tobacco. Tobacco use is an important risk factor for a variety of diseases (respiratory, cardiovascular, digestive, musculoskeletal and immune system diseases) affecting almost every organ in the human body, having negative effects on intrauterine fetal development and pregnancy, more (Trofor, & Radu-Loghin, 2004), affecting the health of non-smokers exposed to passive smoking (Didilescu, & Marica, 2009). Tobacco smoke contains over 4,000 chemical compounds, and nicotine is the psychoactive component that creates dependency. (Trofor, & Mihaescu, 2007)

Some of the most common symptoms of nicotine dependence are: stop smoking difficulties and smoking cessation symptoms (anxiety, headache, irritability, difficulty concentrating, restlessness, urge to smoke, drowsiness, constipation or diarrhea).

Numerous studies have shown an association between smoking and alcohol consumption. Although quitting smoking is a factor involved in alcohol-related behavior, there are few studies showing the effect of alcohol on craving. Thus, King & Epstein (2005) showed that alcohol may cause a dose-dependent increase in craving, even among occasional smokers. The explanation could be that nicotine may offset the

sedative effects of alcohol. The findings seem to indicate that alcohol may trigger the desire to smoke, even in a non-smoker.

A common addiction is that related to Internet use. This addiction has increased in recent years due to increased development of IT technology and the Internet, and because of the increased accessibility to them. A vulnerable category to this type of addiction is the young one, due to their lower ability to control their enthusiasm about the Internet (Ju-Yu, Chih-Hung, Cheng-Fang, Sue-Huei, Wei-Lun & Cheng-Chung, 2008). This addiction is commonly associated with depression and disorders characterized by attention deficit and hyperactivity. Young people who suffer from this addiction have problems of their daily routine, school performance, family relationships and mood. (Ju-Yu, et al., 2008) They often have reduced low self-esteem and related life satisfaction.

Ko, Yen, Chen, Chen, & Yen (2005) have formulated criteria for adolescents Internet addiction:

Criterion A - includes preoccupation, uncontrolled impulse regarding Internet use, tolerance, withdrawal, usage more than the intended, impairment of decision-making ability, excessive time and effort spent on the Internet (for diagnosis are sufficient six of these criteria). Criterion B - describes functional impairment secondary to Internet use; Criterion C - describes criteria to eliminate other psychotic and bipolar disorders diagnosis.

The young family's Internet addiction model requires the existence of high family conflict (eg, marriage dissolution), other family members who use various substances that create addiction, and reduced family role in young monitoring. It was also noted that for many young people with this addiction has been observed a personal history related to the various addictive substances use and a poor academic preparation. (Cheng-Fang, Chih-Hung, Ju-Yu, & Chung-Ping, 2009)

The purpose of this paper is the epidemiological analysis of alcohol, tobacco and Internet use addiction data among Physical Education and Sport Faculty (PESF) students of the West University, Timișoara, Romania.

MATERIAL AND METHODS

The epidemiological survey was conducted in May 2010 on a group of 79 PESF students from year I and III (Physical Education and Sport and Kinesitherapy Departments). 77.22% students, from the total number of students enrolled in research, responded to the questionnaires. Their average age was 21.1 ± 2.25 (with age limits between 19 and 33), the majority (67.21%) were male and in the first year of study (62.3%). Epidemiological investigation used a series of standardized questionnaires: for alcohol addiction - AUDIT questionnaire - „Alcohol Use Disorders Identification Test“ - a 10-item questionnaire developed by Saunders, Aasland, Babor, de la Fuente, & Grant (1993), for tobacco addiction - CAGE questionnaire, a 4 items questionnaire (Ewing, 1984) and Fagerström questionnaire - a 10-item questionnaire, developed by Fagerström (Fageström, & Schneider, 1989; Fageström, 2003), and for Internet addiction, a 20 items questionnaire, „Internet Addiction Test” – IAT (Widyanto, & McMurrin, 2004). Interpretation of these questionnaires was as follows: for the CAGE questionnaire was considered that there is tobacco addiction in the case of two answers with „yes” and

for Fagerström questionnaire was considered mild tobacco addiction a score between 0 and 3, moderate addiction, a score between 4 and 6 and a high addiction - a score between 7 and 10.

In the AUDIT questionnaire threshold for alcohol dependence score was 8 for men and 4 for women, and for the IAT questionnaire, it was considered that there are common issues related to Internet use for a score between 40 and 69 and was considered that the Internet is causing significant problems, for a score between 70 and 100. Statistical data analysis was done using IBM SPSS 17.0 program, being considered statistically significant values of $p < 0.01$.

RESULTS AND DISCUSSION

In the CAGE questionnaire case was found that of all surveyed students, 62.3% were in the first year and 37.7% were in the third year of study. Of these, 21.31% were identified with positive screening test, the majority (9 students, 14.75%) were male and came from the first year (16.39%). Regarding the average age of those with tobacco addiction, it was 20.84 ± 1.72 years.

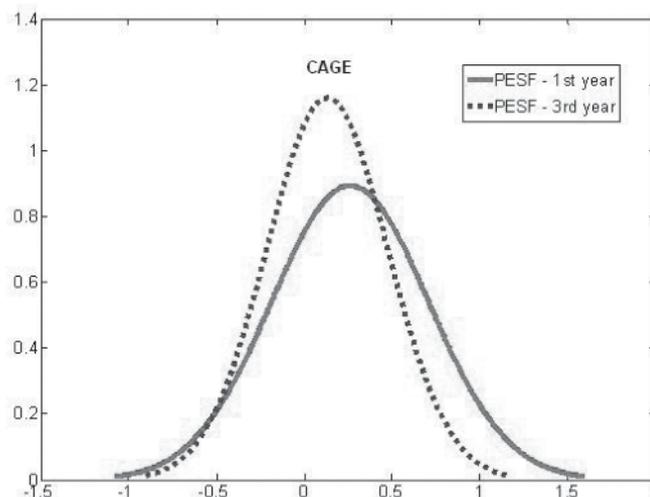


Figure 1. Normal distribution scores of tobacco addiction students, from first and third year, at CAGE questionnaire

Another questionnaire used to reveal tobacco addiction was the Fagerström questionnaire. Following its use was detected a total of 25 students (40.98%) with tobacco addiction, 6 (9.84%) with mild and high addiction, and 13 (21.31%) with moderate addiction, most of the first year (21 students, 34.42%). In the

mild addiction, the average score achieved was 2.5 ± 0.54 , for moderate addiction was 5.23 ± 0.72 , and for high addiction, 7.33 ± 0.51 . This survey revealed an average score of 5.33 ± 1.68 for the first year and 3.75 ± 2.21 for the third year.

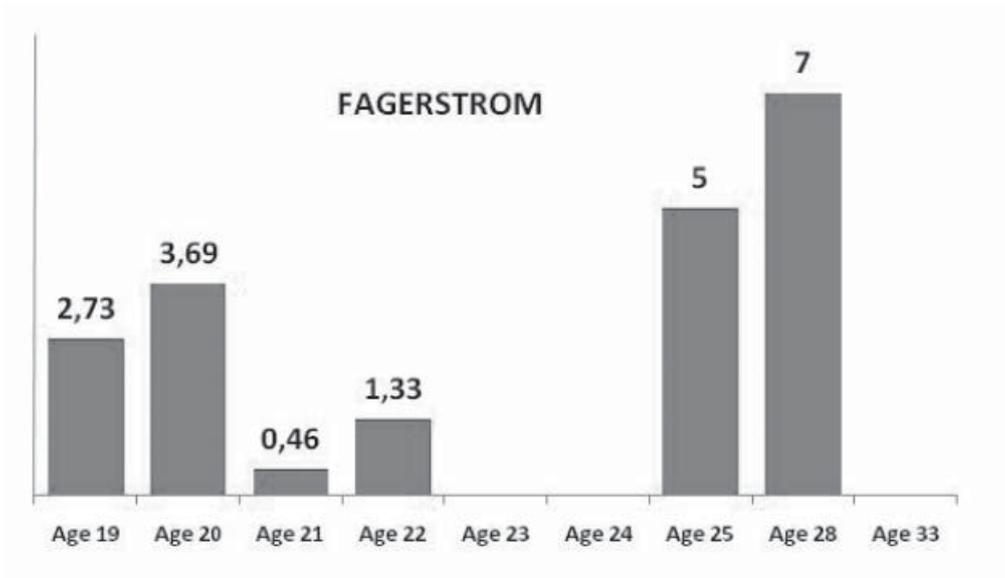


Figure 2. Average Fagerström questionnaire obtained scores in terms of age and study year

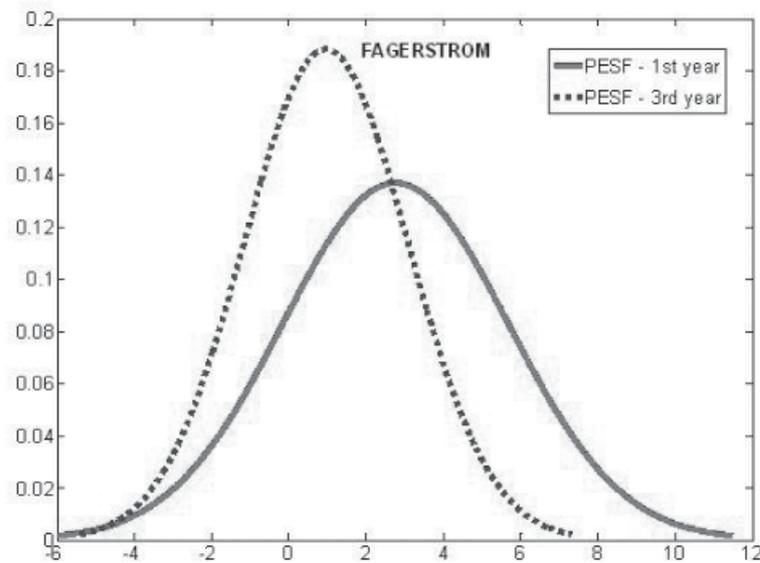


Figure 3. Normal distribution scores of tobacco addiction students, from first and third year, at Fagerström questionnaire

Regarding the age of addiction, it was in average, for mild addiction - 21 ± 1.09 years, for moderate addiction - 20.15 ± 1.72 years, and for high addiction - 21.66 ± 3.20 years. The dominant gender with tobacco addiction was the male one - 19 students (31.15%) in all three degrees of addiction (6.56%, 18.03% and 6.56% respectively).

When used the AUDIT questionnaire for determining alcohol addiction, it was detected the existence of five addiction cases, most (6.56%) was from the first year and males (8.20%). The average age of these students was 20.2 ± 1.64 years, the average score was 3.45 ± 3.65 in the first year and 2.74 ± 3.04 , for the third year.

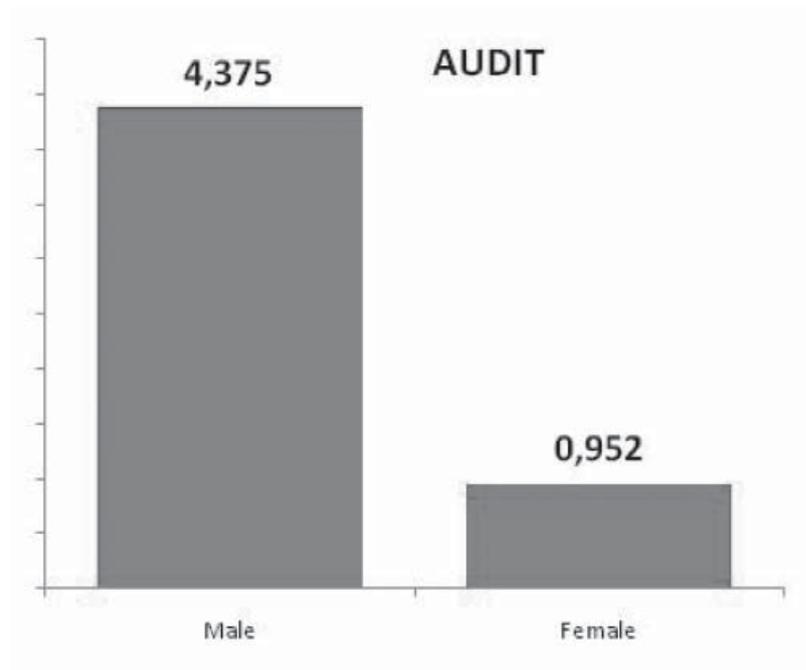


Figure 4. Average AUDIT questionnaire scores in terms of age and study years

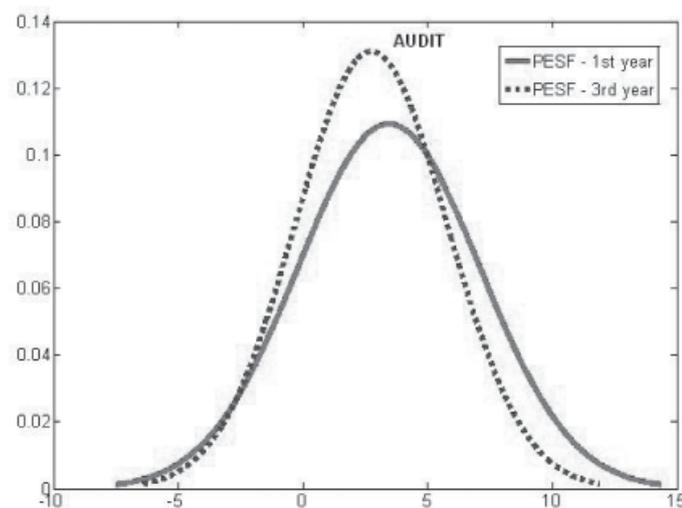


Figure 5. Normal distribution scores of alcohol addiction students, from first and third year, at AUDIT questionnaire

Using the IAT questionnaire to determine addiction to the Internet showed only common problems related to Internet use (10 students, 16.39%),

average score achieved being 46.6 ± 4.11 (45 ± 3.09 for the first year and 49 ± 4.69 for the third year) and the mean age was 20.6 ± 1.34 years.

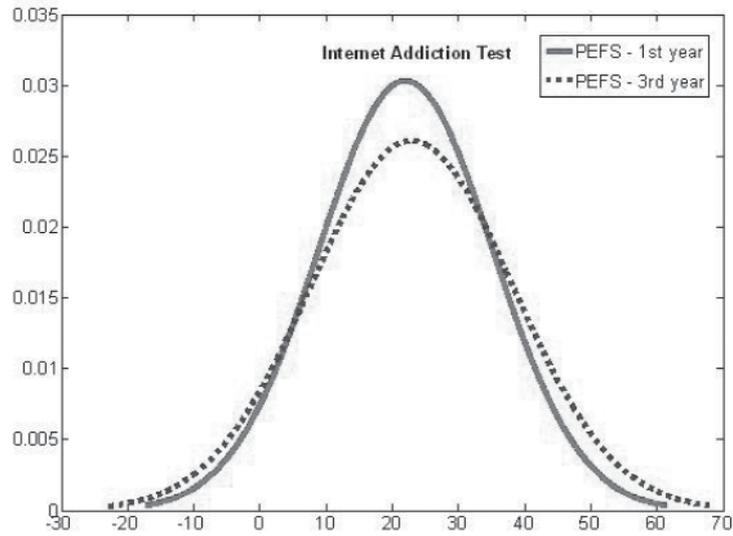


Figure 6. Normal distribution scores of Internet addiction students, from first and third year, at IAT questionnaire

All first year students identified with common problems related to Internet use (6 students, 9.48%) were males (9.48%), with a mean age of 19.66 ± 0.51

years. Also, the majority of Internet addiction students were from the third year and males (4.92%), the average age of these students were 22 ± 0.81 years.

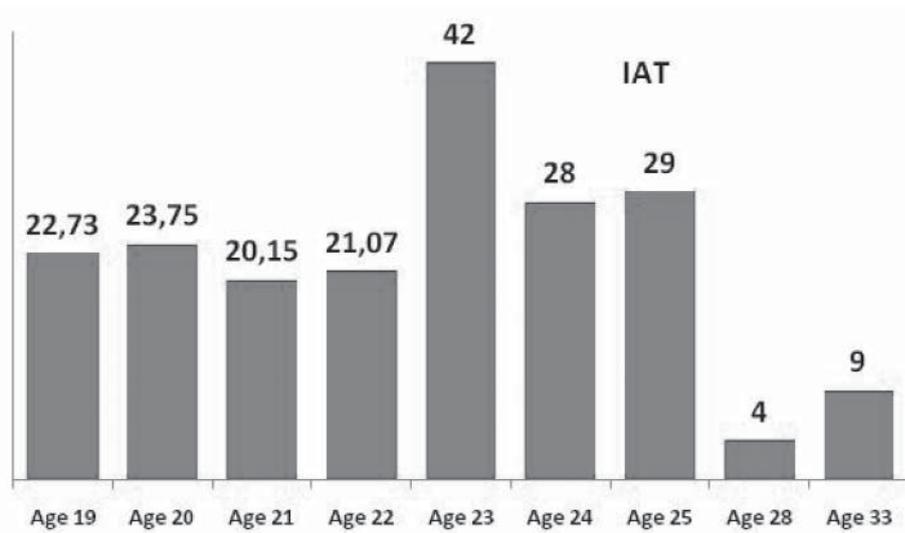


Figure 7. Average IAT questionnaire obtained scores in terms of age and study year

After comparing the results obtained with IAT, AUDIT and Fagerström questionnaires, between the first and the third years of study, we obtained a $p >$

0.01 (statistically insignificant), and when comparing CAGE questionnaire results, we obtained a statistically significant p ($p = 0.01$).

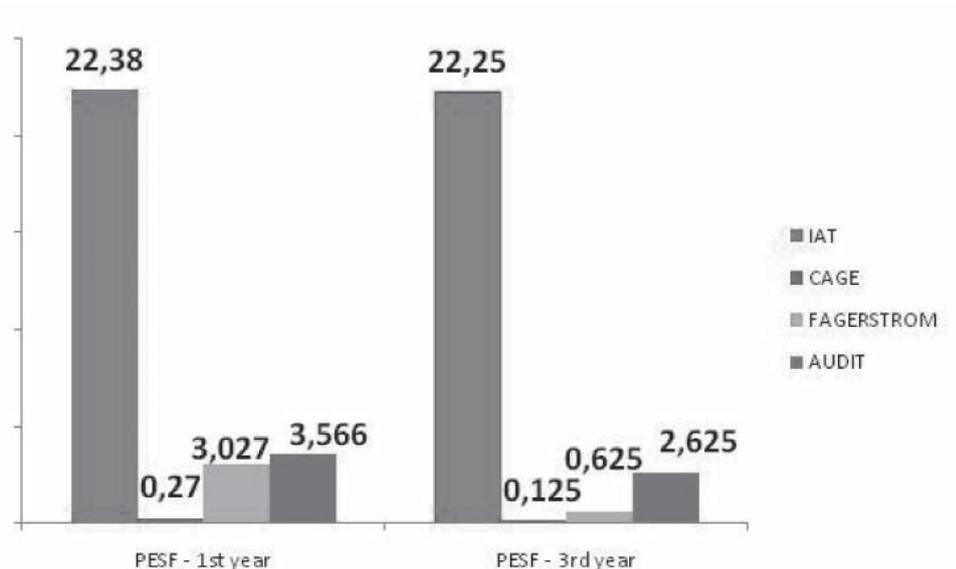


Figure 8. Average scores of all four questionnaires, from first and third year students

Using Pearson correlation coefficient (r) to highlight the correlation between age and the four questionnaires results, did not reveal an association. (Table 1) Studying the association between gender and the four questionnaires results, using Pearson's

coefficient, revealed the existence of a weak association ($r = 0.480171$) between male gender and AUDIT questionnaire results. For the others questionnaires there was not an association. (Table 1)

Table 1. Correlations between the four addiction questionnaires results and students age and gender

Pearson coefficient	AUDIT	FAGERSTRÖM	CAGE	IAT
r_1	-0.13829	-0.11987	-0.06301	-0.11564
r_2	0.480171	0.1848	0.040056	0.291782

Legend:

r_1 - Pearson correlation coefficient between students age and the four questionnaires addiction results,
 r_2 - Pearson correlation coefficient between students gender and the four questionnaires addiction results

Our data's on alcohol and tobacco addiction are similar to those existing in the literature. Thus, Aslan, Özvars, Esin, & Akn, (2006) in a study of alcohol and tobacco consumption among students of a university in Ankara, Turkey (on a sample group of 2258 students), have found a high prevalence rate, of 36.7% (for tobacco) and 52.3% (for alcohol).

Lower values of alcohol and tobacco prevalence among students were found by Webb, Ashton, Kelly, & Kamali (1997) among British university students (36-39% for tobacco consumption and between 10% and 23% for alcohol consumption, according to faculty profile).

In another study revealed the prevalence of smoking in four private universities in Beirut, Lebanon, was found a high smoking prevalence of 40%, among students (Tamim, Terro, Kassem, Ghazi, Khamis, Hay, & Musharrafieh, 2003).

Obtained data on the Internet addiction prevalence among PESF students (16.39% students with mild addiction - with common problems related to Internet use) were lower than those existing in literature. Thus, Ju-Yu, et al. (2008) in a study on psychiatric symptoms among adolescents with and without Internet addiction (on a sample group of 3662 students) have found a total of 733 students (20.8%) with Internet addiction. In another study conducted by Cheng-Fang, et al. (2009) on a group of teenagers in Taiwan have found 579 teenagers (aged ≥ 15 years) with addiction to the Internet, representing 26.6% of total.

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CONCLUSIONS

After analyzing the data obtained through the four addiction questionnaires use, we observed a predominance use of tobacco addiction, alcohol and Internet use addiction among first year students and at male gender. Through Pearson correlation coefficient use between the four addiction questionnaires results and students age, we observed no correlation between them. Also, in the case of correlation between the addiction questionnaires results and gender, the only correlation obtained was between male gender and AUDIT questionnaire.

When comparing the results of the four addiction questionnaires, between the first year and the third one, were obtained values of $p > 0.01$, except CAGE questionnaire, where we obtained a $p = 0.01$ (statistically significant).

The results do not indicate an increased addiction among PESF students, the highest values being obtained for tobacco addiction (Fagerström questionnaire - 40.98%, CAGE questionnaire - 21.31%).

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