


PREVALENCE OF E-SMOKING AMONG YOUNG UNIVERSITY STUDENTS

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Allana da Silva Matos¹, Camila Carvalho Cavalcante², Lucélia Maria de Souza³ and Elias Ferreira Pôrto⁴

ABSTRACT

INTRODUCTION: Electronic smoking has become a growing concern among young university students due to its popularity and potential health risks. **OBJECTIVE:** To evaluate the prevalence and factors associated with the use of electronic cigarettes. **METHODS:** this is a cross-sectional study in which young people aged between 18 and 40 years of both sexes were chosen to participate and who could answer a questionnaire via google form. **RESULTS:** They reveal that 56.8% of the participants use electronic cigarettes at least once a month, and 21.6% more frequently. The main motivation for use was identified as self-desire and fad, with the influence of friends also being significant. Respiratory problems were reported by 15.2% of users after starting use. **CONCLUSION:** study concludes that there is an urgent need for awareness campaigns and highlights the essential role of physiotherapy in the treatment of respiratory problems associated with the use of electronic cigarettes. **Keywords:** electronic smoking, young university students, prevalence, respiratory health, physical therapy.

Keywords: Smoking. Electronic smoking. Prevalence.

¹ Physiotherapy Course - Cruzeiro do Sul University
ORCID: <https://orcid.org/0009-0002-2422-5274>
LATTES: <https://lattes.cnpq.br/0307188903630934>
E-mail: allanaodm@gmail.com

² Physiotherapy Course - Cruzeiro do Sul University
ORCID: <https://orcid.org/0009-0003-7096-7102>
LATTES: <https://lattes.cnpq.br/4209274723794981>
E-mail: milacavalcante.fisio@gmail.com

³ Physiotherapy Course - Cruzeiro do Sul University
ORCID: <https://orcid.org/0009-0001-1324-0404>
LATTES: <https://lattes.cnpq.br/7891732527230099>
E-mail: luceliastar@hotmail.com

⁴ Advisor.
E-mail: profeliasporto@gmail.com
ORCID: <https://orcid.org/0000-0001-8326-2054>
LATTES: <http://lattes.cnpq.br/0280344263553892>



INTRODUCTION

The electronic cigarette appeared at the end of the twentieth century, initially developed by Herbert A. Gilbert, presenting an appearance similar to that of conventional cigarettes. With technological advances, these devices have been modified, acquiring different characteristics and incorporating various substances that, when heated, are considered carcinogenic and toxic. Studies indicate that current devices may contain nickel and ethylene oxide, as well as flavoring and psychoactive compounds from cannabis (JARDIM, José; VICENTE, Rosangela, 2022).

Electronic smoking devices, known as vapers, pods, e-cigarettes, and e-ciggys, are battery-powered devices. When vaporized by users, they do not generate butts or ashes, which has contributed to their global popularity and increased consumption, especially due to their low cost (BISPO, Samylle, 2022).

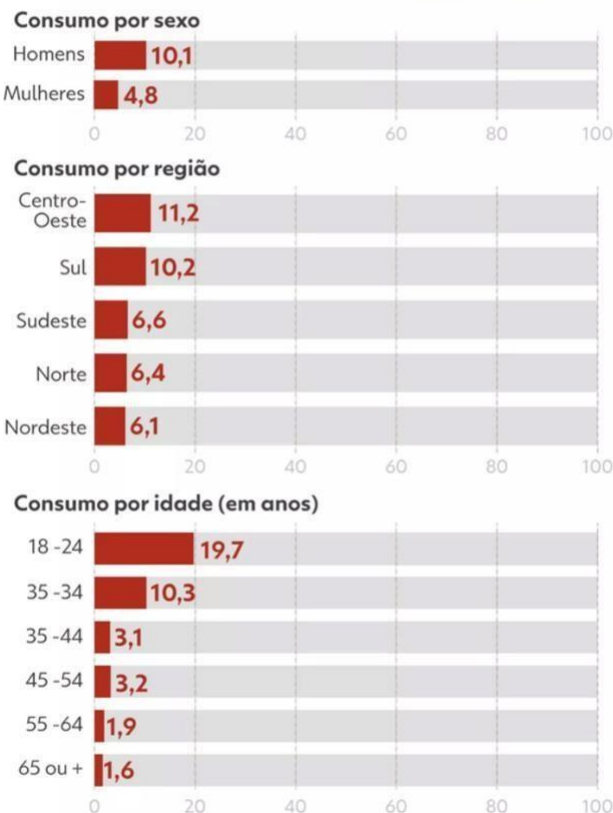
According to the World Health Organization (WHO) and the Pan American Health Organization (PAHO), the use of vapers can induce addiction, due to the presence of nicotine, with several negative consequences for health. These effects include anomalies in babies exposed during pregnancy, impairment of learning and mental health of young people, increased likelihood of cardiorespiratory diseases, lung alterations, and injuries resulting from malfunction of devices.

Despite the popularity of electronic cigarettes, the National Health Surveillance Agency (ANVISA) has prohibited its commercialization and dissemination since 2009, through the Collegiate Board Resolution RDC 46. This is due to the absence of scientific data proving benefits compared to traditional cigarettes and reports of health problems associated with frequent users, resulting from the decrease in the body's defenses.

The identification of the harms of electronic cigarettes has generated positive impacts on public health. According to the WHO, these devices are a significant cause of preventable death. The organization has reported a decrease in the number of e-cigarette users over the past two decades, with the majority of users being women. In addition, it is observed that most consumers of electronic cigarettes are young people of high school and higher age.

Raio-x do cigarro eletrônico

% de usuários por população do Brasil



g1 Fonte: Pesquisa Covitel
Infográfico elaborado em:27/04/2022

Covitel reported that e-smoking is more prevalent among young people aged 18 to 24, with the male consumption rate more than double that of women. The incidence is especially high in the Center-South and South regions of the country. In addition, electronic cigarettes have been identified as a "gateway" to the consumption of conventional cigarettes. During the COVID-19 pandemic, there was an increase in the use of e-cigarettes, concomitant with a significant decrease in the practice of physical activities.

Physical therapy aims to preserve and recover the functions of the human body's systems. Professionals in the field use various techniques and methodologies to achieve effective results, especially in the face of the adverse conditions often found in smokers (BARBOSA et al., 2023).

According to the Center for Tobacco Research, based at the Ohio State University Comprehensive Cancer Center and the Southern California Keck School of Medicine, the use of electronic cigarettes, marijuana or traditional cigarettes can



present symptoms as early as one month of use. Among the interviewees, increases in wheezing, dyspnea, and symptoms of inflammation in the bronchi were reported. Over the years, the consumption of these products can pose serious health risks to smokers.

HYPOTHESIS

The prevalence of e-cigarette use among young university students in Brazil has increased significantly, surpassing the prevalence of traditional smoking in this age group. This trend reflects a shift in consumption preferences for nicotine products.

STUDY QUESTION

What is the prevalence of electronic cigarette use among young university students and what are the main factors that lead to this choice?

OBJECTIVE

GENERAL OBJECTIVE

To evaluate the prevalence of e-cigarette use among young university students.

SPECIFIC OBJECTIVES

- To analyze the frequency and motivations that lead young university students to use electronic cigarettes.
- To investigate the age group and social class of e-cigarette users.
- Identify and highlight the potential health consequences associated with e-cigarette use.

To explore how the work of physiotherapy professionals can contribute to the treatment of health problems resulting from the use of electronic cigarettes.

METHODOLOGY

TYPE OF STUDY

This study is a field research with a cross-sectional approach. It was conducted through the collection of primary data, using an online questionnaire created in Google Forms. This approach provides a comprehensive and snapshot view of the prevalence and factors associated with e-cigarette use among young college students.



LOCATION OF COLLECTION DATA

Data collection was carried out online through a form on Google Forms. The questionnaire was shared via email and social networks, which facilitated access and participation by young university students.

SELECTION CRITERIA

For the selection of participants, young university students of both sexes who are enrolled in Higher Education Institutions were considered. The age range of the participants was diverse, covering different ages within the group of university students.

INCLUSION CRITERIA

The criteria for inclusion of the participants were:

- Young university students aged between 19 and 40 years.
- Of both sexes.
- Who fully answer the questionnaire via Google Forms.
- That they sign the TCL electronically.

EXCLUSION CRITERIA THE FOLLOWING WERE EXCLUDED FROM THE STUDY:

- Young people who use any type of illicit drug.
- College students who are exclusively enrolled in online courses.

ETHICAL PROCEDURES

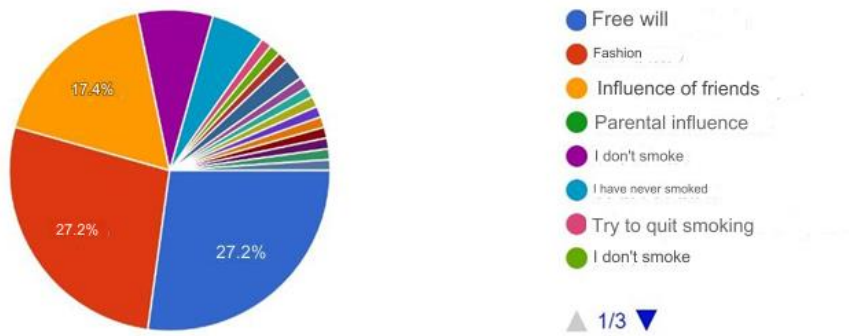
The present research is based on the ethical principles established by the National Health Council, according to resolutions No. 466/2012 and 510/2016. All participants, who are volunteers, are guaranteed the confidentiality of information and anonymity, with respect to their rights and duties.

PROCEDURES AND INSTRUMENTS FOR DATA COLLECTION

The questionnaire adopted a quantitative research method, performing an analysis of the collected data to standardize and group the information. The form was applied online, with most of the questions in a closed format, in order to obtain more direct answers.

What led you to use electronic cigarettes?

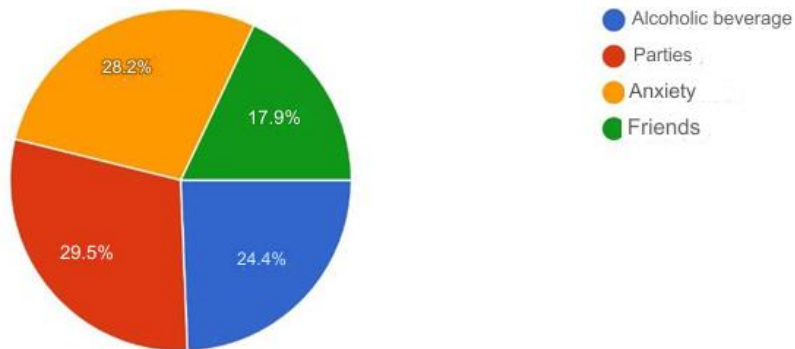
92 answers



Source: Google form

What do you think increases its use?

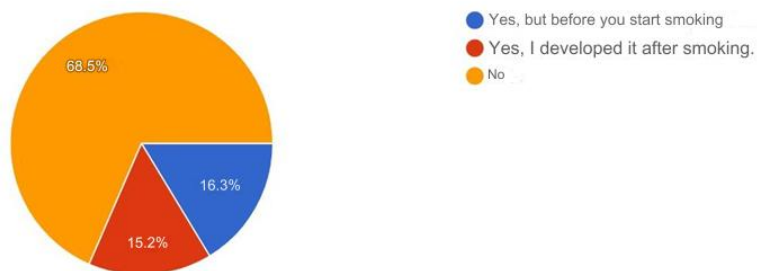
78 answers



Source: Google form

Do you have any respiratory problems?

92 answers



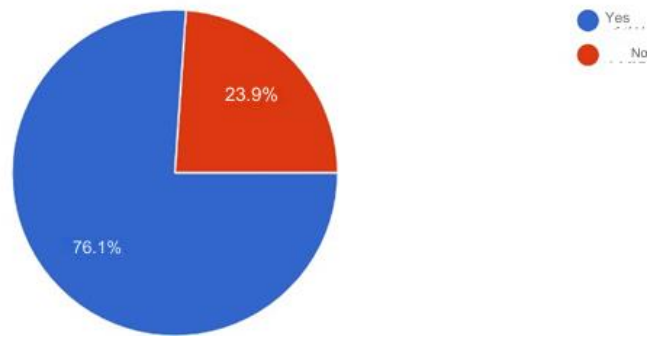
Source: Google form

In addition, more than one-seventh of the participants reported living with smokers, and more than half of them expressed an intention to quit vaping or at least consider not using more in the future. It is important to note that, among the participants, 66.3% identified themselves as female, 32.6% as male and 5.5% as belonging to another gender. Most candidates have a monthly income between 1 and 3 minimum wages.



Do you live with other smokers?

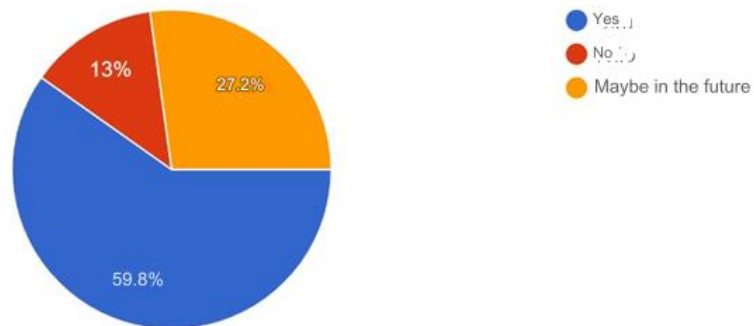
92 answers



Source: Google form

Do you intend to quit smoking?

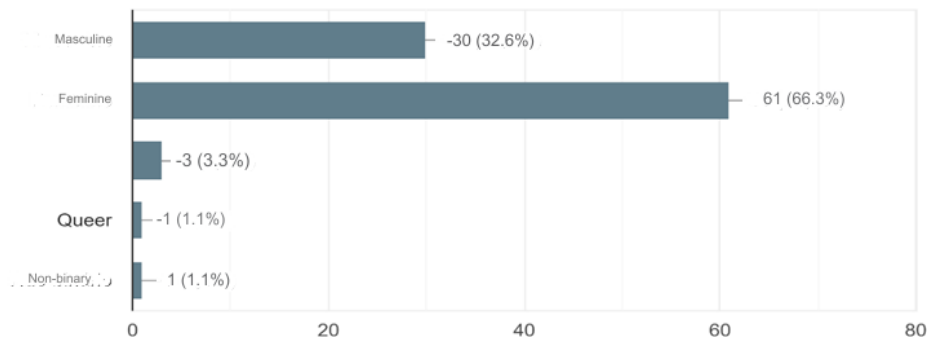
92 answers



Source: Google form

What is your gender?

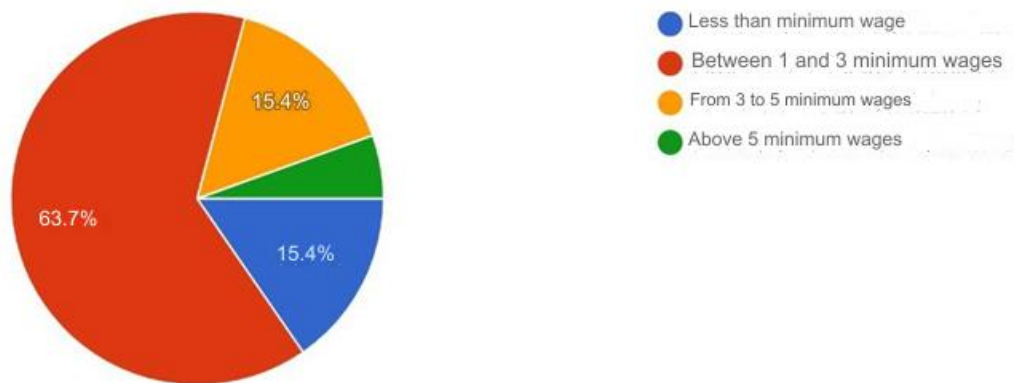
92 answers



Source: Google form

What is your monthly income?

91 answers



Source: Google form

DISCUSSION

This research confirmed that the use of e-cigarettes is quite common among young university students, a trend also observed in other studies (JARDIM & VICENTE, 2022; BISPO, 2022). The growing replacement of conventional cigarettes with electronic cigarettes can be attributed to the misconception that vapers are less harmful to health. E-cigarettes are often more attractive to young people due to the absence of butts and ashes, as well as the variety of flavors that make it more inviting (BISPO, 2022).

The data collected indicate that fashion, influence of friends and parties are the main factors that lead young people to start using electronic cigarettes. These elements are in line with the existing literature, which suggests that social acceptance and group living exert a strong influence on risk behavior among adolescents and young adults (CASTRO, 2016; NOBRÉGA, 2023). Alcohol consumption and anxiety were also identified as complementary reasons, suggesting that e-cigarettes can be used as a way to relieve daily stress, in a similar way to other substances such as alcohol (Q&A: Vape and other e-cigarettes , 2023).

A worrying aspect identified was the development of respiratory problems after the start of electronic cigarette use. Approximately 15.2% of the participants reported respiratory symptoms that appeared after starting to use these devices. The scientific literature associates the prolonged use of electronic cigarettes with lung problems, such as wheezing and inflammation of the bronchi, corroborating the findings of this study (NOBRÉGA, 2023). These symptoms underscore the urgent need to raise awareness of the risks associated with vaper use, which are often underestimated by users (JARDIM & VICENTE, 2022).



The predominance of female participants (66.3%) is remarkable and may be related to cultural and social factors. Studies indicate that women tend to use e-cigarettes more than men, often considering them a "less dangerous" alternative to traditional cigarettes or more acceptable in certain social circles (CASTRO, 2016). This may be linked to the fact that devices are often made available in more discreet and personalized versions, attracting this audience (BISPO, 2022).

The desire to stop using electronic cigarettes, expressed by more than half of the participants, suggests a growing awareness of the health risks. This data indicates that public health campaigns targeting young people can be effective, especially when they provide clear information about health dangers (Q&A: Vape and Other E-Cigarettes, 2023). In addition, the role of physiotherapists in the treatment and prevention of respiratory complications associated with the use of e-cigarettes should be strengthened. Respiratory physiotherapy, with its pulmonary rehabilitation techniques, can be crucial in the recovery of compromised lung functions (NOBRÉGA, 2023).

The data from this study reinforce the need for public policies that restrict access to these devices and promote education about their health risks. The increase in the use of vapers among young university students makes it urgent to create preventive programs aimed at this population, with the participation of health professionals, such as physiotherapists, who can provide guidance on the risks of use and assist in the treatment of diseases related to electronic cigarettes (JARDIM & VICENTE, 2022; BISPO, 2022).

CONCLUSION

The survey revealed that the use of e-cigarettes is very common among young university students, being driven by social trends and the influence of friends. Respiratory problems are frequent among users, with some developing new conditions after starting use. The intention to discontinue the use of these devices indicates a growing awareness of the associated risks. The results highlight the importance of public health strategies and the key role of physiotherapists in the management and prevention of health problems related to the use of e-cigarettes.

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REFERENCES

1. Jardim, J. R., & Vicente, R. (2022). Mania entre jovens, saiba mais sobre os cigarros eletrônicos. Escola Paulista de Medicina. <https://sp.unifesp.br/epm/noticias/mania-entre-jovens-saibamais-sobre-os-cigarros-eletronicos> (Acesso em 16 de março de 2024).
2. Bispo, S. (2022). Consequências no sistema respiratório de usuários de cigarro eletrônico. Repositório Puc Goiás. <https://repositorio.pucgoias.edu.br/jspui/bitstream/123456789/4909/1/Artigo%20Smylle%20Sousa%20Bispo.pdf> (Acesso em 16 de março de 2024).
3. Barbosa, F. S., Cunha, G. P., Santana da Silva, J. E. de S., & Ribeiro, A. S. O. (Ano de publicação). A importância da fisioterapia respiratória nas doenças oriundas ao tabagismo. Cathedral. <http://cathedral.ojs.galoa.com.br/index.php/cathedral/article/view/662> (Acesso em 16 de março de 2024).
4. Perguntas e respostas: vape e outros cigarros eletrônicos. (2023). Paho. <https://www.paho.org/pt/noticias/5-5-2023-perguntas-erespostas-vape-e-outros-cigarros-eletronicos> (Acesso em 16 de março de 2024).
5. Cigarro eletrônico. (2016). Ministério da Saúde. <https://www.gov.br/anvisa/pt-br/assuntos/tabaco/cigarroeletronico#:~:text=A%20comercializa%C3%A7%C3%A3o%2C%20importa%C3%A7%C3%A3o%20e%20propaganda,28%20de%20agosto%20de%202009> (Acesso em 16 de março de 2024).
6. Castro, R. (2016). Tabagismo, a principal causa de morte evitável no planeta. Jornal da USP. <https://jornal.usp.br/radiusp/radioagencia-usp/tabagismo-a-principal-causa-de-morte-evitavel-noplaneta/#:~:text=De%20acordo%20com%20a%20Organiza%C3%A7%C3%A3o,Brasil%20em%20decorr%C3%Aancia%20do%20fumo> (Acesso em 16 de março de 2024).
7. 1 a cada 5 jovens de 18 a 24 anos usa cigarros eletrônicos no Brasil aponta pesquisa. (2022). G1. <https://g1.globo.com/saude/noticia/2022/04/27/1-a-cada-5-jovens-de-18-a24-anos-usam-cigarros-eletronicos-no-brasil-aponta-pesquisa.ghtml> (Acesso em 3 de abril de 2024).
8. Nóbrega, C. (2023). Uso de cigarro eletrônico por 30 dias já pode causar severos problemas respiratórios, diz estudo. Hospital do Câncer de Pernambuco. <https://www.hcp.org.br/2023/08/22/usar-cigarro-eletronico-por-30-dias-japode-causar-severos-problemas-respiratorios-dizestudo/#:~:text=Verificou%2Dse%20que%20os%20indiv%C3%ADduos,de%20apresentar%20sintomas%20de%20bronquite> (Acesso em 3 de abril de 2024).
9. Questionário para TCC sobre a prevalência do tabagismo eletrônico em jovens universitários. (2022). <https://docs.google.com/forms/d/1iQ7Lcdvz1pyJ6LmB4Ae7lTmFpio0kmGncYvukdM4Y44/edit> (Acesso em 22 de maio de 2022).