

## Resilience-based alcohol education: developing an intervention; evaluating feasibility and barriers to implementation using mixed methods

Article (Accepted Version)

de Visser, Richard O, Graber, Rebecca, Abraham, Charles, Hart, Angie and Memon, Anjum (2020) Resilience-based alcohol education: developing an intervention; evaluating feasibility and barriers to implementation using mixed methods. *Health Education Research*, 35 (2). pp. 123-133. ISSN 0268-1153

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## **Resilience-based alcohol education: Developing an intervention; evaluating feasibility and barriers to implementation using mixed methods**

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### **ABSTRACT**

**Purpose:** Alcohol education must ensure that young people have appropriate information, motivation, and skills. This paper describes the fifth phase in a programme of intervention development based on principles of social marketing and intervention mapping. The aim was to enhance Drink Refusal Self-Efficacy (DRSE) and help develop skills for non-drinking or moderate drinking. **Methods:** We conducted a mixed-methods feasibility trial that measured intervention effects among 277 UK secondary school students aged 14-16, and used qualitative methods to explore four teachers' experiences of delivering the intervention.

**Results:** The intervention did not produce the desired changes in DRSE or alcohol use, but nor did it increase alcohol use. In the qualitative process evaluation, time constraints, pressure to prioritize other topics, awkwardness and embarrassment were identified as barriers to fidelitous delivery. A more intense and/or more prolonged intervention delivered with greater fidelity may have produced the desired changes in DRSE and alcohol use. **Conclusions:** This study illustrates how principles of social marketing and intervention mapping can aid development of resilience-based education designed to help students develop skills to drink moderately, or not drink. It also highlights the need to consider the constraints of micro-social (school) and macro-social (societal) cultures when designing alcohol education.

### **FUNDING**

This work was supported by the Medical Research Council (MC\_PC\_13079).

Excessive alcohol consumption can result in interpersonal difficulties, and acute and long-term health problems.<sup>[1,2]</sup> In the UK and other developed nations there is evidence of - and concern about - alcohol use among young people. Although the proportion of young people in the UK who do not drink alcohol has increased in recent years - up from 18% in 2005 to 29% in 2015<sup>[3]</sup> - it is also noted that many young people drink excessively: 20% of women and men aged 16-24 engaged in heavy episodic drinking in the last week, and they were more likely to do so than any adult age group.<sup>[4]</sup>

Research-based interventions can reduce young people's alcohol use.<sup>[5,6]</sup> However, many campaigns to counter excessive alcohol consumption are limited because they: focus primarily on physical risks and harms to health, which young people tend not to worry about; give too little attention to aspects of drinking that young people value, such as pleasure and social belongingness; emphasize individual responsibility for drinking and ignore the social context of drinking; do not specify behavioral strategies that could be used to reduce alcohol intake; and/or do not provide realistic models of behavior change.<sup>[7-11]</sup>

### Behavioral Skills and Resilience

Effective alcohol education must ensure that young people have the knowledge *and* skills needed to enact healthy choices about alcohol. When applied to alcohol, the Information-Motivation-Behavioral Skills (IMB) model emphasizes the need not only to improve knowledge of alcohol-related harms, but to enhance motivation to drink moderately, and to develop the requisite skills.<sup>[12]</sup> Motivation is necessary for action, but not sufficient.<sup>[13]</sup> Drink-Refusal Self-Efficacy (DRSE) - the capacity to resist temptation, expectation, or pressure to drink - is also required.<sup>[14,15]</sup>

A focus on self-efficacy and skills can be conceptualized within a resilience-building approach. A psychosocial resilience framework argues that it is important to develop skills, self-confidence, and protective mechanisms to help people to manage challenging situations.<sup>[16,17]</sup> In the context of youth drinking, the challenging context is a youth "binge-drinking" culture, the required self-confidence is DRSE, and the skills are alcohol refusal or management strategies. Within this resilience approach, treating young non-drinkers and moderate drinkers as "experts" in responsible drinking can facilitate the identification of effective skills and strategies that can be used to inform the development of interventions that focus on *how* to change behavior. These young people have developed sufficient motivation, DRSE, and skills to counter temptation, expectations, or pressure to drink, and are therefore an indispensable source of information and expertise.

Valuing the role of peers who have become “experts” through experience is central to peer education.<sup>[18]</sup> This approach has been applied with success in school health education.<sup>[19]</sup> It is often perceived as more engaging than teacher-delivered health education,<sup>[20,21]</sup> and may address young people’s concerns that alcohol education is patronizing or paternalistic.<sup>[7]</sup> Peer education can also provide opportunities for young people to develop a critical consciousness of existing social norms and may encourage the development of alternative norms.<sup>[22]</sup>

School-based social marketing can influence young people’s alcohol use.<sup>[9]</sup> Key elements of social marketing include: population segmentation to identify a target group; quantitative and/or qualitative research to understand people’s values and needs; demonstration of appealing rewards and pay-offs resulting from behavior change; analysis of appropriate communication channels; formative evaluation of interventions by the target audience; and implementation of the intervention. In the school context, it is important to consider not only the views of the target audience of young people, but also the opinions and emotions of the teachers and others who deliver alcohol education because they have a great influence on program delivery.<sup>[23]</sup> Indeed, studies of transdisciplinary initiatives highlight the need for effective collaboration with teachers during the conceptualization, development, implementation, and translation of interventions.<sup>[24,25]</sup>

Videos can be an effective social marketing medium, especially if they are tailored to the target audience, use gain-framed messages that emphasize the benefits of change, and model the desired behaviors.<sup>[26]</sup> However, there is a lack of research into the impact of video-based alcohol interventions for young people.

### Intervention development

The programme of work was funded by an intervention development scheme, so we report that process here. Figure 1 displays the development process for the intervention studied here. In **Phase 1**, 1412 16–21 year olds in South-East England completed an online questionnaire.<sup>[14]</sup> The finding that DRSE was a significant independent predictor of alcohol use meant that enhancing DRSE and related skills were important change objectives.

In **Phase 2**, we conducted semi-structured interviews with 25 moderate drinkers and non-drinkers purposively sampled from Phase 1. Analysis explored: (a) how young people experience non- and moderate drinking in a “binge drinking” culture; and (b) strategies for refusing alcohol.<sup>[27]</sup> They identified six themes around the core concept of finding the “sweet spot”, which could entail non-drinking or moderate drinking: “feeling good in the body”, “feeling like you can be who you are”, “feeling like you belong”, “making a free choice”, “enjoying the moment”, and “feeling safe and secure”. The findings of this UK study

reflected those of studies in other countries. [28,29]

In **Phase 3**, we designed an 11-minute video to prompt students to develop confidence and skills to find their “sweet spot”. It was shown to students and teachers for their feedback in 13 focus group with students aged 15-17 years and five focus groups with teachers and school leaders. Key findings were that students and teachers considered the “sweet spot” concept and videos to be a good basis for a realistic, useful behavior change framework, and that the videos were more believable, realistic, and useful than existing resources. [30]

In **Phase 4**, the findings from Phase 3 informed the revision of the videos and the addition of material to cover all six “sweet spot” themes. The intervention incorporated components derived from a taxonomy of types of behavior change techniques (BCTs) chosen because they were especially relevant to resisting alcohol in social contexts with peers. [31] The key BCTs indicated in square brackets were selected to address the issues identified in earlier phases of the programme of work: (1) providing information about the consequences of non-drinking, drinking, and drunkenness [social and environmental consequences]; (2) providing information about others’ beliefs about non-drinking, drinking, and drunkenness [information about others’ approval]; (3) facilitating identification of barriers and facilitators of non-drinking and moderate drinking [problem solving/coping planning]; (4) providing encouragement of healthier behavior [social support (general)]; (5) providing opportunities for beneficial social comparison [social comparison]; (6) modelling healthier behavior = [modeling the behavior]; (7) teaching use of plans, prompts and cues = [action planning]; and (8) planning social support [social support (practical)].

A health education expert developed a two-lesson package with lesson plans in which use of the video was embedded with other activities designed to enhance motivation and DRSE. The activities (mapped onto the relevant numbered techniques) included: quizzes (techniques 1/2) that assessed students’ knowledge of the risk associated with alcohol use and their perceptions of the social context of alcohol use; mind maps (techniques 3/4/5) that helped students to explore their own and others’ beliefs about (non)-drinking and drunkenness; discussion of case-studies of young celebrities who do not drink alcohol (techniques 5/6) that helped students to identify models of healthier behavior with whom they may be able to identify; discussion of personal values (techniques 1/3/5) to encourage students to understand their own values and their own “sweet spot”, and how to stay true to these; and generation of strategies for managing drinking opportunities (techniques 7/8) to help students to identify strategies and social contexts compatible with their “sweet spot”.

The phases described above can be aligned with the cumulative sequential Intervention Mapping framework: identifying unmet needs (a survey of beliefs and behaviours in Phase 1); specifying a logic model identifying change processes and objectives (using interviews designed to identify effective alcohol management strategies in Phase 2); using theory and evidence to design the intervention (development and evaluation of video resources in Phase 3); preparing and revising necessary materials and designing the intervention (revision and production of intervention materials in Phase 4); deploying the intervention and evaluating it using assessment tools matched to the defined change process (a feasibility trial in Phase 5).<sup>[32]</sup> To summarize, the intervention was developed by applying IMB model principles within a resilience-based approach, with a specific focus on DRSE. These principles were operationalized by applying specific change techniques using principles of Intervention Mapping and social marketing.

### The Present Study

This paper describes Phase 5 of the intervention development, implementation and evaluation process (Figure 1): a feasibility trial and qualitative process evaluation<sup>[33]</sup> of a school-based intervention to encourage moderate- and non-drinking among adolescents. The first aim was to implement the intervention. The second was to assess intervention effects on alcohol use and DRSE. The third was to identify facilitators of, and barriers to, faithful intervention delivery. Assessment of implementation is important because teachers not delivering all sessions exactly as they were intended can be a barrier to the effectiveness of theory-based interventions.<sup>[20,34]</sup> We adopted a mixed-methods approach to translating psychological theory to intervention development and evaluation.<sup>[30]</sup> In phase 5, it was important to address teachers' experience of delivering these lessons developed in Phase 3, because they influence fidelity of program delivery.<sup>[23-25]</sup>

## **METHODS**

The intervention was assessed with mixed-methods. A feasibility trial was conducted in 2016 involving four schools in South-East England: two classes were allocated opportunistically to the control condition, and three classes were allocated to intervention condition. This was accompanied by a qualitative process evaluation.<sup>[33]</sup> The study was approved by the first author's institutional review board. Control groups received "usual care" alcohol education: in the UK, it is expected that schools will deliver drug and alcohol education appropriate for their students, but there is no statutory curriculum. Intervention schools received "usual care" plus the "Sweet Spot" intervention. All lessons were delivered

by existing school staff, who received a training briefing from the second author to ensure that they understood the study aims, and how to deliver the classroom activities.

## **Surveys of students**

### ***Sample and Procedure***

The sample consisted of 277 students in years 10 and 11 (aged 14-16) for whom it was possible to match baseline and follow-up data (Intervention  $n = 103$ ; Control  $n = 174$ ). Surveys were matched by unique codes derive from immutable personal information - i.e., fragments of names and birth dates. Students for whom it was not possible to match data were those not present for both data collection sessions, and those who did not provide the information required to match data. An “opt out” consent process was used. Parents/guardians of students received information about the study and indicated if they did not want their child to be asked to complete the questionnaires. Students gave their own consent to complete the questionnaires. Those who took part could opt in to a prize draw for shopping vouchers.

### ***Materials***

Students completed computer-administered questionnaires at baseline and 3-month follow-up. Students used novel items to estimate the proportions of their friends who had: drunk alcohol in the last week; and been drunk in the last week (1 - all of them / 2 - most of them / 3 - some of them / 4 - none of them).

Students used novel items to report how frequently they drank alcohol when socializing with friends (1 - always / 2 - often / 3 - sometimes / 4 - rarely / 5 - never), and how important alcohol was for socializing with friends (1 - very important / 2 - important / 3 - neutral / 4 - unimportant / 5 - very unimportant). They also reported the number of times in the last month that they: drank alcohol; and got drunk.

Three elements of alcohol-related motivation were assessed using the next three months as the specified time frame: intention not to drink alcohol; intention to drink but not to get drunk; and intention to get drunk (1 - strongly intend not to do this ... 7 - strongly intend to do this). These measures were adapted from UK research with young people.<sup>[36]</sup>

**Drink Refusal Self-Efficacy:** 12 items assessed DRSE.<sup>[14]</sup> Responses were made using 7-point scales (1 - very difficult ... 7 - very easy) on three subscales: social pressure (e.g., “When someone offers me a drink”); emotional relief (e.g., “When I am worried”); and opportunistic drinking (e.g., “When I am watching TV”). These scales were correlated with each other, so a single 12-item scale was used ( $\alpha = .92$ ).

### ***Analytic approach***

The required sample size to detect small-moderate intervention effects ( $d = 0.35$ ) with 80% power and  $\alpha = .05$  was 102+ per group.<sup>[36]</sup> To counter inflation of the Type I error rate arising from eight between-group comparisons, the significance level was set at  $p < .006$  (i.e.,  $.05 / 8$ ). At baseline, the intervention group reported that a greater proportion of their friends had drunk alcohol in the last week or had been drunk in the last week (Table I). They also reported that they drank more frequently when socializing with friends, and that alcohol was more important to socializing. To acknowledge and account for these differences, intention to treat analyses using repeated measures analyses of covariance (ANCOVA) were used to test intervention effects: baseline measures of all variables were included as covariates. The measures of frequency of drinking and frequency of getting drink were positively skewed, with high kurtosis; however no transformations could correct this, because the most common response for both variable was “zero”, and the second most common was “one”. Although the measures of intention were not skewed, they were moderately platykurtic. There were no straightforward alternatives to the kinds of ANCOVA that were required to test for intervention effects.

### **Interviews with teachers**

Four teachers in intervention schools were invited to take part in individual or small-group interview at the end of the intervention. Sampling was opportunistic, and the final sample was determined by teacher availability during school visits. Interviews lasting approximately 40 minutes were conducted by the first two authors (one male, one female), who both have several years experience conducting qualitative data collection and analysis. Interviews were audio-recorded, and transcribed verbatim. When the accuracy of the transcripts had been verified, the transcripts were anonymized, and the recordings were erased.

Thematic Analysis was conducted in accordance with Braun and Clarke’s six-phase guide: 1) transcription of interviews; 2) reading transcripts to become familiarized; 3) coding text segments; 4) identifying themes; 5) reviewing themes; and 6) defining and naming themes.<sup>[37]</sup> The first author conducted initial coding and discussed the process of identifying and reviewing themes with the second author. The particular foci were feasibility of delivery, facilitators of delivery, and barriers to delivery.

## **RESULTS**

### **Surveys of students**

Before presenting the results, it is important to note that one intervention school had to be excluded from the study because the teachers did not deliver the intervention as intended. An



alternative school was recruited as a replacement.

At baseline, alcohol consumption in the last month was reported by 62% of students in the control group and 65% of the intervention group. Drunkenness in the last month was reported by 35% of the control group and 28% of the intervention group.

Table II displays comparisons of 3-month follow-up data for students in the control and intervention groups, after adjusting for responses at baseline. The intervention did not lead to significant changes in: importance of alcohol to socializing; frequency of drinking alcohol; frequency of getting drunk; motivation not to drink alcohol; motivation to drink but not get drunk; motivation to get drunk; or DRSE. These results were found in unadjusted analyses and in analyses adjusted for the baseline differences reported in Table 1.

### **Interviews with teachers**

Thematic analysis revealed four key influences on the absence of intervention effects: Fidelity of delivery; Inclusion within curricula; Discussing alternatives to abstinence; and Role relationships. These themes are described below and illustrated with quotes.

#### ***Fidelity of delivery***

Time was an important influence on fidelity of delivery. Some teachers reported that although the training informed them of the program aims, they needed more time than their timetables allowed to familiarize themselves with the materials and to use their understanding of their students to determine which materials and activities were most appropriate:

It needs a fair amount of preparation and thinking and planning about how you're going to deliver it. Um, there's quite a lot of material there. I'm not saying that's a bad thing [...] but it was quite snappy [snaps fingers]. It was one activity [snaps fingers] after another, video, discussions and so on. [School 1]

I just wasn't prepared enough. I didn't have enough subject knowledge. Um, I just hadn't had time to really sit down and read all of the materials and look at the videos that had been put - you know, I just didn't have time to do what I should have done before going into a lesson, and that's what made it sort of feel a little bit sort of rushed. [School 2]

Furthermore, in one school, the task of delivering the lessons was passed to a teaching assistant who was not a qualified health educator and who neither felt confident to deliver nor able to deliver all content as planned.

#### ***Inclusion within curricula***

Within school curricula, health education is given a low priority, with sessions being of short duration and/or spread over a term. This meant that - despite learning from earlier phases about how best to integrate lessons into the curriculum - it was not always possible for lessons to be conveyed in a way that delivered a concentrated, focused message. As noted below, the intervention was perceived to require more time for effective delivery. Furthermore, a fragmented approach to delivery without longer-term follow-up may have meant that students were not able to think deeply about and revisit issues, or to put strategies into practice:

We only see them once a fortnight ... it was effectively, like, over a 10-week period [...] PHSE lessons sometimes get took<sub>[sic]</sub> for other stuff [...] We don't have a lot of curriculum time, and I've got my own stuff I need to put in as well. [School 2]

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You need to be a pretty experienced teacher I would say to do it. Um, and there was a lot to do in 50 minutes. We didn't get it all done. You could have stretched it out over three lessons. Yeah, a longer period of time. [School 1]

### ***Discussing alternatives to abstinence***

It was noted in earlier phases that some teachers, school administrators, and parents may not appreciate an alcohol education message that is not just about abstinence, and which could be interpreted as condoning illegal activity.<sup>[27]</sup> This was also noted by some teachers - even those who acknowledged that many students drank:

Ethically, it would be a tough one, because for a lot of kids in a lot of schools they won't be drinking. So, what you're saying to them is "It's absolutely fine to go drinking, but you've just got to reach the sweet spot". [School 1]

### ***Role relationships***

In contrast to a mutually assumed "don't ask, don't tell" approach, the program required students to talk openly about actual or potential alcohol use. Some teachers indicated that ongoing relationships with students made such discussion awkward or embarrassing:

I'd find it a bit tricky to be talking with kids who are under-aged drinkers about their drinking behavior. I know they do it, you know, we all know they drink. But I guess in my position I would just feel a bit awkward being open about it [...] Some teachers are quite relaxed about talking about how kids behave outside school. I don't. I'm a bit of an old fuddy-duddy. I know they do it. If it comes up, I kind of don't get cross about it or anything like that. I just move on. [School 1]

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There is sometimes a student with, um, family background that makes it a bit

problematic. [School 2]

Consequently, some teachers suggested that the program may be best delivered by people who do not have an ongoing teaching relationship with students:

If we do get people to talk about alcoholism or addiction or smoking or sexual behavior or whatever, we get people from outside to do that. [School 1]

## **DISCUSSION**

The first aim - implementing the intervention - was achieved. The second aim was to measure intervention effects. The intervention did not produce the desired changes in the putative mechanism of change (DRSE) or the behavioral outcomes. However, nor did the “permissive” message lead to significant increases in intended or actual alcohol use. It is important to note that there was a significant baseline difference between control groups and intervention groups in terms of the normative context of alcohol intake. Although these differences were controlled for in analyses, they may not have been only a statistical anomaly to be controlled for: they may have affected the impact of the intervention, because drinking appeared to be a stronger part of the social fabric in intervention schools, and change at the individual level may, therefore, have been more difficult.

The third aim was to identify facilitators of, and barriers to, fidelitous intervention delivery. The qualitative process evaluation suggested that a more intense and/or more prolonged intervention delivered with greater fidelity may have produced the desired changes in DRSE and alcohol use. Fidelity of implementation proved problematic. Indeed, one intervention school had to be excluded from the study (and replaced by another) because teachers did not deliver the intervention as intended. In the other schools, the program was not always delivered according to protocol.

Time constraints, pressure to prioritize other topics, and awkwardness and embarrassment arising from ongoing student-teacher relationships were all identified as barriers to effective alcohol education in general, and fidelitous delivery of the intervention in particular. Similar barriers have been noted in other health domains, including sexuality and nutrition.<sup>[20,38,39]</sup> Although teachers expressed enthusiasm about, and support for the intervention principles and methods, they also identified some potential barriers in Phase 4. However, they appear to have underestimated the extent to which these barriers would affect implementation of the intervention. This highlights the need for effective transdisciplinary collaboration across all phases to identify facilitators and barriers.<sup>[23-25]</sup> It is also important to note that each school may have its own specific needs, demands, barriers, and facilitators, and that this variation

can create challenges to standardised delivery of interventions, especially if the programme is delivered by teachers rather than individuals employed to deliver the intervention.

To be most effective, the “sweet spot” intervention may need to be delivered by people other than school staff who fully understand and support the program philosophy and its mode of delivery, and are given the time and resources required to deliver it well. Such trained educators could also be better placed to get involved with students in discussions of actual and intended drinking behavior than teachers, who often described being reluctant, embarrassed, or awkward in such discussions. Health education programs delivered by visiting educators may have larger effects on adolescents’ behavior than those delivered by “entrenched” teachers.<sup>[40,41]</sup> Peer education is often considered more appealing than teacher-delivered health education,<sup>[19,21]</sup> and may address young people’s views that alcohol education is patronizing.<sup>[7]</sup> Peer education can also provide opportunities to encourage young people to critique current social norms and to develop healthier alternatives.<sup>[22]</sup> This perspective can be aligned with a resilience framework that highlights broader protective social mechanisms as well as individual capacities.<sup>[42]</sup> The findings of this study suggest that, whoever delivers an intervention, it is important that they agree with the program philosophy, are properly trained in the program materials and methods, and have sufficient time and support to deliver the intervention as it is designed to be delivered.

A strength of this study was applying a cumulative sequential process of development involving key stakeholders applying principles of social marketing,<sup>[9]</sup> intervention mapping,<sup>[32]</sup> and process evaluation.<sup>[33]</sup> However, the study did have some limitations. The sample was relatively small. This reflected the difficulty of recruiting schools that were able to add the two-lesson intervention within timetables that had little room for new material. However, the sample size for this feasibility trial was sufficient to detect small-moderate intervention effects.<sup>[36]</sup> It would have been helpful to have tried to quantify implementation fidelity. However, given that this was a feasibility study, any analyses would have lacked statistical power. A better-resourced trial would need temporal, physical, and human resources to recruit a larger sample from a broader geographic range. The questionnaire assessed minimal personal demographic data - sex, age, and ethnicity- because it was believed that adolescents could report these with greater accuracy than parental education, household income, etc. A full intervention trial would need to compare the demographic profiles of samples in control and intervention groups, and control for these if necessary.

The study employed some measures of alcohol consumption that differed from the standardised measures employed in many studies of older drinkers.<sup>[43]</sup> For example, this study

used a consumption frequency measure, whereas others prefer quantity-frequency measures. The measure of frequency of drunkenness did not include a standardised definition: this was deliberate, because drunkenness is a subjective state,<sup>[44,45]</sup> and the analyses involved within-subjects comparisons. The lack of a standardised definition should not have affected the findings, as there is no reason to assume that there would have been systematic within- or between-group differences in stability or change in subjective definitions of drunkenness.

In summary, this study illustrates how a systematic mixed-methods approach to intervention design and outcome and process evaluation can aid the refinement of school-based alcohol education interventions. The results provided generally positive information about the perceived relevance and acceptability of the program. However, the findings highlight the difficulties of providing interventions that meet the needs of students within the constraints of micro-social (school) and macro-social (societal) cultures of alcohol use. The findings also emphasize the need for schools to give sufficient time and support for effective education to reduce alcohol-related harm.

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**Table I** Comparison of control and intervention groups at baseline

		<b>control (n = 174)</b>	<b>intervention (n = 103)</b>	
		Mean (SD)	Mean (SD)	<b>difference</b>
Sex	Male	51.7%	37.9%	$\chi^2_{(2)} = 5.58, p = .061$
	Female	46.6%	61.2%	
	Other	1.7%	1.0%	
What proportion of your friends have drunk alcohol in the last week? <sup>a</sup>		2.07 (0.82)	2.48 (0.98)	$F_{(1,275)} = 13.83, p < .001$
What proportion of your friends have been drunk in the last week? <sup>a</sup>		1.84 (0.80)	2.58 (1.18)	$F_{(1,275)} = 38.94, p < .001$
How frequently do you drink when you get together ... with your friends? <sup>b</sup>		2.37 (1.10)	2.92 (1.35)	$F_{(1,275)} = 13.53, p < .001$
How important is alcohol to the activities you do with your friends? <sup>b</sup>		2.26 (1.00)	2.96 (1.37)	$F_{(1,275)} = 23.89, p < .001$
In the last month, how many times did you drink alcohol?		1.52 (2.11)	1.84 (2.48)	$F_{(1,275)} = 1.36, p = .244$
In the last month, how many times did you get drunk?		0.63 (1.32)	0.62 (1.50)	$F_{(1,275)} = 0.00, p = .984$
Motivation for next 3 months: Not drink alcohol <sup>c</sup>		3.40 (2.09)	3.51 (2.18)	$F_{(1,275)} = 0.20, p = .655$
Motivation for next 3 months: Drink but not get drunk <sup>c</sup>		3.27 (1.93)	3.56 (1.95)	$F_{(1,275)} = 1.48, p = .225$
Motivation for next 3 months: Get drunk <sup>c</sup>		2.85 (1.99)	2.50 (1.91)	$F_{(1,275)} = 2.13, p = .146$
Drink Refusal Self-Efficacy <sup>d</sup>		5.20 (1.62)	5.21 (1.57)	$F_{(1,275)} = 0.04, p = .846$

a - range 1: all of them ... 4 - none of them;

b - range: 1 - always ... 5 - never;

c - range: 1 - strongly intend not to ... 7 - strongly intend to;

d - range: 1 - very difficult ... 7 - very easy



**Table II** Comparison of control and intervention groups at 3-month follow-up (repeated measures ANCOVA)

	<b>control</b>	<b>intervention</b>	<b>difference</b>	<b>difference - adjusted*</b>	<b>effect size</b>
	(n = 174)	(n = 103)			
	Mean (SD)	Mean (SD)			
How frequently do you drink when you get together ... with your friends? <sup>a</sup>	2.48 (1.08)	2.94 (1.20)	$F_{(1,275)} = 0.63, p = .428$	$F_{(1,271)} = 0.03, p = .852$	$p\eta^2 < .01$
How important is alcohol to the activities you do with your friends? <sup>a</sup>	2.25 (1.03)	3.03 (1.31)	$F_{(1,275)} = 0.54, p = .463$	$F_{(1,271)} = 2.46, p = .118$	$p\eta^2 = .01$
In the last month, how many times did you drink alcohol?	1.84 (2.40)	2.11 (2.45)	$F_{(1,275)} = 0.04, p = .842$	$F_{(1,271)} = 0.37, p = .543$	$p\eta^2 < .01$
In the last month, how many times did you get drunk?	0.71 (1.32)	0.65 (1.27)	$F_{(1,275)} = 0.12, p = .729$	$F_{(1,271)} = 0.01, p = .904$	$p\eta^2 < .01$
Motivation for next 3 months: Not drink alcohol <sup>b</sup>	3.61 (2.17)	3.12 (2.07)	$F_{(1,275)} = 4.06, p = .045$	$F_{(1,271)} = 1.91, p = .168$	$p\eta^2 = .01$
Motivation for next 3 months: Drink but not get drunk <sup>b</sup>	3.60 (2.00)	3.83 (1.86)	$F_{(1,275)} = 0.06, p = .804$	$F_{(1,271)} = 0.77, p = .380$	$p\eta^2 < .01$
Motivation for next 3 months: Get drunk <sup>b</sup>	3.32 (2.10)	3.44 (2.18)	$F_{(1,275)} = 3.09, p = .079$	$F_{(1,271)} = 2.34, p = .127$	$p\eta^2 < .01$
Drink Refusal Self-Efficacy <sup>c</sup>	5.28 (1.46)	5.22 (1.55)	$F_{(1,275)} = 0.17, p = .680$	$F_{(1,271)} = 0.25, p = .617$	$p\eta^2 < .01$

a - range: 1 - always ... 5 - never;

b - range: 1 - strongly intend not to ... 7 - strongly intend to;

c - range: 1 - very difficult ... 7 - very easy

\* adjusted for baseline differences between control and intervention groups