

Original Article

# Concerned and Busy About Health Cigarette Consumption and Electronic Cigarette Use

Enrique Ferrer<sup>1</sup>, Vivian Aurelia Minnaard<sup>2</sup>, Agostina Melamed<sup>3</sup>, Maira Escribano<sup>4</sup>, Dolores Rodriguez Acosta<sup>5</sup>  
 María Magnoni<sup>6</sup>

University of the Fraternity of Saint Thomas Aquinas, FASTA, Mar del Plata, Argentina.

<sup>2</sup>Corresponding Author : [minnaard@ufasta.edu.ar](mailto:minnaard@ufasta.edu.ar)

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**Abstract** - Tobacco consumption and the use of electronic cigarettes can be adopted due to a lack of information about health risks. The research is carried out in two stages. The first is with students of the Medicine program of the Clinical Surgical Chair I, and the second stage considered an extension activity, is carried out in a workshop format for 400 secondary school students. A flash survey is applied to pre and post-scheduled activity. Notable changes are observed in the information, although there are aspects that require further work on the topic.

**Keywords** - Cigarette consumption, Electronic cigarette, Risk factor, Extension activity, Prevention.

## 1. Introduction

On the 10th anniversary of the publication of the "World Health Organization Framework Convention on Tobacco Control" highlights that only a few countries have developed a surveillance system in this regard. (1) Tobacco use is considered as a common risk factor for the four major communicable diseases (NCDs): cardiovascular diseases, cancer, chronic respiratory diseases and diabetes."(2)

Although countries have taken measures to protect smoke-free spaces, the results are not yet as expected (3). It should be noted that there are many studies that recognize "risk and protective factors" that must be identified in order to advance in the development of smoking prevention strategies and that health education is a key aspect of this issue.

## 2. Materials and Methods

The Quirurgical Clinic chair carries out the research in two stages. The first stage is developed descriptively with a sample of 22 students taking the subject in 2023, selected in a non-probabilistic manner for convenience. The data is obtained with an online form. In the second stage, an extension activity is designed with the participation of the students, which is implemented in a secondary school in the city of Mar del Plata, Argentina. 400 students from the First year to Sixth year participated, with ages ranging from 12 years to 18 years old.

## 3. Results and Discussion

In the first stage, the chair works on respiratory complications that are associated with tobacco consumption and the respiratory challenges that doctors may face before, during, and after surgery.

Figure 1: Objectives designed for experience

Stage 1	Stage 2
To investigate the degree of information that Medical Science students have about cigarette consumption in its various formats and the perception of their role as future professionals in the prevention of respiratory complications in smoking patients in Mar del Plata in 2023.	To analyze changes in the information of students attending pre- and post-workshop on tobacco use and e-cigarette use.

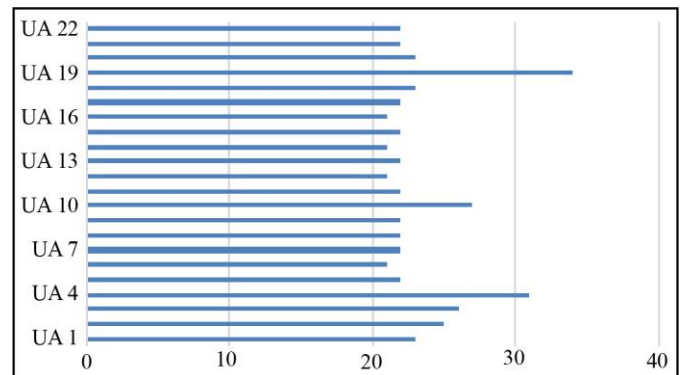


Fig. 1 Students age



In Higher Education, the aim is to promote proposals that strengthen creativity and produce ideas about a problem to be solved. (4). Subsequently, an online form is sent to the students where they are asked, among other questions, their opinions on the use of e-cigarettes. The answers are presented below.

**Table 1. Students' opinions on the use of electronic cigarettes**

E1	It seems to be a safer alternative than tobacco since you do not consume smoke but rather vapor. At the same time, this means that the "flavors" have different chemicals that are not healthy at all because they contain substances that cause lung inflammation due to the large amount of "puffs" that the person produces. It is just as harmful as regular cigarettes.
E2	Consumption is not regulated, nor its components, I distrust what it may have.
E3	It is good.
E4	It is harmful.
E5	Its consumption increased more than anything in young people because it is believed that it is "less bad" than the normal cigarette.
E6	That is good.
E7	It is the same as a normal cigarette.
E8	It is the same as the common.
E9	It works as a replacement for normal cigarettes but does not help with smoking cessation.
E10	Which is just as harmful as cigarettes.
E11	It is just as harmful as cigarettes, and people are not aware.
E12	It has the same consequences as conventional cigarette consumption.
E13	It is equally or more harmful than cigarettes.
E14	It is also harmful to health.
E15	It is just as harmful as regular cigarettes since it contains heavy metals, glycerin, etc.

E16	It is the same as well-regarded normal.
E17	Because it is socially well-regarded because people believe that it is less harmful than cigarettes.
E18	Equal or more harmful than industrial.
E19	Perhaps because of the good social representation it has.
E20	Because of fashion and because there is a lot of misinformation, people think that replacing tobacco with a vape is healthy when, in reality, it is just as bad or even worse.
E21	Because of anxiety.
E22	Due to the convenience of not having to discard it and buy packages constantly.

30% of the students indicated that they had relatives who had a smoking habit with respiratory complications and even that they had been hospitalized. 90% of them smoked electronic cigarettes, lacking information about the risks they entail and highlighting that they did so in response to a trend of the moment for a social reason. The students recognized that this activity acted as a prelude to carrying out actions during the year of health promotion and prevention, so they proposed developing a second stage. In the second stage, it is decided to plan a workshop to work on the risks of smoking and electronic cigarettes. The flash survey presented pre and post-workshop is presented below. The flash survey is characterized by having few questions, generally no more than 10. It is a tool that allows you to measure opinions, among other aspects (5). Below is the survey diagram for the workshop.

**Smoking that makes people talk**

<p><b>A. Smoking is...</b>                  a- A healthy habit                  b- A chronic illness                  c- An infectious disease                  d An addiction                  e- B and D are correct</p>
<p><b>B. The cigarette...</b>                  a- Contains acetone, naphthalene, and arsenic.                  b- It is a carcinogen (specific chemical or physical agent that has the ability to cause cancer in individuals exposed to it).                  c- It has nicotine as an addictive substance.                  d- Affects all organs and systems of the body                  e- All are correct</p>

<p>C. In babies of smoking parents, it can cause...</p> <p>a-Sudden death</p> <p>b-Infections</p> <p>c-Developmental disorders</p> <p>d-Behavioral disorders</p> <p>e-All the above</p>
<p>D. Among the long-term effects identified at the respiratory level, we find...</p> <p>a- Chronic obstructive pulmonary disease</p> <p>b-Chronic obstructive pulmonary disease, Lung cancer, Respiratory infection</p> <p>c-Lung cancer, Chronic obstructive pulmonary disease</p> <p>d-Chronic obstructive pulmonary disease, Pneumonia</p> <p>e-None of the above</p>
<p>F. The electronic cigarette...</p> <p>a-Does not generate health risks</p> <p>b-It is less dangerous than cigarettes</p> <p>c-Generates the same damage as cigarettes</p> <p>d-Generates more damage than cigarettes</p> <p>f-Unlike cigarettes, it is not carcinogenic</p>

Below are the results obtained by applying the flash survey pre and post-experience.

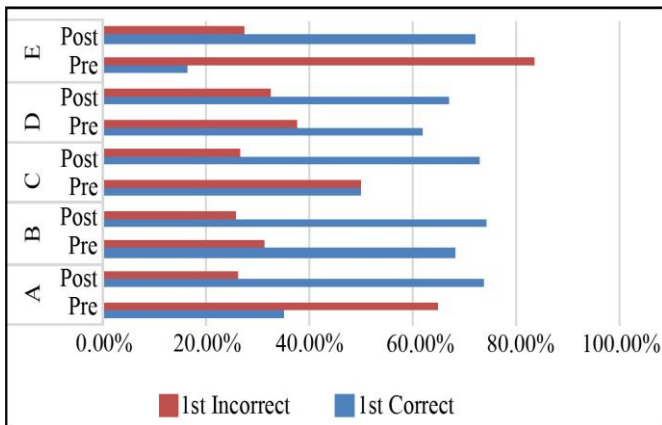


Fig. 4 Responses to the flash survey of First Year Basic Cycle students

In the case of first-year students whose ages correspond to 12-13 years, it is observed that in the 5 aspects contemplated in the flash survey, an increase in correct answers is observed.

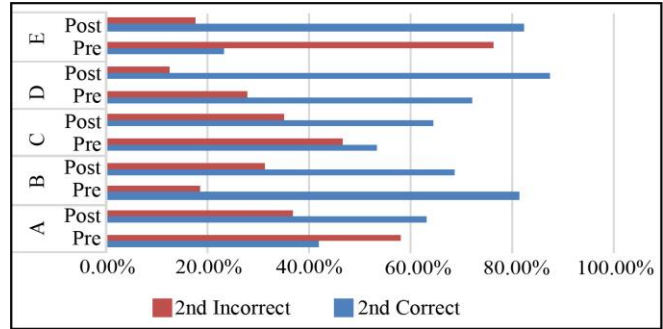


Fig. 5 Responses to the flash survey of Second Year Basic Cycle students

When analyzing the results of second-year students, whose age generally corresponds to 14 years, it is observed that in the 5 aspects contemplated in the flash survey, there is an increase in correct answers, the most notable modification being that which corresponds to the electronic cigarette. , making evident the little information that the students had before the workshop.

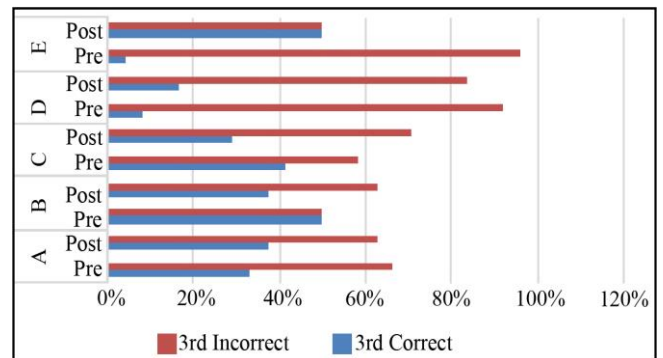


Fig. 6 Responses to the flash survey of Third Year Basic Cycle students

As for the third-year students, whose age generally corresponds to 15 years, the greatest modification is observed in Items A, B, and C of the survey, while in items D and E, although changes are perceived, there are still conceptual errors.

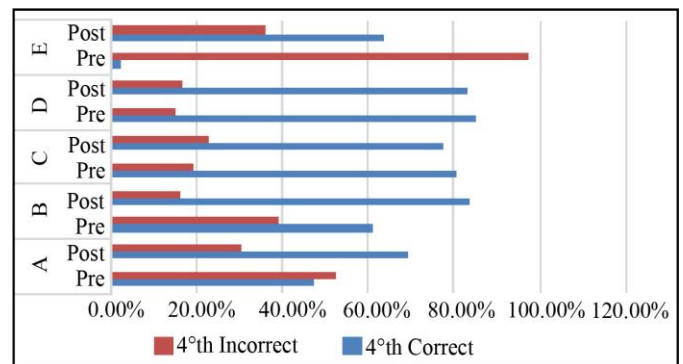


Fig. 7 Responses to the flash survey of Fourth Year Basic Cycle students

In these students of approximately 16 years, modifications are identified to the first 4 items of the survey. Although changes are observed in item E, a percentage greater than 30% in incorrect answers still persists, and these researchers postulate a hypothesis that responds to the fashion established at this time at parties.

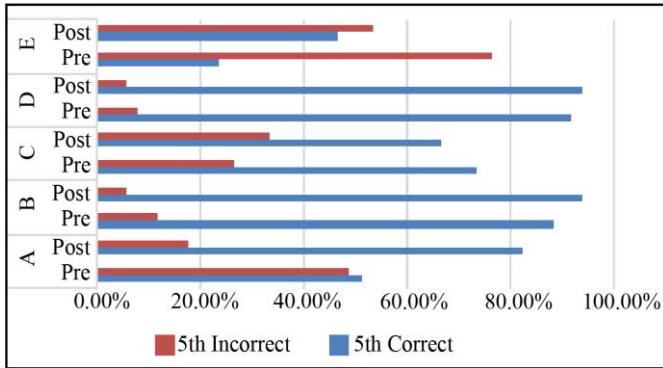


Fig. 8 Responses to the flash survey of Fifth Year Basic Cycle students

It is observed in these 17-year-old students that they have modified the information about tobacco consumption and the use of electronic cigarettes. However, in item C, it is observed that in the post-survey, the number of incorrect answers has increased. Moreover, in item E, it is observed that 53.33% of incorrect answers are still observed.

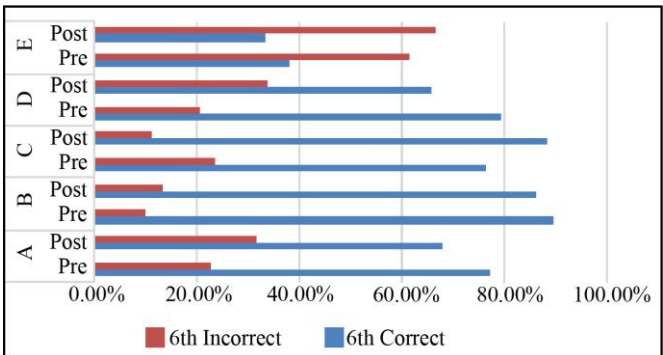


Fig. 9 Responses to the flash survey of Sixth Year Basic Cycle students

These young people of approximately 18 years old, who are in the last year of Middle School and are one step away from entering higher education, have a high percentage of correct answers. However, percentages of incorrect answers are identified, such as in item D 33.96. % and in E 66.67%.

These data make us reflect on what has been said by different authors who analyze the influence of lifestyles on the habits of young people and their health(6), so does anxiety and stress. (7)

These aspects are also recognized by those who identify social pressures from friends or from different contexts, the search for acceptance by certain groups are just some

examples. (3), although the use of e-cigarettes poses a respiratory and cardiac risk(8). In a study carried out on the Prevention of Consumption of Legal Psychoactive Substances in three countries of the Americas, it was observed that although an increase in alcohol consumption was detected, no changes were observed in the case of tobacco. (9)In an investigation carried out in Argentina on their consumption, one of the results obtained indicates that nearly 50% of the young people surveyed indicated that they believed that they were less harmful. (10) Given the risks, it is necessary to increase control of its use(11).

Table 2. Percentages of correct answers pre and post-workshop

Basic Cycle of Middle School				
		1st	2nd	3 rd
A	Pre	35,18%	41,86%	33%
	Post	73,78%	63,15%	37,50%
B	Pre	68,51%	81,39%	50%
	Post	74,32%	68,75%	37,50%
C	Pre	50%	53%	41,66%
	Post	73,23%	64,70%	29,10%
D	Pre	62,13%	72,09%	8,33%
	Post	67,14%	87,50%	16,60%
E	Pre	16,30%	23,40%	4,17%
	Post	72,22%	82,35%	50%
Upper Cycle of Middle School				
		4th	5 th	6th
A	Pre	47,50%	51,35%	77,14%
	Post	69,56%	82,35%	68,00%
B	Pre	60,97%	88,23%	89,74%
	Post	83,67%	94,11%	86,27%
C	Pre	80,48%	73,33%	76,47%
	Post	77,35%	66,66%	88,46%
D	Pre	85%	91,89%	79,41%
	Post	83,33%	94,11%	66,04%
E	Pre	2,70%	23,68%	38,24%
	Post	63,82%	46,66%	33,33%

Table 2 shows the percentages of correct answers pre and post-workshop; those courses in which the percentages decreased in the post-workshop survey are identified in pink. This shows that it is necessary to continue designing creative strategies that promote reflective thinking (12)but at the same time implement varied activities throughout the school year. In an experience carried out by a research group that addressed different strategies selected according to the ages of the students, they indicated that it would be very important for families to have active participation. (13) Regarding

active learning can be interpreted in different ways, but it helps students develop and strengthen skills. (14). This is visualized in stage 1 of the experience where the students of Quirurgical Clinic chair design a strategy such as the implemented workshop, where the commitment and responsibility demonstrated in stage 2 in front of the 400 middle-level students is visualized in the development of the scheduled day. However, a study of medical students highlights the need for increased strategies to promote more information about tobacco use and its impact on health from the time of entry into medical school. (15). Therefore, the age range to implement prevention strategies is wide. But at the same time, implement varied activities throughout the school year.

#### 4. Conclusion

Smoking constitutes a serious global public health problem. Medical students must be active participants in a risk factor as prevalent and preventable worldwide as

tobacco consumption. The age of initiation of tobacco consumption tends to decrease in the vast majority of countries, making it necessary to intervene at younger ages to prevent consumption. It is necessary to emphasize both the short-term and long-term risks caused by the consumption of cigarettes and electronic cigarettes.

For this reason, the damage they cause to the body must be identified, and educational strategies must be implemented that lead to the reflection of students of different academic levels and patients on this topic that worries and occupies and emphasizes the cessation of consumption as a fundamental preventive measure of large quantities of pathologies.

#### Acknowledgments

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