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# Mixed-methods evaluation of a prevention campaign on binge drinking and cannabis use addressed to young people

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## ABSTRACT

**Objective:** To assess whether the French “Amis aussi la nuit” (“Friends also at night”) campaign on peer-support concerning binge drinking and cannabis use in a party setting reached young adults aged 17–25 years, and how it was perceived by them.

**Methods:** A posttest evaluation of the campaign using a mixed-methods design was performed. Quantitative data from a large survey ( $n = 1003$ ) and qualitative data from semi-structured interviews ( $n = 23$ ) and one focus group ( $n = 6$ ) were combined to explore strengths and weaknesses of the campaign. We adopted a convergent design where all data were collected simultaneously, reported jointly and, finally, cross-checked for discussion.

**Results:** Participants appreciated the campaign, felt involved in its preventive messages and found used communication strategy acceptable and effective. Some negative features were also identified, especially concerning the language and tone of the campaign.

**Conclusions:** Recommendations for improving this campaign and informing future ones on similar topics are provided based on the study results. Our findings are important for public health professionals who are interested in the prevention of high-risk behaviors in the young.

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## Introduction

Binge drinking is generally defined as a disproportionately high quantity of alcohol drunk in a short period of time, with negative consequences both in the short term (e.g., risk of injury, risky behaviors related to sex or driving) and in the long term (e.g., cancer, cirrhosis, impaired brain development) (Wechsler, 1994). It is a widespread phenomenon among young people (Davoren et al., 2016). According to national statistics (OFDT, 2019), in 2017 less than half of French young adults (44%) reported having had more than five drinks on a single occasion in the past 30 days.

Similarly, cannabis is among the most widely used illicit drugs by young people in high-income countries (Hall & Degenhardt, 2009). Cannabis use in young adulthood increases the likelihood of developing adult psychosis, mental health problems, and adjustment difficulties like conduct problems or school dropout (Arseneault et al., 2002). In France, in 2019 (Le Borgès et al., 2019; Santé Publique France, 2019) 27% of young people were using cannabis.

Thus, binge drinking and cannabis use are important prevention topics for health institutions and professionals in charge of promoting health behaviors among young people. Various social-marketing campaigns on the reduction of risks related to alcohol and cannabis use have targeted young people internationally in the last decades (Flaudias et al., 2015; Lee, 2018; Mbuthia et al., 2017; Perkins & Craig,

2006; Wechsler et al., 2003). A systematic review on the effectiveness of mass-media campaigns in reducing drug use among young people has underlined the need for evaluation so as to provide benefits to both research and practice (Allara et al., 2015). However, few social-marketing campaigns on alcohol and cannabis consumption addressing young adults have been evaluated. Among them, campaigns reducing drinking in American students (Gomberg et al., 2001; Perkins & Craig, 2006) showed positive results since students decreased alcohol consumption. Two other American campaigns on cannabis misuse reduction showed that those exposed to them were more aware of the negative consequences of being a cannabis user (Kruger et al., 2021). On the other hand, a campaign on drug use conducted in University students in Kenya was not effective: students increased their substance consumption after having been exposed to the campaign (Mbuthia et al., 2017).

The aim of this study was to assess through a mixed-methods design whether the French “Amis aussi la nuit” (“Friends also at night”) campaign concerning binge drinking and cannabis use reached young adults, and how it was perceived by them. We critically evaluated strengths and weaknesses of the campaign to suggest how the campaign could be improved and to inform those who might design similar campaigns.

## The “amis aussi la nuit” campaign

The “Amis aussi la nuit” prevention campaign was conceived, designed, implemented, and funded by *Santé publique France*, the National Public Health Agency of the French Ministry of Health, and ran from the 25th of September to the 25th of October 2019. The main objective of the campaign was to reduce the risks and consequences of excessive substance use (alcohol and cannabis) among young people aged 17–25 years.

The material of the campaign included digital (three web banners, three stories on Instagram and Snapchat, short pre-roll videos on YouTube, influencers’ videos on social networks, one audio spot broadcast on music streaming platforms, and keyword referencing), print (three posters displayed on 1240 festive places like pubs or clubs, and 2 stickers placed on mirrors or walls of 370 bars or restaurants’ toilets in 9 French cities) and radio devices (2 radio spots on a French radio with a young audience). A website (<http://www.amisaussilanuit.fr>) was also created and disseminated via social media, as well as an ad hoc Instagram account. Information and materials of the campaign were sent to Universities in the largest cities of France, e.g., Paris, Marseille, Lyon, Bordeaux.

## Materials and methods

This posttest evaluation study used a mixed-methods approach combining quantitative and qualitative data. In particular, we adopted a convergent design where all data were collected simultaneously, reported jointly and, finally, cross-checked for discussion (Creswell & Clark, 2010).

Quantitative data were collected from a large online survey conducted from the 28th of October to the 8th of November 2019, after the end of the campaign, on a representative sample of the French population from a panel of Internet users using the quota method applied to the following variables: sex and age of the respondent, occupation of the head of the household and urban size. A post-stratification weighting was used to correct for main sociodemographic variables. The questionnaire included three sections: sociodemographic information (eight items ranging from sex to job activity); psychoactive substances use (nine items on drinking and cannabis use quantity and frequency); and evaluation of the campaign (27 items). The completion of the survey took 15 minutes. The survey covered all campaign supports that were shown to participants to answer all items of the questionnaire. Quantitative data were described by numbers and percentages. Pearson’s chi-square was used for bivariate analysis.

The qualitative phase followed the COREQ (Consolidated criteria for reporting qualitative research) checklist (Tong et al., 2007). It focused only on the materials concerning binge drinking (i.e. two posters, two stickers, and one radio spot). This choice was imposed by the institution behind the dissemination of the campaigns. Qualitative data were collected through semi-structured interviews and one focus group conducted between October and November 2019 by a sociologist and an intern. Respondents were students recruited through a post on the Facebook pages of student groups in the city of Bordeaux,

France. The message briefly explained the topic and objectives of the qualitative study and potential participants were asked to answer a form on their sex, age, field, and year of study and drinking pattern (four profiles, i.e. “not drinking or hardly ever drinking,” “drinking regularly but moderately,” “drinking on the weekend” and “drinking often and without moderation”) inspired by previous research (Freysinet-Dominjon & Wagner, 2003). We reached a theoretical saturation when obtaining redundant themes and constructs across the three profiles of alcohol consumers. Data were collected based on two interview grids (one for the semi-structured interviews and one for the focus groups). The semi-structured interviews and the focus group were conducted in rooms at the University of Bordeaux and lasted between 1 and 2 hours. Qualitative data were audio-recorded, transcribed and coded using the software NVivo both deductively based on the interview guide and inductively based on spontaneous messages emerging from the discussions. These data were analyzed in triangulation (the sociologist, the intern and the co-principal investigator of the study) using a Grounded Theory approach (Glaser & Strauss, 2017).

This study followed the Declaration of Helsinki Ethical Principles for Medical Research Involving Human Subjects. Interviewed participants were asked to sign a consent form before participation to the study. Names of participants in the qualitative phase were changed in order to guarantee the anonymous nature of collected data.

## Results

### Study population

Participants to the survey were 1003: 50% female, 17–20 years old (45%), and 21–25 years old (55%). Table 1 presents the characteristics of the quantitative sample.

Participants to the semi-structured interviews were 23 students, of whom 13 were males. Students were aged on average 21.0 years old. Among students, 1 was “not drinking alcohol at all,” 4 were “drinking regularly but moderately,” 8 were “drinking on the weekend” and 10 “drinking often and without moderation.” Participants to the focus group were six students (four females) and aged on average 20.6 years old. They were either “drinking on the weekend” or “drinking often and without moderation”

### Appeal of the form and contents of the campaign (vocabulary, style, credibility, pertinence)

As for quantitative results, a total of 82% young people found their form appealing. Among them, stickers were considered as captivating by 88% and, in general, the whole campaign was appreciated by 90% of young people. Those who had already experienced bad consequences of binge drinking or cannabis smoking appreciated the most the content and form of the campaign (95%,  $p < .05$ ). As reported in a free-text item within the survey, reasons for liking the campaign were both concerning the format (for 57%) and the content (for 53%). As for the format, young people appreciated the tone, register, and realistic setting (29%), followed by the scenario (16%) and the easiness

**Table 1.** Sample of the quantitative evaluation: sociodemographic characteristics, consumption of psychoactive substances and party habits.

Whole sample N = 1003	Unweighted n	Weighted %
Sex		
Female	530	50
Male	473	50
Age		
17–20 years-old	467	45
21–25 years-old	536	55
Principal occupation		
Active	401	41
Pupils or students	534	52
Inactive	68	7
Size of urban area		
Rural to 20,000 inhabitants	311	30
Medium cities (from 20,000 to 100,000 inhabitants)	512	51
Paris area	180	19
Alcohol intake (past week)		
Exceeding the French guidelines*	264	26
In line with the French guidelines	739	74
Frequency of binge drinking** (among people who declared to have had a drink during the past week n = 557)		
Never	181	33
Less than once a month	208	37
At least once a month	168	30
Cannabis (30 last days)		
Yes	88	9
No	915	91
Frequencies of parties with friends		
Never	156	15
Occasional parties (from once a month to 2–3 times a month)	750	75
Regular parties (once or several times a week)	97	10
To have experienced bad consequences of binge drinking or cannabis smoking		
Yes, myself	59	6
Yes, a friend or close people	191	19
No, never	767	76

\* Since 2017, French guidelines for adults are based on three dimensions: 1/ you should not drink more than 10 standard drinks per week, 2/ no more than 2 standard drinks per day and 3/ you should have alcohol-free days during the week. A standard drink contains roughly 10 grams of pure alcohol in France.

\*\*Binge drinking is defined in France as drinking 6 glasses of alcohol in one occasion.

of understanding the campaign (14%). As for content, young people found the message effective (22%), concerning both the aim of sensitizing and empowering (18%) and the content about friendship (12%). Almost all of them found the campaign clear (96%) and useful (94%). For 88%, the campaign was attractive and used the right tone. One-quarter (26%) found the campaign shocking. See, [Tables 2 and 3](#) for detailed information.

These results were nuanced by the qualitative data. Concerning the tone and language (for the posters and the radio spot), some young people judged them as “ridiculous,” “exaggerated,” “old-fashioned,” “embarrassing,” “unnatural,” “a bit out of date,” and “infantilizing,” since employed terms were not in line with current young language. For some, the use of this specific vocabulary produced a distance between the target audience and the institution promoting the campaign:

*“It’s something that I’m quite sensitive to when I look at prevention stuff for young people, it’s that we actually know very well that it’s not young people who are behind this . . . and it’s really obvious that they’re trying to adapt to our language.”*

(Thomas, 20 years, “drinking on the weekend” profile)

Posters seemed to many participants to the qualitative phase to be fairly conventional. Inversely, the use of the stickers was considered as original. Young people appreciated the radio spot since it was credible, short, and accessible.

Interviewed young people agreed that displayed situations were realistic:

*“It can happen yes, to worry about someone and the others say “but who cares, he’s gone his own way or he’s in the bathroom” when in fact we don’t know what happened to him.”*

(Arthur, 20 years old, “drinking often and without moderation” profile)

For all interviewed young people, the campaign was useful and pertinent. For them, preventing risks linked to binge drinking is a public health priority. Furthermore, the approach of the campaign (based on peer support) was appreciated by the participants, since it was perceived as relevant.

*“The message is highly relevant yeah, it’s clear, it’s important. . . . All the more prevention campaigns, they’re important too, of course. A lot of people die because of alcohol, it destroys lives, it destroys families, of course it’s very important . . . yeah, it’s a real issue. »*

(Thomas, 20 years, “drinking often and without moderation” profile)

### **Adoption of the campaign and degree of incentive to change behavior**

About 65% of young adults reported in the survey that they could identify with the characters, especially when binge drinking (80%,  $p < .05$ ) and smoking cannabis (84%,  $p < .05$ ) above average standards. In details, 71% of youth felt personally concerned for themselves (42%) or someone close to them (68%). Rates were higher among young people consuming cannabis (84%,  $p < .05$ ) and consuming alcohol in a limited time at higher rates than recommended (84%,  $p < .05$ ). For 91% of participants, the campaign directly concerned them.

Similarly, interviewed young people of the qualitative phase felt personally concerned since they had already experienced what the campaign showed:

*“It’s mostly because I think we’ve all been in a situation like this before, so identifying with the situation is still something that’s good and strong”.*

(Virginia, 21 years, “drinking on the weekend” profile)

Concerning the influencing nature of the campaign ([Table 2](#)), 92% of people completing the questionnaire declared they were encouraged to “pay attention to friends who drink or smoke too much,” and 89% to intervene by saying to “a friend who has drunk or smoked too much during a party that he/she should slow down.” Furthermore, 67% of young adults having recognized the campaign declared they were encouraged to reduce binge drinking or use of cannabis during parties.

Participants to the qualitative phase declared that the campaign could positively change their behavior since it reinforced the feeling they had of the importance of taking care of friends. The campaign pushed them to think over their attitudes and question the complex concept of friendship. Furthermore, the campaign reinforced their feeling of self-efficacy, i.e. being capable and legitimate to tell their friends to stop drinking.

**Table 2.** Main indicators of the quantitative evaluation: spontaneous recall, visibility, perception of the campaign and incentive to change behavior.

	Unweighted n	Weighted %
Spontaneous and specific recall* of the campaign		
Yes	23	2
No	980	98
Have recognized at least one element of the campaign		
Yes	581	57
No	422	43
Perception (among people who had recognized at least one element of the campaign): "This campaign ..."		
... is clear, easy to understand	555	96
... is useful	548	94
... draws attention	509	87
... finds the right tone to deal with alcohol and cannabis	509	88
... offers solutions to avoid alcohol or cannabis related-risks	427	74
... shows people or situations I can identify myself with	378	65
... gives a bad image of people drinking alcohol or smoking cannabis too much	300	52
... makes me feel guilty	180	32
... is shocking	147	26
... shows it is normal to be drunk during parties	124	21
... shows it is normal to smoke cannabis during parties	115	20
... makes me feel like drinking alcohol	84	15
... makes me feel like smoking cannabis	70	12
Incentives (among people who had recognized at least one element of the campaign): "This campaign is encouraging you ...?"		
... to pay attention to friends who drink or smoke too much	533	92
... to say to a friend who has drunk or smoked too much during a party that he/she should slow down	519	89
... to think about one's use of alcohol or cannabis during parties	447	77
... to reduce one's use of alcohol or cannabis during parties	388	67

\* Respondents spontaneously cited one precise element of the campaign.

## Discussion

The prevention campaign "Amis aussi la nuit" was generally appreciated by young people as a successful social-marketing intervention.

Some campaigns aim to reduce alcohol and cannabis use in a normative way. Their effectiveness is usually limited as it is reported in a systematic review (Allara et al., 2015). Some other campaigns, including this one, aim to reduce alcohol- and cannabis-related risks instead of stigmatizing the use of these substances. They clarify the social norms about binge drinking and cannabis consumption without imposing them. The two American campaigns on reduction of risks related to cannabis use are in line with this approach (Kruger et al., 2021).

The message conveyed by the "Amis aussi la nuit" campaign was to take care of friends regarding alcohol and cannabis use during parties. Peer-support was considered as important by young people and using this approach was judged as relevant by participants to our study. They declared that they were empowered and that the campaign prompted them to pay attention to

their friends' consumption in order to avoid unpleasant incidents. This result was similar to findings from previous research on peer support (Zarzar et al., 2012).

Young people liked the fact that images were realistic and that they could identify with the characters. The campaign evoked some personal experiences and triggered the reflection on the value of friendship especially in a dangerous situation. Almost all participants liked the banners, stories and visual materials, but used youthful tone was defined as too caricatural and stereotyped. Participants recognized that the sender of the message was an institution, which was not really in tune with their language style.

Using an alarming approach seemed to engage young people, even if, for some of them, it could lead to a stigmatized vision of their conducts. Results from a previous study among University students (Dahl et al., 2003) showed that alarming content in advertising significantly increased their attention, benefited memory, and positively influenced behavior. However, previous research (Castillo-Manzano et al., 2012) reported some concern regarding the negative effects of using alarming advertising content. Thus, the use of alarming images and contents remains debatable.

As for target audience, medium-to-high users of alcohol and cannabis were the most respondent to the campaign, similarly to above-mentioned American studies (Gomberg et al., 2001; Perkins & Craig, 2006). This is an encouraging result, which implies that the campaign reached those more at risk. Concerned young adults identified more with the campaign characters which might influence the desired behavioral change, as supported by the social identification theory according to which identity (sociodemographic and economic status) increases the likelihood that information will be relevant to the individual, resulting in increased attention (Devlin & Dillard, 2016).

**Table 3.** Bivariate analysis between sociodemographic and use of substances variables, and main indicators for the campaign evaluation.

	To have recognized the campaign		To like the campaign*		To feel concerned by the campaign*		To identify oneself with the characters*	
	%	p-value	%	p-value	%	p-value	%	p-value
Sex		<.001		.321		.620		.963
Female	63		91		72		65	
Male	52		89		70		65	
Age		.004		.123		.807		.310
17–20 years-old	62		92		71		63	
21–25 years-old	53		89		70		67	
Alcohol intake (past week)		<.001		.282		<.001		<0.001
Exceed the French guidelines*	66		92		84		80	
Inline with the French guidelines	54		89		65		58	
Cannabis 30 last days		.054		.472		.019		.001
Yes	67		88		84		84	
No	57		91		69		63	
To have experienced bad consequences of binge drinking or cannabis smoking						<.001		<.001
Yes, myself or a friend or close people	69		95	.024	86		78	
No, never	54		89		65		60	

This campaign used a multi-channel approach to maximize its diffusion including posters, radio spots, posts in social networks, etc., thus incurring a high level of investment and costs. This approach is proved to be effective, as reported in a systematic review on health-related campaigns (Stead et al., 2019).

As suggested in previous research (Gough et al., 2017), social media are a convenient and effective means to reach young adults and disseminate health messages. Social networks have the capacity to reach a large and broad cross-section of young adults and to harness their attitudes and beliefs. This evaluation underlines the fact that this kind of campaigns should be concentrated on web-based supports for a longer period.

Concerning the evaluation technique, to the best of our knowledge, this is one of the few studies analyzing a social-marketing campaign through a mixed-methods design. Mixed-methods evaluations are considered as one of the most performing techniques to collect information from consumers (Cresswell et al., 2003). The quantitative analysis allows the general understanding of acceptability and reach of the campaign, while the qualitative analysis provides more specific and personal points of view around the campaign. Furthermore, the impact of selection biases and social desirability in semi-structured interviews and focus group are nuanced by the large quantitative survey sample.

This study is not without limitations. First, data were exclusively collected after the diffusion of the campaign and it is not possible to evaluate its effect on participants' health behavior, specifically intervening with friends or decreasing their consumption. Studies using a pretest-posttest design will help measure the effectiveness of similar campaigns on reducing alcohol-related risks. However, measuring the impact of the campaign on participants' health behavior was not the objective of this study, which aimed at describing the visibility and perception of the campaign among young adults. Second, qualitative data was collected exclusively from students of one French region (Bordeaux area), which hinders the possibility of providing a complete appraisal of the campaign in other regions in France where consumptions are varied. Despite the fact that qualitative samples are not meant to be representative, semi-structured interviews and focus groups with other young people (e.g. workers, unemployed) might provide a broader assessment of the campaign from different perspectives. Furthermore, for the qualitative evaluation, we only considered the binge drinking part of the campaign. Data concerning the cannabis-related campaign need to be collected to corroborate the findings concerning the binge drinking-related materials.

## Conclusion

The evaluation of the campaign suggested several recommendations for future campaigns on similar topics addressed to the same target audience. First, the campaign style and vocabulary should fit the target audience without being caricatural. We suggest to use short and punchy messages whose interpretation is clear and immediate. Second, campaigns should reflect real-world practices of young people in order to propel identification and

credibility. Third, campaigns should avoid a normative approach and leverage a peer-to-peer perspective. Fourth, implied behavior changes should have positive repercussions for the audience. Messages centered on the reduction of risks rather than on stigmatization are preferred. Fifth, visibility of the campaign should be maximized by using different channels, tones, styles, etc. In particular, when targeting young people, banners, stories, and posts on social media are the most effective campaign supports. Finally, it is important to involve the target audience from the early design of the campaigns in order to maximize their acceptability and effectiveness.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability statement

Data is available from the first author upon reasonable request.

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