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Mapping Colombians' positions on national policies to control tobacco and marijuana consumption: a pilot study

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Abstract

Background Public authorities use a variety of control policies, with varying degrees of severity, to reduce the prevalence of health-damaging habits. Since these policies can only succeed if people understand and approve of them, this study mapped Colombians' positions on policies to control tobacco and marijuana consumption.

Method A sample of 147 adults was presented with 32 vignettes illustrating a control policy. Each vignette contained four items of information: the behavior targeted (smoking tobacco or using marijuana), the nature of preventive measures (e.g., information campaigns), the degree of regulatory measures (e.g., prohibition of use by minors) and the severity of penalties (e.g., imprisonment).

Results Through cluster analysis, three qualitatively different positions were found in relation to control policies for each substance: *Generally unfavorable, irrespective of policy* (22% and 17%), *Depends on regulation* (18% and 22%), and *Always favorable, irrespective of policy* (23% and 25%). A substantial minority of participants (37% and 36%) expressed no opinion at all.

Conclusion While qualitatively different positions on the acceptability of national policies to control tobacco and marijuana consumption were indeed observed among Colombian participants, the most frequent response seemed to be indifference (or indeterminacy), with other positions reflecting little more than systematic opposition or blind acquiescence. It would therefore be useful to make citizens aware that their opinions count, that their relative indifference to these issues is in itself a problem, and that it is by taking their perspectives into account that one can truly define and make effective public health policies that are understood and accepted by as many people as possible.

Keywords Tobacco, Marijuana, Control, National policies, Personal positions, Colombia

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Background

As in most countries, tobacco consumption is a common recreational activity in Colombia. It is estimated that among adults aged 18 to 65, between 8% and 9% smoke tobacco regularly [1]. Among teenagers, the rate may be even higher [2]. While marijuana cultivation for personal use—another popular recreational activity—was decriminalized in 2015, its trade remains illegal [3]. It is estimated that between 1% and 3% of adults use marijuana regularly [4]. A 2016 study involving a large sample of students aged 12 to 17 revealed that 16% had consumed an illegal substance at least once in their lives, with marijuana being among the most commonly used [5]. Notably, tobacco and cannabis are typically consumed separately. While reliable statistics for Colombia are unavailable, data from a culturally similar country, Mexico, indicate that the prevalence of mixing tobacco and cannabis remains below 10% [6]. These recreational activities may be enjoyable in their own right, but they come at a high cost. For instance, individuals who smoke tobacco regularly have a life expectancy that is at least ten years shorter than those who do not smoke [7]. Meanwhile, individuals who use marijuana may face increased health risks, as well as a heightened risk of domestic and traffic accidents. In other words, they may endanger the lives of others [8, 9].

Controlling the consumption of substances that are bad for people's health is a tricky balancing exercise [10]. If consumption of these substances is banned, and there is no substitute for them, then a black market is created and the consumption, trade and production take place in a covert way, with all the consequences in terms of criminality that this entails. The cure can therefore be worse than the disease. On the other hand, if the consumption of such a substance is authorized, the consequences for public health could be considered the responsibility of the government. Any accident or death linked to the consumption of the substance might, at least partially, be attributed to governmental oversight. Regulating the consumption of substances harmful to health can therefore resemble a dilemma, as demonstrated in a study conducted in France [11].

One of the consequences of the above is that, depending on the aspect of the situation that they favor (e.g., civil liberties *versus* public health), citizens' positions on control policies can vary considerably. For example, in a study carried out in France on the acceptability of national policies to control alcohol consumption, tobacco use and gambling, Castanié et al. [12] demonstrated the existence of at least eight qualitatively different positions, i.e. positions that could not easily be ordered along a single prohibition-permissivity axis. The different policies examined by these authors varied according to the comprehensiveness of preventive measures (e.g.,

information campaigns), the strength of regulatory measures (e.g., bans on minors) and the severity of sanctions. With regard to tobacco, the policy found most likely to be supported by a majority of people involved moderate levels of regulation in combination with at least a moderate level of prevention and a low level of sanctions. For alcohol, on the other hand, policies involving a high level of sanctions were clearly preferred.

The present study

The present study, conducted in Colombia, builds on the work of Castanié et al. [12]. However, while Castanié et al. [12] focused on alcohol, gambling, and tobacco, the present study focuses on tobacco and marijuana. In Colombia, recreational cannabis use is illegal and, in principle, prosecuted as a criminal offense. However, simple consumption is often not penalized [13]. Additionally, the sale of tobacco to minors is prohibited, and smoking in enclosed public spaces is restricted [13]. The few studies carried out in Colombia on drug control policies have shown the same diversity of opinion as found in France. López López et al. [14] inventoried Colombians' perspectives on current and potential drug policies. Different situations were described in terms of the demand for drugs in a specific country, the existence of information campaigns regarding the dangerousness of drugs in that country, and the national policy regarding soft (e.g., cannabis) and hard (e.g., heroin) drugs (from a *laissez faire* policy to a complete ban on all drugs). Participants rated the acceptability of each situation. Half of the participants considered all situations to be unacceptable; that is, no single policy seemed right to them, 19% felt that the only fully acceptable policy was total prohibition (although some members of this group were prepared to allow over-the-counter sale of soft drugs), 14% favored two policies—total prohibition and total regulation of all substances by the government, 8% believed that the drug market should be free, and 5% were in favor of total regulation of all substances. In most cases, the presence of information campaigns was highly appreciated. A subsequent study by Del Rio Forero et al. [15] showed that this diversity of positions was also observed with regard to appropriate sentences for drug trafficking, depending on the age of the trafficker and the type and quantity of illicit substances found on him/her.

At least three qualitatively different positions were, therefore, expected in the present study. The first would express rejection of any control of the consumption of either substance. Presumably, this position would more likely be found in the case of tobacco than marijuana. The second would be the opposite position: preference for the toughest policies, involving a high level of regulation and severe penalties. Presumably, this position would more likely be found in the control of marijuana consumption

than in the control of tobacco consumption. The third would be an intermediate position, emphasizing information campaigns and involving moderate levels of regulation and sanctions.

Method

Participants

The participants in the study represent a convenience sample of 147 adults (72% women) aged 18 to 67 ($M=34.31$, $SD=14.86$), and residing in three cities in Colombia: Bogotá, Cartagena and Bucaramanga. Their demographic characteristics are shown in Table 1. Some of the participants ($N=90$) were approached in different neighborhoods of these cities. They were asked to participate in the survey while walking along the main pedestrian sidewalks, usually in areas near public facilities, shopping malls, school zones and churches. The participation rate was 67%. The primary reason given for not participating in the study was a lack of time. The remaining participants ($N=57$) completed the survey online via

the SurveyMonkey platform due to the health emergency declared by the Colombian government in response to COVID-19.

Despite differences in recruitment methods and minor demographic variations, no significant differences were found between the responses of participants who completed the survey in person and those who completed it online. This suggests that the data collection method (in-person or online) did not substantially affect participants' responses.

Material

The material consisted of 36 vignettes describing national control policies. As in Castanié et al. [12], each vignette presented four pieces of information (a) the type of substance considered in the policy (tobacco or marijuana), (b) the level of prevention implemented by the government (no information campaigns, campaigns targeting at-risk populations, or massive campaigns aimed at the whole population), (c) the level of regulation planned

Table 1 Demographic characteristics of the sample. Composition of the clusters

Variable	Tobacco				Marijuana				Total
	Never	Depends	Always	Undet.	Never	Depends	Always	Undet.	
Gender									
Male	10(24)	9(22)	7(17)	15(37)	6(15)	10(24)	11(27)	14(34)	41
Female	22(21)	18(17)	27(25)	39(37)	19(18)	22(21)	26(24)	39(37)	106
Age									
18–21 Years	15(31) ^a	7(14)	9(18)	18(37)	13(27) ^a	8(16)	8(16) ^a	20(41)	49
22–30 Years	13(28) ^b	11(24)	8(17)	14(31)	10(22) ^b	12(26)	11(24)	13(28)	46
31 + Years	4(8) ^{ab}	9(17)	17(33)	22(42)	2(4) ^{ab}	12(23)	18(35) ^a	20(38)	52
Young Children									
No	28(26)	19(17)	21(19)	42(38)	20(18)	25(23)	23(21)	42(38)	110
Yes	4(11)	8(22)	13(35)	12(32)	5(13)	7(19)	14(38)	11(30)	37
Province									
Bogota	23(24)	17(17)	20(21)	37(38)	21(22) ^a	19(19)	21(22)	36(37)	97
Cartagena	4(21)	4(21)	3(16)	8(42)	2(11)	5(26)	3(16)	9(47)	19
Bucaramanga	5(16)	6(19)	11(36)	9(29)	2(6) ^a	8(26)	13(42)	8(36)	31
Social Strata									
Lower	11(24)	4(9) ^a	14(30)	17(37)	11(24)	4(9) ^{ab}	15(32)	16(35)	46
Middle	12(21)	12(21)	14(24)	20(34)	9(16)	14(24) ^a	14(24)	21(36)	58
Higher	9(21)	11(26) ^a	6(14)	17(39)	5(12)	14(32) ^b	8(19)	16(37)	43
Attendance at Religious services									
Never	6(22)	4(15)	4(15)	13(48)	6(22)	6(22)	4(15)	11(41)	27
Sometimes	20(27)	13(17)	15(20)	27(36)	13(17)	19(25)	17(23)	26(35)	75
Frequently	6(13)	10(22)	15(34)	14(31)	6(13)	7(15)	16(36)	16(36)	45
Tobacco Consumption									
Never	18(20) ^a	17(19)	24(26)	32(35)	14(16)	21(23)	23(25)	33(36)	91
In the Past	5(14)	7(20)	8(23)	15(43)	5(14)	6(17)	11(32)	13(37)	35
Currently	9(43) ^a	3(14)	2(10)	7(33)	6(29)	5(24)	3(14)	7(33)	21
Marijuana Consumption									
Never	23(20)	18(16) ^a	30(27)	41(37)	19(17) ^a	21(19)	31(28)	41(36)	112
In the Past	7(24)	6(21)	4(14)	12(41)	3(10)	10(35)	5(17)	11(38)	29
Currently	2(33)	3(50) ^b	0(0)	1(17)	3(50) ^a	1(17)	1(16)	1(17)	6
Total	32	27	34	54	25	32	37	53	147

by the government (e.g., prohibition of consumption in public places, high cost of the substance, age limits), and (d) the level of sanctions imposed on transgressors (e.g., financial penalties only). The vignettes were obtained by orthogonally crossing these four factors: Type of substance \times Prevention \times Regulation \times Sanction, $2 \times 3 \times 3 \times 2$ (see Table 2).

An example scenario (translated from Spanish) was as follows: “The Republic of Cilicia is a democratic state committed to the fight against smoking. The state completely prohibits smoking in public places, including restaurants, bars and nightclubs. It does not even allow ventilated smoking rooms in these places. It sets high prices for the purchase of cigarettes (30 thousand pesos

per pack). Their sale is prohibited to minors under 21 years of age. The state regularly launches information campaigns regarding at-risk populations (e.g., adolescents). In case of non-compliance with these regulations, the state considers various types of sanctions ranging from imprisonment to financial penalties. If this policy were applied in Colombia, to what extent would you approve of it?” The response scale ranged from “Would Not Approve At All” (0) to “Would Approve Completely” (10).

It should be noted that the set of 36 vignettes contained the three policies currently in force in Colombia: information campaigns, moderate regulation, and minor sanctions for tobacco or marijuana consumption.

Table 2 Mean ratings (and standard deviation) observed in each condition

Substance	Information Campaigns	Regulation	Sanction	M	SD
Tobacco	No	Strong	Not Severe	5.79	3.40
Tobacco	No	Strong	Severe	5.82	3.36
Tobacco	No	Moderate	Not Severe	5.53	3.30
Tobacco	No	Moderate	Severe	5.84	3.29
Tobacco	No	Weak	Not Severe	4.60	3.44
Tobacco	No	Weak	Severe	4.94	3.56
Tobacco	Targeted	Strong	Not Severe	6.59	3.05
Tobacco	Targeted	Strong	Severe	6.64	3.10
Tobacco	Targeted	Moderate	Not Severe	6.48	2.94
Tobacco	Targeted	Moderate	Severe	6.68	2.96
Tobacco	Targeted	Weak	Not Severe	5.38	3.30
Tobacco	Targeted	Weak	Severe	5.46	3.37
Tobacco	Massive	Strong	Not Severe	7.09	2.93
Tobacco	Massive	Strong	Severe	7.03	2.96
Tobacco	Massive	Moderate	Not Severe	6.54	2.94
Tobacco	Massive	Moderate	Severe	6.92	2.93
Tobacco	Massive	Weak	Not Severe	5.61	3.37
Tobacco	Massive	Weak	Severe	5.72	3.42
Marijuana	No	Strong	Not Severe	6.13	3.38
Marijuana	No	Strong	Severe	5.72	3.46
Marijuana	No	Moderate	Not Severe	5.12	3.51
Marijuana	No	Moderate	Severe	4.99	3.58
Marijuana	No	Weak	Not Severe	4.45	3.74
Marijuana	No	Weak	Severe	4.67	3.83
Marijuana	Targeted	Strong	Not Severe	6.41	3.12
Marijuana	Targeted	Strong	Severe	6.63	3.07
Marijuana	Targeted	Moderate	Not Severe	5.86	3.33
Marijuana	Targeted	Moderate	Severe	5.96	3.32
Marijuana	Targeted	Weak	Not Severe	4.81	3.71
Marijuana	Targeted	Weak	Severe	5.01	3.72
Marijuana	Massive	Strong	Not Severe	6.71	3.16
Marijuana	Massive	Strong	Severe	6.86	3.12
Marijuana	Massive	Moderate	Not Severe	5.88	3.24
Marijuana	Massive	Moderate	Severe	6.16	3.27
Marijuana	Massive	Weak	Not Severe	4.82	3.59
Marijuana	Massive	Weak	Severe	4.97	3.61

Procedure

Data gathering was carried out in 2020 and 2021. The procedure followed Anderson's [16] guidelines for this type of study. For participants surveyed individually, the survey was conducted in a quiet room. After an initial meeting on the street, it was agreed to meet the participant at home at a later date. For other participants who were surveyed online, a link to the SurveyMonkey platform was sent after they had agreed to participate voluntarily and virtually signed an informed consent form. They were accompanied remotely through a familiarization phase, and then completed all the scenarios at their own pace. In both situations, participants needed between 20 and 25 min to respond. No participant commented on the number of statements or expressed doubts about the plausibility of the situations presented.

A demographic questionnaire was completed at the end of each session. Some respondents spontaneously expressed their opinions on the subject; these were recorded. The study complied with the ethical recommendations of the Colombian Psychological Society. Total anonymity was preserved and informed consent was obtained from all participants. The study was approved by the Board of Trustees of Konrad Lorenz University.

Results

The overall mean ratings and their standard deviations are shown in Table 2. In order to detect qualitatively different patterns of ratings— that is, qualitatively different participant positions— a cluster analysis, using the K-means procedure [17] was first applied on the acceptability ratings in the tobacco control condition. Several solutions were tested: a two-cluster one, a three-cluster one, a four-cluster one, and a five-cluster one. Figure 1 shows the decrease in the average distance from the centroid as a function of the number of clusters considered. The four-cluster solution seemed optimal. It partitioned the sample into four groups of 54, 34, 32 and 27

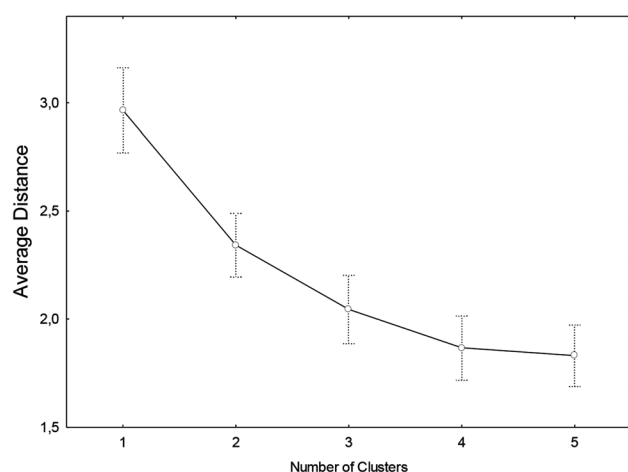


Fig. 1 Decrease in the average distance from the centroid as a function of the number of clusters considered

participants. In the five-cluster solution, the additional cluster was a small cluster of nine participants. The same procedure was then applied to the acceptability ratings in the marijuana control condition. The four-cluster solution was again the one that seemed optimal. It partitioned the sample into four groups of 53, 37, 32 and 25 participants. Two ANOVAs were subsequently conducted with a design of Cluster \times Information \times Regulation \times Sanction, $4 \times 3 \times 3 \times 2$, one on the ratings observed in the tobacco vignettes and the other on the ratings observed in the marijuana vignettes. Owing to the great number of comparisons, the alpha threshold was set at 0.001 ($0.05/30 = 0.0016$). The main results are shown in Table 3.

In the tobacco control condition, the first cluster (22% of the sample) was the expected cluster of participants expressing unfavorable views. As can be observed in Fig. 2 (left hand panel), most ratings were quite low ($M = 2.84$, $SE = 0.70$). Ratings were, however, slightly higher in the case of massive information campaigns ($M = 3.76$, $SE = 0.95$) than when there was a complete absence of information ($M = 1.95$, $SE = 0.60$), $\eta^2_p = .26$. This cluster was called *Generally unfavorable, irrespective of policy*. As can be observed in Table 1, participants aged 18–30 years and those who smoke tobacco expressed this position more often than older participants or those who are not current tobacco consumers.

The second cluster (18% of the sample) was called *Depends on regulation* because, as can be observed in Fig. 2 (second panel), ratings were considerably higher when regulation was very strong ($M = 7.88$, $SE = 0.68$) than when it was at its weakest level ($M = 2.02$, $SE = 0.71$), $\eta^2_p = .78$. Participants with higher socioeconomic status and those who use marijuana expressed this position more often than participants with lower socioeconomic status or those who were not current users.

The third cluster (23% of the sample) was called *Always favorable, irrespective of policy*. As can be observed in Fig. 2 (third panel), ratings were systematically high ($M = 9.38$, $SE = 0.38$). No effect was detected.

The fourth cluster (37% of the sample) was called *Undetermined* because, as can be observed in Fig. 2 (right-hand panel), ratings did not deviate much from the center of the response scale ($M = 6.22$, $SE = 0.37$). Ratings were, as in the first cluster, slightly higher in the case of massive information campaigns ($M = 6.80$, $SE = 0.43$)

Table 3 Main results of the two overall ANOVAs

Data	Factor	df	MS	F	p	η^2_p
Tobacco Vignettes	Cluster	3	4 345.10	288.76	0.001	0.86
	Information	2	213.29	20.57	0.001	0.13
	Regulation	2	590.22	80.34	0.001	0.36
	Sanction	1	8.26	2.51	0.12	0.02
	Cluster \times Information	6	38.96	3.76	0.001	0.07
	Cluster \times Regulation	6	365.89	49.81	0.001	0.51
	Cluster \times Sanction	3	10.70	3.25	0.02	0.06
	Information \times Regulation	4	6.48	2.02	0.09	0.01
	Cluster \times Information \times Regulation	12	9.50	2.97	0.001	0.06
	Cluster	3	4 372.75	102.26	0.001	0.68
Marijuana Vignettes	Information	2	128.71	15.76	0.001	0.10
	Regulation	2	737.80	45.16	0.001	0.24
	Sanction	1	1.04	0.25	0.62	0.00
	Cluster \times Information	6	16.14	1.98	0.07	0.04
	Cluster \times Regulation	6	196.81	12.05	0.001	0.20
	Cluster \times Sanction	3	7.28	1.76	0.16	0.04
	Information \times Regulation	4	10.51	4.65	0.001	0.03
	Cluster \times Information \times Regulation	12	2.20	0.97	0.47	0.02

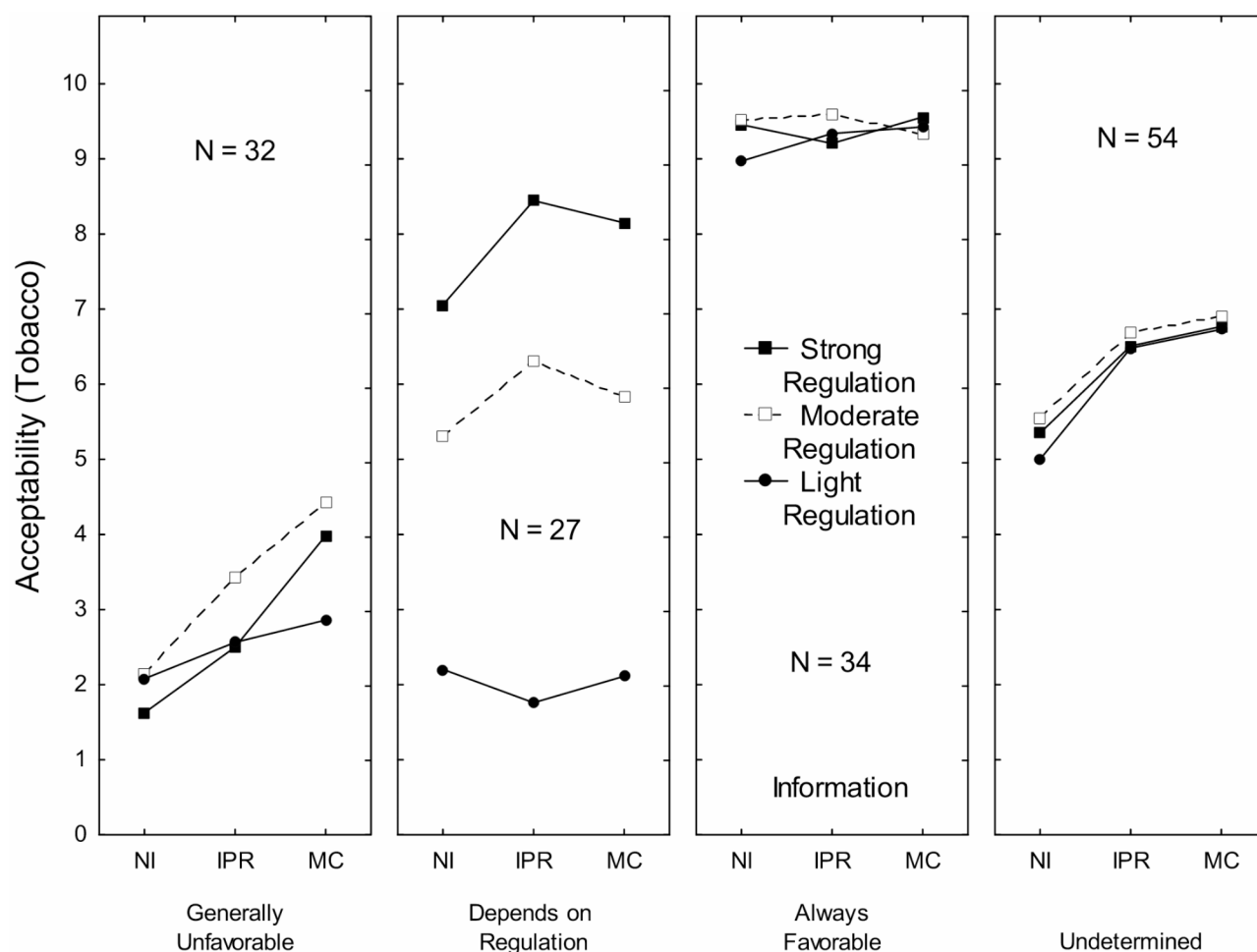


Fig. 2 Acceptability judgments are on the vertical axis. The three levels of the Information factor are on the horizontal axis (NI=No information campaigns, IPR=Information campaigns targeted at people at risk, MC=Massive information campaigns). The three curves correspond to the three levels of the Regulation factor. Each panel corresponds to one position

than when there was a complete absence of information ($M=5.30$, $SE=0.63$), $\eta^2_p=.23$.

In the marijuana control condition, the first cluster (17% of the sample) was, as with tobacco, the expected *Generally unfavorable* cluster. As can be observed in Fig. 3 (left hand panel), ratings were, in effect, quite low ($M=2.24$, $SE=0.70$). As illustrated in Table 1, participants who were younger (18–30 years), lived in Bogota, and used marijuana expressed this position more often than participants who were older, lived in Bucaramanga, or were not current marijuana users.

The second cluster (22% of the sample) was called *Depends on regulation* (as with the tobacco control condition) because, as can be observed in Fig. 3 (second panel), ratings were considerably higher when regulation was very strong ($M=7.20$, $SE=0.77$) than when it was at its weakest level ($M=0.68$, $SE=0.33$), $\eta^2_p=.81$. In addition, the effect of the regulation factor was stronger in the case of massive information campaigns ($8.11-0.70=7.41$) than in the case of absence of information ($6.14-0.69=5.45$),

$\eta^2_p=.13$. Participants with higher or intermediate socioeconomic status expressed this position more often than participants with lower status.

The third cluster (25% of the sample) was again an *Always favorable* cluster. As can be observed in Fig. 3 (third panel), ratings were systematically high ($M=9.42$, $SE=0.36$). No effect was detected. Participants who were older expressed this position more often than participants who were younger.

The fourth cluster (36% of the sample) was the *Undetermined* cluster. Ratings did not deviate much from the center of the response scale ($M=5.79$, $SE=0.47$). However, ratings were slightly higher in the case of massive information campaigns ($M=6.18$, $SE=0.42$) than in the case of a complete absence of information ($M=5.12$, $SE=0.59$), $\eta^2_p=.14$.

Table 4 shows the comparison between the two sets of clusters (tobacco and marijuana). In 68% of cases, the participants who expressed a determined position for one of the substances expressed the same position for

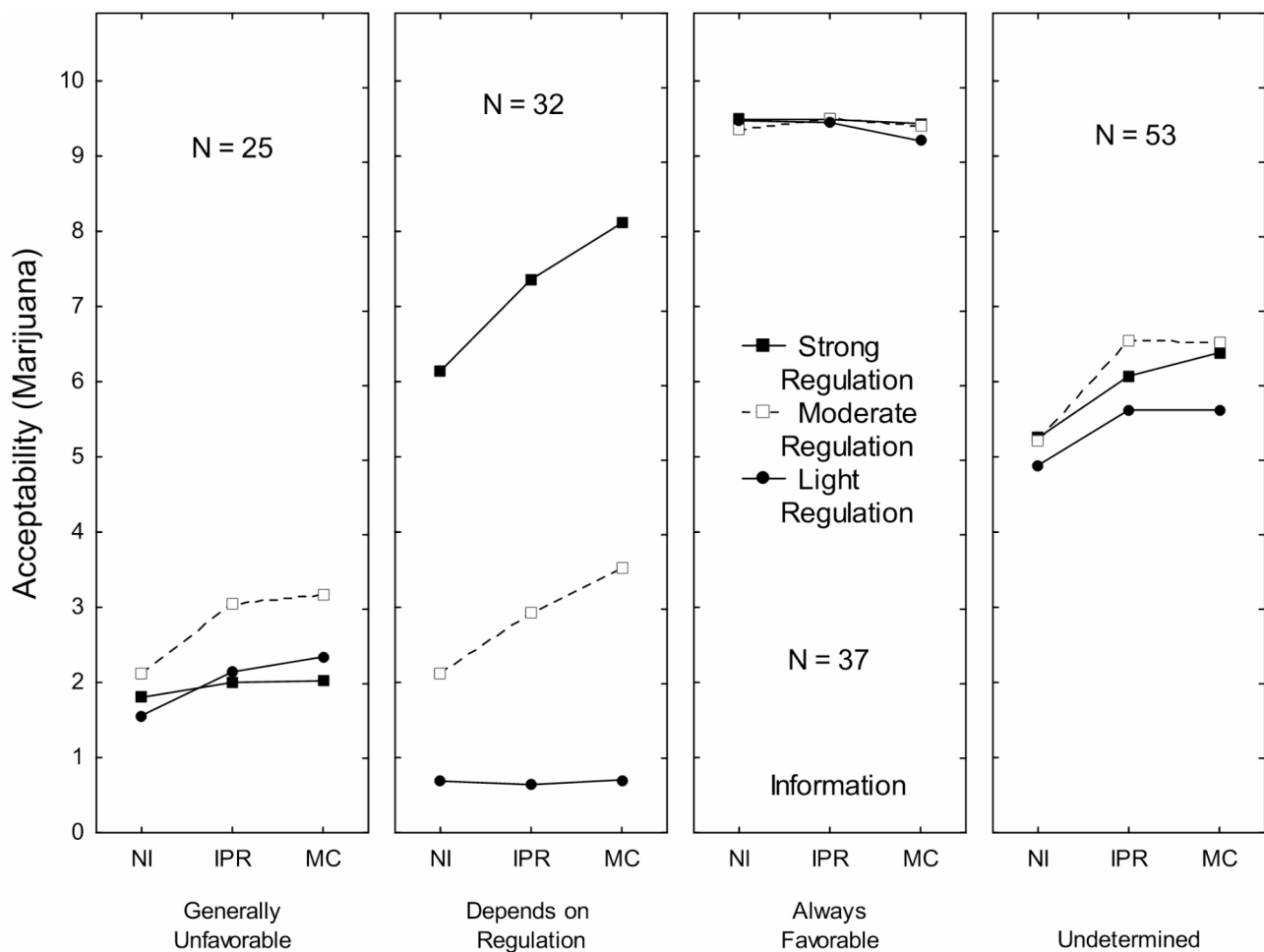


Fig. 3 Acceptability judgments are on the vertical axis. The three levels of the Information factor are on the horizontal axis (NI=No information campaigns, IPR=Information campaigns targeted at people at risk, MC=Massive information campaigns). The three curves correspond to the three levels of the Regulation factor. Each panel corresponds to one position

Table 4 Correspondence between the two sets of positions

Tobacco	Marijuana				Total
	Generally Unfavorable	Depends on Regulation	Always Favorable	Undetermined	
Generally Unfavorable	21(66)	8(25)	0(0)	3(9)	32
Depends on Regulation	3(11)	17(63)	1(4)	6(22)	27
Always Favorable	1(3)	1(3)	30(88)	2(6)	34
Undetermined	0(0)	6(11)	6(11)	42(78)	54
Total	25	32	37	53	147

the other substance. However, (a) 25% of participants who expressed a systematically unfavorable position towards control in the case of tobacco expressed a regulationist position in the case of marijuana, and (b) 22%

of participants who expressed a regulationist position in the case of tobacco were indeterminate in the case of marijuana.

An additional ANOVA was performed with a design of Substance \times Information \times Regulation \times Sanction, $2 \times 3 \times 3 \times 2$. Ratings were slightly higher in the case of tobacco consumption control ($M=6.04$, $SE=0.84$) than in the case of marijuana consumption control $M=5.62$, $SE=0.95$), $\eta^2_p=.08$. No interaction involving the substances was significant.

Discussion

When it comes to tobacco and marijuana control policies, the most striking finding was that a relative majority of participants did not express a clear position. These participants identified themselves as neutral (neither supportive nor opposed) or indifferent to public health measures that nonetheless impact the entire population.

Two minority positions— *Always favorable* and *Generally unfavorable, irrespective of policy*— had the same

structure. The only difference with the indifferent position just mentioned was that all acceptability ratings were either high or low. In all three cases, it is as if the participants were either refusing to take into account the characteristics of the control policies or refusing to express their personal position. This result is quite similar to that reported in the López López et al. [14] study of hard and soft drug control policies, where 50% of participants did not consider the nature of the drugs or the nature of the policy (ranging from *laissez faire* to complete prohibition) when making their judgement. In all three cases, as well as in the López López et al. [14] study, the only factor with any impact on responses was the presence of information campaigns on the dangers of substance use.

It was only a minority of participants who expressed a personal position. This was not the expected moderate position but, in both cases, a very strict one, similar to the position *Strong regulation in association with strong prevention* found in France [12]. Among the minority of participants who expressed a personal opinion, therefore, the control policy that seemed most acceptable was one that combined massive information campaigns, the strictest possible regulation and possibly severe sanctions involving imprisonment. It is notable that these participants belong more frequently to the affluent social classes than to the modest ones. Finally, we observe that individuals who currently use tobacco and/or marijuana are more likely than non-users to express a *Generally unfavorable* position. In other words, people who use substances often exhibit resistance to measures aimed at regulating the consumption of their preferred substances, even when such measures are relatively limited in scope.

Variations in positions were found depending on whether the substance was tobacco or marijuana, but these variations were small. In more than two-thirds of cases, the positions were similar. When there was variation, it mainly concerned the shift from an indeterminate or unfavorable position in the tobacco condition to the *Depends on regulation* position in the marijuana condition. In a few rare cases, however, participants expressing a *Depends on regulation* position in the tobacco condition stopped expressing this position in the marijuana condition.

One wonders why around three-quarters of participants, when expressing their opinion (*Undetermined*, *Always favorable* or *Generally unfavorable*), did not seem sensitive to the characteristics of control policies in terms of the level of regulation or type of sanction. This could be attributed to the material used. However, the material was similar to that used in the study by Castanié et al. [12]. In that study, 68% of the participants expressed a clear position (e.g., *Strong regulation associated with strong prevention*), 18% expressed an extreme position (e.g., *Always acceptable*), and only 14% did not express

any position. If the material were to blame, the majority of participants in the Castanié et al. study [12] would not have been able to express positions that took into account the characteristics of the control policies presented. The participants themselves could also be considered responsible. However, in the study by Del Rio et al. [15], conducted with the same type of participants, very structured and diverse positions were also observed. In that study, 81% of participants expressed positions that strongly considered the characteristics of the scenarios presented (e.g., *Always severe except in the case of simple possession*), while the remainder expressed extreme positions (e.g., *Never severe*). Participants in this type of study were not found to be incapable of taking into account the characteristics of the concrete situations presented.

Most probably, participants considered that the defining of control policies was the responsibility of government, and that the only way to deal with the government was either unconditional acquiescence, systematic opposition or, better still, indifference.

Limitations

The main limitation was that the sample was a convenience sample of lay people living in three regions of Colombia, who agreed to complete a time-intensive inquiry. This pilot study was not epidemiological in nature. As stated above, its aim was to map, in an exploratory way, people's opinions about control policies, and not to determine the exact percentages of people holding each of these opinions. No major differences were found between the data collected in Bogotá or in the two coastal cities.

Conclusion

Regarding the acceptability of national policies to control tobacco and marijuana consumption, several positions were observed among Colombian participants. The most frequent of these, however, seemed to be indifference (or indeterminacy), and the other positions reflected little more than systematic opposition or blind acquiescence. It was only among participants of higher social status that structured personal positions were observed among a majority of participants.

It would therefore be useful to make citizens, whatever their social level, more aware of the idea that their opinion matters, that their relative indifference to these issues is in itself a problem, and that it is on the basis of taking their perspectives into account that public health policies, understood and accepted by the majority, can really be defined and made effective.

Abbreviations

SD	Standard deviation
ANOVA	Analysis of variance
M	Mean

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Not applicable.

Author contributions

All authors contributed to the overall study concept and design. DRF and CPM managed the data collection process. MTMS, LK and EM conducted the statistical analysis. All authors contributed to interpretation of the data. DRF, CPM and MTMS devised the paper and wrote the first draft. All authors contributed to subsequent drafts, read and approved the final version of the manuscript.

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Data availability

All data collected is available and can be accessed by contacting the corresponding author.

Declarations

Ethics approval and consent to participate

Ethical approval for the study was granted by the Ethics Committee of the Konrad Lorenz University, Colombia.

Consent for publication

The authors have obtained consent to publish from the participants.

Competing interests

The authors declare no competing interests.

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