MECHANISMS

TOWARD A TOBACCO-FREE GENERATION

The experience of the MECHANISMS study on
school-based tobacco prevention in Bogotá and Northern Ireland.

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Tobacco worldwide: an ongoing challenge

Global tobacco use has declined in recent decades. However, efforts made by countries and non-governmental organisations have not been enough to prevent millions of people from suffering the health, social and financial consequences of smoking.

The World Health Organisation considers smoking to be one of the greatest threats to public health.

It is the leading cause of preventable disease and death in the world. Every year more than 8 million people worldwide die from causes related to tobacco use [1].

Number of deaths related to tobacco use per 100,000 inhabitants (2019) [2]

208

164

54

31

Colombia   United Kingdom
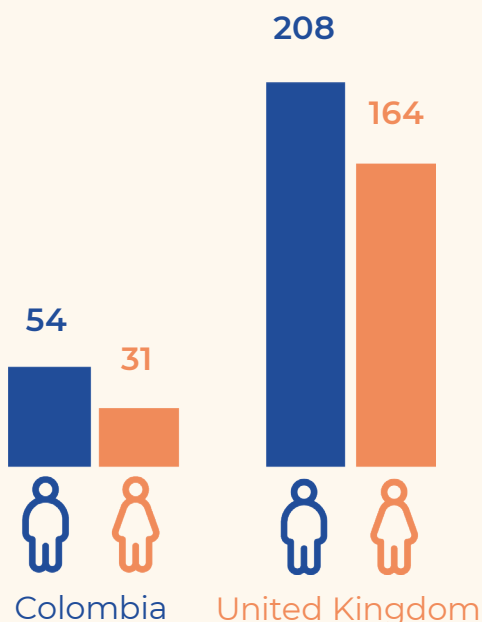
Note: The differences between Colombia and the United Kingdom can be partly explained by the different age distribution in both countries.

Of the 56.5 million people who died worldwide in 2019 [2]:

13.71%
Deaths were related to direct smoking

2.31%
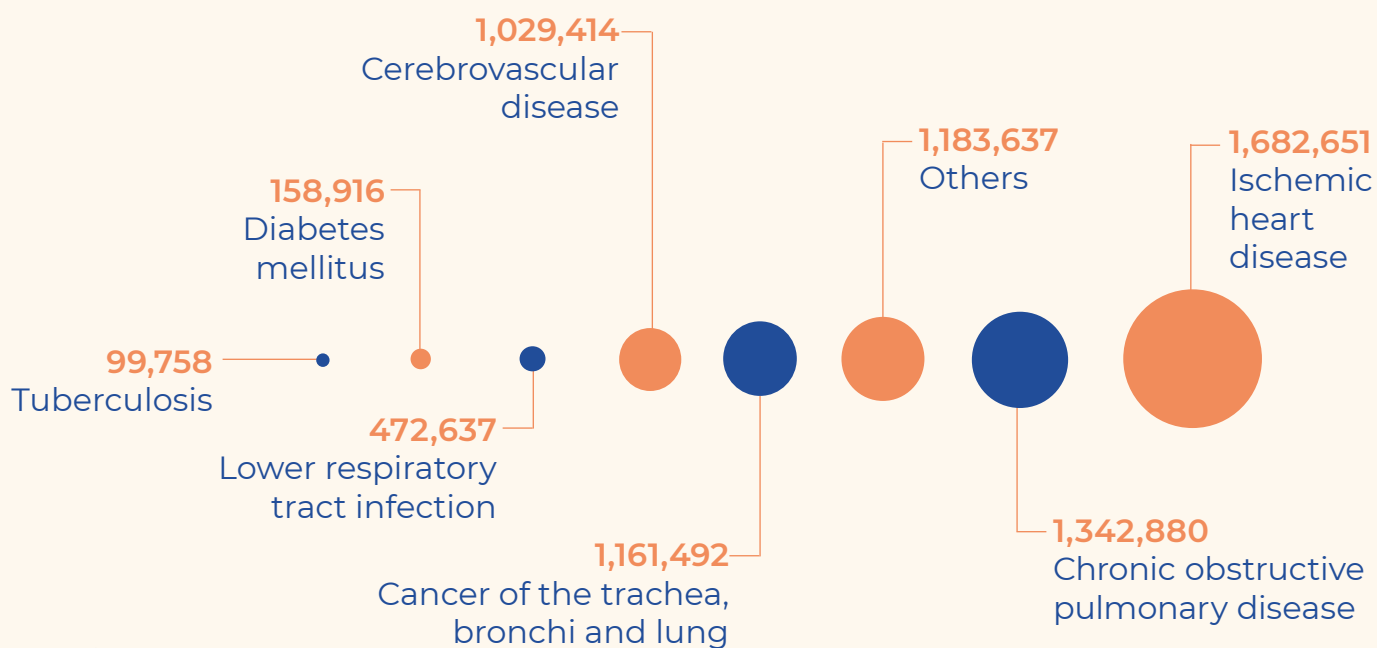Deaths were attributable to secondhand smoke

Tobacco affects health

Tobacco use [4] [5]:

• Causes heart disease, respiratory and mental illnesses.

• Is the leading cause of different types of cancer and cancer deaths.

• Aggravates the health risks for patients with HIV/AIDS.

• Can lead to abuse of alcohol, increasing its harmful effects.

Number of annual deaths from diseases caused by cigarette smoking worldwide [5]

99,758
Tuberculosis

158,916
Diabetes mellitus

472,637
Lower respiratory tract infection

1,029,414
Cerebrovascular disease

1,161,492
Cancer of the trachea, bronchi and lung

1,183,637
Others

1,342,880
Chronic obstructive pulmonary disease

1,682,651
Ischemic heart disease

Tobacco affects the economy

Tobacco use results in loss of productivity and human capital. The treatment of diseases caused by tobacco places significant additional costs on health systems.

This affects the sustainable development of nations because it limits public investment in other sectors such as education, health, technology or production [5] [1].

Annual financial cost of smoking [5]

2% GDP world

=

2 trillion dollars

Percentage cost of tobacco use to GDP

1.7 % United Kingdom (2017) [5]

1.8% Colombia (2016) [6]

Tobacco use generates more adverse effects on the health and living conditions of the lowest income groups in contrast to the highest. This is all the more worrying when one considers that the incidence of smoking is greater in people with lower levels of education and income [1].

80% of 1.3 billion tobacco users live in low - or middle-income countries [1].

20%

80%

■ High or very high - income country consumers

■ Low - or middle - income country consumers
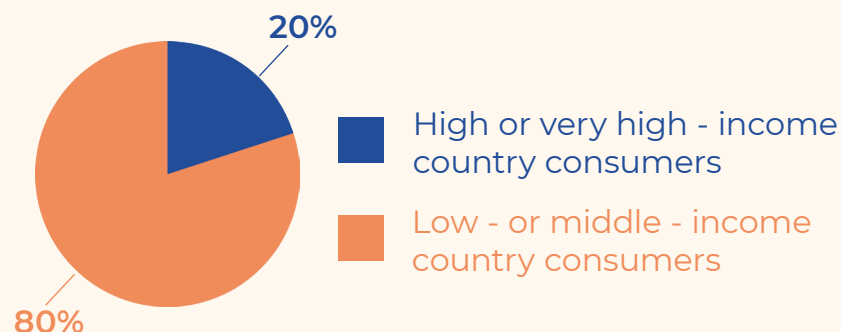
What about children and teenagers?

One of the key target groups of industry advertising is teenagers and young people, since they are considered the "replacement population" of smokers who die prematurely [7].

Most people who use tobacco started in their teens. This implies a high probability of dependence on nicotine for a longer time and a greater difficulty in stopping using it. Teenagers are more likely to become regular customers of tobacco products [3] [5].

Around **90%** of habitual smokers tried smoking before the age of 19 [8].

Average age of initial tobacco use in teenagers
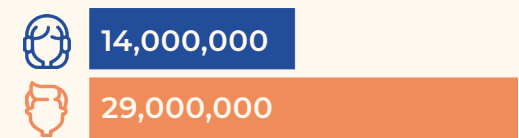
Colombia
(12-18 years) [10]
13 years

United Kingdom
(11-15 years) [9]
14 years

Teenagers are more susceptible to tobacco use because [3] [7]:

• They tend to exhibit risky behaviour and worry less about their long-term health.

• It is easier for them to become addicted to nicotine compared to adults, even if they only smoke occasionally.

• They are more susceptible to situational influences, or to influences from friends, family, or the media.

Teenage tobacco use

In 2019, there were 43 million boys and girls worldwide aged 13-15 years who were tobacco users. Of these, **67.4%** were boys and **32.6%** girls [11].

14,000,000
29,000,000

	Prevalence in Colombia (2016) [10]		Prevalence in the UK (2019) [12]	
	13-15	13-15	11-16	11-16
Traditional tobacco	9.2%	8.6%	5%	8%
Electronic Nicotine Delivery Systems (ENDS)	9.0%	8.8%	7%	5%

Note: In this case, the prevalence corresponds to the proportion of boys and girls who currently use cigarettes.

Effects on young people's health and well-being due to smoking or exposure to smoking 6 7 13 14 15

Secondhand smoke exposure is a risk factor for asthma in children and teenagers.

Areas of the brain responsible for cognitive and emotional functions can be compromised by nicotine use.

Exposure to nicotine in these areas influences continued tobacco use into adulthood.

Nicotine affects adolescent brain development and has effects on the reward system.

Active tobacco use during adolescence and youth increases the risk of developing COPD, arteriosclerosis, stroke, and other cardiovascular diseases.

Lung growth and function are limited in teenagers who actively smoke. Early commencement increases the risk of developing lung cancer.

Exposure to tobacco smoke can affect children's school performance, impacting their ability to follow instructions and, when smokers start younger, the likelihood of reducing their cognitive ability increases.

Strategies for tobacco control

Smoking is the only current epidemic relying on effective and widely proven measures which governments already have within their reach and to which they have made commitments.

Tobacco control requires a substantial political commitment from countries in order to develop effective programs with social impact [3].

"Reductions in global tobacco use demonstrate that when governments introduce and strengthen comprehensive evidence-based actions, they can protect the well-being of their citizens and communities" [11]

Dr. Ruediger Krech, WHO Director of Health Promotion

An effective way to reduce tobacco use, exposure to second-hand smoke and social and health consequences is through tobacco control and smoking prevention [13]

Increase political commitment and create country obligations

↓

Implement more effective policies

↓

Establish actions to mitigate the environmental and economic impact in all links of the tobacco chain

Build protective environments that prevent tobacco use and adopt smoking cessation programs

↓

Decrease other social impacts

Decrease use

↓

Gain in well-being

At a global level, multisectoral strategies have been developed to control tobacco consumption, and therefore counteract its social, health, and economic effects.

In 2005, the WHO Framework Convention on Tobacco Control (FCTC) was adopted, an international treaty to which countries and public policy makers commit in order to implement proven measures to reduce tobacco consumption [3].

If diverse strategies and actions from the Framework Convention's proposed measures are implemented, millions of lives will be saved by preventing the consequences of tobacco use [3].

Between 2007 and 2017, global tobacco use fell from 22.5% to 19.2%, thanks to the implementation of the FCTC [12].

Within the FCTC's obligations are six essential measures to curb the tobacco epidemic:

M Monitor tobacco use and prevention policies

P Protect people from tobacco smoke

O Offer help to quit tobacco use

W Warn about the dangers of tobacco

E Enforce bans on tobacco advertising, promotion and sponsorship

**R** Raise taxes on tobacco

Confronting tobacco use

M

Monitor tobacco use and prevention policies

Monitoring is fundamental to understand and evaluate the impact of strategies used to control tobacco.

Monitoring makes it possible to effectively confront the tobacco epidemic, introduce appropriate measures, evaluate the impact of implemented policies, and adjust strategies as the epidemic changes.

Improved monitoring increases the success of tobacco control strategies.

Colombia
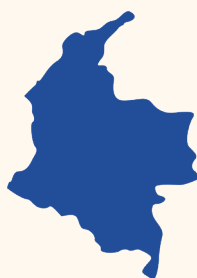
Takes into account recent and representative sources of information about tobacco use in young people and adults.

Surveys of young people are not regular [12].

United Kingdom

Takes into account recent, representative and regular sources of information on the use of tobacco in young people and adults [12].

P

Protect people from tobacco smoke

Secondhand smoke kills and smoke-free areas save lives. Measures must be adopted and applied to provide protection against exposure to tobacco smoke in schools, workplaces, public transport and public areas [12].

1 in 2 children worldwide regularly breathe air contaminated with tobacco smoke in public spaces [1].

Year that laws establishing smoke-free areas were introduced [5].

2007 —— United Kingdom
2009 —— Colombia

In Colombia, there are smoke-free environments in closed and open public spaces, but compliance levels are intermediate [6]:

• **32%** of teenagers between the ages of 13-15 report being exposed to tobacco smoke in public spaces.

• In addition, **15%** of young people are exposed to tobacco smoke in the home.

100% smoke-free environments [14] :

Guarantee the right to breathe clean air

Protect non-smokers from secondhand smoke

Help people to reduce tobacco consumption or permanently quit

Prevent people from starting to smoke, including children and teenagers

Offer help to quit tobacco use

Many consumers want to quit tobacco, but need help. Offering support to stop reduces the prevalence of tobacco use [12].

Having smoking cessation programs can double the chances of successfully stopping smoking. Countries must institute at least three cessation interventions [12]:

Support to stop smoking in primary care facilities.

Free national stop smoking helpline.

Affordable nicotine replacement therapy.

Although Colombia does not have free helplines, nor does it cover nicotine replacement therapy, in 2016 the national smoking cessation program was launched. In 2020, guidelines were published that define the responsibilities of insurers and service providers in implementing cessation interventions [16].

In Colombia, among young people who attend school and smoke, **22.7%** want to quit smoking and **36.7%** have tried to quit in the last 12 months [10].

Achieving the highest standard of cessation guidelines will result in approximately 1.5 millon fewer deaths worldwide from tobacco use by 2030 [12].

W

Warn about the dangers of tobacco

Consumers have the right to receive truthful, sufficient and accurate information about the health impact of products they buy and use [3].

Plain packaging means [17]:

- Reducing the attractiveness of packaging.

- Increasing the effectiveness of health warnings.

- Conveying accurate information about the dangers of tobacco use.

- Motivating smokers to quit.

- Preventing more people, especially children and adolescents, from starting to smoke.

Plain packaging increases the effectiveness of the warnings but in Colombia there is no law to establish it [6].

Features of warning labels on tobacco packaging [5]

Criterion	Colombia	United Kingdom
Label Type	Graphic	Graphic
% of Packaging Covered	30%	65%
Neutral Packaging	No	Yes

Colombian smokers and non-smokers feel that current warnings are not large enough to adequately deter people from smoking. A requirement to cover at least **70%** of the packaging would increase the impact of warnings on the harms of smoking [6] [18].

Investing in plain packaging and increasing the size of health warnings would generate savings in social costs for Colombia of up to 396 billion and 587 billion pesos by 2030, respectively [6].

In Colombia, 4 out of 10 students between the ages of 13 and 15 reported not having received any kind of teaching about the effects of tobacco on health and other related issues in school [10].

E

Enforce bans on tobacco advertising, promotion and sponsorship

The FCTC recognises that a total ban on tobacco advertising, promotion and sponsorship is an effective measure to reduce tobacco use [3].

This applies to both direct advertising methods (media, social networks, internet, among others) and indirect advertising methods (exchange and spread of the brand, free distribution, among others).
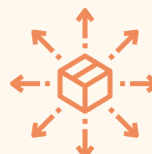
In Colombia there are national awareness campaigns regarding the harm caused by tobacco. However, their dissemination is modest and their effectiveness unevaluated. Likewise, there is a wide-ranging ban on tobacco advertising, promotion and sponsorship, but also concern about frequent violations of this regulation [6].

The current emphasis is on the importance of enforcing the ban on advertising and display at retail outlets [1] [3].

somos **Más** sin tabaco

Cada vez somos más los que decidimos no fumar

Colombian Ministry of Health and Social Protection Campaign (2012)

R

Raise taxes on tobacco

Tax increases reduce the affordability of tobacco products. This sets limits on their purchase by teenagers and low-income populations [3].

Increasing consumer tax alone is the most cost-effective measure to reduce smoking. Tripling tobacco tax, to achieve a **50%** increase in the price of cigarettes, results in fewer teenagers starting to smoke. **By reducing the number of smokers, 2 billion Colombian pesos a year in treatment costs are saved, as well as 6.6 times more years of life in the lowest income quintile with respect to the highest [19].**

Middle-income countries like Colombia must adopt large and frequent increases in tobacco taxes to achieve consumption reduction goals [20].

For every Colombian peso invested in tripling the tax on cigarettes, the return on investment is COL$ 607 billion by 2030, reflecting the costs saved by avoiding lost productivity and treatment costs [6].

Progress index of the tobacco tax policy (incorporating four measures necessary for optimal tax, ranked on a scale of 1 to 5) [21]

4.38 — 2.38 — 2.07
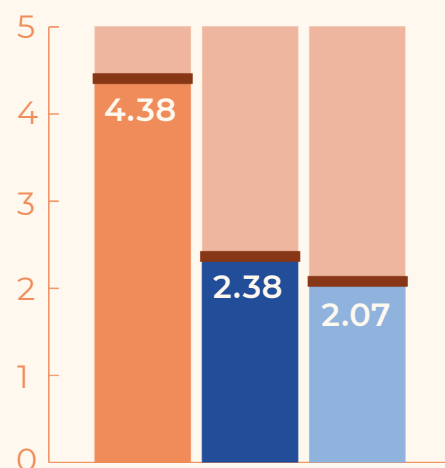
■ United Kingdom

■ Colombia

■ Average 170 countries

Generating evidence to prevent tobacco use

Raising public awareness about the health dangers of tobacco influences decisions about smoking. The WHO proposes that educational campaigns against tobacco use and counter-advertising should aim to change social norms [3].

In high-income countries, there is an increase in public awareness of the harm caused by cigarette smoking, and a decrease in smoking rates [22].

In contrast, low - and middle - income countries pose a great challenge to the prevention of tobacco use as they tend to be vulnerable to tobacco industry strategies. Local evidence is limited, and rates of use remain very high [7] [22] [23].

It is now recognised that appropriately targeted prevention programs implemented in schools can have an impact on controlling teenage tobacco use. Despite the limited evidence available in low- and middle -income countries, the implementation of these programs is promising [24].

School-based interventions [22] [24]:

Have an impact on the prevention of regular tobacco use among experimenters or non-smokers and on reducing overall rates of consumption.

Tend to improve or increase knowledge, attitudes, and beliefs about the effects of tobacco use.

Allow the development or strengthening of skills for life.

In many countries, schools must include tobacco prevention programs, strategies or activities in their curriculum. However various reviews suggest that school-based teenage smoking prevention programs lose their effectiveness if they only focus on increasing the level of knowledge about the dangers of smoking and the effects on people who smoke [25] [26].

The Pan American Health Organisation suggests that these programs would have a greater impact if they were also concerned with the effects of tobacco smoke on non-smokers and with the development of critical thinking about issues such as the science of addiction, tobacco company advertising strategies, and the social costs of smoking [26].

Complementary measures for teenage smoking prevention programs:

Promotion of smoke-free areas.

Restrictions on advertising and promotion on digital media.

Increase in cigarette taxes and prices.
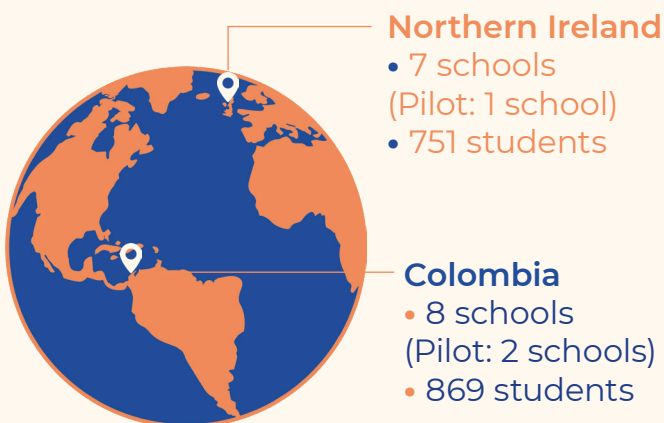
Regulation of new consumption

Context-adjusted prevention

MECHANISMS [a] is a bid for the prevention of tobacco consumption in teenagers [27].

The MECHANISMS study describes the mechanisms of two tobacco prevention programs in schools in Bogotá and Northern Ireland, and identifies the role of peer influence and social norms on smoking.

The two interventions included in the study, *ASSIST* and *Dead Cool*, were found to be effective in preventing students from starting to smoke [27].

ASSIST and *Dead Cool* [b] were culturally adapted to the context of the target population in Bogotá, with their needs and expectations considered during the process. This allowed meaningful experiences to be created for participants [28].

Northern Ireland
- 7 schools (Pilot: 1 school)
- 751 students

Colombia
- 8 schools (Pilot: 2 schools)
- 869 students

ASSIST and *Dead Cool* were developed and tested in the United Kingdom [25] [29]. Carrying out interventions in a new setting requires their cultural adaptation with the aim of incorporating core elements, strategies, and activities into a different context.

The adaptation process in Bogotá included the participation of different stakeholders, the original designers of the interventions, and members of the local community.

[a] In Bogotá the study was named Des-ahógate.

[b] *Entre Parceros* is the cultural adaptation of *ASSIST* and *Bacanísmo* is the cultural adaptation of *Dead Cool*.

ASSIST [25]	Dead Cool [29]
• Focused on preventing use through social networks and spreading social norms against smoking. • Prevention led by supportive peers (students recognised as influential). • Training aimed at a group of supportive peers who communicated prevention messages about anti-smoking social norms.	• Based on the Theory of Planned Behaviour (training in personal skills and abilities). • Prevention led by teachers or trainers in the classroom. • Guided training to identify and manage the influences of friends, family and the media.

ASSIST and Dead Cool incorporated knowledge about attitudes, beliefs and effects of tobacco consumption; but they also promoted the development and strengthening of useful life skills in different settings and contexts.

ASSIST Topics

Effects on health

Reasons to smoke or not to smoke

Myths and truths about smoking

Communication skills

Dead Cool Topics

Advertising strategies

Right to smoke-free areas

Strategies for saying **no**

Influences

18

To smoke or not to smoke? That is the question ...

The intention to smoke refers to consciously deciding to want to smoke or not in the future [30].

The intention to smoke in teenagers is determined by factors such as the social influence of their peer group or their environment (family, school, neighbourhood) or by the social norms associated with tobacco use [31] [32].

Before the interventions, students from Northern Ireland and Bogotá reported their intention to smoke [33]

Northern Ireland	Bogotá
31% of students had some intention to smoke	**43%** of students had some intention to smoke
85% of students reported never having smoked	**80%** of students reported never having smoked

At the beginning of the study, most of the students had never smoked.

The reasons teenagers decide to start smoking can differ between high-income and upper-middle-income countries.

Therefore, to be effective, interventions and policies for tobacco control must respond to the particular needs of each context.

Factors relating to each teenager's personality, their attitude towards tobacco use, and reports that their school provides enough information about smoking, do not determine intentions to start smoking in Bogotá, but they do in Northern Ireland.

On the other hand, there may be common circumstances that increase conscious decisions to smoke in the future, such as exposure to cigarette advertising in shops [33].

For example, John's intention to start smoking decreases if [33]:

Living in Northern Ireland	Living in Bogotá
• He reports less tobacco use in his family environment. • He has a negative stance towards tobacco use. • He is satisfied with his life. • He thinks he receives enough information about tobacco products at school.	• He reports less tobacco use among his friends. • He thinks he can resist the curiosity to smoke a cigarette. • He thinks it would be very difficult for him to quit smoking • He does not skip school.

Prevention changes intention

Previous studies have found that interventions are effective in preventing tobacco use and in decreasing the intention to smoke.

ASSIST	*Dead Cool*
• The implementation of this program in the United Kingdom achieved a sustained reduction in regular tobacco use by teenagers for two years after the intervention [25]. • Informal spaces were used for the exchange of information, conversations between students, and peer influence outside of the classroom. This approach has also been proved effective in promoting health behaviours other than those associated with smoking.	• In the UK, this program was shown to have positive short-term effects in preventing teenagers from starting to smoke. • The prevention of tobacco use can be influenced through cooperative learning and socialisation with peers, impacting both cognitive factors (Why would I smoke or not?), and affective factors (How do I feel about my health or advertising manipulation?) [29].

"In the project they taught us the dangers of cigarettes, and for me there was a change because before I had the mindset that as soon as I turned 18 I would be smoking my first cigarette and after knowing that cigarettes have consequences, well, I don't want to do it any more."
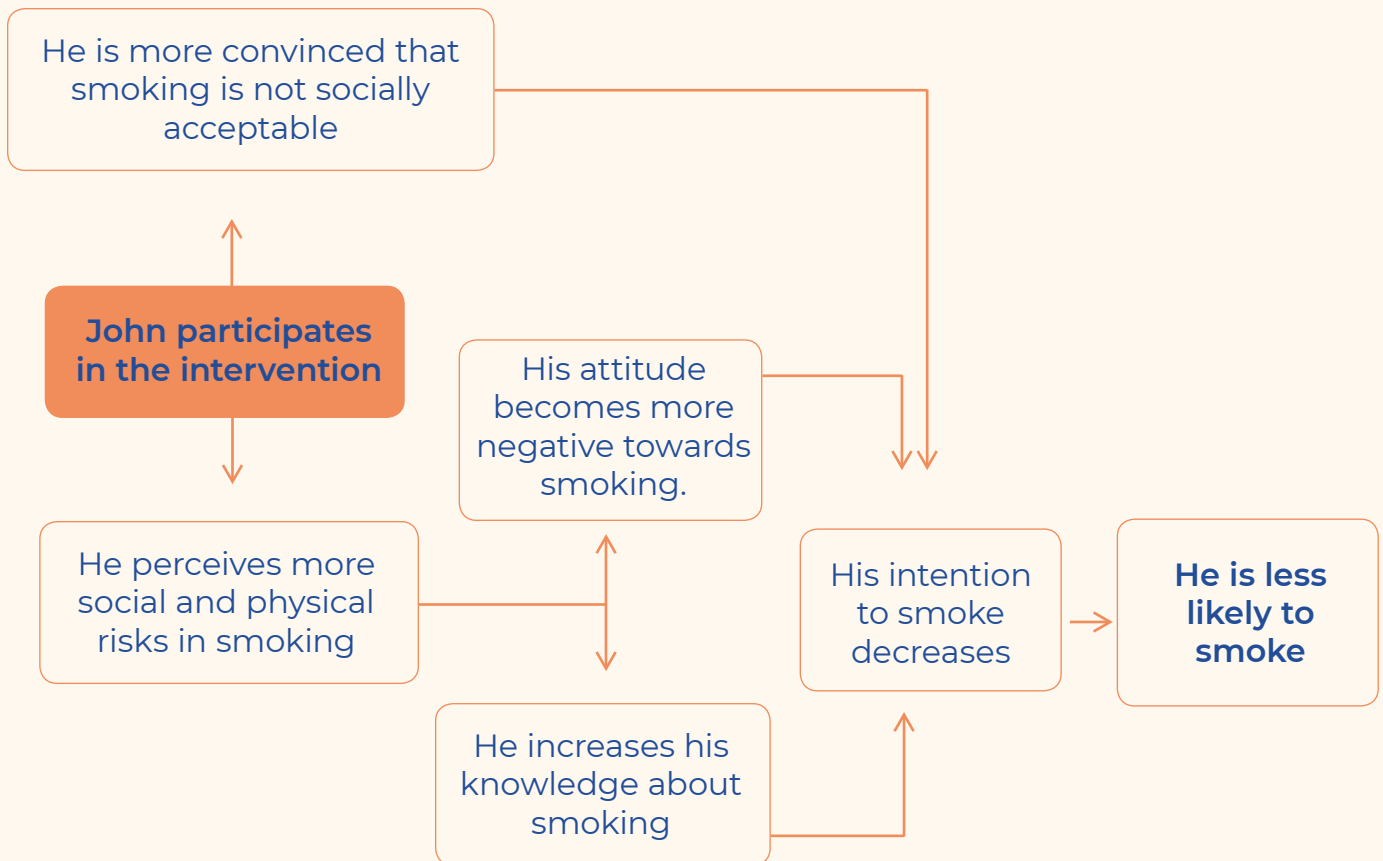
Student participant in Bogotá

After the implementation of both interventions in Bogotá and Northern Ireland, the students:

• Increased their knowledge of tobacco by **4%**.

• Increased their belief in the physical risks of tobacco use by **3.1%**.

• Increased their belief in the risk of tobacco addiction by **2.9%**.

Dead Cool had more positive anti-smoking results than *ASSIST*, in relation to beliefs that influence smoking intentions and tobacco use [34].

He is more convinced that smoking is not socially acceptable

John participates in the intervention

His attitude becomes more negative towards smoking.

He perceives more social and physical risks in smoking

His intention to smoke decreases

He is less likely to smoke

He increases his knowledge about smoking

"I always knew I wasn't going to smoke and I don't want to smoke because I know what it can do to me. [*Dead Cool*] just confirmed with facts how really bad it is, and that I'm doing the right thing by not smoking."

Student participant in Northern Ireland

Social influence: The company we keep ...

Tobacco use is a socially contagious behaviour, that is to say, the greater the number of friends and acquaintances who smoke, the greater the probability of smoking [35]. Teenagers are more susceptible to being influenced by tobacco use, and the beliefs and attitudes of their peers and their families [31].

MECHANISMS studied whether beliefs and behaviours related to tobacco use were influenced by classmates or friends from school [36] [37].

"Mmm well I did it because I saw that all my friends were doing it. Like everyone does it and I can't get left behind"

"If there are 11 of us and there are two who don't do it and the other nine are smoking, the other two just think 'we better try it, if everyone is doing it' "

Student participant in Northern Ireland

Student participant in Bogotá

The influence of close friends is more important than that of distant classmates

For example, in a school students connect with each other through friendships. **This is a depiction of friendships at John's school.** He has a close group of friends that surround him in daily life and with whom he shares various activities.

But he is also part of class and school groups. The study found that John's tobacco use and his beliefs were also shared by his classmates and schoolmates, especially his closest friends. Therefore, John's closest friends influence [37]:

- Whether he smokes or has smoked before

- Whether he intends to smoke in the future

- How much he knows about the consequences of tobacco

- His position for or against tobacco

- His beliefs about whether smoking is socially acceptable

- His beliefs about how many people smoke

John's school
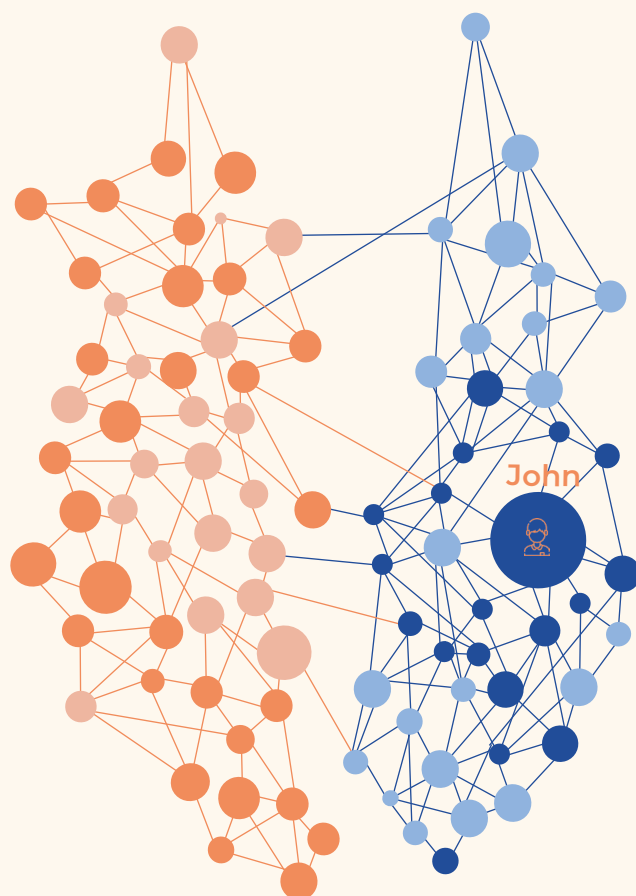
John

The influential effect of friends or classmates was stronger in *ASSIST* than in *Dead Cool* due to the conversations of peer supporters [37].

Social influence in tobacco use operates in two ways

Does John want to smoke because he thinks his classmates smoke?

Behaviour may be driven by personal judgments about the popularity of doing something, in other words, "I smoke because others do it." So people simply do what others do and what is considered normal [31].

At the beginning of the study, **25%** of students believed that few or none of their peers smoked.

Does John want to smoke because he thinks his classmates want him to smoke?

Behaviour may be driven by social approval motives, in other words, "If I smoke, my peers will like me more." So the intention to smoke arises through the influence of others [31].

At the beginning of the study, **62%** of students believed that it is extremely or very inappropriate for a classmate from a higher grade to smoke outside of school.

In MECHANISMS, social influence was evaluated through social norms, that is, what students believe about their classmates do or think of tobacco use [36].

Before and after the interventions, students were placed in three categories according to their social norms regarding tobacco use.

Most students have social norms against tobacco use.

Students believe that the people around them ...	ASSIST		Dead Cool	
	Before	After	Before	After
Do not smoke and do not approve of smoking	88%	90%	93%	92%
Smoke, but do not approve of smoking	8%	7%	4%	4%
Approve of smoking	4%	3%	3%	4%

**Older students tend to be in the group of students who have social norms in favor of tobacco use [36].**

After the interventions, students who remain in the category against smoking have friends who remain in the same category, that is, students are influenced to maintain their social norms against smoking.

Both interventions generate changes in social norms, *ASSIST* shows a greater transition towards anti-smoking social norms.

Prevention also spreads among friends [36]

Although John did not directly take part in *ASSIST*, after the intervention he went from having social norms in favor of smoking to having social norms against smoking.

Students who had this positive change against smoking are those who have more friends who also had positive changes in their social norms against smoking.

John
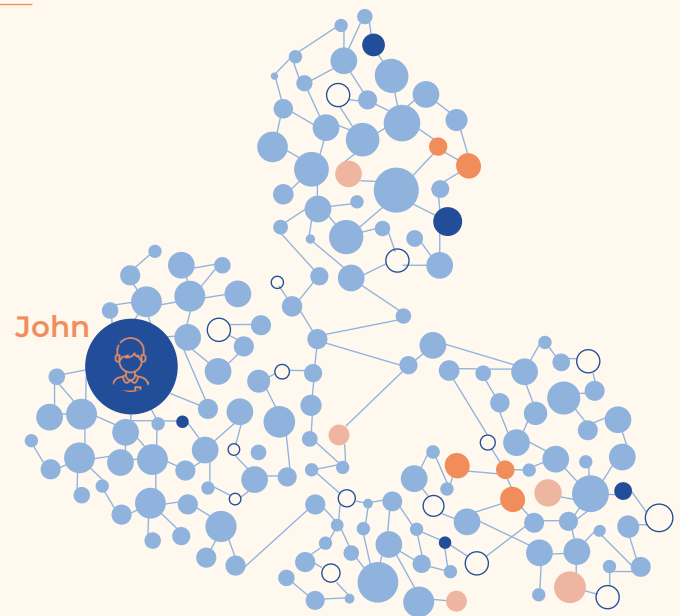
"I was at my house with a friend [...] I asked her if she had ever smoked and she said yes and then I began to say everything about cigarettes and she listened to me and told me that, well, she was going to change."

Student participant in Bogotá

- ● Maintains anti-smoking social norms
- ● Changes to anti-smoking social norms
- ● Maintains pro-smoking social norms
- ● Changes to pro-smoking social norms
- ○ No data

Contextual influences Following the crowd ...

An intervention works differently according to the context [38]. In the MECHANISMS study we found differences and similarities between Northern Ireland and Bogotá [39]. In focus groups, students mentioned contextual factors related to tobacco use.

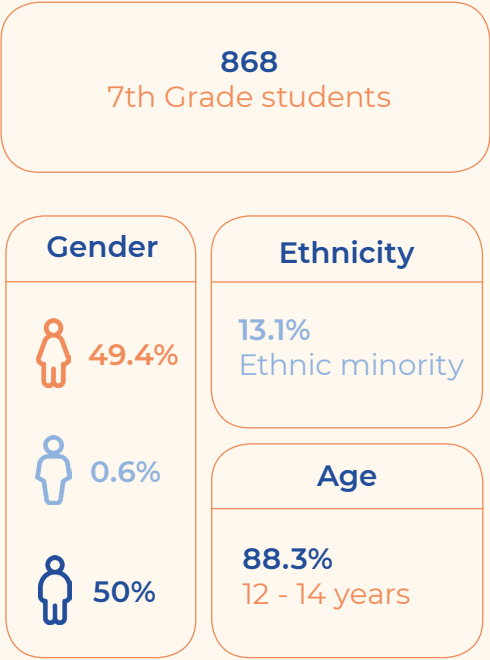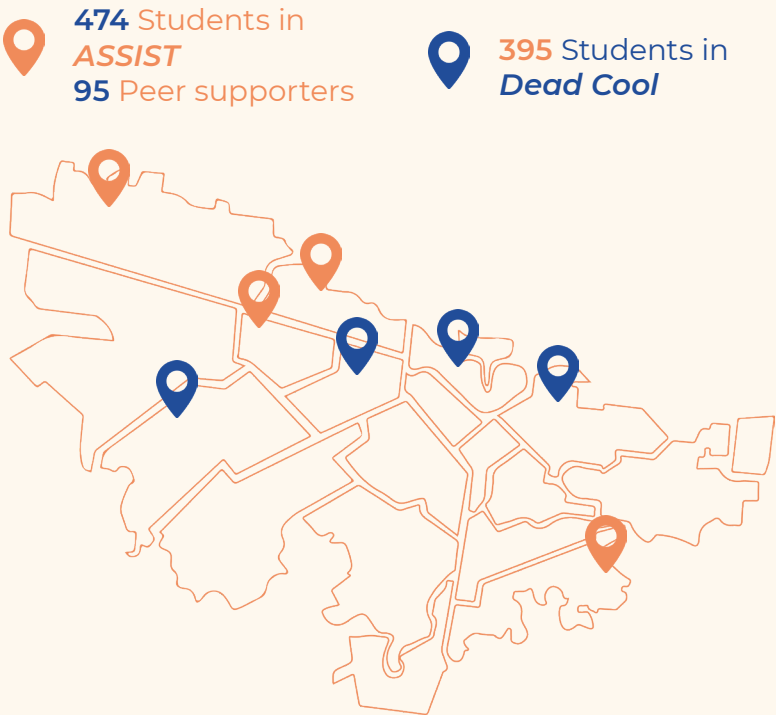| Northern Ireland	Bogotá
• Previously informed about tobacco use at school • Families who smoke • Access to purchase of vaporisers through social networks	• Families who smoke • Access to buy loose cigarettes in the neighbourhood • Drug use and availability in the neighbourhood

Contextual factors, such as the availability of tobacco products, increase the probability that adolescents will start smoking or vaping [40].

In addition, contextual risks make the prevention of tobacco use more urgent, since previous studies have found nicotine to be the gateway to other drug use [41].
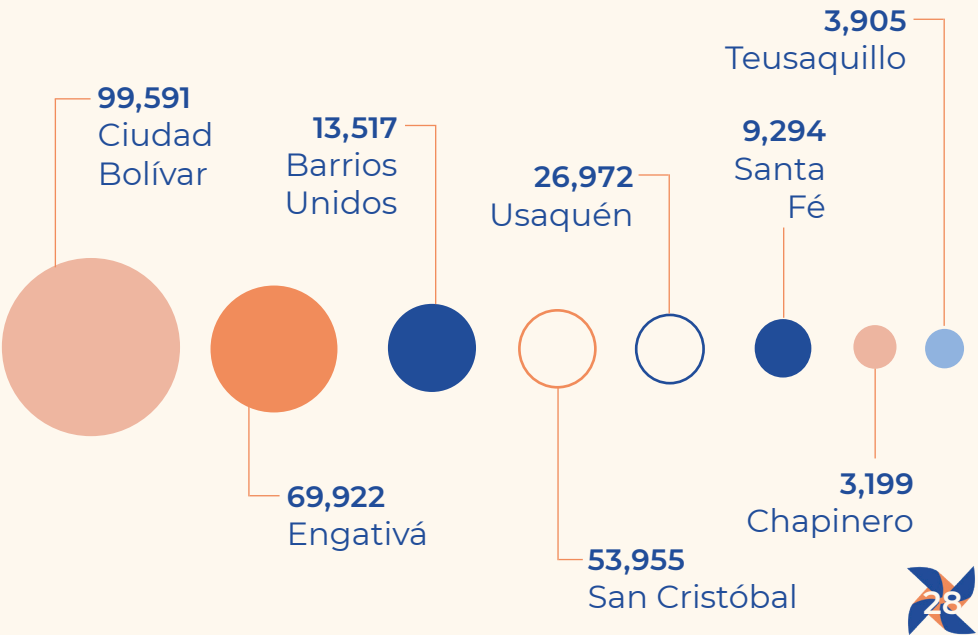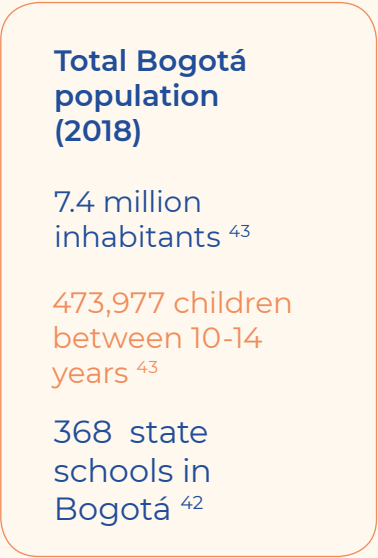
Implementation and evaluation of prevention programs should include context as a key element, since the resources provided by both interventions interact differently with the resources available in context [39].

Bogotá:
A diverse context

8 state schools from different locations in Bogotá city participated in MECHANISMS.

474 Students in *ASSIST*
95 Peer supporters

395 Students in *Dead Cool*

868
7th Grade students

Gender		Ethnicity
👩 **49.4%**		**13.1%** Ethnic minority
🧒 **0.6%**		**Age**
🧑 **50%**		**88.3%** 12 - 14 years

Number of state school students from the localities of participating state schools in Bogotá 2018 [42]

Total Bogotá population (2018)

7.4 million inhabitants [43]

473,977 children between 10-14 years [43]

368 state schools in Bogotá [42]

99,591
Ciudad Bolívar

13,517
Barrios Unidos

26,972
Usaquén

9,294
Santa Fé

3,905
Teusaquillo

69,922
Engativá

53,955
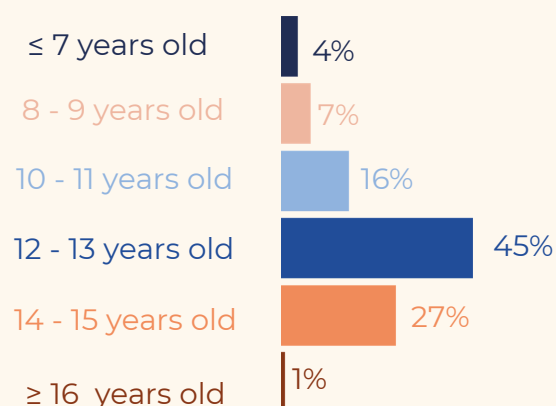San Cristóbal

3,199
Chapinero

Generally, in countries with a lower Human Development Index (HDI) there is often an alarming increase in tobacco use by teenagers and young people; countries with a high HDI show considerable reductions [5].

According to the National Youth Smoking Survey [10]:

• **22%** of teenagers between 11 and 17 years old had smoked at some point in their life.

• **25%** of teenagers in Bogotá city had tried cigarettes at least once or tried to smoke.

• **23%** of teenagers in Bogotá city had smoked or tried to smoke electronic cigarettes.

Age when cigarettes were tried for the first time in Bogotá [10]

≤ 7 years old	4%
8 - 9 years old	7%
10 - 11 years old	16%
12 - 13 years old	45%
14 - 15 years old	27%
≥ 16 years old	1%

The variation in tobacco use within a country depends, among other things, on the capabilities of cities to implement and enforce public policies for tobacco control.

In Latin America, several countries have joined forces to monitor the implementation of these public policies at national level. However monitoring implementation and compliance of measures in all cities is an important challenge [23].

Public Policies Compliance Monitoring

+

Monitoring of tobacco use in adolescents

=

Decision making for the formulation of public policies

Families, neighbourhoods and schools: windows of opportunity for prevention

According to the research, other areas that require intervention to prevent tobacco use by children and teenagers are: **families, neighbourhoods and schools.**

"Children and teenagers who are exposed to secondhand smoke can get sick or have serious complications in our health."

Student participant in Bogotá

Bogotá	Colombia	
45.6%	29%	Public Spaces
11.3%	20.8%	Home
8.9%	7.8%	School
10.1%	15.9%	Friend's House
8.3%	7.6%	Social Events
1.7%	1.6%	Work
14%	17.3%	Other

HOME

In **14.8%** of households, people smoke indoors **(124 out of 836).**

"Well, my dad smokes when he's stressed, so I saw it there, it kind of made me want to try, but no."

Student participant in Bogotá

"Well, my aunt had it there (e-cigarette) and she told me that she was going to stop smoking the cigarette and left it charging [...] well they left me alone at home with the e-cigarette, and well I had my doubts because when she blew the smoke, it smelled like mint."

Student participant in Bogotá

In households where at least one tobacco product is used, **44.1%** report that someone smokes daily inside the house.

SCHOOL

No school shows features that promote tobacco use.

4 out of 8 schools comply with smoke-free signs

In **8 schools** there was no presence of smokers.

In **8 schools** there were no items present from tobacco use (cigarette butts, packs, etc.).

1 out of 8 schools have posters with information about the risks of tobacco use.

NEIGHBOURHOOD

83.1% of retail outlets around schools sell loose cigarettes **(64 out of 77).**

Only **29.9%** of the outlets are smoke-free areas **(23 out of 77)**

> "I am always very surrounded by smokers because near my house or whenever I go home from school, I see a lot of people who are smoking."

Student participant in Bogotá

Tobacco products are available in shops, supermarkets and from street vendors. In **53% (41 of 77)** of the outlets around school, tobacco products are on public display. In **47% (36 of 77)** there are items promoting consumption and only **7.8% (6 of 77)** of the premises have signs prohibiting sale to minors.

> "One day I was in the park with my sister and my cousin; and my cousin had gone to [...] the games, so I went to look for her [...] and a man was talking to her, so I went and got her, and the man told me to come, that he had cigarettes and I told him no, and during the whole trip I basically watched him offering them to me, trying to influence my sister and my cousin."

Student participant in Bogotá

The Pan American Health Organisation questions the effectiveness of laws limited to prohibiting young people's access to cigarettes. Although they make it difficult for children and teenagers to obtain cigarettes, it does not have a direct impact on reducing use, as they can look for other alternatives or means to obtain them [26].

> "Leaders, our families and our environment must ensure we have smoke-free areas, we want a protective environment"

Student participant in Bogotá

Implement smoke-free environments

Protect non-smokers

Support to stop smoking
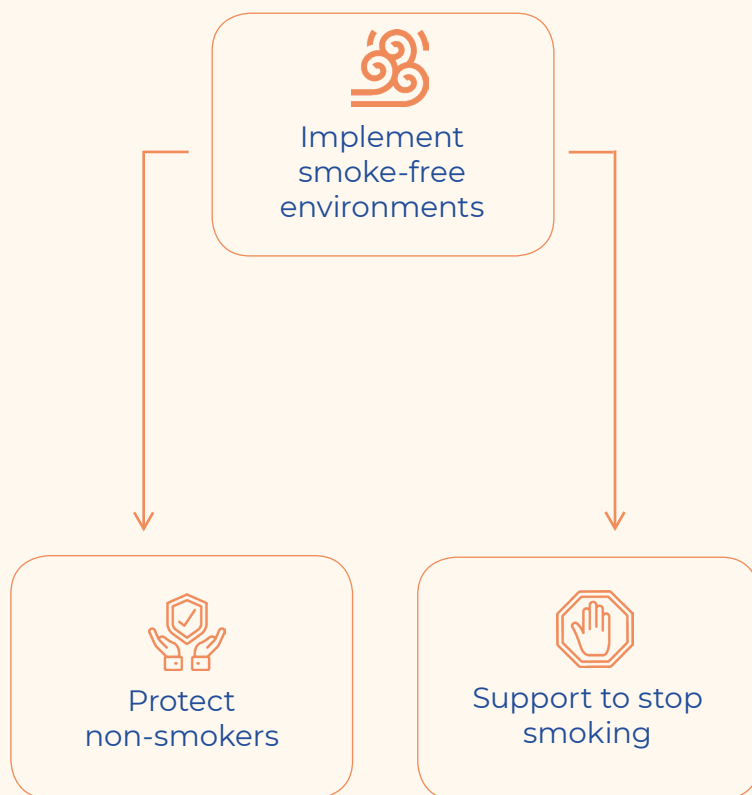
The Media

According to the World Health Organisation, the tobacco industry is increasingly turning to new advertising, promotion, and sponsorship strategies.

As most laws prohibit broadcasting through traditional means (TV, radio, print media, etc.), the industry is turning to new media and trends that are outside the regulations [3].

In recent years there has been a boom in the promotion and sponsorship of tobacco products through the internet, apps and social networks.

"If I go on social media, there will likely be someone on my timeline probably smoking. On Instagram or Twitter. They promote different brands and everything. Not just cigarettes."

Student participant in Northern Ireland

In the National Youth Tobacco Survey (2018), **28.4%** of teenagers in Bogotá had seen tobacco advertisements or promotional videos when searching the internet [10].

The research found that:

90% (780 of 863) of students believe that it does not look good for a superhero to smoke in a movie.

"There are people on YouTube who blow smoke rings with e-cigarettes. Then people, children more than anything, try to do it to feel cool"

Student participant in Bogotá

What did we learn?

- Evidence-based prevention provides optimal strategies for reducing tobacco use and its devastating social and economic consequences. School interventions must be adapted to the context and particular needs of each population.

- Interventions to prevent teenage tobacco use should:

  - Eliminate exposure to pro-tobacco messages.

  - Provide adequate education on the side effects of tobacco use.

  - Develop the ability to reject tobacco products in teenagers.

- The *Dead Cool* and *ASSIST* interventions can help prevent tobacco use in teenagers insofar as they make an impact on what facilitates the behaviours (beliefs, attitudes, and knowledge) that decrease the intention to smoke and use tobacco. In addition, they allow social influence to be used in a positive way by spreading prevention messages among friends.

- Interventions complement the development of skills in students' lives, such as their communication skills and learning to say "NO" in different settings. Moreover, students become multipliers of the message, impacting other people in school and their families.

- The importance of social influence in the prevention and promotion of health behaviours has been recognised. The role of social influence on teenagers particularly stands out as an opportunity to prevent tobacco use, as well as enhance other health promotion strategies.

• Interventions in schools are necessary, but not enough. In order to prevent tobacco use in teenagers, it is essential to establish these programs with cross-sectional measures at multiple levels of society to create a fully protective environment for children and teenagers.

• To create protective environments it is essential to direct efforts into fully complying with the Framework Convention for Tobacco Control and, above all, with the measures that directly influence the decisions of children and teenagers in all cities:

1. Monitor tobacco use and prevention policies.

2. Raise taxes.

3. Protect the population from tobacco smoke.

4. Offer help to quit smoking.

5. Warn of the dangers of tobacco.

6. Enforce bans on advertising, promotion, and sponsorship.

7. Political will and cross-sectional organisation are needed to adopt and enforce policies.

• All day-to-day settings for children and teenagers must be protective. **To advance the implementation of tobacco control policies, constant monitoring at home, in the neighbourhood and at school is necessary.** For example, the ban on sales is established but evidence indicates that in spaces such as the neighbourhood or around school, teenagers can buy and smoke loose cigarettes.

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