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Key words: Public Opinion, Policy measures, Attitudes, Alcohol, Tobacco

Abstract

Background: Effective alcohol, tobacco and illegal drug policies reduce the harm to users and third parties. Knowledge about determinants and interrelations between attitudes held by the general public to different types of policy measures can benefit policy-makers who aim to increase accept for effective policy measures. The present study describes the level of support for various policy measures held by the general public, and investigate the association between the attitudes to policy measures on alcohol, tobacco and illegal drug.

Methods: A sample of the Norwegian general population aged 16-64 (N=1803) were interviewed by telephone. Respondents reported demographic information, own substance use and attitudes to various policy measures. Associations between attitudes were assessed with correlation and regression analysis.

Results: Associations between attitudes were strongest for similar policy measures across substance groups (e.g. tax increases on alcohol and tobacco). There was a weaker association between attitudes to different policy measures aimed at the same substance (e.g. tax increase on alcohol and campaigns on alcohol).

Conclusion: The degree people approve or disapprove of the use of particular types of policy measures seem irrespective of the targeted substance.

Introduction

Alcohol, tobacco and illegal drug use are all related to severe health outcomes and social problems for both the users and third parties (Anderson & Baumberg, 2006; Anderson, Chisholm, & Fuhr, 2009; Babor et al., 2010; Gil-Gonzalez, Vives-Cases, Alvarez-Dardet, &

Latour-Pérez, 2006; Klingemann, Gmel, & Organization, 2001; Lim et al., 2013; Rehm et al., 2009; Rehm et al., 2006; Richardson & Budd, 2003; Roche, Pidd, Berry, & Harrison, 2008; Strang et al., 2012; Öberg, Jaakkola, Woodward, Peruga, & Prüss-Ustün, 2011). Policy measures for these substances refer to interventions that affect consumption through market measures, and are applied by the government to regulate use and minimize harmful effects (Babor et al., 2010). The research on public opinion to various alcohol, tobacco and drug policy measures has mainly focused on how attitudes change over time and how they vary between demographic groups (Branson, Duffy, Perry, & Wellings, 2012; Diepeveen, Ling, Suhrcke, Roland, & Marteau, 2013; Maryon-Davis & Jolley, 2010). Little is known as to whether attitudes are more closely associated within substance groups, or on a given policy measure across substance groups.

Thus, questions like Are people generally in favor/disfavor of a given policy measure, regardless of the substance targeted? and Are attitudes based on a wish to reduce general consumption in the public of a given substance, regardless of the means?" remain unanswered. The overlap of attitudes to various policy measures can, show the structure of policy attitudes, and be of practical relevance for policy makers wishing to increase the accept for policy measures.

Attitudes are defined as "a psychological tendency expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993). The public attitude to alcohol, tobacco and illegal drug policy measures provide knowledge on the legitimacy of various policy interventions; which interventions has public support, and whether any are so unpopular that the political cost of implementation is too high to justify their use (Storvoll, Rossow, & Rise, 2010).

Different alcohol, tobacco and illegal drug policy measures vary in their intrusiveness and the extent they intervene in peoples lives. Examples of intrusive policy measures are high

taxation and restrictions on when and where products are sold and consumed. Attitude campaigns, for responsible use of alcohol, against smoking cigarettes and use of illegal drugs, represent less intrusive measures. Intrusive measures are more effective to prevent harm to users and third parties (Brand, Saisana, Rynn, Pennoni, & Lowenfels, 2007; Maryon-Davis & Jolley, 2010). Peoples attitudes to policy measures vary depending on the types of intervention (Storvoll et al., 2010): in general people have positive attitudes to less intrusive interventions, while intrusive measures are less popular (Diepeveen et al., 2013).

Several other factors also influence individuals' attitudes to alcohol, tobacco and illegal drug policy measures, including own substance use, age, gender and education. Women and older individuals have relatively more positive attitudes to intrusive policy measures (Doucet, Velicer, & Laforge, 2007; Giesbrecht, Lalomiteanu, Anglin, & Adlaf, 2007; Greenfield, Ye, & Giesbrecht, 2007; Holmila, Mustonen, Österberg, & Raitasalo, 2009; Matheson et al., 2013; Saglie & Nordlund, 1993; Storvoll, Moan, & Rise, 2014; Wilkinson, Room, & Livingston, 2009). The findings on education are less consistent; some studies show that higher level of education is associated with more positive attitudes, others that it is associated with both positive and negative attitudes, depending on the type of policy measures, and some suggest that education has little impact on attitudes to intrusive policy measures at all. . (Doucet et al., 2007; Holmberg & Weibull, 2013; Holmila et al., 2009; Reitan, 2003; Saglie & Nordlund, 1993; Wilkinson et al., 2009). Personal substance use is associated with less positive attitudes to intrusive policy measures on that substance (Holmila et al., 2009; Matheson et al., 2013; Osypuk & Acevedo-Garcia, 2010; Wilkinson et al., 2009; Østhus, 2005). For instance, support for legalization of different drugs was associated with having used the drug in question (Lancaster, Sutherland, & Ritter, 2013). Similarly, the more people drink, the more they oppose taxation of alcohol (Macdonald, Stockwell, & Luo, 2011).

To our knowledge, no previous studies have investigated the overlap in attitudes to

alcohol, tobacco and illegal drug policy measures. Thus, little is known as to whether peoples' opinions on substance-related issues reflect a) a general sentiment to reduce negative effects of any substance by any means, b) a sentiment to reduce negative effects of specific types of substances, such as acceptance of various measures related to alcohol, or c) acceptance of specific types of measures across substance groups, such as support for media campaigns across substance groups. For instance, are those who support policy measures for alcohol the same respondents who support policy measures for illegal drugs? Do individuals who support one type of policy measure, such as high taxes, do so across substance groups? These are important questions when the goal is to increase support for effective policy measures. If peoples attitudes to policy measures tend to be substance specific, persuasive messages emphasizing substance specific negative consequences may provide a means to change attitudes. On the other hand, if attitudes are policy specific, it may be less efficient to focus on substance specific harms. Instead, one could target public perception on the effectiveness and consequences of a given measure that can subsequently be implemented across different substances.

In this study we 1) Describe the level of support for various policy measures, 2) Investigate the associations between various attitudes to alcohol, tobacco and illegal drug policy measures, 3) Investigate the overlap between attitudes for similar policy measures (e.g. alcohol media campaigns and tobacco media campaigns) when controlling for attitudes towards other types of policy measures, and 4) Investigate the overlap between attitudes for different policy measures targeting the same substance (e.g. alcohol media campaigns and alcohol excise taxes) when controlling for attitudes towards other types of policy measures.

Methods

Setting

Norway has a long tradition of a restrictive alcohol, tobacco and illegal drug policy. Limited availability of alcoholic beverages, high alcohol taxes, and a comprehensive alcohol monopoly system have been regarded as the three pillars of the Nordic alcohol policy (Österberg, 2007). During the last few decades Norwegian alcohol policy has been liberalized in terms of increased availability and access (Storvoll & Halkjelsvik, 2013). Compared to other western countries however, the Norwegian alcohol policy is still fairly restrictive (Brand et al., 2007; Karlsson & Osterberg, 2001). Norwegian tobacco policies include ban on smoking in public places such as restaurants, and in the workplace. Tobacco advertising is illegal, the products are marked with information about health risks, and they are highly taxed so as to make them expensive (Lund, 2009). Norwegian drug policy include harsh punishment for drug crimes, and a high degree of social control in treatment of drug problems such as opioid dependence (Skretting, 2014; Waal, 2007).

Support for restrictive alcohol policies measures has increased during the past decade. This may reflect changes in values, more knowledge about alcohol-related harm and changes in beliefs about restrictive measures with regard to harm reduction (Storvoll & Halkjelsvik, 2013). This is likely the case with regards to support for tobacco and illegal drug policies as well. For instance, a while after the introduction of the smoke-free legislation in Norway in 2004, 75% of the general public supported the legislation (Lund & Lund, 2006).

Data collection and sample

On behalf of SIRUS, Statistics Norway (SSB) conducted a computer assisted telephone survey on alcohol, illegal drugs and tobacco in 2012. Respondents were drawn from the Norwegian population registry (random selection). Prior to conducting telephone interviews,

information letters were sent to the respondents to inform about the topic and purpose of the study, that participation was voluntary and about privacy concerns. Those without a registered phone number were asked to provide contact details. 3 000 individuals ranging from 16 to 79 years old were drawn from the national population register. An additional sample of 16-30 year olds were drawn to allow other researchers to address alcohol, tobacco and illegal drug use among adolescents and young adults. A larger subsample of this age-group was therefore necessary. Of the 3700 individuals, 48 were dead or lived abroad, and were excluded from the target sample (N = 3 666). In total, 1947 (53.3 %) participated in the study. Reasons for non-participation were: Statistics Norway was unable to establish contact (25.4 %), did not want to (17.0 %) or were unable to participate (4.3 %). Only respondents aged 16-64 were asked questions about illegal drug use. They constitute the subsample of 1803 persons aged 16-64 which this study is based on.

Measures

Attitudes

Participants responded to which extent they agreed with statements about alcohol, tobacco, and illegal drug policy measures. Originally, there were 20 policy-related attitude items. Of these, nine were attitudes to measures that applied across at least two substance groups (See Table 1). Since policy measures for illegal drugs largely differ from legal substance policy measures, only one illegal drug policy measure was included in the study. Responses were indicated on a 5 point scale, ranging from 1 "strongly disagree" to 5 "strongly agree". The order of the statements within each substance group was fixed, but the order of the substance groups was randomized (i.e., one third of the sample received the questions about alcohol first, etc.). The scores of two items, "Current limitations on sale of alcohol is too strict" and "Current limitations on sale of cigarettes are too strict", were reversed, so that higher scores on all items

indicate higher support for policy measures. The level of intrusiveness of policies included in this paper, can be divided in two groups. Attitude campaigns and the ban on advertisement are considered less intrusive measures, and tax and restriction of availability as more intrusive. Degree of intrusiveness is related to limitation of individual freedom (Branson et al., 2012; Diepeveen et al., 2013; NCOB, 2007).

Policy-related attitudes refer to attitudes to similar policy measures across substance groups, such as media campaigns for alcohol and tobacco. Substance-related attitudes refer to attitudes to different policy measures targeting the same substance. For instance, alcohol media campaigns and alcohol taxes.

Demographics

The demographic variables included in the study were age (continuous), gender (women are coded 0 and men 1) and education. Low education (coded 1) refers up to secondary education, middle education refers to 1 - 4 years of tertiary education (coded 2), and high education refers to more than 4 years of higher education (coded 3).

Substance use

Respondents were asked: "have you consumed alcohol the past 12 months?". The binary response option yes/no, showed that the majority (87.8%) had done so. Another item asked about the frequency of alcohol consumption in the past year (daily, weekly, monthly, less than monthly). These two variables were combined into a 4-point frequency scale for alcohol: 1) not consumed alcohol the past year, 2) less than once per month, 3) monthly, 4) weekly or daily. Weekly and daily consumption were combined, because very few drank on a daily basis. Frequency of tobacco smoking was measured asking "do you sometimes smoke (filter or rolling tobacco) cigarettes?" with a yes/no response option, and "do you currently smoke daily, weekly

or less than weekly?". In total 24.9% smoked. A 4-point tobacco smoking scale with the following categories were created: 1) Do not smoke, 2) smoke less than once a week, 3) smoke at least once a week, but not daily and 4) smoke daily. The measure of tobacco use address use of cigarettes and rolling tobacco. To identify illegal drug use the past 12 months, respondents were asked whether they had used cannabis, cocaine, ecstasy, amphetamine, heroin, GHB/GLB, LSD or other illegal drugs on a yes/no alternative. During the past year, 5.4% had used one or more illegal drugs. The majority of these had used cannabis (5%) alone or in addition to other illegal drugs.

Ethics

The study was conducted according to the Statistics Act and the Norwegian Personal Data Act (Finansdepartementet, 1990; SSB, 2014).

Statistical analysis

We assessed bivariate associations between different attitude items and between the attitude items and the demographic variables with Pearson correlations (Table 2). Partial correlation was used to hold constant the effect of age, gender, education and own substance use when the pattern of overlap between policy-related and substance-related attitudes were examined (Figure 1)..

We conducted separate hierarchical multiple analyses for each policy attitude using the mean score on unrelated attitudes, substance-related attitudes, and policy-related attitudes as the independent measures (Table 3). Which variables were used as predictors changed according to the attitude that served as the dependent measure. For instance, attitudes to restrictions of alcohol sales was regressed on restrictions of tobacco sales (the policy-related measure), the mean score on other alcohol-related policy measures (the substance-related measure) and the mean score on the remaining attitudes (the unrelated measure). Appendix table 1 provides an overview over how these variables were computed and which "unrelated",

“substance-related” and “policy-related” variables were applied in the different regression analyses. In the first block in the regression analyses, the covariates age, gender, education, and substance use were entered along with the unrelated attitudes; attitudes that were not related to the dependent attitude variable on substance or policy level. Alcohol and tobacco use were included for all the analyses; illegal drug use only in the analysis on attitude campaigns against illegal drug use. The rationale for this initial block was that a general tendency to approve any kind of policy measure would be reflected in the coefficient of the unrelated attitudes. In the second block of the analyses, we entered the measure of policy-related attitude and the measure of substance related attitudes.

To correct for the additional sample of young people and for differences between the sample and the population in distribution of gender, age and educational level we used inverse probability weighting on the descriptive data (Means and standard deviations) for the attitude items analyses shown in table 1 (SSB, 2014). Unweighted data was used for the Pearson correlation, Partial correlation and the hierarchical multiple regression analyses. Results

Table 1 shows the descriptive data for the attitude items. The tendency was that less intrusive interventions received higher support than more intrusive ones. Across all three substance groups, support for attitude campaigns was high (range 4.39-4.48 out of 5). There was strong support for the ban on advertisements for both alcohol and tobacco. For the most intrusive

items, there was more variation in support across substances, with higher support for limitation on sale of cigarettes than for alcohol. There was low support for increase in tax for cigarettes (2.83) and even lower for alcohol tax (1.95).

Insert table 1 about here

Table 2 presents zero-order correlations between the attitude items and the demographic variables. Overall, the correlation between similar measures across substance groups was stronger than correlations between measures within substance groups. The correlation coefficients for associations between similar policy measures across substance groups ranged from $r = .29$ (limitations alcohol and tobacco sales are too strict) to $r = .59$ (attitude campaigns on alcohol and tobacco). The mean of the distribution of these policy-related coefficients was .45. The mean of the correlation coefficients for policy measures within substance groups was .24 within alcohol, and .23 within tobacco.

Insert table 2 about here

Demographic variables and substance use correlated weakly to moderately with attitudes to policy measures. The strongest correlations were between tobacco smoking and support for increased tax on cigarettes (-.35) and drinking and support for increased tax on alcohol (-.27). To determine whether the associations between attitude items in Table 2 could be due to influence of demographic or substance use variables, we computed partial correlations between the attitude measures, controlling for the effects of demographics and substance use. This did not change the pattern of associations between attitude items. The mean score on the partial correlation coefficients within policy measures, across substances was .42 (range .26 to

.58), and the mean score on the partial correlation coefficients within alcohol and tobacco was .16 (range .04 to .28) and .19 (range .15 to .31), respectively.

Figure 1 presents the partial correlations in descending order and illustrates the tendency for stronger correlation between similar policies across substance groups (green) than among different policy measures within substance groups (blue). For all but one item, similar policy measures across substance groups were more strongly associated than correlations within substance groups.

Insert figure 1 about here

To determine whether some of the associations above could be explained by a general tendency to support any type of restriction we performed nine hierarchical regression analyses where each policy attitude was regressed on its corresponding policy-related, substance-related, and unrelated attitudes. In the first block of the regression analyses, we entered demography and own substance use, along with the unrelated attitudes. The coefficients were low, with no clear pattern in terms of the directionality of the associations (Table 3). This could mean that people's attitudes towards policy measures is not governed by a general inclination to approve or disapprove any kind of policy measure. In the second block, we entered the policy-related and substance-related predictors. Overall, the pattern observed in Table 3 mirror those of Figure 1. Even when controlling for unrelated and substance related attitudes, there was still a substantial association between policy-related attitudes. The regression analyses also suggested an effect of substance-related attitudes for some of the policy measures, but this effect was not as consistent and not as strong as the association between policy-related attitudes.

Insert table 3 about here

Discussion

This study provides new knowledge on overlap in attitudes to alcohol, tobacco and illegal drug policy measures. We wondered whether peoples' attitudes to substance-related policy measures reflect a sentiment to reduce negative effects of specific types of substances, or an acceptance of specific types of measures across substance groups. While both alternatives received some support, the results suggest that attitudes are most governed by approval/disapproval of specific types of policy measures, regardless of which substance they apply to. We also asked whether peoples' attitudes to substance-related policy measures reflect a general sentiment to reduce negative effects of any substance by any means. The results did not support the idea of a general inclination across all policy measures.

If people support some types of measures and disapprove of others across substances it is not surprising that the level of support varied across policy measures (see Table 1). In line with previous research (Diepeveen et al., 2013), less intrusive policy measures, such as ban on advertising received highest support, while more intrusive measures, including limitations on sale and increased tax rates, received less support.

The patterns of associations can be interpreted in light of previous findings.. For instance, attitudes to alcohol policy measures and changes in attitudes over time has been associated with ratings of perceived effectiveness of the policy measures (Storvoll et al., 2014; Storvoll, Rossow, & Rise, 2013). It is reasonable to assume that people's perception of effectiveness apply to a given policy measure across substances, although this was not tested in the cited studies. These studies, along with findings in the present study, points to the importance of policy-specific perceptions, or other variables underlying policy-specific

associations. Perceptions related to harm from alcohol has also been associated with policy attitudes (Storvoll et al., 2014; Storvoll et al., 2013), but the effect was weaker than that of perceived effectiveness of the policy measures. Correspondingly, we found a weak overlap between substance-specific attitudes in the present study, even when controlling for a general tendency of supporting policy measures. This may be interpreted as a substance-specific concern about harm from use. For instance, a person may be particularly concerned with regards to harm from tobacco use, and tend to support most health policy measures directed towards that substance group.

More broadly, the results provide insight into the underlying causes of attitudes toward alcohol, tobacco and illegal drug policy measures. People do not seem to be governed mainly by perceptions about the consequences of the particular substances when forming their opinions. Rather, instrumental perceptions about practical consequences (e.g. effectiveness) or the ideological meaning of the policy measures (e.g. restriction of freedom) likely play a role.

If the relation between policy specific measures reflect a causal link between attitudes, the present results may have practical implications. Past research suggest that attitudes change in favor of a policy after its implementation (Diepeveen et al., 2013; Fong et al., 2006; Hilton et al., 2007; Thrasher, Boado, Sebríe, & Bianco, 2009; Thrasher, Pérez-Hernández, Swayampakala, Arillo-Santillán, & Bottai, 2010). This suggests that implementing a policy measure in one domain may increase the acceptance of the same policy measure in another domain. For example, introducing tobacco tax may change attitudes towards this policy measure, which in turn may increase acceptance for taxes on alcohol. However, the patterns of associations between policy-specific attitudes could reflect underlying political perceptions that are unaffected by specific policy attitudes.

Methodological considerations

The number of policy measures across substances was low because the policy

measures for illegal drugs differ from legal substance policy measures; and several tobacco policy measures differ from alcohol policy measures. The limited number of items could produce patterns of associations driven by a few strong or weak associations. For instance, the correlations across substance groups for the two media-related policy measures (campaigns and ban on advertisement) seemed to be particularly strong. However, the correlation between attitudes towards increased alcohol tax and increased tobacco tax was also among the strongest, so the results are not merely due to media-related attitudes.

While self-reporting are associated with more social desirability bias and underreporting of own substance use compared to data gathered using other methods, (Mensch & Kandel, 1988; Rouse, Kozel, & Richards, 1985; Van de Mortel, 2008), we believe it is the best approach to address attitudes towards policy measures. The present study used quite crude measures on substance use. A more refined measure could include information on quantity of alcohol, tobacco and illegal drug use, and lifetime use.

The use of a general population sample to study attitudes to alcohol, tobacco and illegal drug policy measures is a major strength of the study. Further, the present study is the first to investigate overlap in attitudes to policy measures across substance groups within the same sample. We believe the results can be used as a comparative basis for studies in other countries. Future studies could explore the underlying causes of the patterns presented in the present article, and investigate whether a similar pattern of overlap in attitudes toward policy measures emerge in other areas of public health, such as healthy food and exercise.

Conclusion

We asked whether peoples' opinions on substance-related policy measures reflect (a) a general sentiment to reduce negative effects of any substances by any means, (b) a sentiment to reduce negative effects of specific types of substances or (c) acceptance of specific types of policy measures across substance groups. We did not find any support for the first alternative,

only some support for the second alternative, but clear support for the third alternative.. The results may have practical implications, but needs to be explored in future experimental studies. For instance, the data suggests that information focusing on consequences of a policy measure may affect attitudes to a larger extent than information focusing on consequences of substance use. This is relevant for policy makers that aim to increase the acceptance of effective policy measures, and to improve the efficiency of information campaigns.

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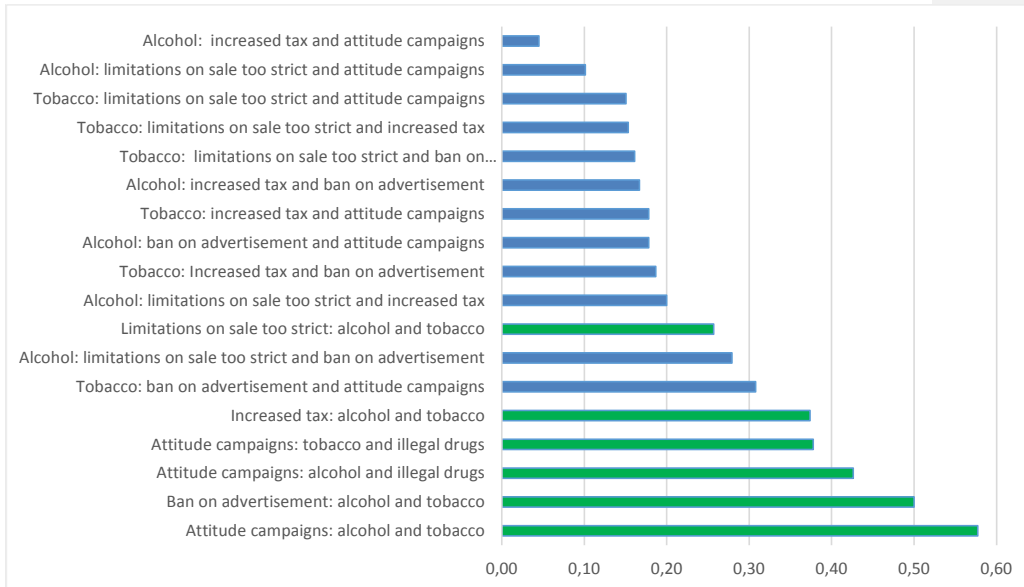


Figure 1

Substance-specific (blue) and policy-specific (green) partial correlations controlled for the effect of age, gender, education and own substance use. Unweighted data.

Slettet:

Table 1

Attitudes (Means and SDs) to various alcohol, tobacco and illegal drug policies among the Norwegian population between 16 and 64 years of age (N=1803)

	Mean	SD
Alcohol		
Current restrictions on sale of alcohol are too strict (reversed)	3.35	1.66
There should be an increase in tax on alcohol	1.95	1.44
The ban on alcohol advertisements should remain	4.31	1.34
Attitude campaigns on responsible use of alcohol is a sensible use of resources	4.39	1.11
Tobacco		
Current restrictions on sale of cigarettes are too strict (reversed)	3.91	1.52
There should be an increase in tax on cigarettes	2.83	1.76
The ban on cigarette advertisements should remain	4.61	1.09
Attitude campaigns against smoking is a sensible use of resources	4.43	1.11
Illegal drugs		
Attitude campaigns against use of illegal drugs is a sensible use of resources	4.48	1.07

1=Low support. 5= High support. Weighted data.

Table 2

Pearsons' correlation on alcohol, tobacco and illegal drug policy measures, and demographic variables and own substance use (Lowest N= 1744)

	1.	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Limitations alcohol sale too strict	1.00														
2. Limitations cigarette sale too strict	.29**	1.00													
3. Increase tax on alcohol	.25**	.11**	1.00												
4. Increase tax on cigarettes	.23**	.24**	.42**	1.00											
5. Ban on alcohol advertisements	.35**	.22**	.22**	.21**	1.00										
6. Ban on cigarettes advertisement	.24**	.27**	.15**	.26**	.55**	1.00									
7. Campaigns attitudes alcohol	-.11**	-.13**	-.06	-.07**	-.17**	-.19**	1.00								
8. Campaigns attitudes cigarettes	-.12**	-.17**	-.09**	-.21**	-.20**	-.30**	.59**	1.00							
9. Campaigns attitudes illegal drugs	-.04	-.10**	.03	-.02	-.10**	-.11**	.44**	.39**	1.00						
10. Gender	-.17**	-.05	-.10**	-.07**	-.17**	-.08**	.03	.05	.02	1.00					
11. Age	.06**	.05	.02	-.04	.11**	.06	-.10**	-.09**	-.11**	.02	1.00				
12. Education	.03	.14**	.03	.11**	.09**	.08**	-.09**	-.10**	-.04	-.03	.21**	1.00			
13. Smoking	-.05	-.17**	-.15**	-.35**	-.05	-.08**	.08**	.16**	.04	.03	.05	-.13**	1.00		
14. Drinking	.08**	-.03	.27**	.07**	.05	-.03	.00	.00	.02	-.10**	-.02	-.07**	-.11**	1.00	
15. Drug use	.07**	.02	.07**	.12**	.07**	.04	-.07**	-.10**	-.12**	-.11**	.21**	.08**	-.18**	.08**	1.00

Unweighted data, **P<.01

Table 3

Multiple hierarchical regression analysis predicting attitudes using unrelated, substance-related and policy-related attitudes

		Standardized Beta Coefficients								
		Alcohol restriction	Alcohol taxes	Alcohol advertising	Alcohol campaigns	Tobacco restrictions	Tobacco taxes	Tobacco advertising	Tobacco campagins	Illegal drug campaigns
Model 1 ^a	Unrelated	.15***	.08**	.05	-.17***	.02	.17***	.03	-.18***	-.08**
Model2 ^a	Unrelated	.03	-.01	-.05	.02	-.07**	.07**	-.07**	-.01	.04
	Related substance	.24***	.16***	.21***	-.08***	.09**	.05	.05	-.23***	
	Related policy	.24***	.37***	.48***	.59***	.24***	.34***	.51***	.51***	.46***

^aControlled for age, gender, education and substance use. **P<.01. ***P<.001. Unweighted data.

Appendix table 1

Variables that were computed into unrelated, related substance and related policy for the 9 regression analyses

	<i>Alcohol restriction</i>	<i>Alcohol taxes</i>	<i>Alcohol advertising</i>	<i>Alcohol campaigns</i>	<i>Tobacco restrictions</i>	<i>Tobacco taxes</i>	<i>Tobacco advertising</i>	<i>Tobacco campagins</i>	<i>Illegal drug campaigns</i>
Unrelated	Tobacco taxes	Tobacco restriction	Tobacco restriction	Tobacco restriction	Alcohol taxes	Alcohol restriction	Alcohol taxes	Alcohol taxes	Tobacco restriction
	Tobacco advertising	Tobacco advertising	Tobacco taxes	Tobacco taxes	Alcohol advertising	Alcohol advertising	Alcohol restriction	Alcohol restriction	Tobacco taxes
	Tobacco campaigns	Tobacco campaigns	Tobacco campaigns	Tobacco advertising	Alcohol campaigns	Alcohol campaigns	Alcohol campaigns	Alcohol advertising	Tobacco advertising
	Illegal drug campaigns	Illegal drug campaigns	Illegal drug campaigns		Illegal drug campaigns	Illegal drug campaigns	Illegal drug campaigns		Alcohol taxes
									Alcohol restriction Alcohol advertising
Related substance	Alcohol taxes	Alcohol restriction	Alcohol taxes	Alcohol taxes	Tobacco taxes	Tobacco restriction	Tobacco taxes	Tobacco taxes	-
	Alcohol advertising	Alcohol advertising	Alcohol restriction	Alcohol advertising	Tobacco advertising	Tobacco advertising	Tobacco restriction	Tobacco advertising	-
	Alcohol campaigns	Alcohol campaigns	Alcohol campaigns	Alcohol restriction	Tobacco campaigns	Tobacco campaigns	Tobacco campaigns	Tobacco restriction	-
Related Policy	Tobacco restrictions	Tobacco Taxes	Tobacco advertising	Tobacco Capmpaigns Illegal drug campagins	Alcohol restrictions	Alcohol Taxes	Alcohol advertising	Alcohol Capmpaigns Illegal drug campagins	Alcohol campaigns Tobacco campaigns