

USE OF ELECTRONIC CIGARETTES BY STUDENTS IN THE HUMANITIES AT A PRIVATE UNIVERSITY IN ANÁPOLIS, GOIÁS

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ABSTRACT

The use of electronic cigarettes, particularly among young people, is a public health concern. Therefore, the objective of this study was to evaluate the use of electronic cigarettes among humanities students at a private university in Anápolis, Goiás. This is an observational, descriptive quantitative study that included students enrolled in administration, international relations, law, advertising and marketing, and pedagogy programs, aged 18 or older, who signed the Free and Informed Consent Form (FICF). Data from 168 participants were analyzed, of which 34 were electronic cigarette users. The majority were female (55.8%), self-declared as white (58.8%), half were in the age group of 18 to 20 years and the other half between 21 and 24 years, and single individuals predominated (58.9%). Finally, most had a monthly income of two to three minimum wages, were employed, and had very low dependence (52.9%) on ECs. The motivations for use were varied, followed by addiction and personal preference. Additionally, it was observed that most used them at bar parties (38.2%) and in the company of others (64.7%). This study identified the nuances in EC use to develop effective awareness and risk behavior reduction strategies.

Keywords: Electronic Nicotine Delivery Systems; Humanities; Smoking

INTRODUCTION

The electronic cigarette was created by pharmacist Hon Lik, patented in 2003 and introduced to the market in 2004, as an alternative form of tobacco use. At the time, it was believed to be a safer way to smoke (DEMICK, 2009). In view of this, there is an observed trend of increasing consumption of these products, especially among young people, due to their appealing designs and flavoring additives (SANTOS, 2018). Regarding the characteristics of ECs, they are electronic devices that deliver nicotine through an aerosol and are composed of an atomizer, battery, and nicotine cartridge (KNORST, et al., 2014). The vapors have two main solvents, glycerol and propylene

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glycol, which, when heated, generate carcinogenic substances and pulmonary irritants (CARVALHO, 2018). Furthermore, they can contain other chemical compounds such as nicotine, cannabis derivatives, flavorings, and heavy metals (OLIVEIRA et al., 2022).

In view of this, in 2019 the first reports of adverse effects from EC use emerged, characterizing the lung disease associated with the use of electronic cigarettes or Vaping Product Associated Lung Injury (EVALI) (HARTNETT et al., 2020). This disease can manifest through dyspnea, chest pain, cough, and hemoptysis, in addition to gastrointestinal and constitutional effects, such as fever. These symptoms were mainly associated with impairment of pulmonary surfactant due to vitamin E acetate, an additive in products containing THC, as is the case with electronic cigarettes (WINNICKA, et al., 2020).

Due to the risks these products pose, associated with the increasing deliberate use among young people, it is necessary to analyze the use of these products among university students. In this sense, the demand for the present study arises, which was directed at students in the humanities field, to analyze the variables associated with EC consumption in this target population with the aim of developing new preventive, guidance, and care strategies for this group, which can contribute to the scientific community.

METHODOLOGY

This is an observational, descriptive quantitative study that analyzed the prevalence of electronic cigarette use among humanities students at a private University in Anápolis, Goiás. The sample calculation took into account the statistical test for predicting electronic cigarette use (dependent variable) in relation to areas of education (independent variable) (binary logistic regression) adjusted for sex and age, medium effect size 0.5; significance level 5%; sample power 80%; plus 20% for losses. The calculation was performed in G*power software (version 3.1.9.7) with an a priori analysis, finding a result of 162 students who should be interviewed (table 1).

The study included students enrolled in administration, social communication, pedagogy, law, and international relations courses, whose coordinators authorized the research, aged 18 or over, who signed the Free and Informed Consent Form (FICF). Questionnaires with blank or incomplete responses, students from other academic

areas, and those under 18 years of age were excluded; their data was collected but discarded in this research.

Tabela 1. Quantitativo de estudantes da área de humanas entrevistados, subdivididos de acordo com os cursos.

ÁREA DO CONHECIMENTO	CURSOS	TOTAL DE ALUNOS	NÚMERO DE ENTREVISTADOS	USUÁRIOS DE CE'S N (%)
Humanas	Administração	208	26	5 (14,7)
	Comunicação Social	81	8	5 (14,7)
	Direito	1106	113	20 (58,8)
	Pedagogia	167	16	2 (5,9)
	Relações Internacionais	49	5	2 (5,9)

Fonte: autores, 2024.

For the approach, a prior presentation was made to the teachers, and pre-authorization was requested. The students were recruited through a brief oral presentation, before or at the end of their curricular activities (classes), in hallways and common areas. After clarifications, a questionnaire was made available via Google Forms for access by reading the QR code and the link (Google Forms link – <https://forms.gle/v6UMJAHuB1TZ5VVu9>). Sociodemographic data, data on the participants' health were collected, and finally, a subdivision was made regarding smoking preference and habit.

For participants who denied smoking, the questionnaire was concluded. For those who said they smoked ECs or other types of cigarettes, the Fagerström test was applied to measure the individuals' degree of dependence. The questionnaire ended with an educational booklet on the implications of electronic cigarette use. The data were provided by Google Forms in a Microsoft Office Excel® spreadsheet file and were processed using descriptive statistics in the form of absolute and relative frequency and presented in tables.

RESULTS

According to the sample calculation, it was estimated to cover at least 162 students, and 168 were interviewed. Of these individuals, 114 students answered that they did not use any type of cigarette but had used them before, 6 had never smoked,

and 12 declared they smoked other types of cigarettes. From the analyzed data, a contingent of 36 electronic cigarette users was evidenced, of which two were under 18 years old and were excluded from the analysis, so that 34 questionnaires represented the sample universe of the present research.

Among the 34 analyzed questionnaires, the majority of participants were female (55.8%), declared themselves white (58.8%), half were in the age group between 18 and 20 years old and the others between 21 and 24 years old. Furthermore, there was a prevalence of single individuals (58.9%), while the others reported being in a relationship, with no married individuals or those in a stable union. Finally, the majority had a monthly income of two to three minimum wages (32.4%) and were employed (58.8%).

Regarding the dependence of the interviewees, the majority presented a very low dependence (52.9%) on electronic cigarettes. In view of this, the justification for the reason for use was varied (61.8%), followed by addiction (17.6%) and because they like either the flavor provided by the essences or the sensation (8.8%). Furthermore, it was observed that the majority used them at parties and bars (38.2%) and accompanied by other people (64.7%) (table 2).

Tabela 2. Análise do uso do cigarro eletrônico, socialização e o grau de dependência.

Grau de dependência (Teste de Fargeström adaptado)	n (%)
Muito baixa (0-2)	18 (52,9)
Baixa (3-4)	01 (2,9)
Média (5)	01 (2,9)
Elevada (6-7)	08 (23,5)
Muito elevada (8-10)	06 (17,6)

Motivo de uso	
Vício	06 (17,6)
Ansiedade	02 (5,9)
Depressão	00 (0,0)
Relaxante	01 (2,9)
Gosta	03 (8,8)
Influência	02 (5,9)
Outros	21 (61,8)

Local onde mais fuma	
Em casa	12 (35,3)
Festas/Bares	13 (38,2)
Na universidade	07 (20,6)

Trabalho	00 (0,0)
Todos as opções acima	02 (5,9)

Quando fuma

Acompanhado de outras pessoas	22 (64,7)
Sozinho	12 (35,3)

Fonte: autores, 2024.

CONCLUSION

It can be inferred from the analyzed data that although there is a low degree of dependence on electronic cigarettes, there is still excessive use of these devices, which can be explained by the influence of the environment and other people, or even by the sensation and taste they provide. Therefore, the present study identified the nuances in EC use so that more effective strategies for awareness of the damages and reduction of this risky behavior can be outlined.

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