

**ORIGINAL**  
**Research article**

## **Smoking in young Mexicans: an empirical study in Veracruz, Michoacán, Mexico City and the state of Mexico**

**Tabaquismo en jóvenes mexicanos: estudio empírico en Veracruz, Michoacán, Ciudad de México y Estado de México\***

Received: November 21, 2022 - Evaluated: February 23, 2023 - Accepted: June 30, 2023

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### **To cite this Article**

De-La-Fuente-Izaguirre, R., López-Lunagómez, D., & Arieta-Melgarejo, P. (2023). Smoking in young Mexicans: an empirical study in Veracruz, Michoacán, Mexico City and the state of Mexico. *Revista Gestión y Desarrollo Libre*, 8(16), 1-13. <https://doi.org/10.18041/2539-3669/gestionlibre.16.2023.10493>

**Editor:** PhD Rolando Eslava-Zapata

### **Abstract**

Tobacco consumption in Mexican youth between 15 and 25 years of age has been favored by different psychosocial factors; in this sense, it is important to carry out correlational studies to determine the predominant factors that favor tobacco consumption at early ages. In this study, psychosocial factors are analyzed in order to identify those that are related to smoking among Mexican youth. For this reason, a study was carried out with a population of 80 adolescents between 15 and 25 years of age from the states of Veracruz, Michoacán, Mexico City, and the State of Mexico. The Fagerström test of nicotine dependence and a questionnaire of factors accompanying smoking were used. The results reveal that social and family factors, as opposed to economic and academic factors, have a significant influence on the initiation of tobacco use. The suggestion is made to continue with psychosocial studies to explore the triggers of smoking in smokers and the reasons that inhibit the behavior in non-smokers, with which it will be possible to create more efficient health policies.

\* Original article. Research and innovation article. Research article. Research article linked to the Academic Body Emerging Technologies of the Universidad Veracruzana, Mexico.

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**Keywords:** Young, Tobacco, Dependence, Habit, Psychosocial Factors

### **Resumen**

El consumo de tabaco en jóvenes mexicanos entre 15 y 25 años se ha visto favorecido por diferentes factores psicosociales, en ese sentido es importante realizar estudios correlacionales que determinen los factores predominantes que favorecen el consumo del tabaco en edades tempranas. En este estudio se analizan los factores psicosociales con el objetivo de identificar aquellos que están relacionados con el consumo de tabaquismo en jóvenes mexicanos. Por tal motivo se desarrolla un estudio con una población de 80 adolescentes con un rango de edad entre 15 y 25 años, de los estados de Veracruz, Michoacán, Ciudad de México y Estado de México. Se utiliza la prueba de Fagerström de dependencia de la nicotina y un cuestionario de factores que acompañan al tabaquismo. Los resultados revelan que los factores sociales y familiares, a diferencia de los económicos y académicos influyen de manera significativa para el inicio del consumo del tabaco. Se hace la sugerencia de continuar con estudios de carácter psicosocial para explorar cuáles son los detonantes del tabaquismo en fumadores y los motivos que inhiben la conducta en los no fumadores, con lo que, será posible crear políticas de salud más eficientes.

**Palabras clave:** Jóvenes, Tabaco, Dependencia, Factores Psicosociales

### **SUMMARY**

INTRODUCTION. - RESOLUTION SCHEME. - I. Research problem. - II. Methodology. - III. Research results.-CONCLUSIONS.-REFERENCES.

### **Introduction**

Tobacco is the second most consumed drug in the world after alcohol. Despite being legal, multiple pieces of evidence relate smoking to more than 25 diseases, such as lung cancer, larynx cancer, pulmonary emphysema, cardiac infarction, fertility problems, and premature menopause. It has adverse effects not only on smokers but also on passive smokers who inhale "second-hand" smoke (Ruíz, Ruíz, Salazar, Torres, Valer, Santiago, Blas, Vásquez & Guevara, 2016, p. 32-37).

According to Armendáriz, Rodríguez & Guzmán (2008, p. 2) in Mexico, "drug use has increased in recent years in the general population. However, adolescents are highly vulnerable to risky behaviors". During this stage of life, which can be complex, various adjustments occur internally and in social relationships. It is a perfect time for adolescents to start using tobacco and alcohol. Psychologically, recent research focuses on understanding how adolescents initiate drug use, especially alcohol and tobacco use. It has been shown that there are multiple personal and interpersonal factors related to these substances. According to the Juvenile Integration Centers, as adolescents age, the risk of tobacco and alcohol use increases. Significant gender differences are also observed, with males consuming more than females (Armendariz et al., 2008, p. 2).

In 2019, almost 60 thousand deaths will be caused by tobacco consumption in Mexico. The Informative Bulletin of the General Directorate of Social Communication of the National Autonomous University of Mexico (UNAM) mentions that:

Tobacco is one of the main preventable causes of disease and death worldwide. It is an addictive substance, socially accepted and legally consumed. The World Health Organization (WHO) reports 1.1 billion smokers worldwide; of these, more

than 7 million die each year. However, the figure grows with the death of 1.2 million non-smokers exposed to cigarette smoke. In Mexico, tobacco consumption kills about 60,000 people a year. The average age at which people start smoking is 13 years old, which is crucial because, in that period, the respiratory system is still immature to resist tobacco toxins. In addition, the central nervous system reaches maturity around 21, and smoking affects its development.

It is imperative to mention that smoking is a public health problem with many approaches and roots; historically, smoking has been given varied connotations, from those of status and power to those that refer to a lack of respect for life. Consequently, it is a behavior socially accepted and encouraged by certain sectors. However, it is condemned and refuted by others, including the health sector, once the damage it causes to people's well-being has been proven.

Although the global trend observed so far is reversing, it is clear that Mexican society is far from no longer affected; the results of the (National Survey on Drug, Alcohol, and Tobacco Consumption 2016 and 2017), (ENCODAT) reflect that:

17.60% of the population aged 12 to 65 years smoke tobacco; that is, there are 14.9 million smokers in Mexico (Comisión Nacional contra las Adicciones, 2017). From this figure, it stands out that the age range with the highest prevalence, both in males and females, is 18 to 24 years old, followed by 25 to 29, so smoking continues to be a habit started at an early age and, therefore, it remains with a high probability of risk for the smoker and his or her family.

Now, taking up the WHO's proposal to generate responsible health policies, it is recognized that there have been important changes in the last 15 years in Mexico. Smoking in enclosed places and the marketing of tobacco products is currently prohibited. Even cigarette companies must publish a warning on the packaging of the risk posed by their products. Therefore, it is in the interest of health psychology to know the psychosocial factors that accompany tobacco consumption in young Mexicans, highlighting those that are recurrent in various populations, allowing the creation of patterns of social, family, school, economic, or any other behavior that facilitates the generation of knowledge for the creation of prevention and treatment policies for this group of people. In this way, it seeks to accompany health policies on smoking prevention. It contributes to reducing the factors affecting the health status of Mexicans. In this sense, the objective of the research was to identify psychosocial factors related to smoking in young Mexicans between 15 and 25 years of age living in Mexico City, the State of Mexico, Michoacán, and Veracruz.

## **Resolution scheme**

### **1. Research problem**

What psychosocial factors favor tobacco consumption in Mexican youth between 15 and 25?

## 2. Methodology

The research methodology is mixed with a non-experimental one, which, according to Hernández, Fernández & Baptista (2010, p. 152-153), "this type of research is conducted without the manipulation of variables, and only the phenomena are observed in their natural environment and then analyzed." It is an exploratory correlational design, and its objective was to investigate the psychosocial factors that have a significant presence in tobacco consumption in young Mexicans between 15 and 25 years of age; in the end, a comparison was made between the states under investigation.

The sample consisted of 80 young people between 15 and 25 years of age from Mexico City, the State of Mexico, Michoacán, and Veracruz. The sample selection was convenience non-probabilistic since the participants had to meet certain characteristics that favored the research and were not randomly selected. The sample was selected based on the following inclusion criteria:

- Men and women between 15 and 25 years.
- Participants who are smokers or who have tried tobacco sometime.
- In the same way, the exclusion criteria presented are:
- Subjects who are not in the age range of 15 to 25.
- Subjects who have not used tobacco.

The research hypothesis (H0) proposes the existence of some psychosocial factors that influence tobacco consumption among Mexican youth between 15 and 25 years. The alternative hypothesis (H1) is that no factors influence tobacco consumption among Mexican youth between 15 and 25 years of age. Tobacco consumption is presented as a dependent variable, cigarette smoking being the most popular method of tobacco consumption. The cigarette is a highly sophisticated system designed to deliver the drug efficiently. When tobacco is smoked, nicotine is rapidly absorbed into the bloodstream and reaches the brain. It causes a stimulant response in the body, triggering a rush of adrenaline and causing an increase in blood pressure, respiration, and heart rate. Adolescents are especially susceptible to nicotine's reinforcing effects, which increases their vulnerability to tobacco addiction (Becoña, 2004, p. 237-263).

The independent variable of the research is psychosocial factors, which are considered circumstances of psychological and social character that have a direct or indirect relationship with other phenomena or behaviors and that can be of causal, precipitating, predisposing, or simply concurrent order of the same. Therefore, they can contribute to the development and maintenance of the problem (Mendoza & Vargas, 2017, p. 139-167). The operationalization of the variables is the result of the frequency obtained on the elements that the population refers to as factors that incite their smoking behavior, according to the "Questionnaire of factors that accompany smoking," under an individual analysis by entity of the republic and a comparative one by entities.

The study was conducted with the Google Forms technological tool, in which the items corresponding to the Fagerström test were transcribed in their entirety with their respective response options, as well as the variables of the questionnaire of factors that accompany smoking, which includes the sociodemographic items required to cross-check the information. A questionnaire was sent to 20 young people from Veracruz, CDMX, Mexico, and Michoacán, along with the links to the document so that the answers could later be saved to the tool's

information. Upon reaching the maximum number of young people foreseen in this work (80 participants), the form was closed, and the results obtained were analyzed.

A database was created in Microsoft Excel to analyze the results. Consequently, the frequency of psychosocial factors was identified and verified whether statistically significant differences existed in the different states. Two instruments were used during the research:

- The six-item version of the Fagerström test of nicotine dependence was used, with four dichotomous items and two Likert-type responses from 0 to 3. The score can range from 0 to 10 points. The timing and frequency of cigarette smoking and the difficulty of quitting smoking were assessed. A cut-off point of 6 points was considered to differentiate between nicotine-dependent and non-nicotine-addicted smokers. Processing of results: score between 0 and 4 (the smoker is slightly dependent on nicotine), score of 5 or 6 (the smoker has a medium dependence), and score between 7 and 10 (the smoker is highly hooked on nicotine).
- Questionnaire of factors that accompany smoking (own creation), which explored: the set of elements that the population referred to as factors that incited their smoking behavior (nominal categorical variable), sociodemographic data (sex, age, occupation, type of education, level of studies, state of residence, family members with whom they live) and economic position (continuous quantitative variables, nominal categorical variables, ordinal categorical variables); smoking history and habits (age at smoking onset, family and friends who smoke, accompanying tobacco with alcohol, places where they smoke) and circumstances in which they smoke (continuous quantitative variables, nominal categorical variables); beliefs about health effects and problems related to tobacco use (nominal categorical variables); health care habits (ordinal categorical variables) and interest in quitting smoking (discrete quantitative variables, ordinal categorical variables, nominal categorical variables).

Sociodemographic data include sex, age, occupation, level of education, sociodemographic location, family members with whom they live, and socioeconomic level.

### **3. Research results**

The Fagerström test was applied to the participants, followed by a self-developed questionnaire on "Consumption Habits." The results will be presented below in numbered tables and graphs, accompanied by a brief explanation of each. Of the 80 participants, 48.80% were men and 51.20% were women. Regarding their occupation, 38.70% worked, 35.00% studied and worked, 25.00% studied and 1.20% neither studied nor worked. Of the participants, 36.30% attended private schools, 30.00% enrolled in public schools, and 33.80% did not attend school.

Table 1 shows the results of the Fagerström test of nicotine dependence to differentiate between smokers with low dependence, medium dependence, and high dependence in the different states. Of the sample, 61 participants were slightly dependent, 14 had medium dependence, and 5 were highly dependent. The following values were taken as a reference point: between 0 and 4 (low dependence), between 5 and 6 (medium dependence), and between 7 and 10 (high dependence).

**Table 1. Nicotine dependence results by states**

STATES	LOW DEPENDENCE	MEDIUM DEPENDENCE	HIGH DEPENDENCE
CDMX	9	9	2
Estado de México	19	0	1
Veracruz	14	5	1
Michoacán	19	0	1
TOTAL	61	14	5

Source: own preparation.

Table 2 contains the results from the entire Fagerström test population in the different states. It shows that the maximum score was 7, which are the bars with the highest elevation; 2 correspond to Mexico City, 1 to Eastern Mexico, 1 to Michoacán, and 1 to Veracruz, giving a total of 5 participants highly dependent on nicotine, corresponding to 6.00% of the total sample. The results of the consumption habits questionnaire in terms of smoking prevalence were obtained from a total sample of 80 participants, with 64 currently smoking and 16 stopped smoking: 64 currently taking inhaling and 16 stopped inhaling. Therefore, the prevalence of smokers stands at 80.00%. As for the age at which they tried a cigarette for the first time, table 3 shows that, of a large number of participants, the most frequent age at which they started their first cigarette was 15 years old, followed by those who started cigarettes at 14.

**Table 2. Results of the Fagerström test scores**

PSYCHOSOCIAL FACTORS	CDMX	ESTADO DE MÉXICO	MICHOACÁN	VERACRUZ
Who among your family members smokes?	Father	Other Relatives	Other Relatives	Father and Mother
Who of your close friends smokes?	Half the people in my close circle of friends smoke	Few people in my close circle of friends smoke	Half of the people in my close circle of friends smoke	Half of the people in my close circle of friends smoke
Do you smoke when you drink alcohol?	YES	YES	YES	YES
In what places do you usually smoke?	Bars or parties	Bars or parties	Bars or parties	Street
At what times do you usually smoke?	When I am in the company and go to parties	When I am anxious and go to parties	When I am alone and tired or stressed.	When I am alone and at parties
Do you think it is difficult to quit smoking once you start?	Yes, but it is possible to quit smoking.	Yes, but it is possible to quit smoking.	Yes, but it is possible to quit smoking.	It is not easy to quit.
What are the reasons you started smoking?	Out of curiosity and because my friends smoke	Out of curiosity and social status	Out of curiosity	Because of social status and because my relatives smoke
How many times have you tried to quit smoking?	None and once	None and 2 times	None and 2 times	Not at all
Do you want to quit smoking?	Yes	Yes	Yes, and I already quit.	Yes
What are your reasons for quitting smoking?	Because I want for set a good example to my family	Because I want to set a good example to my family and I want for improve my health.	Because I want to improve my health	Because I do not want to get sick
Have you had any health problems directly caused by smoking?	Yes	No	No	No

Source: own preparation.

**Table 3. Edad de inicio del hábito de tabaquismo**

AGE RANGE	FREQUENCY
9 -12	10
13-16	43
17-20	23

21-25	4
Average	16,60

**Source:** own preparation.

Table 4 shows the results obtained for psychosocial factors based on the items indicated therein. The state made An individual analysis, obtaining the most frequent responses to describe the data finally. In Table 4, as a result of the questionnaire conducted in the different states regarding psychosocial factors, it was possible to conclude that in Mexico City, the relative who smokes most is the father; in the States of Mexico and Michoacán, other relatives and Veracruz the father and the mother. In the total sample, the factor of other family members has a significant presence at 40.00%.

In the case of who among their circle of friends consumes tobacco, it was determined that in Mexico City, Michoacán, and Veracruz, half of the people in their close circle of friends use tobacco. In contrast, in the State of Mexico, few people in their circle of friends are smokers. Of the sample, 42.00% said half of their close friends smoke. On the other hand, those interviewed in the four entities agree that they use tobacco when drinking. Of the sample, 63.70% do, 21.30% do not drink alcohol, and 15% do not.

Regarding the places where they usually smoke, in Mexico City, the State of Mexico, and Michoacán, it is in bars or parties; in the case of the State of Veracruz, they usually do it on the street. Of the sample, 65.00% mentioned bars and parties, and 51.20% mentioned smoking on the street. These two places had the highest scores.

Regarding when they smoke, people from Mexico City smoke when they are accompanied and attend parties. Participants from Mexico smoke when they are anxious and attend parties. Michoacán residents do it when they are lonely, tired, or stressed. In the state of Veracruz, they do it alone and at parties. As a result of questioning whether it is difficult to stop smoking once they start, people from Mexico City, the State of Mexico, and Michoacán stated that it is indeed difficult but possible to stop. In contrast, Veracruz participants stated that quitting smoking is not easy. Of the total sample, 73.80% believe it is possible to quit smoking.

Of the participants, 63.20% said they started smoking out of curiosity; it is interesting since it has a significant frequency, followed by 17.50% who do it because their friends use cigarettes. People from Mexico City responded once to how often they have attempted to stop cigarettes. People from the State of Mexico and Michoacán have tried twice, and those from the State of Veracruz have not tried. Of the total sample, 43.8% have not attempted to quit smoking. When asked if they intend to stop smoking, all four entities wish to stop smoking, even some people from the state of Michoacán answered that they have already stopped it; of the total sample, 67.50% want to give up smoking. When asked what the reasons for quitting smoking were, the participants' answers from Mexico City were that they want to set a good example to their family, in the State of Mexico, they want to set a good example and for health. The State of Michoacán agrees with the State of Veracruz in improving their health.

Finally, regarding whether they have had health problems directly caused by smoking, the respondents from Mexico City stated that they had had some health problems; on the other hand, the State of Mexico, Michoacán, and Veracruz stated that they had no health problems. Of the total sample, 78.80% have had no problems due to smoking, and only 21.30% have been affected. The data observed from the frequency analysis of psychosocial factors favoring tobacco consumption in young Mexicans between 15 and 25 years of age living in Mexico City, State of Mexico, Michoacán and Veracruz, indicate that the most representative factors in the total population consulted are: "out of curiosity" (36.30%), "because of social status" (18.80%), "because my friends smoke" (17.50%) and "because my relatives smoke (11.30%).

**Table 4. Significant frequency of categories of psychosocial factors of the different states**

PSYCHOSOCIAL FACTORS	CDMX	ESTADO DE MÉXICO	MICHOACÁN	VERACRUZ
Who among your family members smokes?	Father	Other Relatives	Other Relatives	Father and Mother
Who among your close friends smokes?	Half of the people in my close circle of friends smoke	Few people in my close circle of friends smoke	Half of the people in my close circle of friends smoke	Half of the people in my close circle of friends smoke
Do you smoke when you drink alcohol?	YES	YES	YES	YES
In what places do you usually smoke?	Bars or parties	Bars or parties	Bars or parties	Street
At what times do you usually smoke?	When I am in the company and go to parties	When I am anxious and go to parties	When I am alone and tired or stressed.	When I am alone and at parties
Do you think it is difficult to quit smoking once you start?	Yes, but it is possible to quit smoking.	Yes, but it is possible to quit smoking.	Yes, but it is possible to quit smoking.	It is not easy to quit.
What are the reasons you started smoking?	Out of curiosity and because my friends smoke	Out of curiosity and social status	Out of curiosity	Because of social status and because my relatives smoke
How many times have you tried to quit smoking?	None and once	None and 2 times	None and 2 times	Not at all
Do you want to quit smoking?	Yes	Yes	Yes, and I already quit.	Yes
What are your reasons for quitting smoking?	Because I want to set a good example for my family	Because I want to set a good example to my family and I want for improve my health.	Because I want to improve my health	Because I do not want to get sick
Have you had any health problems directly caused by smoking?	Yes	No	No	No

**Source:** own preparation.

From the above, the data processed by the State of the Mexican Republic infer differences in the order of prevalence of the factors, as shown in table 5. As can be seen, the responses oscillate among themselves as follows: "out of curiosity" [+ 40%], "because I felt stressed" [+30%], "because my friends smoke" [+30%], "because I felt anxious" [+5%], "because my relatives smoke" [30%], "because of social status" [+15%], "because I wanted to accompany it with alcohol" [+5%], "because I had problems" [+5%]. From the above, it can be concluded that the factors with +5% have coincidence because they are represented at very low-frequency levels, compared to the factors from +- 30% to +-40% that have high values.

Consequently, it can be defined that although at a general level, the psychosocial factors that participants report as most representative are ["out of curiosity" (36.3%), "because of social status" (18.80%), "because my friends smoke" (17.5%) and "because my relatives smoke" (11.3%)], these do not form a uniform pattern according to the behavior of the results at the state level.

**Table 5. Order of prevalence of factors**

ITEM	CIUDAD DE MÉXICO %	ESTADO DE MÉXICO %	MICHOACÁN %	VERACRUZ %
By Curiosity	35,80	30,00	60,00	20,00
Stressed	0,00	30,00	5,00	5,00
Friends Smoking	35,80	5,00	10,00	20,00
Anxiety	0,00	5,00	5,00	0,00
Family Members Smoke	15,00	0,00	0,00	30,00
Social Status	15,00	25,00	10,00	25,00
Alcohol Accompaniment	0,00	5,00	0,00	0,00
Problems	0,00	0,00	0,00	0,00

**Source:** own preparation.



The Chi-square test was included in table 6 in the previous frequency analysis. Given that the Chi-square test is based on the differences between the observed and expected frequencies between the variables and that if the significance associated with this statistic is less than or equal to 0.05, it can be inferred that the result of 0.005 distances the possibility of coincidence between the states. This result is consistent with what was stated in the paragraph before.

**Table 6. Chi-Square Test**

Chi-Square Test	Value	df	Asymptotic sig.
Pearson Chi-Square	41,59	21	0,005
Likelihood Ratio	44,727	21	0,002
Linear by Linear Assosiation	0,897	1	0,344
Number of valid cases	80		

**Source:** own preparation.

In another relationship, four of the psychosocial values that the participants evoked as the main factors that led them to start smoking (out of curiosity, because my relatives are smokers because my friends are smokers, and because of social status) can be associated with the response to contact with smokers. Thus, 62.50% of the population surveyed reported having at least half of the people in their close circle of friends as smokers, which can generate greater social pressure by being in an environment where most people consume cigarettes, as well as the family factor of which 100.00% of respondents reported having family members who consume cigarettes. These points can be associated with answers to why they started smoking. 67 of the 80 people surveyed [(84.00%) responded positively to one of the four reasons given (out of curiosity (29), because my relatives are smokers (9) because my friends smoke (14), and because of social status (15)].

Thus, taking up the research question "What is the main psychosocial factor that favors tobacco consumption among young Mexicans aged 15 to 25 years?" it can be said that "out of curiosity" is the most frequent response, with 36.30% of the study. This response also coincides with Mexico City, Mexico, and Michoacán. Veracruz's highest value is "because my friends smoke," and "out of curiosity" is the third.

According to the hypotheses, social pressure, academic, economic, and family levels are why young Mexicans between 15 and 25 begin smoking. Social pressure, academic, economic, and family levels are not the main reasons young Mexicans between 15 and 25 start smoking in the different entities. As inferred, the factors connected to personal and family pressure are those previously mentioned as present and determining factors in high-frequency percentages. In contrast, financial factors and school level are not involved.

Although there is a difference between the average age at smoking initiation and the last level of education, the average age of such participants refers to the possibility that in four years, the participants who currently have the lowest level of education could reach the highest level, thus altering the average age of initiation of such a group, thus eliminating the current bias (table 7).

**Table 7. Behavior of the schooling variable.**

LEVEL OF EDUCATION	NUMBER OF PEOPLE	%	AVERAGE AGE OF SMOKING INITIATION	CURRENT AVERAGE AGE
High school or equivalent	25	31,25	14,28	20,24
Graduate degree or equivalent	5	6,25	18,00	24,40
Secondary school	5	6,25	14,40	20,00

High school or equivalent	45	56,25	16,24	23,47
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**Source:** own preparation.

Thus, the average age of onset among people who report being in different economic positions is not a determining factor since the values show minimal and non-representative differences, as described in table 8. Thus, unlike economic and academic factors, the alternative hypothesis is partially testable regarding social and family factors. On the other hand, it is not possible to define that the research hypothesis is true because it is not possible to disqualify the four values.

**Table 8. Economic position**

ECONOMIC POSITION	NUMBER OF PEOPLE	%	AVERAGE AGE OF SMOKING INITIATION
Extreme Poverty	0	0,00	0,00
Low	18	22,50	15,06
Medium	56	70,00	15,95
High	6	7,50	14,33

**Source:** own preparation.

## Conclusions

As the results section mentions, our research question focuses on determining the main psychosocial factor influencing tobacco consumption in young Mexicans between 15 and 25. To conclude, some items were prepared within the questionnaire on factors that accompany smoking. These items were prepared for those reasons that various articles, studies, and sources pointed out as possibilities:

The American Cancer Society, in its bulletin (Why People Start Using Tobacco, and Why It is Difficult to Stop 2014), mentions that "some adolescents indicate that they "just wanted to try," or that smoking seemed "cool," "cool" or "super." The Smoking Protocols of the Spanish Association of Child and Adolescent Psychiatry indicate that social causes include: "consumption by parents and, more importantly, by siblings," "tobacco use by friends," "family permissiveness with tobacco". The psychological causes include: "low self-esteem," "image dissatisfaction," "low self-efficacy to refuse consumption," as well as "pro-smoking attitudes (it calms me down, it helps me lose weight, it helps me relate to people, others see me as the older, spurious relationship with concepts such as freedom or independence,...)" (healthychildren.org, 2023).

The National Institute of Public Health indicates that "it has been observed that social motives have a great weight in the initiation of smoking: eight out of ten smokers start smoking mainly because of curiosity and pressure from friends" (Tapia-Conyer, Kuri-Morales & Hoy-Gutiérrez 2001, p. 91-98). The American Academy of Pediatrics (AAP) states that factors that may influence tobacco use are: "use of tobacco products by friends or family," "lack of parental support or involvement," "easy access, availability and affordability of tobacco products," "poor academic performance," low self-esteem" and "exposure to tobacco advertising" (healthychildren.org, 2023).

The Mexican Youth Smoking Survey (2011, p. 49-53) indicates that "young people susceptible to initiating consumption are easy targets for the industry, which through its marketing strategies, encourages consumption, to replace smokers who die from tobacco consumption," thus confirming that social and environmental factors have a broad impact on

the initiation or maintenance of tobacco consumption. Therefore, and as a consequence of the responses obtained in the application of our instrument, it is inferred that "out of curiosity" is the most frequent response with 36.30% of the study, a response that also coincides in Mexico City, State of Mexico and Michoacán, while in Veracruz the highest value is "because my friends smoke" and "out of curiosity" is the third.

Regarding the entire population, without considering the subgroups by entity, the factors that follow "out of curiosity" (36.30%) are: "because of social status" (18.80%), "because my friends smoke" (17.50%), and "because my relatives do" with (11.30%), which point to the existence of psychosocial environmental elements that have an important relevance in the consumption of tobacco among young people. These data are consolidated in the understanding that 62.5% of the population surveyed reported having at least half of the people in their close circle of friends as smokers. In addition, 100.00% indicated having smoking family members.

On the other hand, the hypothesis presented needs to be more verifiable regarding social and family factors, unlike the academic and economic factors, which could not be reliably proven. In the academic category, we found that the persons who answered that their last level of studies was high school also reported having started smoking at an earlier average age (14.28 years); however, these persons are currently 20 years old regularly, so it is possible that in the next four years they could reach a higher level of studies and, with this, they would be altering the average age at which they started smoking of the persons who mentioned having this level of studies, which is currently 16.24 years old. Regarding economic status, the persons consulted reported being in a low (22.50%), medium (77.00%), and high (7.50%) economic position; however, the average ages of smoking initiation are almost identical, low (15.06), medium (15.95) and high (14.33).

On the other hand, it was determined that defining the research hypothesis as testable is impossible because it is impossible to disqualify the four values based on the above arguments. Future studies need to use relevant care when handling psychosocial variables since evaluating and interpreting psychosocial variables requires specific and statistical data. In this study, precedents were set for analyzing the factors influencing tobacco consumption in a group of people with a specific age range and from the 4 different states they come from. With that, an approach can be given to the smoker's behavior, and their main motivation to consume tobacco leads to future planning of preventive actions in education on the subject.

Following up on analyzing the different variables involved in smoking behavior is vital so that the interested authors can focus their preventive actions on discouraging participants' curiosity about tobacco consumption. As well as the reason why people are attracted to smoking, it would be of vital and complementary importance to identify in future studies the psychosocial factors or positive factors that result from the evaluation of the habits of people who do not smoke, as well as the causes and motivations they have or the variables that are determinants in the null consumption of tobacco to have a difference between the main cause of initiation of smoking, and the main cause reported by people who do not have the habit of smoking. The idea is to create tools to support and raise awareness of smoking initiation prevention.

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