



**Evaluated Interventions to Reduce Alcohol-Related Harm among  
Young People  
Piloting for the Resource on Alcohol and Youth Projects  
(RAYPRO) Database**

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## **EXECUTIVE SUMMARY**

### **Background: Terms of Reference**

The European Alcohol and Health Forum (EAHF) Task Force on youth-specific aspects of alcohol recommended the development of a database resource. The function of the database is to facilitate the sharing of information on good practice projects aiming to reduce or prevent alcohol-related harms among young people. The working title for this database is the Resource on Alcohol and Youth Projects Database or RAYPRO.

The Institute for Social Marketing at the Open University and University of Stirling was commissioned to conduct and report on a pilot exercise to support the development of RAYPRO. The pilot comprised a scoping study, the compilation of 15 case studies drawn from the scoping study and a narrative report on the research process. Collectively, these tasks explore and describe work in the field to be covered by RAYPRO and draw some preliminary learning points on the potential and limitations of the database to promote sharing of good practice.

### **Methods**

A scoping literature search identified peer reviewed papers, published 2000-2010 that evaluated European interventions aiming to reduce alcohol-related harms among young people. Young people were defined as 27 years of age or under, and interventions were assessed as relevant if they met one of the key intervention themes identified by the EAHF Task Force on Youth Specific Aspects of Alcohol, namely:

- Theme 1: curb under-age drinking;
- Theme 2: curb drink-driving by young people;
- Theme 3: educate and empower young people on alcohol issues;
- Theme 4: promote responsible selling and serving of alcohol to young people;
- Theme 5: protect young people from the consequences of alcohol abuse by others.

All included studies were published in peer reviewed academic journals. Each included study was relevance screened but was not quality assessed by the research team. In this report interventions are reported individually, using the measures used by the authors of the published evaluations. Results for each theme for at least one of the three specified age ranges (0-13, 14-17 and 18-27 years) are summarised in Data Extraction Tables.

Fifteen interventions were selected from the scoping study results for the case study analysis and reporting. A minimum of two interventions for each theme were selected. The number of interventions selected for case study analysis was in proportion to the total number of interventions identified for each of the five themes and age ranges. Additionally, the selection aimed to achieve some representation across all the geographic regions (Northern Europe, Eastern Europe and Mediterranean/Southern Europe), although this was constrained by substantial differences in the numbers of publications captured in the scoping search. In addition to information presented in original academic papers, supplementary information was sought from grey literature, personal informants and other relevant academic papers. The case studies are presented individually under headings that reflect the RAYPRO database structure.

## **Results**

The scoping search generated a total of 64 papers covering 53 interventions. Forty two interventions were North European; two had been implemented in Eastern Europe; seven were conducted in Mediterranean countries; and two multi-country interventions spanned regional boundaries.

Twenty interventions relevant to theme one and age range 14-17 years were identified. Thirteen reported a measurable impact and seven a very weak or no effect on alcohol related behaviours. Five interventions reported a significant impact on alcohol related attitudes, and one was found to have no effect, with the remainder not reporting data. Two interventions described an impact on alcohol related knowledge, and the remaining eighteen interventions did not report on knowledge change. Case studies for five of the interventions are presented.

Five interventions relevant to theme two for age range 18-27 years were identified. Four reported significant impact, and one little or no effect on alcohol related behaviours. One intervention was reported to have significantly impacted alcohol related attitudes and knowledge. Case studies for two of the interventions are presented.

All three age bands were included in the scoping results for theme three. Thirty eight interventions were identified as relevant. Twenty four reported some measurable short or long term impact on alcohol related behaviours; ten reported very weak or no effects; four did not report on behaviours. Ten reported a significant impact on alcohol related attitudes, and three had little or no effect, with the remainder not reporting data. Eight reported a significant impact on alcohol related knowledge; two reported little or no effect, and the remainder did not report on alcohol related knowledge. Case studies for four of the interventions are presented.

Seven interventions were identified as relevant to theme four and age bands 14-17 and 18-27 years. Four reported some impact on alcohol related behaviours and three reported no effect. None reported data on alcohol related attitudes, or alcohol related knowledge change. Case studies for two of the interventions are presented.

Two studies were identified for theme five and age band 0-13 years. One reported outcome data in relation to alcohol related behaviours and found a significant impact. The other reported a significant impact on alcohol related attitudes. Neither evaluation reported data relating to alcohol related knowledge. Case studies for two of the interventions are presented.

There was some overlap of studies relevant to themes. Fourteen were relevant to both theme one and theme three; four were relevant to both theme one and theme four; one study was relevant to theme three and theme four. In total, 19 studies were relevant to more than one theme.

## **Conclusion**

The pilot exercise offered some insights on database utility and its potential role in sharing of good practice and inter-project learning:

Academic databases provide both a comprehensive source of the most up to date and historic data, as well as acting as a filter and quality control tool. On the whole, the pilot found peer reviewed sources of information to be more analytic and critical than grey literature sources.

The benefits of peer reviewed data sources were undermined to some extent by lack of detailed reporting in the published articles of project or programme implementation. Grey literature however was not found to be a particularly rich source of this information either.

Triangulation of information from both peer reviewed and grey literature sources, where available, did provide a more complete overview of intervention implementation and impact. The rapid increase in digital information sources, such as websites, electronic documents and powerful search engines has greatly enhanced the accessibility of grey literature.

Personal information sources, when available, were helpful in providing a more complete picture and as a source of additional information and critique.

Process data is very relevant to transferable practice but is frequently unavailable. Cost, timelines, and formative research are most noticeably under-reported. Context, theoretical rationale and implementation personnel details are also under-reported, but to a lesser extent.

The scoping study and case study reports illustrate there is a body of useful information on intervention approaches targeting young people and information that offer learning points for good practice. Process features that may enhance the utility of the evidence base are: clearly defined quality standards to be eligible for inclusion in the database; building in mechanisms for updating of project data; encouraging open communication about failures as well as successes; encouraging reporting of process as well as outcome data.

## 1. INTRODUCTION

The European Alcohol and Health Forum (EAHF) Task Force on youth-specific aspects of alcohol recommended the development of a database resource that could be used to share information on good practice projects intended to reduce alcohol-related harms among young people. The working title for the initiative during the preparation of this report is the Resource on Alcohol and Youth Projects (RAYPRO).

The Institute for Social Marketing at the Open University and University of Stirling was commissioned to conduct and report on a pilot exercise to support the development of RAYPRO. The results are presented for each of the five themes for specified age ranges, as summary results in data extraction tables, followed by selected case studies. A supplementary process report (Section 8) provides additional information on data screening, handling and presentation issues.

The overall aim of the pilot report is to explore the breadth and depth of evidence available to the RAYPRO database. The pilot provides insight and learning on applying relevance and quality assessment criteria and methods; and the process of collating and presenting information appropriate for the database. The pilot also explores and comments on the reporting of process and results of interventions, and their evaluation.

Young people were designated as any participants under the age of 27 years, and were further sub-divided into three specific age bands, provisionally selected as field ranges for the RAYPRO database: 0-13, 14-17 and 18-27 years.

The five key intervention themes for RAYPRO were identified by the EAHF Task Force on Youth Specific Aspects of Alcohol, namely -

1. Curb under-age drinking.
2. Curb drink-driving by young people.
3. Educate and empower young people on alcohol issues.
4. Promote responsible selling and serving of alcohol to young people.
5. Protect young people from the consequences of alcohol abuse by others.

## **2. SCOPING THE PEER REVIEWED EVIDENCE BASE**

### **2.1 Introduction**

The search strategy used to identify literature on European interventions to reduce alcohol-related harms amongst young people published in peer reviewed journals during 2000-2010 is described below.

Results of the scoping survey for each theme for selected age ranges are summarised in data extraction tables. A total of 53 evaluated interventions reported in 64 papers are included in the report.

Nineteen included interventions were relevant to more than one theme (see Figure 1 below). The summary information for the intervention is included under the first listed theme in the tables it is relevant to. Reference details with signposting to original table entry are included under all further themes it is relevant to.

The tables provide summary information on target group, setting, nature and objective of the intervention, along with evaluation design and outcomes measured. Specific results for interventions targeting the three sub-divided age ranges are presented for each theme. Results for interventions targeting age range 0-13 years are reported for theme five. Interventions targeting age range 14-17 years are reported for theme one. Evaluation of interventions targeting age ranges 18-27 years are reported for theme two. Interventions targeting age ranges 14-17 and 18-27 years are reported for theme four. Interventions targeting all three age ranges, i.e. 0-13, 14-17 and 18-27 years are reported for theme three.

### **2.2 Objectives**

This selective reporting approach was adopted to provide a concise overview of the breadth of data available, and the nature of that data – for example geographic representation; type of outcome measures used; the range of methodologies and objectives of interventions. The more detailed case studies were selected from the results of the scoping exercise. The scoping exercise also generated learning on the process of identifying and quality assessing potentially suitable projects. This learning combined with that from the case study reporting is reported in Section 8.

Interventions that reported any changes in behaviour or behaviour-related outcomes on young people within the five thematic areas were the focus of the scoping search. Each thematic area, specifying the age ranges included is reported in the Data Extraction Tables.

For interventions that include but do not specifically target young people within the specified age ranges, inclusion was contingent on reported results being broken down into relevant age bands and a majority of participants falling within the age range bands. For example, an intervention that reported results for 20-30 year olds would be included but an intervention targeting 25-35 year olds would not.

## **2.3 Methodology**

### **2.3.1 Academic Databases and Search Terms**

The Web of Science® academic literature database, accessed via ISI Web of Knowledge<sup>SM</sup> (a subscription access service from Thomson Reuters), is made up of four subject indices: Science, the Social Sciences, the Arts & Humanities and the Conference Proceedings Citation Indices with content in +57 languages. Using this database enabled the search to be limited to European region interventions and to capture non-English language original publications with English language abstracts.

Relevant alcohol terms and terms for behaviours related to the five thematic areas were combined with intervention terms. Searches were run for these in the title, abstract and keyword fields of the database records. Appendix 1 contains a copy of the search terms and search strategy. The date parameters for searches were from the beginning of 2000 to date, with the database searches run on 16<sup>th</sup> March 2010. The results were refined by countries/territories to exclude non-European papers. There were no language restrictions, although most non-English language papers had an English abstract.

The results were downloaded and combined into one database using the bibliographic software Reference Manager® v.11. The contents were de-duplicated.

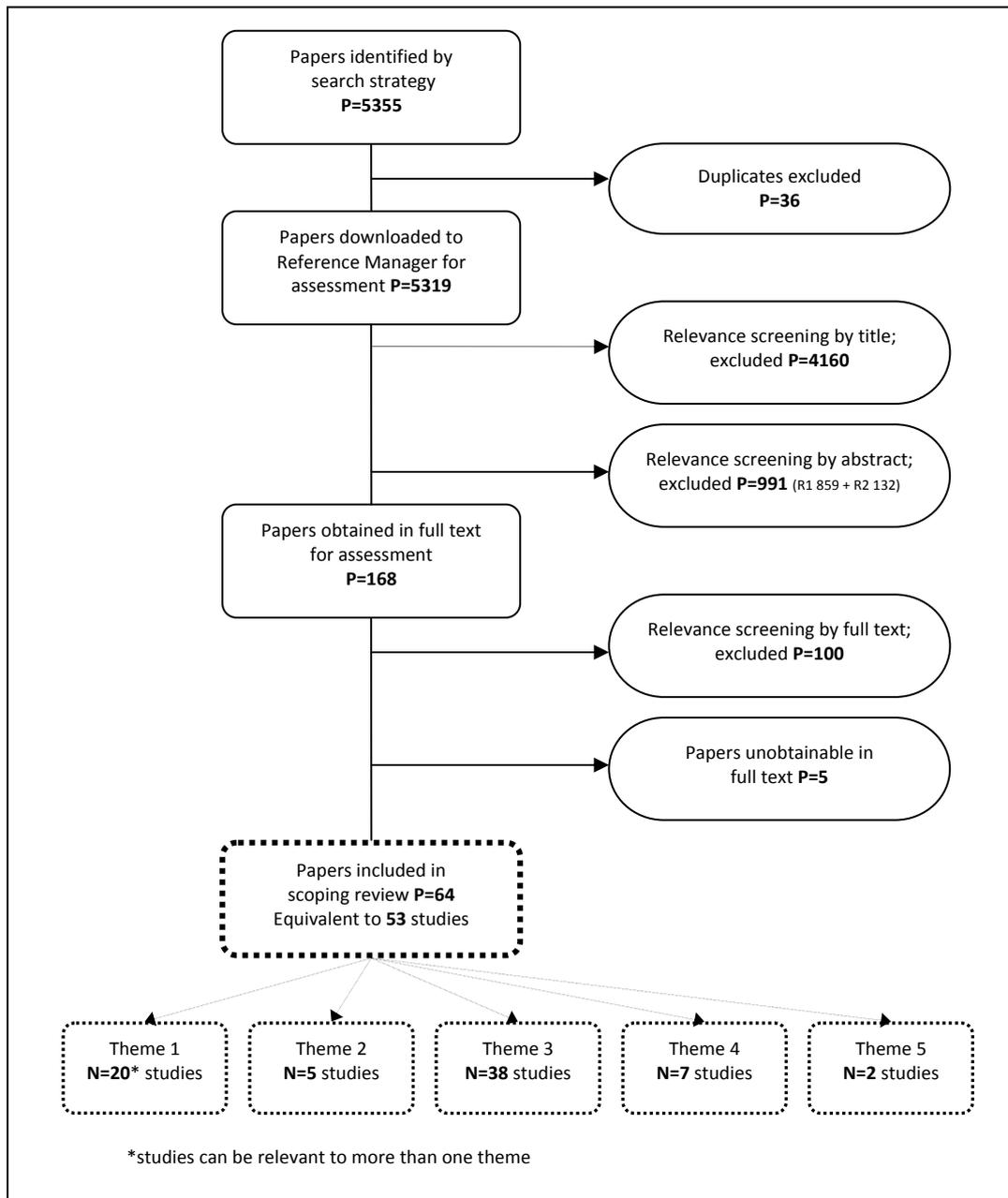
### **2.3.2 Selection of Literature for Inclusion – Relevance Screening**

To be included in this scoping exercise, a paper had to:

- be published since the beginning of 2000 in a peer-reviewed journal, and have an English language title and abstract;
- report on an evaluation of an intervention targeting one or more of the five thematic areas (the potential to: curb under-age drinking; curb drink-driving by young people; educate and empower young people on alcohol issues; promote responsible selling and serving of alcohol to young people; protect young people from the consequences of alcohol abuse by others) in one or more European countries;
- report on a study sample aged  $\leq 27$  years and approximately match the specified age band(s) for each of the five themes. For interventions that include, but do not specifically target young people inclusion criteria specified that a majority of participants should be within the age range bands (see section 2.2, above);
- report on an evaluation using one of the following study designs: randomised control trials (RCT), quasi-experimental studies (e.g. non-RCTs and before-and-after studies) and observational studies, including case studies, where the effect of an intervention is explored.

Papers were excluded if they were economic evaluations, pharmacological intervention evaluations, evaluations of diagnostic, assessment or screening tools for measuring alcohol outcomes (e.g. AUDIT, BASIC, CAGE), prevalence studies, correlation studies with no intervention, reviews of primary studies and review of reviews.

**Figure 1: Flowchart of study selection process**



Results from the searches were initially appraised for relevance to the scoping exercise using their title and then a second appraisal of the remaining results by title and abstracts (by one reviewer). A second reviewer then appraised the titles and abstracts. Figure 1 shows the study selection process. All records passing this stage were obtained in full text. The full text studies were screened by two reviewers, covering a proportion each. The final dataset of 64 papers covering 53 evaluation studies was reviewed by two reviewers with 100% agreement on what should be included. A list of papers unobtainable in full text format in the timescale, and thus not assessed, appears at the base of the references list.

### **2.3.3 Selection of Literature for Inclusion - Quality Screening**

All the studies presented in the report are peer reviewed and published in academic literature<sup>1</sup>, but were not quality assessed by the report authors. Decisions about inclusion in the final report were based on relevance criteria and papers were not subject to further inclusion appraisal based on quality of research design. Further appraisal would have resulted in more studies being excluded from the final report.

### **2.3.4 Data Extraction and Synthesis**

Data extraction of the studies was conducted by two reviewers. Only data relevant to alcohol knowledge, attitude and behavioural or behaviour-related outcomes are presented in the table. Some studies reported other intervention outcomes not directly relevant to the themes of the scoping exercise, such as indicators of mental health; these are not reported.

The quality of data and level of detail provided in the studies included in the report was not sufficient to conduct a combined quantitative analysis, and was not within the specified scope of the research. Interventions are reported individually, using the measures used by the evaluation authors.

## **2.4 Summary of Results**

### **2.4.1 Summary of Evaluations Reported for Interventions to Curb Under-age Drinking (for ages 14-17 years)**

Twenty interventions were identified. Of these thirteen had a measurable impact, and seven had a very weak or no effect on alcohol related behaviours. Five interventions had a significant impact on alcohol related attitudes, and one was found to have no effect, with the remainder not reporting data. Two interventions described an impact on alcohol related knowledge, and the remaining eighteen interventions did not report on knowledge change.

### **2.4.2 Summary of Evaluations Reported for Interventions to Curb Drink-Driving by Young People (age band 18-27 years)**

A total of five interventions were identified. Of these four had a significant impact, and one had little or no effect on alcohol related behaviours. One of these interventions had a significant impact on alcohol related attitudes and knowledge, with the remainder not reporting any data.

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<sup>1</sup> The Thomson Reuters Editorial Development group selects journals for inclusion in Web of Knowledge<sup>SM</sup> databases using a rigorous evaluation process. Application of the peer review process by the journal is a basic standard. (For further information please see: <http://isiwebofknowledge.com/benefits/essays/journalselection/>, last accessed 16<sup>th</sup> April 2010.)

### **2.4.3 Summary of Evaluations Reported for Interventions Educating and Empowering Young People on Alcohol Issues (age bands 0-13, 14-17 and 18-27 years)**

Thirty eight interventions were identified as relevant. Of these, twenty four had some measurable short or long term impact; ten were reported to have very weak or no effects on alcohol related behaviours; four did not report on behaviours. Ten had a significant impact on alcohol related attitudes, and three had little or no effect, with the remainder not reporting data. Eight interventions had a significant impact, two had little or no effect, and the remainder did not report on alcohol related knowledge change.

### **2.4.4 Summary of Evaluations Reported for Interventions Promoting Responsible Selling and Serving of Alcohol to Young People (age bands 14-17 and 18-27 years)**

A total of seven interventions were identified as relevant to theme and age bands selected. Four reported some impact, and three reported no effect on alcohol related behaviours. None of the seven included interventions reported data on alcohol related attitudes, or alcohol related knowledge change.

### **2.4.5 Summary of Evaluations Reported for Interventions Protecting Young People from the Consequences of Alcohol Abuse by Others (age bands 0-13 years)**

Two studies were identified under this theme and this age group. One reported outcome data in relation to alcohol related behaviours and found a significant impact. The other reported a significant impact on alcohol related attitudes. Neither evaluation reported data relating to alcohol related knowledge.

## **2.5 Conclusions**

The relevance/selection criteria applied to the scoping search generated a total of 64 papers covering 53 intervention evaluation studies. Collectively, results from studies of the 53 included interventions identified across all five themes were -

- Nine reported significant effects on alcohol related knowledge; two reported small or no effects on alcohol related knowledge.
- Thirteen reported effects on alcohol related attitudes; three reported no effects on alcohol related attitudes.
- Twenty seven reported measurable immediate and/or sustained positive effects on alcohol related behaviours. Seven of the studies reporting both short and longer term effects found effects not sustained at all. All other studies reporting longer term follow up results found effects diminished over time.
- Ten reported a small, very weak or partial positive effect on alcohol related behaviours.
- Ten reported no effects on behaviours.

Nineteen studies were reported under two themes, reflecting the breadth of objectives of a large proportion of interventions, especially those that fitted a description of “with the potential to curb under-age drinking” (18 interventions listed under theme 1 were included under other themes also).

As summarised and illustrated above, many interventions included in the report found short-term effects that were not sustained. Where programme effects were monitored over time, these were frequently found to reduce or disappear after a period of time post-intervention, although there are some notable exceptions. These are described in detail in the Data Extraction Tables at the beginning of sections 3 to 7.

### 3. THEME 1: CURB UNDER-AGE DRINKING

#### 3.1 Data Extraction Tables

##### Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>An adaption of Petry's therapy manual for alcoholism for adolescents</b></p> <p><b>Delivery year not stated</b></p> <p><b>Becker <i>et al.</i> 2003</b></p> <p><b>Germany</b></p>	<p>One 14-year old, alcohol dependent boy with social and emotional behavioural disorders.</p> <p>Germany</p>	<p>A multi-dimensional therapeutic intervention to tackle alcohol dependency adapted to the situation and needs of an individual adolescent. It included medical, socio-therapeutic and behavioural aspects.</p> <p>The intervention used worksheets and practical material from Petry's book "Alkoholismustherapie" (Alcohol Therapy), adapted for adolescents. The book's motivation strategy is divided into modules:</p> <ul style="list-style-type: none"> <li>• information brokering</li> <li>• behaviour diagnosis</li> <li>• cognitive restructuring</li> <li>• risk of relapse (with relapse prevention).</li> </ul> <p>The intervention was initially delivered on an inpatient basis, then on an out-patient basis, with the support of clinicians and carers.</p> <p>Full physical examination was provided with the provision of medical care as required (i.e. dental care and vitamin supplementation).</p>	<p><b>Evaluation Design:</b> A narrative report outlining the impact of the intervention on the subject.</p> <p><b>Knowledge:</b> Increased knowledge of the physical effects of alcohol increased during therapy, as well as his knowledge of the organs involved in alcohol metabolism was reported.</p> <p><b>Behaviours:</b> Short term effects not sustained. After approximately 3 month's inpatient treatment, the subject managed to abstain from alcohol for 5 weeks whilst attending weekly outpatient appointments. He was also able to regularly attend school during this period with the help of a carer.</p> <p>The subject lost interest in therapy and stopped attending outpatient appointments when a doctor and a carer involved in his therapy changed jobs. After a short period of relapse, he was briefly re-engaged in therapy, but was subsequently transferred to a secure youth welfare institute with expertise in adolescent alcohol disorders.</p>
<p><b>Alcohol policy changes (tax and import quotas)</b></p> <p><b>2003- 2005</b></p> <p><b>Bloomfield <i>et al.</i> 2009</b></p> <p><b>Denmark</b></p>	<p>≤15 year olds</p> <p>Danish National Board of Health hospitals (including in-patient, out-patient treatment and emergency rooms)</p>	<p>Three alcohol policy changes in Denmark:</p> <ul style="list-style-type: none"> <li>• A 45% cut in excise taxes on spirits (equivalent to a price reduction of ~25% on cheaper brands) on 1<sup>st</sup> October 2003.</li> <li>• An increase in travellers' alcohol import quotas within the EU on 1<sup>st</sup> January 2004.</li> <li>• A 13% cut in excise taxes on wine and beer on 9<sup>th</sup> January 2005.</li> </ul>	<p><b>Evaluation Design:</b> Interrupted time series analysis (ARIMA model) was used to assess the impact of the policies on the number of hospital admissions for alcohol intoxication (acute ethanol poisoning) of ≤15 year olds, ≥16 year olds, and for the number of violent assaults reported to the police for January 2000 to December 2005.</p> <p><b>Behaviours:</b> Reduced tax on spirits resulted in increased alcohol poisoning. The model implies a statistically significant 26% increase in the number of acute alcohol intoxication hospitalisations of ≤15 year olds after the 2003 spirits tax reduction. A non-significant effect of 17.6% increase in hospitalisations of ≤15 year olds after the increase in travellers' quotas is implied. (No significant increase in violent assaults or acute intoxication hospitalisation among adults was found.)</p>

## Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Personality-targeted, group intervention</b></p> <p><b>Delivery year not stated</b></p> <p><b>Conrod <i>et al.</i> 2007</b></p> <p><b>UK</b></p>	<p>Years 9 and 10 adolescents (median age 14 years) with personality risk factors for substance misuse (<math>N=368</math>) (using the SURPS scale).</p> <p>13 secondary schools in 10 London boroughs</p>	<p>A manual-based intervention, run as two 90-minute group sessions at participants' schools. Included real-life scenarios shared by high personality risk UK youths. First session included a goal-setting exercise, psycho-educational strategies about their personality variable (as positioned on the SURPS scale: negative thinking, anxiety sensitivity, impulsivity or sensation seeking); and analysis of a personal experience using a cognitive-behavioural model. The second session allowed participants to identify and challenge "cognitive distortions" specific to their personality type on the SURPs scale.</p>	<p><b>Evaluation Design:</b> An RCT with <math>N=199</math> randomly assigned to the intervention group and <math>N=169</math> to the control group following baseline measures of 1. personality risk and 2. drinking outcomes (drinking status, alcohol use and binge drinking). 83% of intervention and 81% of control groups completed 6-month follow-up (both measures) and 76% intervention and 78% control groups completed 12-month follow-up (both measures). Group differences were tested by multi-group analysis.</p> <p><b>Behaviours:</b> The intervention was effective for one personality types, but ineffective for three other personality types also targeted. Adolescent drinkers in the intervention group with a sensation seeking (SS) personality were 45% and 50% less likely to binge drink (<math>\geq 5</math> drinks (boys) or <math>\geq 4</math> drinks (girls) on one occasion) at 6 months (OR=.45) or 12 months (OR.50) respectively, than SS drinkers in the control group. 93% SS drinkers in the control group were binge drinking at 6-month follow-up compared to 39% of SS drinkers in the intervention group; a difference maintained at 12 months. The intervention did not significantly impact on the on the relationship of the other 3 personality factors to growth in drinking.</p>

## Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>“Healthy School and Drugs” project</b></p> <p><b>Delivery year not stated</b></p> <p><b>Cuijpers <i>et al.</i> 2002, Smit <i>et al.</i> 2003</b></p> <p><b>Netherlands</b></p>	<p>High school students from 9 intervention and 3 control schools; N=1930 at baseline (mean age 12.4 (SD=.5) years) and N=1405 at third follow-up 3 years later in Cuijpers <i>et al.</i> 2002 sample; and 1720 school students across six experimental schools and four control schools assessed in four consecutive years from ages 12-15 in the Smit <i>et al.</i> 2003 sample; all from 5 regions of municipal health services in the Netherlands</p>	<p>“Healthy Schools and Drugs” is a multi-component, school based prevention programme for high school students aged 12-18 years. Over 3 years, 5 components are implemented: 1. a coordinating committee made up of school staff, a health official and parent; 2. Educational lessons for 12-15 year-olds covering tobacco, alcohol, marijuana, ecstasy and gambling via an information, health attitude and refusal skills approach; 3. Formulation of school regulations; 4. Early detection and support for students with drug problems; and 5. Parental involvement – e.g. parents’ evenings, newsletters.</p> <p>The intervention is informed by social modelling theory and work on resistance training with participants first receiving information on alcohol and its use, then they are encouraged to reflect on their own attitude towards alcohol use, adjust their risk perception and understand the role of peer pressure and their own social competence in relation to starting to drink or experimenting with drink, and finally encouraged to improve decision making skills. Participating schools also implemented a range of rules to regulate alcohol use. Also various materials are provided by the Netherlands Institute of Mental Health and Addiction.</p>	<p><b>Evaluation Design:</b> Cuijpers et al 2002: A quasi-experimental design comparing N=1156 students at intervention schools with N=774 students at control schools with measures taken before intervention and at 1, 2 and 3 years later. The alcohol measures taken were: self-reported current use and frequency, number of alcoholic drinks per week and per occasion; knowledge of health effects and self-efficacy for estimated success of not drinking in different social occasions.</p> <p>Smit et al 2003: Prospective quasi-experiment controlled study. Data collected from participants on their substance use across four consecutive years.</p> <p><b>Knowledge:</b> Significant effects were found for knowledge about the health effects of alcohol at 2nd and 3rd follow-up.</p> <p><b>Attitudes:</b> A significant effect of the intervention on attitude towards alcohol was found at the 2nd follow up but not after 1 year or 3 years. A significant effect on self-efficacy towards alcohol was found after 1 year only.</p> <p><b>Behaviours:</b> The intervention had a significant effect on alcohol use at all 3 follow-ups. Significant effects of the intervention were found for the frequency of alcohol use and the number of drinks per week at year 3 (<math>p &lt; .01</math>); and on the number of alcohol drinks per instance after 1 and 3 years (<math>p &lt; 0.001</math>) compared to controls. As expected the proportion of students using alcohol increased during the study.</p> <p>The intervention effects on the prevalence of alcohol use remained significant over the years after the start of the intervention (for <math>t_1</math> OR 1.71, 95% CI 1.23-2.43, <math>p = 0.04</math>; for <math>t_2</math> OR 1.75, 95% CI 1.34-2.34, <math>p = 0.04</math>; for <math>t_3</math> OR 1.56, 95% CI 1.21-2.41, <math>p = 0.04</math>), indicating a significant and persistent effect of the intervention on alcohol drinking prevalence rates.</p>

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<p><b>“Familias que Funcionan” (Families that work) programme</b></p> <p><b>Delivery year not stated</b></p> <p><b>Errasti Pérez <i>et al.</i> 2009</b></p> <p><b>Spain</b></p>	<p>380 pupils aged 10-14, from 4 state secondary schools.</p> <p>Cudillero, Gijón, Pola de Siero and Oviedo in Asturias, Spain.</p>	<p>The “Families that Work” programme consisted of a family based drug use prevention intervention adapted from the North American ‘Strengthening Families Program 10-14.’</p> <p>The programme was delivered through schools, with the school sending parents’ information on the intervention. A meeting between parents, teachers and the team of specialist monitors delivering the intervention was then held. Pupils and (at least one) parent then attended a series of seven main sessions and four maintenance sessions of the prevention programme.</p>	<p><b>Evaluation Design:</b> A self report questionnaire based survey was administered at baseline, and again at follow up 1 and 2 years after the intervention. Only 26 of 380 invited families attended some of the sessions and of those 17 attended the main maintenance sessions resulting in a small sample size to assess outcomes. Differences of "drug use" including alcohol use in adolescents were assessed between the pre-test (baseline) and the follow-ups carried out one and two years after the intervention, and between the first and second years of follow-up. (Note that scores are based on perceptions adolescents have about their parents’ attitudes and behaviour.)</p> <p><b>Attitudes:</b> The intervention improved parental attitudes to the use of alcohol by their children and improved family bonding, indicating an increase in protective factors.</p> <p><b>Behaviours:</b> Consistent attendance did have positive effects on behaviours. The program reduced the increase in the consumption of alcohol, commonly observed during adolescence. Attrition rates were very high and the programme is assumed to be ineffective for non-attenders.</p>
<p><b>“Programa de Entrenamiento en Habilidades de Vida” (Life Skills Training) programme</b></p> <p><b>1995-1999</b></p> <p><b>Gómez-Fraguela <i>et al.</i>, 2007<sup>2</sup></b></p> <p><b>Spain</b></p>	<p>14-16 year old students (mean age 14.32 years) from 5 public schools (N=1029).</p> <p>Santiago de Compostela, Galicia, Spain</p>	<p>An adapted version of Botvin’s Life Skills Training, translated into Spanish, with a sixth component added with a focus on leisure activities. The other five components covered in 45-50 minute sessions were information about substances use (prevalence and effects), self esteem, decision making skills, coping with anxiety and social skills training. Sixteen sessions were given in the first year of the programme and 9 booster sessions were given in the second year.</p>	<p><b>Evaluation Design:</b> A non-RCT, with students assigned to one of three groups, the LST programme taught by teachers (N=235), the LST programme taught by researchers (N=309) and the control group (N=485). Post test follow-up at 1, 2 and 3 years. Self-report surveys asked for frequency of monthly beer and spirits consumption separately, using a scale of none, once or twice a month, several times a month, several times a week or every day.</p> <p><b>Behaviours:</b> Short term effects were found not to be sustained. At the 1<sup>st</sup> follow-up, a significantly lower beer consumption was found for students taught the LST programme by researchers compared with control students (p&lt;0.01) and a significantly lower spirits consumption was found for students taught the LST programme by teachers compared with control students (p&lt;0.01). No significant differences were found between either group of intervention students and the control students at the 2 and 3 year follow-ups for either type of drink.</p>

<sup>2</sup> Also consulted the translated data extracted in Jones L, James M, Jefferson T, Lushey C, Morleo M, Stokes E, Sumnall HR, Witty K, Bellis MA (2007). *A review of effectiveness and cost effectiveness of interventions delivered in primary and secondary schools to prevent and/or reduce alcohol use by young people under 18 years old*. London: National Institute for Health and Clinical Effectiveness.

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Underage alcohol selling in supermarkets and liquor stores under the Alcohol Licensing &amp; Catering Act</b></p> <p><b>2000-</b></p> <p><b>Gosselt et al. 2007</b></p> <p><b>Netherlands</b></p>	<p>150 supermarkets (which sell &lt;15% ABV drinks only) and 150 liquor stores from 3 representative Dutch regions, including rural and urban areas, visited at different times of the day, Monday to Friday during Dec 2005 to Feb 2006..</p> <p>Amsterdam (west), Enschede (north-east) and Eindhoven (south), Netherlands</p>	<p>The Alcohol Licensing and Catering Act prohibits retailers to sell milder alcoholic beverages (&lt;15% alcohol) to &lt;16 year olds and strong alcohol beverages (≥15% alcohol) to &lt;18 year olds. Since 2000 retailers are obliged to ask for identification (ID) and verify age when young people buy alcohol.</p>	<p><b>Evaluation Design:</b> A cross-sectional “mystery shopper” study using 4 adolescents from each of the 3 regions who were judged to look typical of their age group. Following a strict protocol, the 15 year-olds visited 150 supermarkets and 75 liquor stores to purchase a &lt;15% ABV drink and a snack; the 17 year-olds visited 75 liquor stores to purchase a ≥15% ABV drink and snack. If asked, mystery shoppers gave a false age but had to show their real ID if asked. At the end of the transaction, when payment is requested, the shopper reveals they only have €0.50 and chooses to purchase the snack only.</p> <p><b>Behaviours:</b> Sales to under age test youth were found to be very high. 86% of all (N=300) buying attempts succeeded. For supermarkets, 88% of all purchase attempts succeeded. A significant difference was found in liquor stores between 15 year-olds successful attempts to purchase a milder alcohol beverage (77%) and the 17 year-olds successful attempts for stronger alcoholic beverages (89%) (p&lt;.05). The success rate for 17 year-olds in liquor stores did not differ from 15 year-olds in supermarkets. In 72% of the store visits, mystery shoppers were not asked their age or for ID. When vendors asked shoppers’ age (4% visits), all purchase attempts succeeded. When vendors asked for ID (12% visits), or first asked the mystery shoppers’ age and then asked for ID (12% of the visits), the overall success rate dropped to 36% and 43% respectively. ID checks had some preventive effect, but 39% of buying attempts succeeded even when under-age ID was shown.</p> <p>Female mystery shoppers were significantly more successful in purchase attempts than males (p&lt;.001) and vendors were significantly more likely to ask for age (p&lt;.001) and ID (p&lt;.001) for males than female adolescents.</p>

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<p><b>Motivational Interviewing (MI) delivered by youth workers</b></p> <p><b>Delivery year not stated</b></p> <p><b>Gray et al. 2005</b></p> <p><b>UK</b></p>	<p><i>N</i>=162 students (mean age 17 years) recruited “naturalistically” from 3 Further Education (FE) colleges, with <i>N</i>=140 providing usable follow-up data. In the UK, FE colleges are “non-traditional educational settings, serving largely those of post-compulsory schooling age (16–18 years old) distinct from universities”.</p> <p>London, UK</p>	<p>Five participating practitioners – 4 youth workers (2 each from rural and urban areas) and 1 addictions researcher – were trained in MI techniques focussed on reducing alcohol drinking, cigarette and cannabis smoking over 2 2-day blocks, held 2 weeks apart 1 month prior to the data collection starting. MI techniques include: reflective listening, asking open-ended questions, providing summaries and affirmations to minimize resistance and elicit change talk. Students in the intervention received a MI single session from the practitioner. Interventions delivered by youth workers were on average briefer (20 mins) than those delivered by the researcher (35 mins) (<math>P &lt; 0.001</math>), however no differences detected in any outcomes between youth workers and the researcher.</p>	<p><b>Evaluation Design:</b> A quasi-experimental design comparing the intervention group (<i>N</i>=48) with an assessment-only control group (<i>N</i>=92). Recruitment and baseline data were collected using a self-completion questionnaire and a follow-up self-completion questionnaire was used 3 months later. Alcohol measures were: number of days in last month alcohol was consumed; units of alcohol drunk in previous week; perceived personal importance and existence of interpersonal problems related to alcohol; and frequency of getting drunk among alcohol drinkers.</p> <p><b>Attitude:</b> No effects on perceived importance of alcohol.</p> <p><b>Behaviours:</b> No effects on behaviour found. In the 48 interventions for which there were follow-up data, drinking alcohol was discussed during 85% (<i>N</i>=41) of intervention sessions. The prevalence of current alcohol consumption remained stable between baseline and follow-up for both groups and there was no change in the number of units consumed in the previous week for either group. Controlling for other potential confounders, the MI intervention group drank on average 1.97 fewer days (unstandardized <math>B = 0.30-3.65</math>, <math>P=0.021</math>) in the month prior to follow-up than the control group. A greater proportion of the control group reported having stopped or cut down their drinking for 1 week or longer however this was not statistically significant (<math>P &gt; 0.1</math>).</p>

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<p><b>The Social and Emotional Training (SET) programme</b></p> <p><b>2000-2005</b></p> <p><b>Kimber &amp; Sandell 2009, Kimber <i>et al.</i> 2008</b></p> <p><b>Sweden</b></p>	<p>For this evaluation, <math>N=41</math> classes from 2 intervention schools and <math>N=14</math> classes in 2 matched control schools in Greater Stockholm, covering grades 7 to 9 (13-14 years to 15-16 years).</p> <p>Botkyrka Municipality, Greater Stockholm, Sweden</p>	<p>The SET programme is delivered by class teachers once a week for grades 6-9 for 45 minutes (and twice a week for grades 1-5). It is guided by detailed manuals for the teacher (1 per grade) and a workbook for students of each grade. SET focuses on developing the following: self-awareness, managing one's emotions, empathy, motivation and social competence. There are no explicit references to substance use in the SET manuals. Teachers use modelling and role-play in the exercises, and students must practice at home also. Interaction between school and parents is emphasized.</p>	<p><b>Evaluation Design:</b> A quasi-experimental longitudinal design with 2 intervention schools and 2 control schools receiving no intervention. A self-report questionnaire was used for all students who remained in the classes from outset of the SET programme, at baseline in August 2000 then in May of each year, i.e. from 2001 (t1) until 2005 (t5). Alcohol measure was a frequency of use scale "How often do you drink beer, cider, wine or spirits?" (nine-step scale, from "Do not drink" to "Every day or every other day").</p> <p><b>Behaviours:</b> Some positive effects on moderate and light alcohol users. There was a significant intervention-by-years interaction (<math>p&lt;.025</math>) on light and moderate drinkers (38% <math>N=25</math>). From a low level of use, there was a slight but consistent decrease over time in the SET group, but an irregular upward movement in the control group. The proportion of adolescents who drank alcohol more than six times a year or more decreased from 3% to 0% in the SET group, but increased from 0% to 38% in the control group over five years. There was a general decrease in consumption in both the SET and control group for largely <i>moderate and heavy alcohol users</i> (62%, <math>N=407</math>) (<math>p&lt;.01</math>). The proportion of adolescents who drank alcohol more than six times a year or more decreased from 54% to 33% over five years.</p>
<p><b>The Örebro Prevention Programme</b></p> <p><b>Delivery year not stated (2.5 years duration)</b></p> <p><b>Koutakis <i>et al.</i> 2009</b></p> <p><b>Sweden</b></p>	<p>900 pupils aged 13-16 in junior high schools in Örebro, Sweden.</p>	<p>Quasi-experimental design, featuring intervention and control groups; targeting drinking among 13-16 year olds. The programme used a family based approach.</p> <p>In the Örebro Prevention Programme, parents of school pupils received information by mail, and during parent meetings in schools delivered by trained teachers, urging them to maintain strict attitudes against youth alcohol use, and to encourage their youth's involvement in adult-led organized activities such as sports, hobbies, religious activities, music, theatre, art and politics.</p> <p>The costs of implementing the programme were negligible, especially when compared to other parenting programmes due to the simple design, and low training costs.</p>	<p><b>Evaluation Design:</b> Pre and post (at 18 and 30 months) test evaluation was conducted using classroom administered self report questionnaires for children, and postal questionnaires for parents.</p> <p><b>Attitudes:</b> The implementation successfully influenced parents' attitudes against underage drinking.</p> <p><b>Behaviours:</b> Some positive effects on youth drinking behaviours were found. At the end of the programme, drunkenness and frequent drunkenness were lower in the intervention group than in the control group. At post-test, youths in the intervention group reported less drunkenness and delinquency. Effect sizes were 0.35 for drunkenness and 0.38 for delinquency, described as low-medium to medium by the authors. The intervention did not achieve increased youth participation in organized activities. Findings were similar for boys and girls, and for early starters.</p>

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<p><b>Single-Session Motivational Interviewing Trial</b></p> <p><b>Delivery year not stated</b></p> <p><b>McCambridge &amp; Strang 2004</b></p> <p><b>UK</b></p>	<p>200 young people (ages 16-20) currently using illegal drugs recruited by peers and assigned to intervention (n=105) or control condition (n=95) attending 17 further education colleges in inner London, UK.</p>	<p>1 hour single session MI (motivational interview) adapted from literature. MI seeks to promote reflection on drug use and its personal consequences in the context of the values and goals of the individual. Initial discussions involved the entire range of drugs being used by the subject, after which there was a focus to particular areas of risk, problems or concerns. With all recipients, eliciting of positives and negatives about each drug followed rapport-building. The relationship between actual and potential drug use consequences and non-drug values and goals was subsequently explored. Various counseling micro skills were used, including reflective listening, affirmation, open questions and summaries, in order to elicit ‘change talk’</p> <p>The goal was to encourage participants to think and talk about risk in ways conducive to the identification of problems and concerns and to reflection on options for change—to stimulate new thinking on personal drug use, which may realize itself in behavioural change. Discussion of decisions to change a specific aspect of drug use, including the use of decisional balance exercises, took place with approximately half the 105 participants randomized to the MI study condition.</p>	<p><b>Evaluation Design:</b> Design cluster randomised control trial. Changes in self reported alcohol use were measured. Measurement was conducted at recruitment and follow-up interview 3 months later.</p> <p><b>Behaviours:</b> Small to moderate effects on alcohol consumption were reported. In comparison to the control group, those randomized to motivational interviewing reduced their use of alcohol, mainly through moderation of ongoing use rather than cessation. Effect size was 0.34 (0.09–0.59). For alcohol the effect was greater among heavier users of these drugs and among heavier cigarette smokers.</p>

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<p><b>4 psychosocial educational intervention programmes</b></p> <p><b>Delivery year not stated</b></p> <p><b>Moral Jiménez et al. 2009</b></p> <p><b>Spain</b></p>	<p>N=141 13-16 year-old pupils (mean age 14.24 years), from a larger sample of secondary school pupils, deemed to be at risk regarding their measured permissive attitudes in relation to their younger age.</p> <p>Asturias, Spain</p>	<p>Four psycho-social interventions with the same core components; various informative activities and group discussions regarding myths associated with alcohol, risk perception, illusions about user invulnerability, and focus on improving social and resistance skills.</p> <ul style="list-style-type: none"> <li>• Testimonies from alcoholics and experts were included in discussions in the <i>Family Intervention Group</i>. Discussions with parents were encouraged.</li> <li>• <i>Expert Group</i> sessions were delivered by a specialist in drug addictions. Informative and awareness activities that focused on dispelling false beliefs about alcohol use/abuse and risk perceptions were encouraged.</li> <li>• The <i>Information Group</i> received only the basic informative sessions delivered by trained teachers without any further contributions</li> <li>• The <i>Basic Awareness Group</i> had sessions focusing on the risks of alcohol consumption with cognitive restructuring techniques by means of group discussion overseen by a professional in drug addictions.</li> </ul> <p>Interventions took place over the course of eight sessions, held once a week.</p>	<p><b>Evaluation Design:</b> Quasi-experimental design with 4 intervention groups and 1 control group: Family Intervention Group (N=31); Expert Group (N=30); Information Group (N=22); Basic Awareness Group (N=30) and Control Group (N=28). Measures taken at baseline with follow-ups at 2, 7 and 12 months.</p> <p><b>Attitudes:</b> Short term effects on attitude were found, but were only sustained by 12months in 1 of the 4 intervention groups. Significant reduction in positive attitudes to drinking alcohol at 2 and 7 months post intervention in the Family Intervention, Expert and Basic Awareness groups compared to baseline, Significant reduction in positive attitudes was found at 12 months in the Basic Awareness Group, but not in the other intervention groups. No significant changes in attitude to drinking were found at 2, 7 or 12 month follow-up in the Information Group. There was an increase in positive attitudes to drinking at 2, 7 and 12 month follow-up in the Control Group compared to baseline, reflecting commonly observed trends in adolescence. Effects on willingness to experiment with alcohol were not significant in any of the four intervention groups or the Control Group at any follow-up time, with the exception of a significant reduction in willingness to experiment in the Family Group at 7 month follow-up and in the Basic Awareness Group at 2 month follow-up.</p> <p><b>Behaviours:</b> Sustained effects on behaviour were found for all intervention groups. Overall, there was a significant reduction in the quantity of alcohol consumed per week at 2, 7 and 12 month follow up compared to baseline.</p>

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<p><b>Pakka Project and Regionsprosjeket</b></p> <p><b>2006-2007</b></p> <p><b>Rossow <i>et al.</i> 2008</b></p> <p><b>Finland and Norway</b></p>	<p>Under age appearing &lt;18s in Finland (n=290) across 66 shops with 290 purchase attempts, and Norway (n=170)</p>	<p>Pakka project: The Pakka project was delivered between 2004 and 2008 in two Finnish regions. The intervention had 3 main goals: (1) to decrease heavy drinking occasions and related acute problems; (2) to decrease under-age drinking; and (3) to develop a model for a sustainable prevention structure at the local level. This consisted of 3 interacting core components: (1) community mobilization and policy changes; (2) youth social alcohol access, consumption and problems; and (3) responsible beverage service and selling.</p> <p>Following intervention purchase attempts were made in supermarkets and grocery stores (80%), kiosks and gas stations (13%), and monopoly outlets (7%).</p>	<p><b>Evaluation Design:</b> Quasi-experimental design.</p> <p><b>Behaviours:</b> Some reductions in underage sales in monopoly outlets were reported. Finnish results: salespeople asked the buyers to present an ID card in 57% of the cases, and in 99% of cases the buyers were denied purchase of alcohol. In 43% of the attempts the salespeople did not ask for an ID card and sold alcohol, and in 1% of the attempts the salespeople asked for an ID card but sold alcohol anyway. Bivariate analyses showed that the proportion of buyers who were asked to present an ID card was significantly higher in monopoly outlets compared to other types of outlets, and the proportion who succeeded in purchasing alcohol was significantly higher in grocery stores, kiosks and petrol stations (46%) compared to monopoly outlets (14%).</p> <p>Norwegian Results: The Norwegian buyers were asked to present an ID card in 50% of the attempts, which in the vast majority of cases led to denial of purchase. A little over half (55%) of the purchase attempts resulted in purchase of beer.</p>
<p><b>The Trelleborg Project</b></p> <p><b>1999-2003</b></p> <p><b>Stafström and Östergren 2008, Stafström <i>et al.</i> 2006</b></p> <p><b>Sweden</b></p>	<p>1376 9<sup>th</sup> graders (aged 15-16), in schools in Trelleborg, Sweden.</p>	<p>A community based intervention to reduce harmful drinking behaviour, and reduce alcohol related accidents and violence, based on the community systems approach. A community led policy programme was implemented which aimed to develop alcohol and drug prevention strategies for children and adolescents, decrease heavy episodic drinking, delay the onset of alcohol consumption, and achieve changes in attitudes towards alcohol and drinking behaviour.</p> <p>As part of the wider community programme a school policy and action plan on alcohol and drug management was implemented. A comprehensive evidence based curriculum on alcohol was introduced in schools, including a textbook. A curriculum for parents was also devised, as well as a mail out of information leaflets to parents.</p>	<p><b>Evaluation Design:</b> Cross sectional survey data was collected using a classroom administered self report questionnaire at baseline in 1999, in 2000 and 2001 and post intervention in 2003.</p> <p><b>Behaviours:</b> Persistent positive effects on alcohol behaviours and alcohol related adverse outcomes were reported. Logistic regression analysis indicated a decrease in harmful drinking behaviour and alcohol-related accidents and violence when comparing baseline with post intervention measurements.</p> <p>Consumers of alcohol decreased from 81.7% in 1999 to 67.2% in 2003. The proportion of students who experienced “excessive drinking” dropped from 37.2% in 1999 to 23.7% in 2003. The rate of those reporting “heavy episodic drinking” during the previous month decreased from 44.5% in 1999 to 27.5% in 2003.</p> <p>The odds ratio for alcohol-related accidents was significantly lower, comparing the baseline in 1999 with follow up in 2003 (OR 0.5, 95% CI 0.27–0.76). There was also an indication that self-reported alcohol-related violence had decreased between 1999 and 2003 (OR 0.7, 95% CI 0.43–1.01).</p>

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<p><b>Learning to Drink</b></p> <p><b>Delivery year not stated</b></p> <p><b>Thush <i>et al.</i> 2005, 2007</b></p> <p><b>Netherlands</b></p>	<p>107 14-18 year-old adolescents (61 male/46 female) recruited through schools in the Maastricht area of the Netherlands.</p>	<p>Respondents were assigned to intervention and control groups (receiving no intervention). The program “Learning to Drink” consisted of 7 weekly sessions and 1 parent session delivered in a bar-lab at the Maastricht University. The sessions consisted of 6 90 minute group sessions and 1 final individual motivational interview. The intervention sessions were carried out by 4 counsellors all trained in motivational interviewing.</p> <p>The sessions inducted participants by giving them information on what a standard alcoholic drink means and asking them to keep a drinking diary. Subsequent sessions included a social expectancy challenge involving receipt of an alcoholic drink or a placebo and then information on alcohol expectancies, a sexual expectancy challenge, information and discussion of drinking norms, perceptions of risk factors relating to alcohol and refusal efficacies training. The 7<sup>th</sup> individual motivational interview session offered tailored feedback and advice.</p> <p>During the parent session background information about adolescent alcohol use was given, suitable norms for moderate drinking were given and discussed and it was specified how parents could identify heavy alcohol use and alcohol related problems by their children and communication strategies.</p> <p>Control group respondents received an information sheet but no intervention sessions. All participants completed a series of self-report questionnaires during the study.</p>	<p><b>Evaluation Design:</b> Randomised clinical trial design with intervention and control groups and data collection at pre-test, post-test and 6 and 12 months following intervention.</p> <p><b>Attitudes:</b> Some positive effects were observed on several of the targeted cognitive determinants.</p> <p>Perception of risk factor: A 2(Time)×2(Condition) Mixed ANCOVA controlling for age and gender revealed a significant Time×Condition effect for the perception of risk factors, <math>F(1, 92)=19.85, pb.001</math>. The experimental group showed a significant increase in perceived risk factors between the fifth and the sixth session, <math>t(47)=5.99, pb.001</math>, whereas the control group did not, <math>t(47)=.93, pN.50</math>.</p> <p>Alcohol outcome expectancies: A 2(Time)×2(Condition) Mixed ANCOVA controlling for age and gender revealed a significant time×condition effect for high dose positive alcohol expectancies, <math>F(1, 91)=5.72, pb.05</math>. Between the second and fourth session, a significant decrease in high dose positive expectancies was found in the experimental group, <math>t(49)=-3.35, pb.01</math>. There was no evidence for a significant change in high dose positive expectancies in the control group, <math>t(44)=.40, pN.50</math>.</p> <p>The experimental group showed a significant decrease in low dose positive expectancies between the second and fourth session, <math>t(49)=-3.97, pb.001</math>, the control group did not, <math>t(44)=-1.07, p=.29</math>.</p> <p><b>Behaviours:</b> No effects on behaviour. The experimental group did not show a significant difference in decrease of drinking at post-test compared with the control group.</p>

## Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>“Unplugged” the EU-Dap school prevention programme</b></p> <p><b>2004-2005</b></p> <p><b>Vigna-Taglianti <i>et al.</i> 2009, Faggiano <i>et al.</i> 2008, 2007</b></p> <p><b>Austria, Belgium, Germany, Greece, Italy, Spain and Sweden</b></p>	<p>7079 school pupils at baseline and of 6359 pupils (3324 boys and 3035 girls) at follow-up, aged 12-14 from 170 schools, in 7 countries.</p> <p>Wien, Austria; Gent, Belgium; Kiel, Germany; Thessaloniki, Greece; Turin, Novara and Aquila, Italy; Bilbao, Spain; and Stockholm, Sweden.</p>	<p>A school-based drug abuse prevention programme developed in the EU-Dap study to prevent the use of tobacco, alcohol and drugs at post-test. Three intervention arms were devised, delivering the curriculum only, curriculum with the involvement of peers and activities, and curriculum with parental involvement and activities. The control group received no intervention activities.</p> <p>The programme consisted of a 12 hour classroom based curriculum delivered by trained teachers, based on the social influences approach. This included sessions on critical thinking, decision making, problem solving, creative thinking, effective communication, interpersonal relationship skills, self awareness, empathy, coping with emotions and stress, normative beliefs, and knowledge about the harmful effects of drugs.</p> <p>In the peer arm, 2 students elected as class representatives conducted short meetings with classmates to monitor reflections on, and experiences of, the programme. In the parental arm, parents of the students participated in 3 interactive workshops as part of the programme.</p>	<p><b>Evaluation Design:</b> Cluster randomised control trial. A pre test survey was carried out at baseline, and a post test survey was conducted in all schools 3 months after the end of the programme using a self completed questionnaires.</p> <p><b>Knowledge, Attitudes, and Skills:</b> Changes were treated as secondary outcomes and not reported in the paper.</p> <p><b>Behaviours:</b> Short term effects were found. These were not enhanced by the additional peer or parental inputs. Programme effects were found for episodes of drunkenness in the past 30 days (POR=0.72; 0.58–0.90 for at least one episode, POR=0.69; 0.48–0.99 for three or more episodes).</p> <p>Adding parental or class peer components to the curriculum did not appear to increase effectiveness. However small sample sizes limit an assessment of their added effect.</p> <p>At the follow-up survey, a significant association between the programme and a lower prevalence of any drunkenness – adjusted PRO - 0.64 (0.49 to 0.85) and frequent drunkenness - – adjusted PRO - 0.68 (0.45 to 1.04) was found among boys, but not among girls.</p>
<p><b>Health Promotion for Adolescents in Primary Care</b></p> <p><b>1999</b></p> <p><b>Walker <i>et al.</i> 2002</b></p> <p><b>UK</b></p>	<p>1516 teenagers aged 14-15 years across eight general practices in Hertfordshire, England.</p>	<p>Teenagers in the intervention group received an appointment for a 20 minute consultation with the GP practice nurse to discuss their health and health related behaviour. Nurses received training for the study which aimed to improve adolescent self efficacy for behaviour change. Teenagers completed baseline and satisfaction questionnaires. Control group teenagers received usual care and baseline questionnaires sent to their home. Follow up questionnaire surveys were issued to both intervention and control groups at 3 months and 12 months and invitations for a consultation were also sent after 12 months.</p>	<p><b>Evaluation Design:</b> Randomised controlled trial, with participants randomised to a consultation (intervention) or usual care (control). Questionnaires completed at baseline, 3 months, and 12 months.</p> <p><b>Behaviours:</b> Some positive short term effects were found but were not found to be sustained. At baseline 970 teenagers completed questionnaires; 35% had been drunk in the previous three months, More intervention group teenagers reported positive movement in stage of change for diet and exercise and in at least one of four behaviours (diet, exercise, smoking, drinking alcohol) at 3 months (41% v 31%, P &lt; 0.01), but this did not persist at 12 months. There was marginally more positive change in actual behaviour by intervention teenagers at 3 months (16% v 12%, P=0.06).</p>

## Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>STAD (Stockholm Prevents Alcohol and Drug Problems) Project Responsible Beverage Service (RBS) Training</b></p> <p><b>1996, 1998, 2001</b></p> <p><b>Wallin &amp; Andréasson 2004</b></p> <p><b>Sweden</b></p>	<p>Licensed premises (restaurants with/without a bar, bars/pubs, nightclubs) in northern Stockholm received the intervention RBS training. <i>N</i>=84 at baseline, <i>N</i>=60 at 1<sup>st</sup> follow-up and <i>N</i>=56 at 2<sup>nd</sup> follow-up. Southern Stockholm licensed premises were used as a control: <i>N</i>=80 at baseline, <i>N</i>=53 at 1<sup>st</sup> follow-up and <i>N</i>=60 at 2<sup>nd</sup> follow-up.</p>	<p>A 2-day training programme in responsible beverage service (RBS) for serving staff, restaurant owners and doormen. Covers alcohol law (including encouragement to ask for ID and legal responsibilities regarding underage serving), medical effects, restaurant-related crimes, drugs and conflict management. [NB: the legal age limit for on-sales in Sweden is 18 years and 20 years for off-sales.]</p>	<p><b>Evaluation Design:</b> A repeated measures study design. As for previous measures, in the 2<sup>nd</sup> follow-up (2001), fourteen 18-year olds (11 boys) were selected by an expert panel as looking under 18 years. Paired visits were made in the evening to each licensed premises and each ordered a beer. After the visit a study protocol was completed including an estimate of servers' age. (As the baseline study (1996) showed no seasonal differences, one measure was used for each follow-up resulting in half the number of purchase attempts.)</p> <p><b>Behaviours:</b> There were no statistically significant differences between the intervention and control areas. Overall, the frequency of alcohol service for adolescents in all study groups decreased from baseline 45% of 600 visits (1996) to 41% of 252 visits (1998) then 32% of 238 visits (2001) in the follow-ups; the decrease in 2001 was statistically significant compared to the baseline in 1996. Neither the age nor gender of the serving staff was related to the likelihood of being served.</p>
<p><b>Young People's Development Programme (YPDP)</b></p> <p><b>2004-2007</b></p> <p><b>Wiggins <i>et al.</i> 2009</b></p> <p><b>UK</b></p>	<p>2724 young people aged 13-15 years across 54 youth service sites in England</p>	<p>Intensive multi component youth development programme including sex and drugs education (YPDP) versus standard youth provision. The YPDP was a 3 year initiative funded by the UK Department of Health targeting young people aged 13-15 deemed by teachers or other care professionals to be at risk of substance misuse. The programme aimed to reduce substance misuse by delivering a personal development programme with content including education, training/employment opportunities, life skills, mentoring, volunteering, health education, arts, sports and advice on accessing services.</p>	<p><b>Evaluation Design:</b> Prospective matched comparative study</p> <p><b>Behaviours:</b> No evidence was found that the intervention was effective in reducing drunkenness.</p>

## Theme 1: Interventions to curb under-age drinking (for ages 14-17 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Alcohol Sales to Underage Adolescents: Evaluation of a Police Intervention</b></p> <p><b>1998-1999</b></p> <p><b>Willner <i>et al.</i> 2000</b></p> <p><b>UK</b></p>	<p>Pairs of 13 and 16 year old girls and boys (total of 62 underage confederates) made 470 attempted test purchases in phase 1 and 348 in phase 2 post intervention across 4 different types of retail outlet (corner shops, off-licences, pubs and supermarkets) in the South East and North East of England.</p>	<p>An initial phase of test purchasing was carried out in both intervention and control areas (number of attempts=470).</p> <p>Following phase 1 of test purchasing a police intervention was administered in test areas consisting of a letter from the area police commander which was sent to all licensed premises within the test areas. This letter reported the headline figures from phase 1 of test purchasing, reminded licencees of their legal obligation with respect to sale of alcohol to minors, recommended that proof of age should be sought for anyone who appeared to be below the age of 21, recommended that only a passport or prove-it card issued by the Portman Group be accepted as proof of age and indicated that the police would be shortly instituting a campaign in which they would themselves carry out test purchasing for evidentiary purposes.</p> <p>The contents of the letter were reiterated in personal visits to premises, telephone calls to regional and area managers of outlets. A press release was issued and received extensive coverage in local media. A total of 11 test purchases were carried out by a 13 year old boy resulting in 3 sales with the offending licensees warned that any further offences would result in prosecution and details were publicized in the local media.</p> <p>No intervention was administered in control areas. Following the police intervention a 2<sup>nd</sup> phase of test purchasing was carried out (number of attempts=348) in both intervention and control areas.</p>	<p><b>Evaluation Design:</b> Unobtrusive naturalistic field study conducted in two urban locations using an intervention/control design.</p> <p><b>Behaviours:</b> Post intervention there was no evidence that the police intervention reduced sales of alcohol to 13 or 16-year-olds.</p> <p>At baseline, sales resulted from 88.1% of purchase attempts by 16-year-old girls, 77% of attempts by 16-year-old boys, 41.6% of 13-year-old girls and 4.1% of 13-year-old boys. Data was generally comparable across locations, alcohol types and outlet types. Refusals were more likely when another vendor was present. 80% of sales to 16-year-olds and 65% of sales to 13-year-old girls were made without challenge. “Prove-It” ID cards were requested in fewer than 12% of purchase attempts in both age groups. Alcohol vendors reported that they rarely encountered underage customers or refused sale though 90% of vendors said that if they became suspicious, they would request ID. Only two vendors believed that they were likely to suffer adverse consequences if they sold alcohol to minors.</p>

## 3.2 Case Studies

### 3.2.1 The Healthy School and Drugs Project

**Lead agency:** The lead agency for the HSD (Health School and Drugs) project was the Trimbos Institute (Netherlands Institute for Mental Health and Addiction), Utrecht, Netherlands. Rescon Research and Consultancy, Haarlem, conducted the outcome evaluation.

**Resources:** The intervention was funded by the Trimbos Institute. No data is available on costs of the programme.

**Target groups and behaviours:** The HSD project was aimed at high school students aged 12-18 years (male and female). The objective of the intervention was to prevent use of alcohol and other drugs by adolescents and to reduce rates of use.

**Context:** The project was conceived during the 1980s and rolled out nationally in the Netherlands during the 1990s. The intervention was delivered annually, reaching 900,000 students across 64-73% of high schools in the Netherlands at its peak.

**Intervention:** The intervention was informed by existing prevention programmes and behavioural models but was conceived as an original programme. The HSD project was based upon the theory of planned behaviour (Ajzen and Fishbein, 1990), social cognitive theory (Bandura, 1996) and McGuire's model of behavioural change (McGuire, 1985). These theoretical influences were used to devise the "ASE" model (De Vries, 1992) that explains behavioural intention, and actual behaviour, by distinguishing three main determinants: attitude, social influence and self-efficacy.

The intervention consisted of a multi-component, school based prevention programme for high school students aged 12-18 years. For each cohort of students the intervention was delivered over a period of three years, with five components being implemented:

1. A coordinating committee was convened at each participating school. Committee membership comprised school staff (teachers, managers, and directors), a health official (from the health education department of the municipal health service) and a parents' representative. The committee coordinated all activities relating to substance use prevention at the school and drafted a working plan each year.
2. The delivery of educational lessons for junior secondary education (12-15 years) consisted of three lessons about tobacco in the first year, three lessons about alcohol in the first or second year and three lessons in the second or third year about marijuana, ecstasy and gambling. Exact scheduling was determined by the preferences of the teacher delivering the intervention. The lessons formed the core component of the HSD project. In each initial lesson of the block of three, basic information about the substance was given. The second and third lessons concentrated on attitude and behaviour, including skills training in making choices, refusal skills and increasing self-esteem. Materials to support the delivery of these lessons included manuals, video tapes, age specific exercises and brochures for students.
3. Formulation of school regulations on substance misuse, for example on the use of alcohol and tobacco at school and at school parties were also an integral component of

the programme. A manual for developing or adapting existing regulations was made available by the local health official.

4. An early detection and support system, including counselling services for students with substance misuse problems was also included. Service provision was facilitated through the training of teachers and counsellors in early detection of drug abuse and counselling skills. Health officials also offered case support to help schools decide if referral to specialised services was required.
5. The fifth component of the HSD project was parental involvement in drug abuse prevention at school. To facilitate parental involvement, manuals for a parents' evening were issued along with brochures for parents and newsletters.

**Evaluation:** The quasi-experimental controlled study evaluation involved 1930 high school students (50.9% Female/49.1% Male) at baseline (mean age 12.4 (SD=.5) years). At the third follow-up, three years later, sample numbers were N=1405. The sample was drawn from nine intervention and three control schools. The twelve schools involved were drawn from across five regions of municipal health services in the Netherlands. N=1156 students at intervention schools and N=774 students at control schools were recruited with measures taken before intervention and at 1, 2 and 3 years later. The alcohol measures taken were: self-reported current use and frequency; number of alcoholic drinks per week and per occasion; knowledge of health effects; and self-efficacy for estimated success of not drinking in different social occasions.

The evaluation research found that the HSD project had a positive impact on increasing alcohol related knowledge and, on alcohol related behaviours, and a small impact on alcohol related attitudes. A breakdown of the outcome evaluation results is detailed below:

**Knowledge:** Significant effects were found for knowledge about health effects of alcohol at 2nd and 3rd follow-up for intervention students.

**Attitudes:** A significant effect of the intervention on attitude towards alcohol was found at the 2nd follow up but not after 1 year or 3 years. A significant effect on self-efficacy towards alcohol was found after 1 year only.

**Behaviours:** As expected, the proportion of students using alcohol increased during the study. The intervention had a significant effect on alcohol use measures at all 3 follow-ups. Significant effects were found for the frequency of alcohol use and the number of drinks per week at year 3 ( $p<.01$ ); and on the number of alcohol drinks per instance after 1 and 3 years ( $p<0.001$ ). The intervention effects on the overall prevalence of alcohol use remained significant over the 3 years.

Authors commented that the implementation of the HSD project highlighted the value and importance of stakeholder partnerships between local schools, health services and officials and with the national coordinating body (Trimbus Institute). The tripartite dissemination structure contributed to high level of acceptance by schools.

**Time frame:** The HSD programme was designed as a long term national programme to be delivered year on year in high schools in the Netherlands. The project was conceived during

the 1980s and rolled out nationally in the Netherlands during the 1990s. It ran for twelve years, finishing in 2002.

#### **Information sources:**

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- <http://www.trimbos.org/>

### **3.2.2 Motivational Interviewing**

**Lead agency:** The intervention was delivered by the study author – a psychology researcher from the National Addiction Centre, Institute of Psychiatry at King’s College, London; and by four youth workers.

Other partners in the intervention were three further education (FE) colleges in the London area. A senior National Addiction Centre academic delivered the MI training to the author and four youth workers. After training further practice development was encouraged through peer supervision amongst practitioners and feedback on MI sessions with participants.

**Resources:** No resources set aside for practitioner involvement in the study beyond attendance at a training workshop. Participant students were recruited naturalistically by delivery agents in their normal place of work. To help ensure a good balance rate of follow-up participants in the control group received an incentive of £5 upon completion of the follow-up questionnaire. No dedicated funding for evaluation.

**Target groups and behaviours:** The aim of this MI intervention was to reduce drinking, cigarette and cannabis smoking among young people. Participants were FE college students in London, UK who were daily cigarette smokers, weekly drinkers or weekly cannabis smokers. The intervention was delivered to 59 participants who were compared to 103 assessment only control subjects. Of the total 162 participants, 53% were male and 47% female. Ethnicity of participants was 27% white, 26% black, 20% Asian, 13% classed as other, and data unavailable for the remaining 14% of participants. The majority lived with their parents or other family; only 12% reported other living arrangements. Participants mean age was 17 years. Twenty-nine percent of participants reported having been in trouble with the police.

**Context:** The intervention designed was based on a previous MI study (McCambridge and Strang, 2004). It was restricted to the London area and specifically targeted young people attending FE colleges which are non-traditional educational settings, largely serving those of post-compulsory schooling, aged 16-18 years.

**Intervention:** Motivational Interviewing is a client-centred directive counselling service which aims to encourage reflection on the risks associated with behaviours such as alcohol and drug use, in the context of personal values and goals. MI is heavily influenced by the work of Rogers (1967) who postulated that when critical conditions of empathy, positive regard, and sincerity are combined in therapy, a client can change their behaviour in a healthy positive way. The approach was originally developed to treat problem drinkers but has since been applied to other behaviours. MI holds potential in targeting existing harms, avoiding future harms or both. A previous MI approach targeting multiple drug use had been developed and strongly informed the current study (McCambridge and Strang, 2003), with further practice development encouraged.

Practitioner training of the four youth workers and the study lead author (an addictions researcher) – were trained by a senior academic (and second author of the published paper) in MI techniques focussed on techniques to encourage reducing alcohol drinking, cigarette and cannabis smoking. Training was provided over two x two-day blocks, held two weeks apart, one month prior to the start of data collection.

The MI techniques were reflective listening, asking open-ended questions, providing summaries and affirmations to minimize resistance and elicit discussions on behaviour change.

Students in the intervention participated in a single MI session with one of the practitioners. Interventions delivered by youth workers were on average briefer (20 minutes) than those delivered by the researcher (35 minutes) ( $P < 0.001$ ).

**Evaluation:** A quasi-experimental research design was used for the evaluation comparing the intervention group ( $N=48$ ) to a control group ( $N=92$ ). Recruitment and baseline data were collected using a self-completion questionnaire. A follow-up self-completion questionnaire was used 3 months later. Alcohol measures were: number of days in last month alcohol was consumed; units of alcohol drunk in previous week; perceived personal importance and existence of interpersonal problems related to alcohol; and frequency of getting drunk among alcohol drinkers. In the 48 interventions for which there were follow-up data, drinking alcohol was discussed during 85% ( $N=41$ ) of intervention sessions.

The results from the outcome evaluation were as follows:

**Attitude:** No differences in perceived importance of alcohol detected.

**Behaviours:** The prevalence of current alcohol consumption remained stable between baseline and follow-up for both groups and there was no change in the number of units consumed in the previous week for either group. Controlling for other potential confounders, the MI intervention group drank on average 1.97 fewer days which was a significant effect level. A greater proportion of the control group reported having stopped or cut down their drinking for 1 week or longer but this was not statistically significant ( $P > 0.1$ ).

No differences in outcomes were detected between MI delivered by youth workers or the researcher.

The evidence indicates it is possible to train youth workers to deliver MI to the benefit of students in FE colleges. However the benefits found were partial and uneven across the

behaviours studied. The study authors suggest that further research on appropriate training of MI techniques, ore precise separation of effects measures, and larger studies with appropriate statistical power are needed to determine effectiveness of youth worker interventions for each of the substances targeted.

**Time frame:** The intervention was a one-off project delivered over a three month period.

**Information sources:**

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### 3.2.3 The Örebro Prevention Programme

**Lead agency:** The intervention was designed by the Centre for Developmental Research at Örebro University. The Swedish Research Council and the Bank of Sweden Tercentenary Foundation funded the development and use of measures used in the study.

**Resources:** The Örebro Prevention Programme is regarded as a low cost intervention with the costs negligible due to the simple design and low training costs. Training for facilitators involved a short, two day training course and cost €830 each.

**Target groups and behaviours:** The intervention targeted parents as well as adolescents aged 13 to 16 attending schools in Örebro County, Sweden. The programme aimed to reduce under-age drinking.

**Context:** The Örebro Prevention Programme was one of several initiatives developed following a call by the Swedish National Institute of Public Health for universal youth alcohol prevention programmes. The call was issued in response to trends of increases in drinking among adolescents in Sweden following the country joining the European Union in 1995 and being required to change policies limiting availability and affordability of alcohol. The intervention was designed in Örebro but has subsequently been rolled out nationally and a website has been established.

A Cochrane systematic review (Jones 2007) suggested that programmes targeting the family are especially effective, and was influential in the design of this programme.

**Intervention:** A review of existing literature was conducted to inform the development of the programme. This concluded that supporting and maintaining parents' disapproving attitudes and forbidding under age drinking was a good platform for the intervention. Studies had also found that youths involved in organised leisure activities exhibited lower levels of delinquency and drinking.

The Social Medicine Unit of Örebro County Hospital conducted survey on alcohol use and health related behaviours which informed selection of schools for the intervention. Schools in Örebro County were important partners in the programme.

Parents of school pupils received information by mail, and during parent meetings in schools. Trained facilitators led the parent/teacher meetings. The meetings encouraged parents to maintain strict attitudes against youth alcohol use, and to encourage their children's involvement in adult-led organized activities such as sports, hobbies, religious activities, music, theatre, art and politics.

**Evaluation:** The evaluation study used a quasi-experimental design, with intervention and control groups. A total of 900 pupils aged 13-16 in junior high schools in Örebro, Sweden was sampled. Pre and post (at 18 and 30 months) test evaluation was conducted using classroom administered self report questionnaires for children, and postal questionnaires for parents. Results as follows -

**Attitudes:** The implementation successfully influenced parents' attitudes against under-age drinking, but not youth participation in organized activities.

**Behaviours:** At the end of the programme, levels of drunkenness, frequency of drunkenness and delinquency were lower in the intervention group than in the control group. Effect sizes were 0.35 for drunkenness and 0.38 for delinquency, described as low-medium to medium by the authors. Findings were similar for boys and girls, and for early starters.

The intervention demonstrated that working via parents was an effective way to reduce under-age drinking as well as delinquency. The study authors recommended that although the programme seems promising, replication in the same and different cultural contexts, and across a range of countries, is required to further test the design.

A cost comparison by the Swedish National Institute of Public Health who funded the intervention concluded that the Strengthening Families Programme cost 80% more to implement than the Örebro intervention.

**Time frame:** The Örebro Prevention Programme is an ongoing intervention. The first controlled study was carried out 1999 – 200, a second study commenced in 2008.

**Information sources:**

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- <http://www.orebro.se/opp>
- <http://www.oru.se>

### 3.2.4 The Trelleborg Project

**Lead agency:** The intervention was designed by researchers at the Department of Health Sciences, Section of Social Medicine and Global Health, Lund University.

**Resources:** Evaluation was conducted by researchers at the Department of Health Sciences, Section of Social Medicine and Global Health, Lund University. The Swedish National Institute of Public Health funded the study.

**Target groups and behaviours:** The Trelleborg Project was a three year community based intervention intended to reduce harmful drinking, and alcohol related accidents and violence among adolescents aged 15-16 years.

Behavioural objectives of the programme were to reduce heavy episodic drinking, delay the onset of alcohol consumption, reduce the number of alcohol related accidents and incidents of violence among adolescents. Change in attitudes toward alcohol and drinking in the adult population were also a stated objective.

**Context:** The intervention was one of several initiatives developed following a call by the Swedish National Institute of Public Health for universal youth alcohol prevention programmes. The call was issued in response to trends of increases in drinking among adolescents in Sweden following the country joining the European Union in 1995 and being required to change policies limiting availability and affordability of alcohol.

The intervention was delivered in Trelleborg, a town close to Malmo in Southern Sweden. A key component of the intervention strategy was the involvement of the local community including police, retailers, schools, teachers, parents and the general adult population.

**Intervention:** The intervention is based upon the systems approach developed by Holder *et al.* (1998). The systems approach is characterised by (1) addressing a wide range of problem behaviours, (2) surveying the entire population, (3) aims to change the behavioural environment and promote a less risky decision making process. A key expectation of the approach was that the community, not project researchers, would have primary responsibility for its implementation.

The Trelleborg Project was informed by the integrated theory of drinking behaviour (Wagenaar and Perry, 1994). The core principle of the theory is that a versatile approach is needed, aiming for reductions in both supply and demand reduction and including structural and individual change to change drinking habits. The theory integrates several models which describe/explain the rationale behind alcohol consumption: social structures; social interaction; social environment; economics; the role of public policy; and risk and protective factors.

The community-led policy programme aimed to develop alcohol and drug prevention strategies for children and adolescents, decrease heavy episodic drinking, delay the onset of alcohol consumption, and achieve changes in attitudes towards alcohol and drinking behaviour. A school policy and action plan on alcohol and drug management was

implemented. A comprehensive evidence-based curriculum on alcohol was introduced in schools, including a textbook. A curriculum for parents was also devised, as well as a mail out of information leaflets to parents.

**Evaluation:** Cross sectional survey data was collected using a classroom administered self report questionnaire at baseline in 1999, in 2000 and 2001 and post intervention in 2003. The following results were obtained from the evaluation study:

**Behaviours:** A post-intervention decrease in harmful drinking behaviour and alcohol-related accidents and violence compared to baseline measures was observed.

The proportion of youth consuming alcohol decreased from 82% in 1999 to 67%. The proportion of students who experienced “excessive drinking” fell from 37 % in 1999 to 28% in 2003. Heavy episodic drinking frequency during the previous month decreased from 45% in 1999 to 28% in 2003.

The frequency of alcohol-related accidents was also significantly lower, comparing the baseline in 1999 with follow up in 2003 (OR 0.5, 95% CI 0.27–0.76). Self-reported alcohol-related violence also decreased between 1999 and 2003 (OR 0.7, 95% CI 0.43–1.01).

The project demonstrated that a community action programme based upon the systems approach could reduce hazardous alcohol consumption, and alcohol related accidents and violence among adolescents. However, the authors comment that behavioural changes may have been influenced by social and economic developments such as reduced unemployment, as well as the effects of the intervention.

**Time frame:** The project was a three year community intervention running from Spring 1999 for 36 months until 2002.

**Information sources:**

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### 3.2.5 “Unplugged” the EU-Dap School Prevention Programme

**Lead agency:** In each of the nine countries the programme is delivered as a partnership between the project group researchers and participating schools. The EU-Dap Study Group includes F Faggiano and F Vigna-Taglianti (authors of evaluation papers): B Zunino, V Siliquini, GL Cuomo, L Vitale (Piedmont Centre for Drug Addiction Epidemiology, Turin, Italy); K Bohrn (Institut für Sozial und Gesundheitspsychologie, Vienna, Austria), P van der

Kreeft, E Coppens, Y Weyts (De Sleutel, Merelbeke, Belgium); JC Melero, T Perez, L Varona (EDEX, Bilbao, Spain); G Wiborg (IFT-Nord, Kiel, Germany); V Yotsidi, C Richardson (University Mental Health Research Institute, Athens, Greece); M Vasara, M Kyriakidou (Pyxida, Thessaloniki, Greece); A-M Lindahl (Stockholm Centre of Public Health and Department of Public Health Sciences, Karolinska Institutet, Sweden); M Panella (Department of Clinical and Experimental Medicine, Avogadro University, Novara, Italy); L Fabiani, M Scatigna (Department of Internal Medicine and Public Health, University of L'Aquila).

Participating schools, teachers who deliver part of the curriculum and parents who participate in some activities are also key agents.

**Resources:** EU-Dap is a project funded by the European Commission (European Public Health programme 2002 grant no. SPC 2002376). Additional national funding was provided by: Compagnia di San Paolo (grant no. 2002-0703) and Lega Italiana per la Lotta contro i Tumori (grant no. 2003 43/4) for the Novara Centre, Swedish Council for Working Life and Social Research (grant no. 2002-0979) and Stockholm County Council (Public Health grant no. LS 0401-0117) for the Swedish centre. The intervention was estimated to cost approximately €200 per class including teachers' training and materials.

**Target groups and behaviours:** The EU-Dap (European Drug Addiction Prevention Trial) is a pan-European drug prevention programme launched in 2004, targeting 12-14 year old adolescents in nine centres in seven countries (Wien, Austria; Gent, Belgium; Kiel, Germany; Thessaloniki, Greece; Turin, Novara and Aquila, Italy; Bilbao, Spain; and Stockholm, Sweden). In 2006 Poland and the Czech Republic joined the project. The main behaviours targeted by the intervention were tobacco, alcohol and illegal drug use by adolescents.

**Context:** The EU-Dap project is a multi-country study aimed at adolescents stratified according to average social status category in respective catchment areas. Over 7000 students in 143 schools are involved in the programme.

A key objective of the EU-Dap programme was to examine the relatively weak empirical evidence of school based substance misuse programmes, by testing the programme across several countries. A second phase aimed to disseminate the results and best practices.

**Intervention:** The programme is based upon the social influences approach (Tobler et al. 2000) which focuses on the delivery of social skills, personal skills, knowledge, and normative education.

It is a school-based prevention programme that aims to prevent the use of tobacco, alcohol and illicit drugs. Three intervention arms were developed and delivered: curriculum only; curriculum with additional peer involvement and activities; and curriculum with parental involvement and activities. A control group received no intervention activities.

The programme consisted of a 12 hour classroom-based curriculum delivered by trained teachers. Sessions on critical thinking, decision making, problem solving, creative thinking, effective communication, interpersonal relationship skills, self awareness, empathy, coping with emotions and stress, normative beliefs, and knowledge about the harmful effects of drugs were included.

For the peer and curriculum combination, two students elected as class representatives, conducted short meetings with classmates to review experiences of the programme. In the parent and curriculum combination, parents participated in three interactive workshops.

**Evaluation:** The evaluation study used a clustered randomised control trial design. A pre test survey was carried out at baseline, and a post test survey was conducted in all schools 3 months after the end of the programme using self completed questionnaires.

**Behaviour:** changes as follows: Programme effects were found for episodes of drunkenness in the past 30 days (prevalence odds ratios = 0.72, CI 95% 0.58–0.90 for at least one episode, and 0.69, CI 95% 0.48–0.99 for three or more episodes). More recent analysis of outcomes, suggest there are significant gender-based differences in effects. Separate analysis found significant consistent programme effects amongst boys, but effect sizes amongst girls were not significant across all countries involved. This finding is surprising and contrary to previous evaluations which have found larger effects sizes for females than males.

Adding parental or class peer components to the curriculum did not increase effectiveness. However small sample sizes limit the reliability of results and conclusions on this.

Changes in knowledge, attitudes, and skill were classed as secondary outcomes and not reported in the paper.

The EU-Dap programme demonstrated that a school curricula based on the social influence model can be effective in delaying progression to daily smoking and episodes of drunkenness. The evidence indicates that universal prevention programmes such as EU-Dap are most effective when implemented before initiation into substance use or has become an established behaviour. More research however is needed to understand the differential effects on boys and girls.

**Time frame:** The EU-Dap project is an ongoing multi-country intervention which began in seven countries in 2004 and was expanded to a further two countries in 2006.

**Information sources:**

- Faggiano F, Galanti MR, Bohrn K *et al.* (2008). The effectiveness of a school-based substance abuse prevention program: EU-Dap cluster randomised controlled trial. *Preventive Medicine*, **47**(5): 537-543.
- Faggiano F, Richardson C, Bohrn K and Galanti MR (2007). A cluster randomized controlled trial of school-based prevention of tobacco, alcohol and drug use: The EU-Dap design and study population. *Preventive Medicine*, **44**(2): 170-173.
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- Tobler NS, Roona MR, Ochshorn PM, *et al.* (2000). School-based adolescent drug prevention programs: 1998 meta-analysis. *Journal of Primary Prevention*, **20**(4): 275-336.
- Email: [fabrizio.faggiano@med.unipmn.it](mailto:fabrizio.faggiano@med.unipmn.it)
- <http://www.eudap.net/>

## 4. THEME 2: CURB DRINK-DRIVING BY YOUNG PEOPLE

### 4.1 Data Extraction Tables

#### Theme 2: Interventions to curb drink-driving by young people (for ages 18-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Lowering Blood Alcohol Content levels</b></p> <p><b>1991-2003</b></p> <p><b>Albalade 2008</b></p> <p><b>Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom</b></p>	<p>Rate of motor vehicle fatalities among 18-25 year olds across former EU-15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom)</p>	<p>Impact of existing of lowering BAC (Blood Alcohol Concentration) level to 0.5 g/l in 11 countries among the EU-15.</p>	<p><b>Evaluation Design:</b> The study uses European panel-based data (CARE) for the period 1991–2003 to evaluate the effectiveness of transition from a higher BAC level in countries within the EU 15 to a level of 0.5 g/l, by applying the differences-in-differences method in a fixed effects estimation that allows for any pattern of correlation (Cluster-Robust).</p> <p><b>Behaviours:</b> Lowering the BAC to 0.5 g/l resulted in a reduction of fatalities by 11.5%.</p>
<p><b>The “Conductor Seguro” [Safe Driver] Project</b></p> <p><b>2008</b></p> <p><b>Aresi et al. 2009</b></p> <p><b>Italy</b></p>	<p>Drivers attending the nightclubs. <math>N=124</math> drivers in the intervention group and <math>N=139</math> in the control group. Age range of 17-45 years, 79% male.</p> <p>The setting was four mainstream nightclubs (i.e. open to the general public) in Milan, randomly chosen from a list of possible sites.</p>	<p>A designated driver intervention. Groups were intercepted on the way into the club, asked to identify the designated driver who was then breathalysed, told about the free club entry offer and given a bracelet to wear. On leaving, the participant completed a questionnaire and was breathalysed again. If the BAC (blood alcohol concentration) was legal (<math>&lt;0.5</math> g/l) an offer of free entrance to the club for one night during the following month was given. If over the limit, they were advised not to drive and alternatives suggested.</p>	<p><b>Evaluation Design:</b> A pre-experimental research design with a control group and no pre-test. The control group was a sample of drivers a week later that had no intervention and were breathalysed and completed the survey upon exiting the club.</p> <p><b>Behaviours:</b> Positive effects on designated drivers’ BAC were found. Compared with the control group, the Safe Drivers’ BAC was significantly lower (<math>p&lt;0.05</math>) and more often below the legal limit. Most of the intervention group (72.6%) drank the same as usual; of those who drank less, just 5% of the total intervention group gave the free entrance incentive as the main reason. 59.7% of the intervention group took part because they were interested in having their BAC assessed. There was no significant difference between groups for age or gender. Comparison by age groups: 66.7% (<math>N=16</math>) of the 20 years-old or less group, 77.3% (<math>N=17</math>) of 21-23 years, 74.5% (<math>N=35</math>) of 24- 27 years and 71% (<math>N=22</math>) of <math>\geq 28</math> years group reported that they had not reduced their alcohol consumption (<math>\chi^2</math> (d.f.3)=.961, <math>p&gt;.05</math>).</p>

## Theme 2: Interventions to curb drink-driving by young people (for ages 18-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Lowering the BAC limit for drivers from .08 to .05%</b></p> <p><b>1998</b></p> <p><b>Bernhoft &amp; Behrendorff 2003</b></p> <p><b>Denmark</b></p>	<p>A sub-sample of driving licence holders, of 18-74 years, taking part in the National Travel Survey in 1997 (N=2873, 9% 18-24 years) and 1998 (N=1409, 9% 18-24 years). [NB: The minimum age for a driving licence in Denmark is 18 years.]</p> <p>The survey is based on telephone interviews with a randomly selected sample of the Danish population.</p>	<p>On the 1<sup>st</sup> March 1998, the legal blood alcohol concentration (BAC) limit for drivers was reduced from 0.08% to 0.05%.</p>	<p><b>Evaluation Design:</b> Data from the National Travel (telephone) Survey 1997, 1998 which included 4 supplementary questions on drinking habits and legal limits was analysed with motor vehicle accident data (1993-1999) and data on drink driving offences (1993-1999).</p> <p><b>Knowledge:</b> Positive effects on knowledge were found. Driving licence holders were asked to state their knowledge of the legal BAC limit. The number of correct answers increased after the amendment and was statistically significant for all age groups.</p> <p><b>Attitude:</b> Positive effects on attitudes were found. The respondents' statements, both before and after the law amendment, reveal that the reason for having less alcohol was most often related to the lower limit.</p> <p><b>Behaviours:</b> Lowering the legal BAC for driving resulted in reductions in alcohol consumption and alcohol-related accidents and injuries. <i>Changes in drinking before driving</i> The difference in distribution before and after the law is statistically significant with 71% of respondents not drinking/having only 1 drink before the amendment, increasing to 80% after. The percentages of men and women who would not drink at all rose after the amendment however 10% women and 27% of men still allow 2 or more drinks within a 2-hour period before driving, with increasing proportion by increasing age. <i>Changes in injury and fatal accidents</i> The proportion of injury accidents with DUI drivers (BAC<math>\geq</math>.05%) aged 25-44 years has decreased significantly (p&lt;.05), while the proportion of DUI drivers (BAC<math>\geq</math>.05%) aged 18-24 years involved in fatal accidents has increased significantly (p&lt;.05).</p>

## Theme 2: Interventions to curb drink-driving by young people (for ages 18-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Law on Road Traffic Safety (LRTS)</b></p> <p><b>1998</b></p> <p><b>Bilban &amp; Bilban Jakopin 2000</b></p> <p><b>Slovenia</b></p>	<p>Inebriated drivers involved in road traffic offences (RTOs) or road traffic accidents (RTAs) one year before and one year after the law was passed.</p> <p>Data for the Republic of Slovenia from the Ministry of the Interior and the Republic Senate for Minor Offences.</p>	<p>On the 1<sup>st</sup> May 1998, the Law on Road Traffic Safety (LRTS) was passed. Article 116 of the LRTS requires drivers not to drive if they have more alcohol in their body than allowed by law (for amateur drivers this limit is 0.5 g/kg in the blood, and for professional drivers it is 0.0 g/kg). Article 117 imposes the sanction of revoking licences for drivers who have <math>\geq 1.5</math>g alcohol /1kg blood.</p>	<p><b>Evaluation Design:</b> A before and after study comparing the statistical data on RTOs and RTAs with alcohol concentration in exhaled air (breathalyzer) calculated to g of alcohol in kg of blood.</p> <p><b>Behaviours:</b> The new law resulted in a reduction in the number of alcohol-related road traffic accidents, but alcohol concentrations in breath tests increased overall. The authors conclude legislation was effective for light and moderate drinkers but ineffective for problem drinkers.</p> <p>One year before the passing of the new LRTS, there were 40,702 RTAs in the Republic of Slovenia (4,990 or 12.2% caused by drunk drivers); one year after the passing of this law, there were 36,479 RTAs (3,131 or 8.6% caused by drunk drivers). Before the new law, Slovene policemen performed 47,899 (56.2%) breathalyzer tests, the average level of alcohol in exhaled air was 1.19 g/kg. One year after the passing of the law, 37,274 tests (43.8% or 77.81% with respect to the year before) found an average alcohol concentration of 1.32 g/kg. The highest levels were found in the age group of 36 to 65 and the lowest ones in the youngest and the oldest age groups. After the passing of the new LRTS, the average alcohol concentrations in exhaled air increased significantly in all age groups (with the exception of the youngest one) and reached the highest levels in the 36 to 65 age groups.</p>
<p><b>“Atout-Route” [Asset-Road] prevention programme</b></p> <p><b>2000</b></p> <p><b>Carcaillon &amp; Salmi 2005</b></p> <p><b>France</b></p>	<p>&lt;25 year-olds</p> <p>All high schools in the county of Landes, Aquitaine, south-west France where motor-vehicle related mortality is third highest in France and above the national average.</p>	<p>A presentation at the high schools covered the risk of driving under the influence of alcohol, drugs or fatigue and how to avoid risky behaviours. At the end of the meeting, young drivers decide if they want to sign a “contract” which provides benefits (in partnership with road safety organisations and businesses) such as price reductions on insurance, driving schools, mechanics, free non-alcoholic drinks at clubs. The contract can be signed at any time.</p>	<p><b>Evaluation Design:</b> A before and after study design using data from the Regional Observatory of Road Safety on traffic collisions in Aquitaine from January 1995 to February 2000 (“before” period) and March 2000 to December 2002 (“after”). Used Poisson regression analysis to model the traffic collisions in the intervention group compared with 3 control groups (<math>\geq 25</math> years in Landes, &lt;25 years in rest of Aquitaine and <math>\geq 25</math> years in rest of Aquitaine) and secondary analysis for a delayed effect of the programme.</p> <p><b>Behaviours:</b> No effects achieved by the intervention. The number of traffic collisions decreased slightly over time for all 4 groups. The effect of the prevention program was not statistically significant (relative risk = 0.89; 95% confidence interval 0.74–1.07). There was no obvious delayed effect.</p>

## 4.2 Case Studies

### 4.2.1 The “Conductor Seguro” [Safe Driver] Project

**Lead agency:** The outreach project named “PrimaEpoi.it” was implemented by the association Ala Milano Onlus, whose remit is to prevent damaging effects from the consumption of alcohol and psychoactive substances. Key stakeholders in the project were the four nightclubs in Milan, Italy, which were randomly selected for inclusion.

**Resources:** No information available

**Target groups and behaviours:** The intervention targeted drivers aged 17-45 years attending nightclubs in Milan. Its aim was the prevention of alcohol-related accidents by providing incentives for designated drivers to drink less. A specific objective was to decrease the number of drivers leaving clubs with a BAC (Blood Alcohol Content) above the legal limit of <0.5 g alcohol/litre of blood.

**Context:** The project was informed by existing literature on designated driver interventions. Previous interventions commonly used two approaches: awareness campaigns targeting the general population through the media or offering incentives such as free entry, food or non-alcoholic beverages in venues to designated drivers. The Harvard Alcohol Project (Winsten, 1994) in the US reported positive outcomes from designated driver intervention. However, a more recent intervention (Ditter et al. 2005) found that the number of self identified designated drivers returned to baseline levels immediately after incentives were withdrawn and there was some discrepancy between actual behaviour change observed and the ideal the intervention aimed to achieve.

**Intervention:** The incentive programme approach of the Conductor Seguro project was linked to a breath analyzer test, used as a measure of BAC. Free entrance to the club for one night during the following month was offered as an incentive to designated drivers whose BAC was within the legal limit on their departure. The intervention was carried out by professional field staff with specialist knowledge of drink driving prevention.

Participants were recruited by personal intercept on the way into the club, informed about the incentive and asked to identify the designated driver. Designated drivers who consented to participate, took a breath test, and were given a bracelet to wear. At the point of departure, the designated driver completed a questionnaire and was again breath tested. If the BAC was legal (<0.5 g/l) a free entrance to the club for one night during the following month was given. If over the limit, they were advised not to drive and alternatives such as letting a friend drive, taking a taxi or bus or waiting for the BAC to decrease was suggested. One hundred and thirty nine drivers were recruited as controls, and one hundred and twenty four were recruited into the experimental group. One hundred and five who agreed to participate at recruitment did not return for breath test and exit survey and therefore these were not included in the analysis.

**Evaluation:** The evaluation study used a post-experimental research design with pre-test. The control group was a sample of drivers recruited one week later who were not offered an incentive but were breath analysed and completed the survey on their exit from the club. One hundred and twenty four drivers were included in the intervention group analysis and one hundred and thirty nine control participants completed the assessment. Seventy-nine percent

of those recruited were male and age range was 17-45 years. The exit survey examined motivation to take part, usual drinking behaviours and other alcohol risk-related behaviours such as drink driving history.

**Behaviours:** Most of the intervention group (nearly 73%) reported they drank the same as usual. Only 5% of the intervention group, who did drink less, gave the free entrance incentive as the main reason. Nearly 60% of the intervention group stated that they took part because they were interested in having their BAC assessed. There was no significant difference between groups for age or gender.

The BAC of designated drivers was significantly lower and more often below the legal limit than non-drivers. However, evidence from the exit survey indicated that designated drivers may have had a lower risk profile than the non-drivers, unrelated to the intervention. This suggests that selection bias resulted in the intervention reaching those at lower risk and there is no evidence that the intervention effectively targeted drivers at greater risk of drink driving and related injury.

The authors conclude that the offer of free nightclub entry was not effective in motivating club-goers who drive to reduce their alcohol consumption. The authors recommend research to identify high risk drink drivers, and how to effectively reach them.

**Time frame:** A single intervention delivered in 2008.

**Information sources:**

- Aresi G, Fornari L, Repetto C and Scolari M (2009). Evaluation of a designated driver intervention to prevent alcohol-related road accidents in the clubs of Milan, Italy. *Adicciones*, **21**(4): 279-288.
- Winsten J (1994). Promoting designated drivers: the Harvard Alcohol Project. *American Journal of Preventive Medicine*, **10**: 11-14.
- Ditter SM, Elder RW, Shults RA, *et al.* (2005). Effectiveness of designated driver programs for reducing alcohol-impaired driving. A Systematic Review. *American Journal of Preventive Medicine*, **28**: 281-287.
- Email: [g.aresi@alainrete.org](mailto:g.aresi@alainrete.org)
- <http://www.primaepoi.it/>

#### **4.2.2 Lowering the BAC Limit for Drivers from 0.08 to 0.05%**

**Lead agency:** Research examining the effect of the lowering of the BAC (Blood Alcohol Concentration) limit from 0.08 to 0.05% was carried out by the Danish Transport Research Institute as an additional activity of the National Travel Survey.

**Resources:** The study was funded by the Danish Transport Research Institute.

**Target groups and behaviours:** The legal BAC limit for all Danish drivers was lowered from 0.08 to 0.05% in 1998. The minimum age for a driving licence in Denmark is 18 years. The new lower limit was introduced to reduce alcohol related road traffic accidents, and the frequency of drink driving.

**Context:** Research indicates there is no absolute lower threshold, at which alcohol impairs driving skills. A legal driving limit of 0.08% blood alcohol concentration (BAC) was introduced in Denmark 1976. A lower BAC limit of 0.05% limit was enacted in 1998. The legislative change was accompanied by extensive publicity, public debate and information campaigns. Following the introduction of the new BAC limit research was commissioned to evaluate the effect of lowering the limit.

**Intervention:** The intervention was the policy change through an act of law in the Danish Parliament, of a new lower BAC limit of 0.05%.

**Evaluation:** A sub sample of driving licence holders included in the Danish National Travel Survey were interviewed in 1997 ( $N=2873$ ) and 1998 ( $N=1409$ ). Nine percent of the sample in each survey was aged 18-24. Four additional questions relating to drivers drinking habits and knowledge of the legal limit were added to the Danish National Transport Survey in 1997 prior to the enactment of the new law, and then repeated in 1998. Data from 1993 to 1999 on motor vehicle accident rates and drink driving offences was also analysed.

**Knowledge:** The number of correct answers increased to 70% after the amendment. The increase was statistically significant for all age groups, but was highest (80%) for those aged 18-24 years.

**Attitude:** Respondents of all ages who knew the legal BAC limits reported that they drank less after the reduction in legal BAC limit. The lower legal limit was the reason most often given for their change in drinking habits. The reported change was only statistically significant amongst age ranges 25 years and older.

**Behaviours:** The proportion of alcohol-related personal injury accidents overall decreased from 8% to 6% after the law change. However, amongst the 18-24 age range who were involved most frequently in drink-related road traffic accidents before the lower limit was introduced, accident rates increased significantly after 1998. Similarly, there was a significant increase in the proportion of 18-24 age drivers involved in fatal accidents after the new BAC limit was introduced.

An analysis of all driver results tested found a positive change in distribution of BAC levels, suggesting that the new law was impacting all drink drivers, including hard-core drinkers. No analysis by age to specifically assess impact on young drivers was reported.

The study authors concluded that a longer survey period of accident trends is required period to properly assess the impact of the change in BAC limit.

**Time frame:** The legislation enacting the new lower BAC limit was introduced in 1998 and is permanent, statutory legislation. The evaluation study was conducted during 1997 and 1998.

**Information sources:**

- Bernhoft IM and Behrensdorff I (2003). Effect of lowering the alcohol limit in Denmark. *Accident Analysis and Prevention*, **35**(4): 515-525.
- Email: [imb@dtf.dk](mailto:imb@dtf.dk)

## 5. THEME 3: EDUCATE AND EMPOWER YOUNG PEOPLE ON ALCOHOL ISSUES

### 5.1 Data Extraction Tables

#### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Normative Feedback &amp; Alcohol Intervention Program</b></p> <p><b>2002</b></p> <p><b>Anderson et al. 2009</b></p> <p><b>Sweden</b></p>	<p>First year university students (freshmen). N=2032 at baseline.</p> <p>Intervention cohort at Luleå University of Technology in northern Sweden, and control cohort at Växjö University in the south of Sweden.</p>	<p><i>Primary intervention:</i> At both universities, following baseline assessments, students were posted normative feedback describing their alcohol consumption and stress levels compared with all other students at their university.</p> <p><i>Secondary intervention:</i> All students in the upper quartile with the highest score regarding alcohol involvement at baseline, at the <u>intervention</u> university, were offered two 2-hour evening or lunchtime mixed-gender group meetings of 3-8 students with a trained instructor on reducing hazardous alcohol use and stress levels.</p>	<p><b>Evaluation Design:</b> Following baseline assessments (AUDIT, eBAC), and the intervention (at one university), a follow-up questionnaire was mailed to all participants at both universities 12 months later.</p> <p><b>Behaviour:</b> Positive effects were found for high risk students who received the additional intervention treatment. No effects were found for the universal intervention offered to all freshmen students. The primary alcohol and stress interventions had no differences in AUDIT scores (-0.2, CI 95%-0.5 to 0.1), estimated blood alcohol concentrations or stress in comparison to freshmen at the control university. The secondary alcohol interventions were associated with decreased AUDIT (-1.1, CI 95% -2.0 to -0.2) as well as alcohol expectancies, blood alcohol concentrations, stress and mental symptoms in comparison to high-risk freshmen at the control university.</p>
<p><b>Screening and Brief Intervention (SBI) in a Custody Suite Pilot Project</b></p> <p><b>March 2007-March 2008</b></p> <p><b>Barton et al. 2009, Barton 2009</b></p> <p><b>UK</b></p>	<p>18-27 year olds among 3900 detainees in the Charles Cross custody suite in Plymouth</p>	<p>The intervention consisted of a pilot intervention named the Screening and Brief Intervention (SBI) pilot project. Detainees were screened using the AUDIT tool whilst in the cells and depending on the score an attendant alcohol worker provided an intervention ranging from provision of general information regarding alcohol consumption to counselling, to referral to further assessment and treatment services.</p>	<p><b>Evaluation Design:</b> Baseline data collected using AUDIT screening tool and general demographic questions. Data analysed using statistical analysis software. A further sample of 52 participants who had been offered access to additional alcohol treatment services, were interviewed.</p> <p><b>Knowledge:</b> The intervention did improve awareness levels of participants who had an alcohol problem which they did not previously recognise.</p> <p><b>Behaviours:</b> An increase in the number of those using alcohol related treatment was observed. 39 of 52 people interviewed reported they had accessed additional services during the intervention period. Further results to be published in due course.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>e-Based Personalised Feedback and Social Norms</b></p> <p><b>Delivery year not stated</b></p> <p><b>Bewick <i>et al.</i> 2008</b></p> <p><b>UK</b></p>	<p>Students completing a university wide student experience survey were asked to register their interest in participating in a study investigating student alcohol consumption. <i>N</i>=1075 students were randomly assigned to the control or intervention group. The paper reports on <i>N</i>=506 students (234 control and 272 intervention) who completed the pre-intervention survey (69% female, mean age was 21.29 (SD 3.68) years).</p> <p>Set at a UK university</p>	<p>Survey was administered through a website. The intervention feedback was delivered when participants logged on to survey. Intervention participants received personalised feedback on their level of alcohol consumption (stated units per week and associated level of health risk); statements indicating the percentage of students who report drinking less alcohol than them; and generic information on drinking guidelines, support services, tips for sensible drinking. Email reminders was used and printer credits were used as an incentive to participate.</p>	<p><b>Evaluation Design:</b> An RCT using CAGE (a 4-item screening tool for alcohol use disorders); average number of drinks consumed per occasion; drinks consumed in previous week behavioural measures. Attitudes to the website and personalised feedback were rated on a 5-item scale. usage and attractiveness</p> <p><b>Attitude:</b> Some positive effects were observed, but not across all measures of impact. Positive effects reported were: 63% of intervention participants agreed that the feedback was useful but only 6% agreed that it would influence the amount they drank. A higher proportion (63%) of those at greater risk of alcohol misuse, according to the CAGE classification agreed with the statement that the normative feedback “.. will make me think more about the amount I drink”, than those assessed as below average risk. (40% agreement) (Mann–Whitney <i>U</i>=1135.50, <i>p</i>=0.01).</p> <p><b>Behaviours:</b> Weak effects were reported for one measure of behaviour and no effects on the other two measures. Positive effects reported were a significant difference in pre- to post-survey mean difference of alcohol consumed <i>per occasion</i> (<i>F</i>=5.74, <i>df</i>=1, 313, <i>p</i>=0.02), with the intervention group displaying a larger mean decrease compared to the control group. No intervention effect was found for units of alcohol consumed <i>per week</i> (<i>F</i>=0.85, <i>df</i>=1, 313, <i>p</i>=0.36) or for CAGE scores ((<i>F</i>=0.17, <i>df</i>=1, 313, <i>p</i>=0.68).</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Allgemeine Lebenskompetenzen und Fertigkeiten (ALF) (general life competencies and skills)</b></p> <p><b>Delivery year not stated</b></p> <p><b>Bühler et al. 2008</b></p> <p><b>Germany</b></p>	<p>643 fifth graders (aged 10-11 years) from 22 classes, across 7 “Realschulen” (non-college bound schools) in Germany.</p>	<p>Quasi-experimental prevention study.</p> <p>The (ALF) (general life competencies and skills) program for fifth graders was delivered by trained teachers to the intervention group consisting of 8 sessions on general life skills training (communication, interpersonal relationships, critical thinking, self-awareness, problem solving, coping with stress and emotions) and 4 sessions on substance use-related issues (information about immediate effects of nicotine and alcohol use and short-term and long-term negative consequences, normative education, discussion about motivation to smoke and drink, media and social influences on use, resistance skills training). The program uses interactive methods and emphasized reference to the personal daily life of students. Control classrooms did not receive any systematic drug prevention activity.</p>	<p><b>Evaluation Design:</b> A baseline and follow up survey at 1 year post intervention was collected using a questionnaire administered by project staff in the classroom.</p> <p><b>Knowledge:</b> Persistent positive effects were reported. Mediation analyses based on a sample of 442 fifth graders 1 year post intervention, revealed that increased knowledge about life skills paralleled an increase in students’ distant/less positive attitudes toward alcohol use.</p> <p><b>Attitudes:</b> Persistent positive effects were reported. Students participating in the intervention program developed a more critical view against alcohol consumption after the program (<math>P &lt; 0.001</math>). Control group, students’ also became more critical but measures of distant/less positive attitudes were lower than the intervention group.</p> <p><b>Behaviours:</b> No effect was found on alcohol related behaviours.</p>
<p><b>Personality-targeted, group intervention</b></p> <p><b>Delivery year not stated</b></p> <p><b>Conrod et al. 2007</b></p> <p><b>UK</b></p>	<p>Years 9 and 10 adolescents (median age 14 years) with personality risk factors for substance misuse (<math>N=368</math>) (using the SURPS scale).</p> <p>13 secondary schools in 10 London boroughs</p>	<p>A manual-based intervention, run as two 90-minute group sessions at participants’ schools. Included real-life scenarios shared by high personality risk UK youths. First session included a goal-setting exercise, psycho-educational strategies about their personality variable (as positioned on the SURPS scale: negative thinking, anxiety sensitivity, impulsivity or sensation seeking); and analysis of a personal experience using a cognitive-behavioural model. The second session allowed participants to identify and challenge “cognitive distortions” specific to their personality type on the SURPs scale.</p>	<p><b>Evaluation Design:</b> An RCT with <math>N=199</math> randomly assigned to the intervention group and <math>N=169</math> to the control group following baseline measures of 1. personality risk and 2. drinking outcomes (drinking status, alcohol use and binge drinking). 83% of intervention and 81% of control groups completed 6-month follow-up (both measures) and 76% intervention and 78% control groups completed 12-month follow-up (both measures). Group differences were tested by multi-group analysis.</p> <p><b>Behaviours:</b> The intervention was effective for one personality types, but ineffective for three other personality types also targeted. Adolescent drinkers in the intervention group with a sensation seeking (SS) personality were 45% and 50% less likely to binge drink (<math>\geq 5</math> drinks (boys) or <math>\geq 4</math> drinks (girls) on one occasion) at 6 months (<math>OR=.45</math>) or 12 months (<math>OR=.50</math>) respectively, than SS drinkers in the control group. 93% SS drinkers in the control group were binge drinking at 6-month follow-up compared to 39% of SS drinkers in the intervention group; a difference maintained at 12 months. The intervention did not significantly impact on the on the relationship of the other 3 personality factors to growth in drinking.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>“Healthy School and Drugs” project</b></p> <p><b>Delivery year not stated</b></p> <p><b>Cuijpers <i>et al.</i> 2002, Smit <i>et al.</i> 2003</b></p> <p><b>Netherlands</b></p>	<p>High school students from 9 intervention and 3 control schools; N=1930 at baseline (mean age 12.4 (SD=.5) years) and N=1405 at third follow-up 3 years later in Cuijpers <i>et al.</i> 2002 sample; and 1720 school students across six experimental schools and four control schools assessed in four consecutive years from ages 12-15 in the Smit <i>et al.</i> 2003 sample; all from 5 regions of municipal health services in the Netherlands</p>	<p>“Healthy Schools and Drugs” is a multi-component, school based prevention programme for high school students aged 12-18 years. Over 3 years, 5 components are implemented: 1. a coordinating committee made up of school staff, a health official and parent; 2. Educational lessons for 12-15 year-olds covering tobacco, alcohol, marijuana, ecstasy and gambling via an information, health attitude and refusal skills approach; 3. Formulation of school regulations; 4. Early detection and support for students with drug problems; and 5. Parental involvement – e.g. parents’ evenings, newsletters.</p> <p>The intervention is informed by social modelling theory and work on resistance training with participants first receiving information on alcohol and its use, then they are encouraged to reflect on their own attitude towards alcohol use, adjust their risk perception and understand the role of peer pressure and their own social competence in relation to starting to drink or experimenting with drink, and finally encouraged to improve decision making skills. Participating schools also implemented a range of rules to regulate alcohol use. Also various materials are provided by the Netherlands Institute of Mental Health and Addiction.</p>	<p><b>Evaluation Design:</b> Cuijpers et al 2002: A quasi-experimental design comparing N=1156 students at intervention schools with N=774 students at control schools with measures taken before intervention and at 1, 2 and 3 years later. The alcohol measures taken were: self-reported current use and frequency, number of alcoholic drinks per week and per occasion; knowledge of health effects and self-efficacy for estimated success of not drinking in different social occasions.</p> <p>Smit et al 2003: Prospective quasi-experiment controlled study. Data collected from participants on their substance use across four consecutive years.</p> <p><b>Knowledge:</b> Significant effects were found for knowledge about the health effects of alcohol at 2nd and 3rd follow-up.</p> <p><b>Attitudes:</b> A significant effect of the intervention on attitude towards alcohol was found at the 2nd follow up but not after 1 year or 3 years. A significant effect on self-efficacy towards alcohol was found after 1 year only.</p> <p><b>Behaviours:</b> The intervention had a significant effect on alcohol use at all 3 follow-ups. Significant effects of the intervention were found for the frequency of alcohol use and the number of drinks per week at year 3 (<math>p &lt; .01</math>); and on the number of alcohol drinks per instance after 1 and 3 years (<math>p &lt; 0.001</math>) compared to controls. As expected the proportion of students using alcohol increased during the study.</p> <p>The intervention effects on the prevalence of alcohol use remained significant over the years after the start of the intervention (for <math>t_1</math> OR=0.71, <math>T=2.43</math>, <math>p=0.04</math>; for <math>t_2</math> OR=0.75, <math>T=2.34</math>, <math>p=0.04</math>; for <math>t_3</math> OR=0.56, <math>T=2.41</math>, <math>p=0.04</math>), indicating a significant and persistent effect of the intervention on alcohol drinking prevalence rates.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>“Familias que Funcionan” (Families that work)</b></p> <p><b>Delivery year not stated</b></p> <p><b>Errasti Pérez <i>et al.</i> 2009</b></p> <p><b>Spain</b></p>	<p>380 pupils aged 10-14, from 4 state secondary schools.</p> <p>Cudillero, Gijón, Pola de Siero and Oviedo in Asturias, Spain.</p>	<p>The “Families that Work” programme consisted of a family based drug use prevention intervention adapted from the North American ‘Strengthening Families Program 10-14.’</p> <p>The programme was delivered through schools, with the school sending parents’ information on the intervention. A meeting between parents, teachers and the team of specialist monitors delivering the intervention was then held. Pupils and (at least one) parent then attended a series of seven main sessions and four maintenance sessions of the prevention programme.</p>	<p><b>Evaluation Design:</b> A self report questionnaire based survey was administered at baseline, and again at follow up 1 and 2 years after the intervention. Only 26 of 380 invited families attended some of the sessions and of those 17 attended the main maintenance sessions resulting in a small sample size to assess outcomes. Differences of "drug use" including alcohol use in adolescents were assessed between the pre-test (baseline) and the follow-ups carried out one and two years after the intervention, and between the first and second years of follow-up. (Note that scores are based on perceptions adolescents have about their parents’ attitudes and behaviour.)</p> <p><b>Attitudes:</b> The intervention improved parental attitudes to the use of alcohol by their children and improved family bonding, indicating an increase in protective factors.</p> <p><b>Behaviours:</b> Consistent attendance did have positive effects on behaviours. The program reduced the increase in the consumption of alcohol, commonly observed during adolescence. Attrition rates were very high and the programme is assumed to be ineffective for non-attenders.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Daily Sensible Drinking guidelines</b></p> <p><b>1995</b></p> <p><b>Gill &amp; O'May 2007</b></p> <p><b>UK</b></p>	<p>Female undergraduate students (response rate = 94%). <i>N</i>= 15 non-drinkers (&lt;1-2 UK units per year), average age 18.02 years and <i>N</i>=165 drinkers, average age 18.45 years</p> <p>24% of drinkers and 60% of non-drinkers were &lt; 18 years, i.e. under legal age to buy alcohol.</p> <p>Set in UK university</p>	<p>The UK Department of Health Sensible Drinking message recommends daily consumption limits of 2–3 units for women and 3–4 units for men, where 1 unit is 8 g of alcohol. The explicit aim of the 1995 policy was to limit intake over individual drinking occasions and thereby incidents of drunkenness.</p>	<p><b>Evaluation Design:</b> Cross-sectional survey on alcohol behaviour and knowledge of drinkers and non-drinkers, included an item to measure recall of UK-recommended daily limits for alcohol consumption for men and women.</p> <p><b>Knowledge:</b> Very weak positive effects of health education appeared to exist, but could not be validated. Over half of the female drinkers sample offered no value for the recommended daily consumption limits for males (58%, <i>n</i>=95) or females (54%, <i>n</i>=89). Among those claiming “never” to have received school-based health education (<i>n</i>=23), the corresponding figures were 61% (<i>n</i>=14) and 48% (<i>n</i>=11), respectively. In comparison, for those who had received school-based health education in the year before the study, the corresponding figures were 53% (<i>n</i>=37) and 51% (<i>n</i>=36) respectively. Only 4% of drinkers (<i>n</i>=6) could quote the correct figures for males and 2% (<i>n</i>=3) for females. Two respondents correctly quoted daily guidelines for both genders.</p>
<p><b>“Programa de Entrenamiento en Habilidades de Vida” (Life Skills Training) programme</b></p> <p><b>1995-1999</b></p> <p><b>Gómez-Fraguela et al. 2007<sup>3</sup></b></p> <p><b>Spain</b></p>	<p>14-16 year old students (mean age 14.32 years) from 5 public schools (<i>N</i>=1029).</p> <p>Santiago de Compostela, Galicia, Spain</p>	<p>An adapted version of Botvin’s Life Skills Training, translated into Spanish, with a sixth component added with a focus on leisure activities. The other five components covered in 45-50 minute sessions were information about substances use (prevalence and effects), self esteem, decision making skills, coping with anxiety and social skills training. Sixteen sessions were given in the first year of the programme and 9 booster sessions were given in the second year.</p>	<p><b>Evaluation Design:</b> A non-RCT, with students assigned to one of three groups, the LST programme taught by teachers (<i>N</i>=235), the LST programme taught by researchers (<i>N</i>=309) and the control group (<i>N</i>=485). Post test follow-up at 1, 2 and 3 years. Self-report surveys asked for frequency of monthly beer and spirits consumption separately, using a scale of none, once or twice a month, several times a month, several times a week or every day.</p> <p><b>Behaviours:</b> Short term effects were found not to be sustained. At the 1<sup>st</sup> follow-up, a significantly lower beer consumption was found for students taught the LST programme by researchers compared with control students (<i>p</i>&lt;0.01) and a significantly lower spirits consumption was found for students taught the LST programme by teachers compared with control students (<i>p</i>&lt;0.01). No significant differences were found between either group of intervention students and the control students at the 2 and 3 year follow-ups for either type of drink.</p>

<sup>3</sup> Also consulted the translated data extracted in Jones L, James M, Jefferson T, Lushey C, Morleo M, Stokes E, Sumnall HR, Witty K, Bellis MA (2007). *A review of effectiveness and cost effectiveness of interventions delivered in primary and secondary schools to prevent and/or reduce alcohol use by young people under 18 years old*. London: National Institute for Health and Clinical Effectiveness.

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Motivational Interviewing (MI) delivered by youth workers</b></p> <p><b>Delivery year not stated</b></p> <p><b>Gray et al. 2005</b></p> <p><b>UK</b></p>	<p><i>N</i>=162 students (mean age 17 years) recruited “naturalistically” from 3 Further Education (FE) colleges, with <i>N</i>=140 providing usable follow-up data. In the UK, FE colleges are “non-traditional educational settings, serving largely those of post-compulsory schooling age (16–18 years old) distinct from universities”.</p> <p>London, UK</p>	<p>Five participating practitioners – 4 youth workers (2 each from rural and urban areas) and 1 addictions researcher – were trained in MI techniques focussed on reducing alcohol drinking, cigarette and cannabis smoking over 2 2-day blocks, held 2 weeks apart 1 month prior to the data collection starting. MI techniques include: reflective listening, asking open-ended questions, providing summaries and affirmations to minimize resistance and elicit change talk. Students in the intervention received a MI single session from the practitioner. Interventions delivered by youth workers were on average briefer (20 mins) than those delivered by the researcher (35 mins) (<math>P &lt; 0.001</math>), however no differences detected in any outcomes between youth workers and the researcher.</p>	<p><b>Evaluation Design:</b> A quasi-experimental design comparing the intervention group (<i>N</i>=48) with an assessment-only control group (<i>N</i>=92). Recruitment and baseline data were collected using a self-completion questionnaire and a follow-up self-completion questionnaire was used 3 months later. Alcohol measures were: number of days in last month alcohol was consumed; units of alcohol drunk in previous week; perceived personal importance and existence of interpersonal problems related to alcohol; and frequency of getting drunk among alcohol drinkers.</p> <p><b>Attitude:</b> No effects on perceived importance of alcohol.</p> <p><b>Behaviours:</b> No effects on behaviour found. In the 48 interventions for which there were follow-up data, drinking alcohol was discussed during 85% (<i>N</i>=41) of intervention sessions. The prevalence of current alcohol consumption remained stable between baseline and follow-up for both groups and there was no change in the number of units consumed in the previous week for either group. Controlling for other potential confounders, the MI intervention group drank on average 1.97 fewer days (unstandardized <math>B = 0.30-3.65</math>, <math>P=0.021</math>) in the month prior to follow-up than the control group. A greater proportion of the control group reported having stopped or cut down their drinking for 1 week or longer however this was not statistically significant (<math>P &gt; 0.1</math>).</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Media campaign on sensible weekly drinking limits</b></p> <p><b>1990-2000</b></p> <p><b>Grønbæk et al. 2001</b></p> <p><b>Denmark</b></p>	<p>A random sample of the adult (<math>\geq 18</math> year olds) Danish population, <math>N=6234</math> over dates 1994-1999, mean response rate of 56%.</p> <p>Denmark</p>	<p>From 1990 to 1999, in week 40 of each year, campaigns on the sensible drinking limit (<math>&lt;14</math> drinks per week for women and <math>&lt;21</math> drinks per week for men) were run via TV spots, information trailers and commercials, financed by the National Board of Health. The campaigns had different target groups but all included the sensible drinking limits as the main message.</p>	<p><b>Evaluation Design:</b> Telephone interviews with a random sample of the adult population were conducted each February from 1994-1999, outwith the campaign period to exclude acute campaign effects. Alcohol measures: respondents asked if they know the recommended number of units for men and women, then told the number for their gender and asked if they drink more, less, threshold or don't know.</p> <p><b>Knowledge:</b> Strong positive effects on knowledge were observed. Knowledge of sensible drinking limits during 1994-1999 was higher for the younger than the older age groups in both men and women according to age categories. By means of logistical regression, odds ratios for knowing sensible drinking limits were estimated as 2.67 (1.85–3.86) among women and 6.49 (4.46–9.44) among men in the youngest age group (18-25 years) compared to the oldest age group (<math>&gt;65</math> years). Hence, when the likelihood of knowing sensible drinking limits for own sex was set at 2.5 among 18-25 year-old men in 1994, the level of knowledge increased by a factor of five in 1999 (OR: 2.5–13.7). In the final year of the study period (1999), 80% of highly educated younger (18–25 years) men knew sensible drinking limits for own sex.</p>

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Intervention Program for University Students who have Parents with Alcohol Problems</b></p> <p>2000</p> <p>Hansson <i>et al.</i> 2006, 2007</p> <p>Sweden</p>	<p>University students (N=82) with at least one parent with alcohol problems, of which 94% DSM-IV alcohol dependent. Mean age = 25.6 (SD±4.93) years at baseline.</p> <p>Lund University, Lund. Intervention sessions took place at the university's Student Health Organisation</p>	<p><i>Alcohol Intervention Program</i>: two 2-hour sessions (with 1 month in between) incorporating discussion and feedback between student and therapist. Covered: identifying high-risk drinking situations; providing accurate information about alcohol; identifying personal risk factors; challenging myths and positive expectations; establishing appropriate and safer drinking goals; managing high-risk drinking situations, and learning from mistakes. Drinking diary completed between sessions.</p> <p><i>Coping Intervention Program</i>: two 2-hour sessions (with 1 month in between) incorporating discussion and feedback between student and therapist. Covered: increasing knowledge about the impact of the family system for dysfunctional coping; and implementing more effective coping strategies in a non-confrontational approach. Coping strategies diary completed between sessions.</p> <p><i>Combination Program</i>: two 2-hour sessions (with 1 month in between) combining shorter versions of the Alcohol Intervention Program followed by the Coping Intervention Program</p>	<p><b>Evaluation Design</b>: Following a 1-hour structured baseline interview, participants were randomized into 1 of the 3 intervention programmes. The participants were followed up after 12 months and after 24 months. Three measures of alcohol consumption were used the AUDIT questionnaire, retrospective estimated blood alcohol concentration (eBAC) and short index of problems, and 3 dysfunctional coping measures were used at baseline and both follow-ups.</p> <p><b>Behaviours</b>: Positive sustained effects were found for the combined alcohol and coping skills intervention 2 years after intervention. The alcohol only intervention had shorter term positive effects but these were not sustained at 2 year follow-up. 78 of the 82 recruited attended the 12 months follow-up, 99% of those were examined at the 24 months follow-up. After 12 months, the two groups that received alcohol intervention improved their drinking pattern significantly more than the group that received the coping intervention only [change of standardized scores -0.27 (CI -0.53 to -0.03)]. At 24 months, only the group receiving the combination program continued to improve their drinking pattern significantly (<math>p &lt; 0.05</math>) from the 12-month follow-up.</p>
<p><b>ThinknDrink? Videogame</b></p> <p>2007-2008</p> <p>Healy &amp; Connolly 2008</p> <p>UK</p>	<p>11-12 year old first year secondary school pupils. Pupils "applied" to the project with a note of interest and teachers picked the best submission. (No sample size given.)</p> <p>Paisley Grammar School and St Andrews Academy, Paisley, UK</p>	<p>The development of a computer game to raise awareness of issues associated with alcohol abuse and underage drinking. Input from public health officials and police officers teachers, and the researchers/game developers. Face-to-face meetings with pupils and software developers. Based on theory that 'Games Based Learning' improves creativity in education. Game displays a scenario where a friend has drunk too much and the player must ensure their safety by making the correct decisions to get them home safely.</p>	<p><b>Evaluation Design</b>: feedback during the project and interviews conducted at the launch event (note, low quality of methods reporting - no information about structure of interview, or the validity and analysis of data). Children, teachers and local officials.</p> <p><b>Knowledge</b>: No increase in alcohol-related knowledge was explicitly reported, although positive comments about the ability of the game to engage children were reported.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Bartender Educational Programme</b></p> <p><b>Delivery year not stated (pre-2002)</b></p> <p><b>Johnsson &amp; Berglund 2009, 2003</b></p> <p><b>Sweden</b></p>	<p>Students visiting the bar counter to purchase drinks (<math>N=664</math> at baseline; <math>N=658</math> at follow-up)</p> <p>12 student pubs (“student nations”/student unions) between 11pm and 1-2am in Lund, Sweden – a town with a high student population (25%)</p>	<p>An educational programme for <math>N=40</math> student bartenders based on the Alcohol Skills Training Program (ASTP) and the Swedish version of the Responsible Beverage Service. Five lectures/discussions over 12 hours focusing on own relationship with alcohol and techniques for responsible beverage serving, maximising the positive effects of alcohol consumption and minimizing the negative.</p>	<p><b>Evaluation Design:</b> A randomized design, with 6 of the 12 pubs’ bartenders receiving the educational programme. At baseline, 664 breath alcohol count (BrAC) measurements were taken from students at the bar counter using a breath analyzer in 11 different pubs as well as a social atmosphere rating (cosy, rowdy, high). The bartenders attended the educational programme. At follow-up 1 month later, 658 BrAC measurements and social atmosphere ratings were taken. At second follow-up, 5 months later, 593 BrAC measurements and social atmosphere ratings were taken.</p> <p><b>Behaviours:</b> Weak short term effects at one month after the intervention were not sustained by 5 months. The BrACs of customers in the intervention bars were reduced by more than those of the customers in the control pubs at 1-month follow-up. The mean difference in BrAC between intervention and control groups was -0.011% (95% CI, 0.022–0.000). The intervention group also decreased more in reported level of “rowdy” social atmosphere than did the control group. The mean difference was -6 points (95%CI, -11 to -1). No differences were found in reported “cosy” and “high” atmosphere categories. <b>5-months</b> The positive effects on BrAC and “rowdy” atmosphere after 1 month were not stable and disappeared about 5 months – both BrAC and social measurements had significantly decreased.</p>

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Cognitive Behavioural Alcohol Program versus Normative Feedback</b></p> <p>1997</p> <p>Johnsson &amp; Berglund 2006</p> <p>Sweden</p>	<p>University Freshmen/"Freshers" (first year undergraduates arriving before 1<sup>st</sup> term commences). N=660 at baseline. Study sample of N=188 high risk drinkers (AUDIT test), mean age = 21 (SD±3) years.</p> <p>Lund Institute of Technology, Lund University</p>	<p><i>Cognitive Behavioural Alcohol Program (CBAP)</i>: a 10 hour educational alcohol skills training programme given in 5 different sessions over 1 week intervals. Mixed gender groups of 8-10 students. Covered: identifying high-risk drinking situations; providing accurate information about alcohol; identifying personal risk factors; challenging myths and positive expectations; establishing appropriate and safer drinking goals; managing high-risk drinking situations, and learning from mistakes.</p> <p><i>Written mailed minimal intervention (PMMI)</i>: normative feedback describing the student's consumption compared with all other Freshers, (i.e. the upper quartile with the highest score). Included recommendations to drink less and telephone numbers for health organisations.</p>	<p><b>Evaluation Design:</b> An RCT where the student body quartile with the highest AUDIT scores at Baseline were randomised to a CBAP or PMMI group. No control group included in the design. The AUDIT questionnaire was used at baseline and 1-year follow-up as an indicator of alcohol misuse..</p> <p><b>Behaviours:</b> Some reductions in alcohol use indicators were found 1 year after the intervention in both intervention groups but without a control group, it is not possible to draw any conclusions on efficacy. There were no significant differences in the total 10-item AUDIT scale between the CBAP and PMMI groups and no significant differences between men and women. Both groups improved (reduced) their total AUDIT scores significantly at the 1 year assessment, which could be explained as a regression to the mean.</p>
<p><b>The Social and Emotional Training (SET) programme</b></p> <p>2000-2005</p> <p>Kimber &amp; Sandell 2009, Kimber <i>et al.</i> 2008</p> <p>Sweden</p>	<p>For this evaluation, N=41 classes from 2 intervention schools and N=14 classes in 2 matched control schools in Greater Stockholm, covering grades 7 to 9 (13-14 years to 15-16 years).</p> <p>Botkyrka Municipality, Greater Stockholm, Sweden</p>	<p>The SET programme is delivered by class teachers once a week for grades 6-9 for 45 minutes (and twice a week for grades 1-5). It is guided by detailed manuals for the teacher (1 per grade) and a workbook for students of each grade. SET focuses on developing the following: self-awareness, managing one's emotions, empathy, motivation and social competence. There are no explicit references to substance use in the SET manuals. Teachers use modelling and role-play in the exercises, and students must practice at home also. Interaction between school and parents is emphasized.</p>	<p><b>Evaluation Design:</b> A quasi-experimental longitudinal design with 2 intervention schools and 2 control schools receiving no intervention. A self-report questionnaire was used for all students who remained in the classes from outset of the SET programme, at baseline in August 2000 then in May of each year, i.e. from 2001 (t1) until 2005 (t5). Alcohol measure was a frequency of use scale "How often do you drink beer, cider, wine or spirits?" (nine-step scale, from "Do not drink" to "Every day or every other day").</p> <p><b>Behaviours:</b> Some positive effects on moderate and light alcohol users. There was a significant intervention-by-years interaction (p&lt;.025) on light and moderate drinkers (38% N=25. From a low level of use, there was a slight but consistent decrease over time in the SET group, but an irregular upward movement in the control group. The proportion of adolescents who drank alcohol more than six times a year or more decreased from 3% to 0% in the SET group, but increased from 0% to 38% in the control group over five years. There was a general decrease in consumption in both the SET and control group for largely <i>moderate and heavy alcohol users</i> (62%, N=407) (p&lt;.01). The proportion of adolescents who drank alcohol more than six times a year or more decreased from 54% to 33% over five years.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Preventing heavy alcohol use in adolescents (PAS)</b></p> <p><b>2006-2008</b></p> <p><b>Koning <i>et al.</i> 2009a,b</b></p> <p><b>Netherlands</b></p>	<p>N= 2937 first year students (mean age 12.68 years, SD±.51) at baseline from 20 schools from different regions of the Netherlands.</p> <p>Netherlands</p>	<p><i>Parent Intervention:</i> based on the Swedish Örebro Prevention Programme, includes a presentation by an alcohol expert, a meeting between parents and the class mentor, and a leaflet summarising the presentation and meeting outcomes. Dutch version focussed on reducing alcohol use only and did not include encouraging involvement in organised activities.</p> <p><i>Student Intervention:</i> an e-learning programme based on the alcohol module of Dutch prevention programme Healthy School and Drugs, over four lessons in first year with a booster session a year later.</p> <p><i>Combined Intervention:</i> all components of the Parent and Student Interventions.</p>	<p><b>Evaluation Design:</b> Schools were randomly assigned to one of four conditions: parent intervention, student intervention, parent and student intervention, or no intervention control group. Baseline data was collected from students (self-report online questionnaire in classroom) and parents (mailed questionnaire) in Sep/Oct 2006, with post-intervention follow-ups 10 months and 22 months later. Alcohol outcome measures were incidence of heavy weekly alcohol use – number of glasses of alcohol student usually drinks on a weekend day (modified in analysis by gender and age) and whether ≥1 glass of alcohol is consumed on a weekly basis or not – and frequency of drinking occasions in the last month.</p> <p><b>Behaviours:</b> The combined parent and student intervention reduced all measured drinking behaviours at 10 months and these were sustained at 22 months (except for binge drinking behaviours which had returned to non-intervention levels). Student only and parent only interventions had no effects. Positive effects reported were statistically significant.</p>
<p><b>The Örebro Prevention Programme</b></p> <p><b>Delivery year not stated (2.5 years duration)</b></p> <p><b>Koutakis <i>et al.</i> 2009</b></p> <p><b>Sweden</b></p>	<p>900 pupils aged 13-16 in junior high schools in Örebro, Sweden.</p>	<p>Quasi-experimental design, featuring intervention and control groups; targeting drinking among 13-16 year olds. The programme used a family based approach.</p> <p>In the Örebro Prevention Programme, parents of school pupils received information by mail, and during parent meetings in schools delivered by trained teachers, urging them to maintain strict attitudes against youth alcohol use, and to encourage their youth's involvement in adult-led organized activities such as sports, hobbies, religious activities, music, theatre, art and politics.</p> <p>The costs of implementing the programme were negligible, especially when compared to other parenting programmes due to the simple design, and low training costs.</p>	<p><b>Evaluation Design:</b> Pre and post (at 18 and 30 months) test evaluation was conducted using classroom administered self report questionnaires for children, and postal questionnaires for parents.</p> <p><b>Attitudes:</b> The implementation successfully influenced parents' attitudes against underage drinking.</p> <p><b>Behaviours:</b> Some positive effects on youth drinking behaviours were found. At the end of the programme, drunkenness and frequent drunkenness were lower in the intervention group than in the control group. At post-test, youths in the intervention group reported less drunkenness and delinquency. Effect sizes were 0.35 for drunkenness and 0.38 for delinquency, described as low-medium to medium by the authors. The intervention did not achieve increased youth participation in organized activities. Findings were similar for boys and girls, and for early starters.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Single-Session Motivational Interviewing Trial</b></p> <p><b>Delivery year not stated</b></p> <p><b>McCambridge &amp; Strang 2004</b></p> <p><b>UK</b></p>	<p>200 young people (ages 16-20) currently using illegal drugs recruited by peers and assigned to intervention (n=105) or control condition (n=95) attending 17 further education colleges in inner London, UK.</p>	<p>1 hour single session MI (motivational interview) adapted from literature. MI seeks to promote reflection on drug use and its personal consequences in the context of the values and goals of the individual. Initial discussions involved the entire range of drugs being used by the subject, after which there was a focus to particular areas of risk, problems or concerns. With all recipients, eliciting of positives and negatives about each drug followed rapport-building. The relationship between actual and potential drug use consequences and non-drug values and goals was subsequently explored. Various counseling micro skills were used, including reflective listening, affirmation, open questions and summaries, in order to elicit 'change talk'</p> <p>The goal was to encourage participants to think and talk about risk in ways conducive to the identification of problems and concerns and to reflection on options for change—to stimulate new thinking on personal drug use, which may realize itself in behavioural change. Discussion of decisions to change a specific aspect of drug use, including the use of decisional balance exercises, took place with approximately half the 105 participants randomized to the MI study condition.</p>	<p><b>Evaluation Design:</b> Design cluster randomised control trial. Changes in self reported alcohol use were measured. Measurement was conducted at recruitment and follow-up interview 3 months later.</p> <p><b>Behaviours:</b> Small to moderate effects on alcohol consumption were reported. In comparison to the control group, those randomized to motivational interviewing reduced their use of alcohol, mainly through moderation of ongoing use rather than cessation. Effect size was 0.34 (0.09–0.59). For alcohol the effect was greater among heavier users of these drugs and among heavier cigarette smokers.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Community Based Primary Prevention Programme in Prague</b></p> <p><b>Delivery year not stated</b></p> <p><b>Miovksý <i>et al.</i> 2007</b></p> <p><b>Czech Republic</b></p>	<p>1142 respondents in the 7<sup>th</sup> grade (aged 11 pre-test with follow up at age 13) in 25 schools in the Prague 6 district</p>	<p>Community based prevention programme in intervention communities, minimum prevention programme in control communities.</p> <p>No further information on intervention reported in article.</p>	<p><b>Evaluation Design:</b> Quasi-experimental controlled research design.</p> <p><b>Knowledge and Attitudes:</b> The intervention was not effective on the whole. However, it did improve risky alcohol-related indicators for the students who reported some forms of family breakdown or dysfunctionality. Testing carried out on both the experimental and control groups of eleven-year-old children only showed minor differences and it was verified that most of those sampled entered the study prior to the onset of alcohol consumption, The first retest at the age of 13 showed statistically significant differences for both groups compared to general population data. However, the difference between the 2 samples' populations was not significant. However, the evidence did indicate the effectiveness of the programme was very high in terms of its impact on substance use (mainly alcohol) in the children from incomplete families and those who show relationship and communication problems with at least one parent.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>4 psychosocial educational intervention programmes</b></p> <p><b>Delivery year not stated</b></p> <p><b>Moral Jiménez et al. 2009</b></p> <p><b>Spain</b></p>	<p>N=141 13-16 year-old pupils (mean age 14.24 years), from a larger sample of secondary school pupils, deemed to be at risk regarding their measured permissive attitudes in relation to their younger age.</p> <p>Asturias, Spain</p>	<p>Four psycho-social interventions with the same core components; various informative activities and group discussions regarding myths associated with alcohol, risk perception, illusions about user invulnerability, and focus on improving social and resistance skills.</p> <ul style="list-style-type: none"> <li>• Testimonies from alcoholics and experts were included in discussions in the <i>Family Intervention Group</i>. Discussions with parents were encouraged.</li> <li>• <i>Expert Group</i> sessions were delivered by a specialist in drug addictions. Informative and awareness activities that focused on dispelling false beliefs about alcohol use/abuse and risk perceptions were encouraged.</li> <li>• The <i>Information Group</i> received only the basic informative sessions delivered by trained teachers without any further contributions</li> <li>• The <i>Basic Awareness Group</i> had sessions focusing on the risks of alcohol consumption with cognitive restructuring techniques by means of group discussion overseen by a professional in drug addictions.</li> </ul> <p>Interventions took place over the course of eight sessions, held once a week.</p>	<p><b>Evaluation Design:</b> Quasi-experimental design with 4 intervention groups and 1 control group: Family Intervention Group (N=31); Expert Group (N=30); Information Group (N=22); Basic Awareness Group (N=30) and Control Group (N=28). Measures taken at baseline with follow-ups at 2, 7 and 12 months.</p> <p><b>Attitudes:</b> Short term effects on attitude were found, but were only sustained by 12 months in 1 of the 4 intervention groups. Significant reduction in positive attitudes to drinking alcohol at 2 and 7 months post intervention in the Family Intervention, Expert and Basic Awareness groups compared to baseline, Significant reduction in positive attitudes was found at 12 months in the Basic Awareness Group, but not in the other intervention groups. No significant changes in attitude to drinking were found at 2, 7 or 12 month follow-up in the Information Group. There was an increase in positive attitudes to drinking at 2, 7 and 12 month follow-up in the Control Group compared to baseline, reflecting commonly observed trends in adolescence.</p> <p>Effects on willingness to experiment with alcohol were not significant in any of the four intervention groups or the Control Group at any follow-up time, with the exception of a significant reduction in willingness to experiment in the Family Group at 7 month follow-up and in the Basic Awareness Group at 2 month follow-up.</p> <p><b>Behaviours:</b> Sustained effects on behaviour were found for all intervention groups. Overall, there was a significant reduction in the quantity of alcohol consumed per week at 2, 7 and 12 month follow up compared to baseline.</p>

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>School-based alcohol education intervention for German 7<sup>th</sup> graders</b></p> <p>2005-2006</p> <p>Morgenstern <i>et al.</i> 2008</p> <p>Germany</p>	<p>1686 7<sup>th</sup> graders (aged 12-13 years), across 30 public schools, in Schleswig-Holstein, Germany.</p>	<p>School-based alcohol education intervention, based on a social influences approach. The intervention consisted of four interactive lessons conducted by teachers which included a schedule, an overarching theme, main objectives, and a range of hands-on materials. Booklets for students and booklets for parents were also produced and issued. The main message of the materials was “no alcohol for minors”.</p>	<p><b>Evaluation Design:</b> Cluster randomised control trial design. Outcome evaluation compared measures of life time alcohol use, past month alcohol use at pre-intervention, and at 4 and 12 months after baseline using a self report questionnaire.</p> <p><b>Knowledge:</b> Inclusion in the intervention group was associated with more general knowledge about alcohol.</p> <p><b>Attitudes:</b> No significant effects were found with respect to students’ self-reported attitudes and intentions to drink.</p> <p><b>Behaviours:</b> The results indicate that the intervention had a small preventive effect on alcohol misuse which was sustained at 12 months post-intervention. There was no statistically significant intervention effect for any of the alcohol use outcomes except for life-time binge drinking. Intervention students were significantly less likely to report life-time binge drinking at post-test [adjusted odds ratio (OR) 0.56; 95% confidence interval (CI): 0.41, 0.77] as well as the 12-month follow-up (0.74; 0.57, 0.97). In the case of the other drinking outcomes, estimates of the intervention effect for the post-test and the 12-month follow-up, although not statistically significant, were always in the direction of a prevention effect.</p>
<p><b>Reducing Friday Alcohol Consumption Among Moderate Women Drinkers</b></p> <p>Delivery Year Not Stated</p> <p>Murgraff <i>et al.</i> 2007</p> <p>UK</p>	<p>347 moderate drinkers (254 women and 93 men) with a mean age of 26.49 years in the UK</p>	<p>All respondents completed a questionnaire informed by the theory of planned behaviour. Participants then assigned to intervention group who were issued with a 2 page leaflet about drinking, and control group (no leaflet).</p>	<p><b>Evaluation Design:</b> Randomised controlled trial design. At pre- and post- intervention respondents were asked to record the average number of units consumed during the last month on Fridays and Saturday to assess for any effect. Statistical analysis of data was conducted to assess impact of intervention.</p> <p><b>Attitudes:</b> Positive effects were found. The intervention group reported significantly higher self-efficacy in relation to specific actions that could promote alcohol reduction (<math>d = 0.21</math>).</p> <p><b>Behaviours:</b> A small to medium effect size was found. The intervention group reported fewer average units consumed on Fridays (<math>d = 0.205</math>) than control (<math>d = 2.44</math>). (<math>d = 0.44</math>). Also, women in the intervention group reported fewer risky single occasion drinking sessions (<math>M = 1.91</math>) than control (<math>M = 2.43</math>).</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Brief Motivational Interventions</b></p> <p><b>2002-2003</b></p> <p><b>Sharp &amp; Atherton 2006</b></p> <p><b>UK</b></p>	<p>96 young offenders most of whom were under 30 years of age in the West Midlands of the UK.</p>	<p>Brief motivational interventions consisting of two hour sessions were delivered to offenders referred to their local alcohol advisory scheme by qualified counsellors. The sessions include information on the effects of alcohol, assessment of current drinking, discussion of strategies for avoiding high risk strategies, exploration of the links between alcohol and crime, thorough assessment of needs and information on services and further advice. Participants also kept a drinking diary and completed a questionnaire.</p>	<p><b>Evaluation Design:</b> Realistic evaluation design, involving analysis of statistical data, interviews with participants, and interviews with senior police officers, custody officer and custody office staff. No statistical data on drinking behaviours reported.</p> <p><b>Knowledge:</b> Moderate -strong effects on knowledge described.. Participants reported increased likelihood of making connections between their offending and drinking. They also reported increased cognisance of the impact of their drinking on others and increased knowledge of alcohol services.</p> <p><b>Attitudes:</b> Moderate-strong effects on attitudes described. Participants reported increased likelihood of making connections between their offending and drinking. They also reported increased cognisance of the impact of their drinking on others.</p> <p><b>Behaviours:</b> Partial effects were reported descriptively but require further validation before conclusions can be drawn.42% of those referred by police attended two sessions at the alcohol agency, with 13% becoming clients of core services of the agencies. 55 participants reported a change in their drinking following contact with the agencies. 8 reported no change in their drinking.</p>
<p><b>Brief Intervention After Alcohol Related Facial Injury</b></p> <p><b>1997-1998</b></p> <p><b>Smith <i>et al.</i> 2003</b></p> <p><b>UK</b></p>	<p>151 Male attendees with a mean age of 24 at A&amp;E at 3 hospitals: (Cardiff Royal Infirmary, Caerphilly Miners' Hospital or Barry Hospital) presenting with alcohol related facial injuries</p>	<p>The intervention was a manual-guided intervention based upon the principles of motivational interviewing delivered by senior general nurses. Strategies included opening the session, alcohol consumption in a typical day, agenda-setting, quick assessment of motivation to change, negative and positive aspects of alcohol consumption, information provision, contrast between present and future drinking behaviour, exploring concerns and help with decision making.</p>	<p><b>Evaluation Design:</b> Randomized Control Trial with 76 participants in control and 75 in treatment group. Baseline measure was carried out with all participants with follow up at 3 months, with 92% of control group, and 81% of intervention group followed up at 12 months.</p> <p><b>Behaviours:</b> Moderate effects on behaviour found, but analysis is weak because higher drop out rate of intervention group is not controlled for. A decline in the number of individuals drinking above the recommended drinking levels was seen at 12-month follow-up in the intervention group, where the number of individuals consuming above the recommended limits had fallen from 45 of 75 at baseline to 16 of 60 at 1-year follow-up: a decrease from 60% to 27%. The equivalent percentages for the control group were 54% and 51%.</p>

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>The Trelleborg Project</b></p> <p><b>1999-2003</b></p> <p><b>Stafström and Östergren 2008, Stafström et al. 2006</b></p> <p><b>Sweden</b></p>	<p>1376 9<sup>th</sup> graders (aged 15-16), in schools in Trelleborg, Sweden.</p>	<p>A community based intervention to reduce harmful drinking behaviour, and reduce alcohol related accidents and violence, based on the community systems approach. A community led policy programme was implemented which aimed to develop alcohol and drug prevention strategies for children and adolescents, decrease heavy episodic drinking, delay the onset of alcohol consumption, and achieve changes in attitudes towards alcohol and drinking behaviour.</p> <p>As part of the wider community programme a school policy and action plan on alcohol and drug management was implemented. A comprehensive evidence based curriculum on alcohol was introduced in schools, including a textbook. A curriculum for parents was also devised, as well as a mail out of information leaflets to parents.</p>	<p><b>Evaluation Design:</b> Cross sectional survey data was collected using a classroom administered self report questionnaire at baseline in 1999, in 2000 and 2001 and post intervention in 2003.</p> <p><b>Behaviours:</b> Persistent positive effects on alcohol behaviours and alcohol related adverse outcomes were reported. Logistic regression analysis indicated a decrease in harmful drinking behaviour and alcohol-related accidents and violence when comparing baseline with post intervention measurements.</p> <p>Consumers of alcohol decreased from 81.7% in 1999 to 67.2% in 2003. The proportion of students who experienced “excessive drinking” dropped from 37.2% in 1999 to 23.7% in 2003. The rate of those reporting “heavy episodic drinking” during the previous month decreased from 44.5% in 1999 to 27.5% in 2003.</p> <p>The odds ratio for alcohol-related accidents was significantly lower, comparing the baseline in 1999 with follow up in 2003 (OR 0.5, 95% CI 0.27–0.76). There was also an indication that self-reported alcohol-related violence had decreased between 1999 and 2003 (OR 0.7, 95% CI 0.43–1.01).</p>
<p><b>Brief Skills Training Program versus Twelve-Step–Influenced Intervention</b></p> <p><b>2000</b></p> <p><b>Ståhlbrandt et al. 2007</b></p> <p><b>Sweden</b></p>	<p>University students (N=556) living in halls of residence (N=98). Mean age = 23.2 (SD±2.6) years at baseline.</p> <p>In Lund, a student-owned foundation, Akademiska Föreningen, supplies rooms in halls of residence buildings across the town.</p>	<p><i>Brief Skills Training Program (BSTP):</i> a single 3-hour interactive lecture and discussion which aims to reduce alcohol harms by reducing alcohol consumptions. Includes basic information, an Alcohol Expectancy Questionnaire and drinking calendars. Students unable to attend lecture were posted a 22 page printed manual of the material.</p> <p><i>Twelve-Step–Influenced Intervention (TSI):</i> a 3-hour formal lecture, given by therapists trained in the 12-step method. The lecture dealt with basic alcohol information, risks and dangers with alcohol, dependence and treatments. Students unable to attend received a CD ROM called ‘Give Life a Chance’. Both featured life stories.</p>	<p><b>Evaluation Design:</b> An RCT where the halls of residence were randomised to a BSTP, TSI or control group. Three instruments, the AUDIT questionnaire, retrospective estimated blood alcohol concentration (eBAC) and short index of problems were used at baseline and 2-year follow-up.</p> <p><b>Behaviours:</b> Very weak effects were found. There was some, improvement in alcohol misuse risk indicators for the BSTP group 2 years after the intervention. All groups had significantly reduced their scores in all 3 instruments at the 2-year follow-up, with no significant differences between the groups. Of those with high-risk alcohol consumption at baseline, there was a significant difference in reduction in AUDIT scores between the BSTP group and the control group at 2-year follow-up (p&lt;.05, 95% CI). There was a tendency for the BSTP group to have greater reductions in AUDIT scores than the TSI group (p=.06, 95% CI). No significant differences by gender were found.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Primary Drug Drama Project</b></p> <p><b>Delivery year not stated</b></p> <p><b>Starkey &amp; Orme 2001</b></p> <p><b>UK</b></p>	<p>253 year 6 (10-11 years) pupils attending six schools in Avon, England.</p>	<p>The primary drug drama project involved an interactive drama production and workshop day in which actors worked with pupils to develop their own performances to make a positive contribution to each school's drug education programme, help pupils explore attitudes and develop relevant skills, and raise awareness of the consequences of different decisions and increase parental involvement.</p> <p>The main themes explored were: attitudes (how they influence behaviour), choices (how they are influenced and exercised), decisions (their different consequences and how these may affect people), risks (how to recognise and assess them, and decide what action to take). A play was delivered dealing with a range of scenarios relating to drugs and also dealing with issues such as bereavement, loneliness, divorce, bullying, self-blame, guilt, depression, escapism and obsession. Four workshops with children and parents were also held. Co-ordinating teachers attended a pre- project meeting and an evaluation session after the project.</p>	<p><b>Evaluation Design:</b> Impact evaluation consisted of pre- and post project testing using a 'draw and write' and a problem solving exercise.</p> <p><b>Knowledge:</b> The intervention had a significant impact on children's awareness that alcohol is a drug with an increase from 3% to 10%.</p> <p><b>Attitudes:</b> A small effect on attitudes found. The results of a problem solving task relating to alcohol revealed an increase in children choosing a 2<sup>nd</sup> class solution (of three classes of solutions/1<sup>st</sup> being the best) from 140 to 157.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Learning to Drink</b></p> <p><b>Delivery year not stated</b></p> <p><b>Thush <i>et al.</i> 2005, 2007</b></p> <p><b>Netherlands</b></p>	<p>107 14-18 year-old adolescents (61 male/46 female) recruited through schools in the Maastricht area of the Netherlands.</p>	<p>Respondents were assigned to intervention and control groups (receiving no intervention). The program 'Learning to Drink; consisted of 7 weekly sessions and 1 parent session delivered in a bar-lab at the Maastricht University. The sessions consisted of 6 90 minute group sessions and 1 final individual motivational interview. The intervention sessions were carried out by 4 counsellors all trained in motivational interviewing.</p> <p>The sessions inducted participants by giving them information on what a standard alcoholic drink means and asking them to keep a drinking diary. Subsequent sessions included a social expectancy challenge involving receipt of an alcoholic drink or a placebo and then information on alcohol expectancies, a sexual expectancy challenge, information and discussion of drinking norms, perceptions of risk factors relating to alcohol and refusal efficacies training. The 7<sup>th</sup> individual motivational interview session offered tailored feedback and advice.</p> <p>During the parent session background information about adolescent alcohol use was given, suitable norms for moderate drinking were given and discussed and it was specified how parents could identify heavy alcohol use and alcohol related problems by their children and communication strategies.</p> <p>Control group respondents received an information sheet but no intervention sessions. All participants completed a series of self-report questionnaires during the study.</p>	<p><b>Evaluation Design:</b> Randomised clinical trial design with intervention and control groups and data collection at pre-test, post-test and 6 and 12 months following intervention.</p> <p><b>Attitudes:</b> Some positive effects were observed on several of the targeted cognitive determinants.</p> <p>Perception of risk factor: A 2(Time)×2(Condition) Mixed ANCOVA controlling for age and gender revealed a significant Time×Condition effect for the perception of risk factors, <math>F(1, 92)=19.85</math>, <math>pb.001</math>. The experimental group showed a significant increase in perceived risk factors between the fifth and the sixth session, <math>t(47)=5.99</math>, <math>pb.001</math>, whereas the control group did not, <math>t(47)=.93</math>, <math>pN.50</math>.</p> <p>Alcohol outcome expectancies: A 2(Time)×2(Condition) Mixed ANCOVA controlling for age and gender revealed a significant time×condition effect for high dose positive alcohol expectancies, <math>F(1, 91)=5.72</math>, <math>pb.05</math>. Between the second and fourth session, a significant decrease in high dose positive expectancies was found in the experimental group, <math>t(49)=-3.35</math>, <math>pb.01</math>. There was no evidence for a significant change in high dose positive expectancies in the control group, <math>t(44)=.40</math>, <math>pN.50</math>.</p> <p>The experimental group showed a significant decrease in low dose positive expectancies between the second and fourth session, <math>t(49)=-3.97</math>, <math>pb.001</math>, the control group did not, <math>t(44)=-1.07</math>, <math>p=.29</math>.</p> <p><b>Behaviours:</b> No effects on behaviour. The experimental group did not show a significant difference in decrease of drinking at post-test compared with the control group.</p>

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Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Single-session expectancy challenge with young heavy drinkers on holiday</b></p> <p><b>2002</b></p> <p><b>Van de Luitgaarden <i>et al.</i> 2007</b></p> <p><b>Netherlands</b></p>	<p>301 heavy drinking men (aged 16-24) on holiday at two seaside destinations in the Netherlands.</p>	<p>Participants were assigned to the intervention or control group. Baseline data was collected using drinking diaries and a questionnaire. Post intervention also included a Visual Analogue Scale of Arousal-Sedation Expectancies (VAS Expectancies) questionnaire.</p> <p>Trained peers led all intervention sessions with one session held in the EC (Expectancy Challenge) condition and participants in the control received assessment only.</p> <p>For the EC intervention first, participants were asked to give five associations to the following sentence: “Alcohol makes me . . .”. Then, 50% of participants received alcohol, the others - a placebo. The group was then split into two teams and a word game that involved drawing clues to a secret phrase (Pictionary) was played. It was then revealed to participants that only half of them had consumed alcohol. Participants were then asked to write down who they suspected had drunk alcohol (or not) and to motivate why they chose these people. The names and motivations were then disclosed on a flip-over. Identification errors were used to discuss alcohol expectancies. The main message was that expectancies are often the cause of behavioural effects after drinking, instead of pharmacological properties of alcohol. Special attention was given to social and sexual alcohol expectancies. After the EC, participants filled out another questionnaire. Furthermore, appointments were made to fill out questionnaires at the campsite 2 days later and a telephone interview was conducted 6 weeks after the EC.</p>	<p><b>Evaluation Design:</b> Randomised control field experiment.</p> <p><b>Behaviours:</b> Partial effects for heaviest drinkers only, at 6 weeks after intervention reported. The intervention resulted in an increase in sedation expectancies in the EC group. Furthermore, the EC led to a differential reduction in alcohol consumption on a night out at six-weeks post-test in the heaviest drinkers only (<math>F(1, 96) = 7.91, p = .01</math>). The reduction in alcohol consumption on a night out was not mediated by the change in sedation expectancies. These findings suggest that further research on the mechanisms of change is necessary before a single-session EC may be used in a real-life prevention setting.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>A Pilot Study of an Expectancy Challenge With “Heavy Drinking” Young People on Holiday</b></p> <p><b>2002</b></p> <p><b>Van de Luitgaarden <i>et al.</i> 2006</b></p> <p><b>Netherlands</b></p>	<p>170 male and female holiday-makers (mean age = 18.8 years) attending camping resorts in the Netherlands</p>	<p>Participants were assigned to the intervention or control group. Baseline data was collected using drinking diaries and a questionnaire. Post intervention also included a Visual Analogue Scale of Arousal-Sedation Expectancies (VAS Expectancies) questionnaire. One meeting was held in the EC (Expectancy Challenge) condition and participants in the control received assessment only. Participants were recruited by 2 teams of two peers consisting of a young man and a young woman – university students aged 19-21 years who had received comprehensive training.</p> <p>For the EC intervention first, participants were asked to give five associations to the following sentence: “Alcohol makes me . . .”. Then, 50% of participants received alcohol, the others - a placebo. The group was then split into two teams and a word game that involved drawing clues to a secret phrase (Pictionary) was played. It was then revealed to participants that only half of them had consumed alcohol. Participants were then asked to write down who they suspected had drunk alcohol (or not) and to motivate why they chose these people. The names and motivations were then disclosed on a flip-over. Identification errors were used to give information about the operation of alcohol expectancies and to start a discussion on expectancy effects of alcohol.</p>	<p><b>Evaluation Design:</b> Randomised control field experiment.</p> <p><b>Behaviours:</b> No effect was found on alcohol use.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Good Behaviour Game (GBG)</b></p> <p><b>1999-2001</b></p> <p><b>Van Lier <i>et al.</i> 2009</b></p> <p><b>Netherlands</b></p>	<p>477 children aged 7-9 years, from 13 elementary schools in Rotterdam and Amsterdam, the Netherlands, with measurement of their alcohol use from ages 10-13 years.</p>	<p>A school-based universal prevention intervention targeting disruptive behaviour problems on alcohol use from ages 10-13. The approach used in the GBG aims to prevent the onset, or reduce the further development of childhood disruptive problems. Given the link between disruptive behaviour problems and substance use, the programme aimed to impact upon substance use.</p> <p>The GBG focuses on preventing school children's aggressive, opposition and ADHD symptoms. In the GBG teachers and students choose positively formulated class rules. Based on behavioural observations of rule breaking, teachers assign children to one of 3/4 teams ensuring that each team contains an equal number of disruptive and non-disruptive children. The children are then encouraged to manage their own and team mates behaviour. Each team receives a number of cards, and teachers take a card when a rule is violated. Teams are rewarded when at the end of the game at least 1 car remains. The GBG was implemented in 3 stages, in the introduction stage the GBG was played 3 times per week for 10 minutes, in the expansion stage the GBG was expanded in terms of time, settings and target behaviour, with rewards delayed until the end of the week or month. In the generalisation phase it was emphasised that GBG rules apply at all times.</p>	<p><b>Evaluation Design:</b> Randomised control trial design. Follow up research was conducted in later years using a self report longitudinal questionnaire at ages 10, 11, 12 and 13 to assess whether the GBG programme had any influence on children's subsequent alcohol use.</p> <p><b>Behaviours:</b> Weak, partial effects were reported. For alcohol use, no overall effect of intervention during childhood was found. However, intervention children self-reports did suggest a lower probability of alcohol consumption over time, based on a question about alcohol use in the last week. The results suggested that the rate of increase of alcohol use from age 10 to 13 years among intervention children was slower than in the control group.</p> <p>When using "alcohol use over past year and past month" as criterion for use, no effect of intervention was found.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>“Unplugged” the EU-Dap school prevention programme</b></p> <p><b>2004-2005</b></p> <p><b>Vigna-Taglianti <i>et al.</i> 2009, Faggiano <i>et al.</i> 2008, 2007</b></p> <p><b>Austria, Belgium, Germany, Greece, Italy, Spain and Sweden</b></p>	<p>7079 school pupils at baseline and of 6359 pupils (3324 boys and 3035 girls) at follow-up, aged 12-14 from 170 schools, in 7 countries.</p> <p>Wien, Austria; Gent, Belgium; Kiel, Germany; Thessaloniki, Greece; Turin, Novara and Aquila, Italy; Bilbao, Spain; and Stockholm, Sweden.</p>	<p>A school-based drug abuse prevention programme developed in the EU-Dap study to prevent the use of tobacco, alcohol and drugs at post-test. Three intervention arms were devised, delivering the curriculum only, curriculum with the involvement of peers and activities, and curriculum with parental involvement and activities. The control group received no intervention activities.</p> <p>The programme consisted of a 12 hour classroom based curriculum delivered by trained teachers, based on the social influences approach. This included sessions on critical thinking, decision making, problem solving, creative thinking, effective communication, interpersonal relationship skills, self awareness, empathy, coping with emotions and stress, normative beliefs, and knowledge about the harmful effects of drugs.</p> <p>In the peer arm, 2 students elected as class representatives conducted short meetings with classmates to monitor reflections on, and experiences of, the programme. In the parental arm, parents of the students participated in 3 interactive workshops as part of the programme.</p>	<p><b>Evaluation Design:</b> Cluster randomised control trial. A pre test survey was carried out at baseline, and a post test survey was conducted in all schools 3 months after the end of the programme using a self completed questionnaires.</p> <p><b>Knowledge, Attitudes, and Skills:</b> Changes were treated as secondary outcomes and not reported in the paper.</p> <p><b>Behaviours:</b> Short term effects were found. These were not enhanced by the additional peer or parental inputs. Programme effects were found for episodes of drunkenness in the past 30 days (POR=0.72; 0.58–0.90 for at least one episode, POR=0.69; 0.48–0.99 for three or more episodes).</p> <p>Adding parental or class peer components to the curriculum did not appear to increase effectiveness. However small sample sizes limit an assessment of their added effect.</p> <p>At the follow-up survey, a significant association between the programme and a lower prevalence of any drunkenness – adjusted PRO - 0.64 (0.49 to 0.85) and frequent drunkenness - – adjusted PRO - 0.68 (0.45 to 1.04) was found among boys, but not among girls.</p>
<p><b>Health Promotion for Adolescents in Primary Care</b></p> <p><b>1999</b></p> <p><b>Walker <i>et al.</i> 2002</b></p> <p><b>UK</b></p>	<p>1516 teenagers aged 14-15 years across eight general practices in Hertfordshire, England.</p>	<p>Teenagers in the intervention group received an appointment for a 20 minute consultation with the GP practice nurse to discuss their health and health related behaviour. Nurses received training for the study which aimed to improve adolescent self efficacy for behaviour change. Teenagers completed baseline and satisfaction questionnaires. Control group teenagers received usual care and baseline questionnaires sent to their home. Follow up questionnaire surveys were issued to both intervention and control groups at 3 months and 12 months and invitations for a consultation were also sent after 12 months.</p>	<p><b>Evaluation Design:</b> Randomised controlled trial, with participants randomised to a consultation (intervention) or usual care (control). Questionnaires completed at baseline, 3 months, and 12 months.</p> <p><b>Behaviours:</b> Some positive short term effects were found but were not found to be sustained. At baseline 970 teenagers completed questionnaires; 35% had been drunk in the previous three months, More intervention group teenagers reported positive movement in stage of change for diet and exercise and in at least one of four behaviours (diet, exercise, smoking, drinking alcohol) at 3 months (41% v 31%, P &lt; 0.01), but this did not persist at 12 months. There was marginally more positive change in actual behaviour by intervention teenagers at 3 months (16% v 12%, P=0.06).</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>The Life Skills Program IPSY</b></p> <p><b>2003-2006</b></p> <p><b>Wenzel <i>et al.</i> 2009</b></p> <p><b>Germany</b></p>	<p>952 students (54% female) attending schools participating in the IPSY programme (mean age 10.4 at pre-test) in Germany.</p>	<p>The life skills programme for the prevention of adolescent misuse of alcohol is based on the WHO's life skills approach as well as on theories and empirical findings concerning the aetiology of adolescent substance misuse and associated risk and protection factors. The programme delivered in schools by trained teachers included the promotion of generic, intra- and interpersonal life skills (e.g. communication, problem solving, coping with anxiety and stress, assertiveness), training of skills relating to substance use (e.g. refusal skills) and transmission of knowledge relating to alcohol (consequences of use, actual prevalence rates), advertising strategies and structuring of leisure time. The programme was delivered across 15 lessons in grade 5, with two booster sessions each of seven lessons in grades 6 and 7.</p>	<p><b>Evaluation Design:</b> quasi-experimental design (intervention/control) with school-wise assignment to the respective groups.</p> <p><b>Behaviours:</b> Moderate consistent effects on behaviour were confirmed. ANCOVAS analysis revealed positive program effects on alcohol use. Positive influences on school bonding following program participation appeared to partially mediate effects on alcohol use. Univariate tests for each dependent variable showed significant main effects of group for 30-day-frequencies of beer-, <math>F(1740) \frac{1}{4} 12.14, p &lt; 0.01</math>, wine-, <math>F(1740) \frac{1}{4} 14.56, p &lt; 0.001</math>, mixed drinks-, <math>F(1740) \frac{1}{4} 12.83, p &lt; 0.001</math>, and spirits-consumption <math>F(1740) \frac{1}{4} 7.6, p &lt; 0.01</math>, as well as for expectations about future regular alcohol use, <math>F(1740) \frac{1}{4} 11.86, p &lt; 0.01</math>. Significant time-by-group interactions were found for 30-day-frequencies of beer-, <math>F(2,1480) \frac{1}{4} 13.86, p &lt; 0.001</math>, wine-, <math>F(2,1480) \frac{1}{4} 10.19, p &lt; 0.001</math>, and mixed drinks-consumption, <math>F(2,1480) \frac{1}{4} 10.17; p &lt; 0.001</math>. There were higher means on all alcohol related variables and a steeper increase over time in 30-day-frequencies of beer-, wine-, and mixed drinks- consumption in the control group compared to the intervention group. Additional single comparisons indicated that differences in means between groups for alcohol-related outcomes became significant from t3 or t4 onwards. Effect sizes ranged from 0.27 to 0.41.</p>

**Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)**

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Challenging implicit and explicit alcohol-related cognitions in young heavy drinkers</b></p> <p><b>Delivery year not stated</b></p> <p><b>Wiers <i>et al.</i> 2005</b></p> <p><b>Netherlands</b></p>	<p>92 heavy drinking undergraduate college and university students (46 men/46 women) with mean age of 20.5 years in the Netherlands.</p>	<p>Study participants were assigned randomly to the EC (Expectancy Challenge) intervention or control condition (a sham alcohol experiment in the same bar laboratory). Pre-test baseline data on alcohol related items including consumption was then collected by survey and IATs (Implicit Associations Tests). The EC is a cognitive behavioural intervention for college-age drinkers to challenge positive expectancies held about drinking. The intervention was delivered in a bar laboratory. Participants agreed to drink two drinks containing alcohol (placebos contained a minimal dose of alcohol on the rim of the glass). They then completed questionnaires assessing background variables.</p> <p>The rest of the session depended on experimental condition. Those assigned to the intervention completed the EC session (including a homework assignment to write an essay on expectancies in the media and in their own lives and to keep an alcohol diary). In the control group after beverage consumption participants performed neuropsychological tests. No information on expectancies followed. The same homework assignment was issued at the end.</p> <p>Post test survey and IATs were carried out 1 week after the intervention. One month after intervention participants handed in their alcohol diaries and received a monetary reward.</p>	<p><b>Evaluation Design:</b> Randomized controlled experiment</p> <p><b>Attitudes:</b> Partial moderate effects were reported. The EC resulted in decreased explicit positive arousal expectancies in men and women alike. There was some evidence for a differential reduction in implicit arousal associations, but findings depended on the version of the IAT and on the scoring-algorithm used.</p> <p><b>Behaviours:</b> Partial weak effects were reported. In men (but not in women) there was a short-lived differential reduction in prospective alcohol use (significant in week 3 of the follow-up), and this reduction was partially mediated by the decrease in explicit positive arousal expectancies.</p>

### Theme 3: Interventions to educate and empower young people on alcohol issues (for ages 0-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>An experimental test of an alcohol expectancy challenge in mixed gender groups of young heavy drinkers</b></p> <p><b>Delivery year not stated</b></p> <p><b>Wiers &amp; Kummeling 2004</b></p> <p><b>Netherlands</b></p>	<p>25 heavy drinking students (11 males) at college in the Netherlands</p>	<p>Participants were assigned to an intervention or control group. Expectancies were measured using the VAV measuring positive and negative expectancies for a low and for a high dose of alcohol and the Expectancy Context Questionnaire ECQ. Alcohol use was measured with self report grids for each day of the last month. The RAPI was used to measure alcohol related problems that may be experienced.</p> <p>Everyone then received two glasses of vodka tonic or placebo. Intervention participants then completed an expectancy challenge session. Men were asked to rate the attractiveness of pictures of female movie stars/women had to guess which movie star would be judged most attractive by men based on their reactions. Next participants had to guess who had drunk alcohol and placebo.</p>	<p><b>Evaluation Design:</b> Randomized controlled experiment</p> <p><b>Attitudes:</b> Consistent positive effects were reported. Positive expectancies decreased significantly in the experimental but not in the control group. In the experimental group, positive expectancies decreased significantly more in women than in men.</p> <p><b>Behaviours:</b> The intervention resulted in positive effects on levels of alcohol consumption. Alcohol use decreased significantly for both men and women. The effects were greatest for women, and add to previous research which had tested the intervention on men only.</p>
<p><b>Young People's Development Programme (YPDP)</b></p> <p><b>2004-2007</b></p> <p><b>Wiggins <i>et al.</i> 2009</b></p> <p><b>UK</b></p>	<p>2724 young people aged 13-15 years across 54 youth service sites in England</p>	<p>Intensive multi component youth development programme including sex and drugs education (YPDP) versus standard youth provision. The YPDP was a 3 year initiative funded by the UK Department of Health targeting young people aged 13-15 deemed by teachers or other care professionals to be at risk of substance misuse. The programme aimed to reduce substance misuse by delivering a personal development programme with content including education, training/employment opportunities, life skills, mentoring, volunteering, health education, arts, sports and advice on accessing services.</p>	<p><b>Evaluation Design:</b> Prospective matched comparative study</p> <p><b>Behaviours:</b> No evidence was found that the intervention was effective in reducing drunkenness.</p>

## 5.2 Case Studies

### 5.2.1 Social and Emotional Training

**Lead agency:** The Social and Emotional Training (SET) programme was designed by Birgitta Kimber of the Department of Public Health Sciences, Division of Social Medicine, Karolinska Institute, Stockholm, Sweden.

Outcome evaluation of the SET programme was conducted by; Birgitta Kimber and Sven Bremberg of the Department of Public Health Sciences, Division of Social Medicine, Karolinska Institute, Stockholm, Sweden and Rolf Sandell of the Department of Social Sciences, Linköping University, Linköping, Sweden.

**Resources:** Funding for evaluation of the programme was provided through grants of 1,200,000 SEK (approx €125,000) from the Swedish Council for Social Research (SFR) and 600,000 SEK (approx €62,500) from the Swedish Council for Working Life and Social Research (FAS). It is not clear if this funding also covered the costs associated with the development of the programme or implementation in the schools in which it was evaluated.

**Target groups and behaviours:** The SET programme was designed for school students, both male and female, in grades 1-9 (compulsory education; age 7-16).

The primary objective of the SET programme was to enhance students' social and emotional skills, specifically; self-awareness; managing emotions; empathy; motivation; and social competence. Although the programme did not specifically target or address the issue of substance use among students, self-reported substance use was used as an outcome measure to evaluate the effectiveness of the project.

**Context:** Alcohol consumption among 15 and 16 year olds in Sweden has increased since the 1980s. This has been attributed, in part, to the loosening of restrictions and greater affordability of alcohol as a result of the country joining the European Union.

The SET programme has been adopted on a voluntary basis by individual schools/educational authorities in Sweden.

**Intervention:** The SET programme draws on a set of educational techniques involving the use of cognitive and behavioural methods termed "social and emotional learning" (SEL). SEL techniques and programmes have been implemented and evaluated in the U.S.A. with encouraging results in terms of health behaviours. Kimber developed the SET programme as a formalised SEL intervention for use in Swedish schools, inspired by similar programmes in the U.S.A such as the PATHS programme (Providing Alternative Thinking Strategies).

The programme was designed to be delivered during scheduled school hours by regular class teachers who have received programme-specific training. The programme uses detailed manuals for teachers and workbooks for students, one volume for each grade. Students in grades 1-5 receive two 45 minute sessions of SET per week, and students in grades 6-9 receive one 45 minute session of SET per week over the course of a school year.

The SET programme consists of 399 exercises/tasks over its entire course. A number of themes recur in the exercises: solving social problems; handling strong emotions;

appreciating similarities and differences; clarification of values; conflict management; interpretation of pictures and narratives; resisting peer pressure; understanding one's own feelings; recognising people and situations; cooperation; listening and relaying messages; setting goals and working to attain them; giving and receiving positive feedback; and stress management.

Teachers are instructed to use modelling and role-play in the tasks/exercises. Students are encouraged to practice outside of school, including in the home. Interaction between schools and parents is emphasised as part of the programme.

**Evaluation:** A quasi-experimental 5-year longitudinal study was conducted to evaluate the effectiveness of the programme. The evaluation examined impact at both age/grade (cross-sectional analysis) as well as years of exposure to the programme (longitudinal analysis).

The programme was implemented in two schools in Botkyrka Municipality in the Stockholm metropolitan area. Two schools in the same municipality with similar socio-economic profiles to the intervention schools were selected to act as controls. Three classes were selected from each grade 1 through 7 in both intervention schools, giving 41 experimental classes in total (1 class dropped out for administrative reasons). One class from each grade 1 through 7 was selected in both control schools, giving a total of 14 control classes.

Questionnaires were completed by students in both intervention and control schools before implementation of the programme (t0) and once a year during the programme (t1-t5). The questionnaires were compiled combining elements from a number of standardised instruments to measure students' psychological well-being, contentment in school and drug use (including tobacco, alcohol, volatile substances and illegal narcotics). Student cohorts in intervention schools had different durations of exposure to the programme when they were evaluated, e.g. students in grade 7 at t1 had only one year's experience of the programme, while students in grade 7 at t5 had five year's exposure of the programme.

Patterns of use were ascertained on a self-reported frequency-of-use scale. The question specifically addressing alcohol use was: "How often do you drink beer, cider, wine or spirits?" with answers on a nine-step scale from "do not drink" to "every day or almost every day".

The investigators analysed longitudinal impact by comparing trajectories for alcohol use according to number of years of exposure (intervention classes)/non-exposure (control classes) to the SET programme.

The investigators found a significant difference in the use of alcohol for non-users and light users of alcohol with increasing duration of exposure/non-exposure to the programme. There was a slight, but consistent decrease in alcohol use over time in the intervention group, but an irregular increase in consumption amongst the control group over time. Consumption of more than six times per year decreased from 3% to 0% in the intervention group, but increased from 0% to 38% in the control group as duration of exposure to the intervention/control rose to five years. Effect sizes were described as medium by the researchers.

Amongst those classified as moderate to heavy alcohol users, there was a general decrease in alcohol use with duration in both intervention and control schools. Difference in consumption between these two groups was not significant.

Cross-sectional analysis found no significant difference in the use of alcohol between the intervention and control students for any given year grade. This applied to both those classified as non-users/light users or moderate/heavy users.

In terms of the programme's core objective of enhancing social and emotional skills, there was a significant positive effect in intervention students with regard to internalising problems, externalising problems, self-image, self-esteem and contentment in school. However, the programme was not found to have a significant impact on social skills.

Teachers' perceptions of the SET programme are reported to be generally, although not universally, positive.

**Time frame:** Outcome evaluation of the SET programme was conducted over a five-year period. The programme was implemented in August of the school year 2000/2001 and ran until the end of the school year 2004/2005. Pre-intervention teacher training took place in the school year 1999/2000.

The SET programme continues to be used in Swedish schools. It is designed to be delivered to students throughout their compulsory education (grades 1-9).

#### **Information sources:**

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[http://www.fas.se/fas\\_templates/Project\\_1250.aspx?arende=9497](http://www.fas.se/fas_templates/Project_1250.aspx?arende=9497)
- Birgitta Kimber's webpage:  
[http://www.birgittakimber.se/birgittakimber/extern/social\\_och\\_emotionell\\_traning.htm](http://www.birgittakimber.se/birgittakimber/extern/social_och_emotionell_traning.htm)
- E-mail: [b.kimber@telia.com](mailto:b.kimber@telia.com)

#### **5.2.2 IPSY (Information + Psychosocial Competence = Protection)**

**Lead agency:** The programme was piloted and implemented in Germany by the Department of Developmental Psychology, Center for Applied Developmental Science (CADS), University of Jena, Germany.

Cross-national validation of the IPSY programme was a project of the University of Torino, Italy.

**Resources:** Cross-national evaluation of IPSY was supported by Philip Morris GmbH, in conjunction with the Ministry of Culture of the Federal State of Thuringia, Germany, and the University of Torino, Italy.

**Target groups and behaviours:** A life skills programme targeted at the prevention of misuse of legal substances like alcohol and tobacco in adolescents.

**Context:** Programmes that teach comprehensive life skills and using interactive are considered to be among the more effective interventions targeting adolescent problem behaviours such as substance misuse.

Evidence suggests that school bonding (i.e. attachment and close relationships with teachers and fellow students, and commitment to the school's social norms and values) may be a protective factor against problem behaviours in adolescents.

**Intervention:** IPSY was delivered over 15 sessions; ten 90-minute sessions and five 45-minute sessions for grade 5 (age 10-11 years) students. The German programme also includes two booster sessions, comprising 7 lessons each, for grade 6 and 7 students. The programme was delivered by teachers who had participated in a one-day facilitator workshop. It was based on a specially designed manual and sessions incorporated the extensive use of interactive methods, such as role play, small group interactions and group discussions.

The programme is based on the WHO's (1997) life skills approach as well as on theories and empirical findings on the causes of adolescent substance use and associated risk and protection factors.

The programme promotes generic intra- and interpersonal life skills such as: positive self-awareness; thoughtful decision making; problem solving; coping with stress and emotions; creativity; empathy; assertiveness; communication skills; and the ability to establish and maintain social relationships. As part of the programme, students are provided with information on actual prevalence rates of substance use and taught refusal skills.

IPSY differed from many life skills programmes in that it also included lessons that explicitly focus on schools, and are intended to positively influence school bonding. Students' experience of, and attitude towards school, positive and negative aspects of school and learning, learning methods, and balancing school and leisure time are all addressed in the programme.

IPSY was initially developed for use with German students. It has been translated for use with Italian students, with some minor adaptations of the programme manual to take account of differences in drinking culture and attitudes between the countries.

**Evaluation:** Evaluations were conducted in the Federal State of Thuringia, Germany, and in the city of Turin, Italy.

In the German evaluation, the programme was implemented in 23 volunteer intervention schools, with 21 schools acting as controls (approx 1700 students). Outcome evaluation was based on pre- and post-intervention self-reported alcohol consumption and school bonding indicators. Evaluation took place 7 months after the initial sessions in grade 5, and after the booster sessions in grades 6 and 7. Early evaluation (Weichold 2006) reported positive but

non-significant and partial effects. More recently published evaluation reports much stronger sustained effects (Wenzel 2009) and provides more insight on the mediating role of school bonding efforts.

The most recently published outcome evaluation demonstrates a decrease in school bonding in both the intervention and control groups over time, but the decrease is of a lower magnitude in the intervention group. The intervention group reported lower frequency of consumption in the past 30 days for beer, wine, mixed drinks and spirits, and a less sharp increase in 30-day frequency for beer, wine and mixed drinks over time than the control group. Students in the intervention group reported lower expectations for future regular use of alcohol than students in the control group. Analysis demonstrates that intervention effects on 30-day frequency of alcohol use and students' expectations of future alcohol use are partially mediated by positive programme influences on school bonding.

The Italian evaluation was of a similar design but on a smaller scale involving 90 students in the intervention group and 91 in the control group. The evaluation was also conducted over a shorter time period (2 months post-intervention only) than the German evaluation. None of the effects of the intervention noted were statistically significant, although the direction of change was promising. Outcome evaluation found more school involvement in the intervention group than in the control group 2 months post-intervention. Two months after participation in the programme students in the intervention group showed a decrease in their acceptance of invitations to drink alcohol, while students in the control group showed an increase. For those students in the intervention group who reported drinking alcohol pre-intervention, the quantity of wine/beer consumption on the last drinking occasion decreased post-intervention, but increased in the control group. However, analysis suggested that students in the intervention group who reported drinking pre-intervention were as likely as drinkers in the control group to maintain their drinker status post-intervention.

Process evaluation was also conducted, taking into account the views of teacher facilitators and students.

Process evaluation found IPSY was very acceptable to teachers in the German trial and well implemented. Eighty percent of lessons were reported to have been taught in the manner prescribed by the programme. Eighty-four percent of teachers liked the programme, and 89% said they would teach the programme independent of the evaluation study. Teachers found the programme to be enjoyable, age-appropriate and many reported transferring elements of IPSY into other subjects. Students were similarly positive about the programme, with 71% reporting they liked the programme, and 83% expressing the wish to have the programme again in their school.

Authors report that 92% of Italian students said they liked the programme very much and expressed a wish to have it again in their school. The authors also reported that IPSY was also implemented comprehensively in the Italian intervention, with the entire session content taught in 85% of lessons.

**Time frame:** The German evaluation of IPSY was conducted over a period of approximately 3 years.

**Information sources:**

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### 5.2.3 Alcohol Expectancy Challenge

**Lead agency:** Experimental Psychology, Maastricht University, Netherlands.

**Resources:** No information is available regarding the costs associated with the alcohol expectancy challenge.

**Target groups and behaviours:** The alcohol expectancy challenge targeted in young heavy drinkers (male and female). The aim was to reduce the magnitude of positive alcohol expectancies and alcohol use

**Context:** Alcohol outcome expectancies are anticipated positive or negative effects of drinking alcohol on behaviours, mood and emotions. Expectancies have previously been demonstrated to be accurate predictors of alcohol use. It has therefore been hypothesised that successful challenge of positive expectancies could result in reduced alcohol consumption.

Darkes and Goldman (1993) developed and tested an alcohol expectancy challenge for male social drinkers. They found that young heavy drinking men who took part in the expectancy challenge showed decreased positive alcohol expectancies and decreased alcohol consumption compared to controls.

**Intervention:** The intervention was based on the challenge developed by Darkes and Goldman, and adapted for a mixed gender group.

In an initial study, the challenge took place over 3 sessions at one week intervals and involved bringing together a mixed gender group of heavy drinkers in a bar-lab. In the first two sessions, participants were randomised into treatment group (given 2 glasses of vodka-tonic) or placebo (2 glasses of non-alcoholic drink).

The first session focused on social behaviour through game playing. Participants were then asked to guess who had drunk alcohol and who had had the placebo drink. Identification errors served as a starting point for information contrasting the real alcohol effects from expected effects.

The second session was concerned with sexual expectancies. Male participants were shown pictures of female movie stars and asked to rate their attractiveness. Female participants had to guess which movie star would be rated as most attractive by the men based on their reactions. The game was reversed. Again, participants guessed who had drunk alcohol, and

identification errors served as a starting point for information contrasting the real alcohol effects from expected effects. Information from the first two sessions was reviewed in the third session.

In a subsequent study, the challenge took place in a single extended session, with both experimental sessions from the original protocol combined into one with only a short break in between. Participants were asked to keep a drinking diary for one month after the single-session expectancy challenge.

**Evaluation:** In the initial study of the 3-session challenge (16 intervention students; 9 controls), the researchers found that positive expectancies for a low levels of alcohol consumption decreased in the intervention group compared with the control group at post-test (one week after the 3<sup>rd</sup> session). No effects on positive expectancies for higher levels of alcohol consumption or on negative expectancies were found.

Among the intervention group, positive alcohol expectancies decreased significantly more in women than in men. In addition, alcohol use decreased more in women than in men, although not significantly so. The intervention did not significantly change positive expectancies and alcohol use amongst the heavy drinking young men.

The researchers noted difficulties in recruiting heavy-drinking students willing to commit to taking part in the five sessions (3 experimental sessions + pre- and post-test questionnaires).

In the evaluation of the extended single-session challenge (46 intervention students; 46 controls), the researchers found that explicit alcohol arousal expectancies were reduced among men and women in the intervention group, but not in the control group one week after the bar-lab session. The effect of the intervention on implicit alcohol expectancies was not clear. They found some evidence of a modest, short-term reduction in alcohol consumption in men in the intervention group (significant only at 3-weeks post-intervention), but not in women. The reduction in alcohol consumption in men in the intervention group was significantly mediated by the change in explicit arousal expectancies.

N.B. Controls in the 3-session intervention group did not attend any experimental sessions. Controls in the single-session challenge received alcohol and placebo drinks in the same bar-lab as the intervention group, but did not receive the information component of the intervention.

**Time frame:** Evaluations were conducted in 2003. The researchers have no plans for further trials of the alcohol expectancies challenge.

**Information sources:**

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## 5.2.4 Preventure

**Lead agency:** The Preventure programme was developed by Dr Patricia Conrod of the Department of Addictions, Division of Psychological Medicine, Institute of Psychiatry, King's College, London.

Outcome evaluations of the Preventure programme have been undertaken by Maudsley NHS Trust; Department of Addictions, Division of Psychological Medicine, Institute of Psychiatry, King's College, London and NIHR Biomedical Research Centre, South London in collaboration with the charity Action on Addiction.

**Resources:** The evaluation of the forerunner of the Preventure programme was supported by the Alcoholic Beverages Medical Research Foundation and an Investigator Award from the Canadian Institutes of Health Research.

The evaluation of Preventure conducted by the Department of Addictions at King's College London was funded by Action on Addiction.

The Adventure trial is funded by Action on Addiction and sponsored by King's College, London.

**Target groups and behaviours:** The Preventure programme is a personality targeted intervention with the aim of delaying initiation and slowing increases in intensity of drinking, binge drinking and drug experimentation in high-risk adolescents.

The programme provides education and cognitive behavioural skills training to adolescents with personality risk factors identified as predictors of early onset substance use and misuse. These personality risk factors are also recognised risk factors for future alcohol abuse and dependence. Four personality risk factors, based on previous research were targeted: negative thinking (NT), anxiety sensitivity (AS), impulsivity (IMP) and sensation seeking (SS).

**Context:** British youth report the highest rates of drinking and binge drinking in Europe.

**Intervention:** The Preventure programme comprises of two 90-minute group sessions, based on a specially developed manual, designed to be delivered at participants' schools.

Participation in the programme is on a voluntary basis. Students are eligible for recruitment to Preventure if they score more than one standard deviation above their school mean on at least one of the four personality risk subscales (NT, AS, IMP and SS) of a pre-validated questionnaire-based assessment, the Substance Use Risk Profile Scale (SURPS). Students are assigned to one of four intervention groups based on their identified personality risk factor. Those with high scores in more than one personality-risk are assigned to the intervention group in which they have the highest deviation from the mean.

Programme manuals use real life experiences or "scenarios" as stimulus material for group discussion. Manuals incorporate three main components: a psycho-educational component, a motivational interviewing component and a cognitive-behavioural component.

In the first 90-minute session, participants are guided in a goal-setting exercise designed to enhance motivation to explore personality and ways of coping with one's personality. Psycho-educational strategies are used to educate participants about the target personality variable (NT, AS, IMP or SS) and the associated coping behaviours, such as interpersonal dependence, avoidance, aggression, risky behaviours and substance misuse. Participants are then introduced to the cognitive-behavioural model and guided in dissecting a personal experience according to the physical, cognitive and behavioural components of an emotional response.

In the second 90-minute session, participants are encouraged to identify and challenge personality-specific cognitive distortions that lead to problematic behaviours.

**Evaluation:** An evaluation of the forerunner of the Preventure programme was conducted amongst high school students in Canada. The Canadian programme targeted only three personality risk types for alcohol misuse (AS, SS and NT) and only students who already reported drinking alcohol were eligible for inclusion in the trial. The intervention showed promising results in terms of abstinence from alcohol, reduction in drinking quantity and reduction in binge drinking rates for all three personality types at 4 month follow up.

368 adolescents were included in an outcome evaluation of the UK Preventure, based on personality risk factors identified using SURPS. Participants were from years nine and ten (median age 14) at 13 secondary schools across 10 London boroughs. 199 students randomised into the intervention group participated in the Preventure programme, while 169 students were randomised to the control group. The control group received only standard drug education sessions provided as part of the National Curriculum, and which the intervention group also received.

Self-reported alcohol use (frequency x quantity) and reported binge drinking (consumption of more than four alcoholic beverages for girls and five for boys on at least one occasion in the past 6 months) was recorded at baseline, six months post intervention and 12-months post intervention for individuals in both the intervention and control groups.

The researchers found that overall the control group had a greater increase in alcohol use in the six month period post-intervention than the group who had participated in Preventure. Increase in alcohol consumption and probability of binge drinking was highest amongst the SS personality groups.

The intervention was significantly effective in preventing increase in alcohol use and binge drinking in SS personality risk type. SS students in the intervention group were 61% less likely to report drinking alcohol in the past six months at 12 months post-intervention than SS students in the control group. SS drinkers in the intervention group were 45% less likely to report binge drinking at six months post-intervention, and 50% less likely to report binge drinking at 12 months post-intervention than drinkers in the SS control group.

The intervention did not significantly slow growth in alcohol consumption or binge drinking rates for NT, AS and IMP personality types.

Student feedback on the Preventure programme was reported to be positive.

In initial trials, the Preventure programme was delivered in schools by a qualified counsellor. In an ongoing study by the Department of Addictions, King's College, the programme is being delivered by school teachers and other educational professionals who have received special training. In this trial, the programme has been renamed Adventure. Six-month post-intervention results are promising in terms of abstinence from alcohol and reduction in binge drinking rates.

**Time frame:** The Adventure trial was started in May 2007 with an estimated completion date of May 2010.

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- Action on Addiction's current research: [http://www.actiononaddiction.org.uk/research/our\\_current\\_research/](http://www.actiononaddiction.org.uk/research/our_current_research/)
- Adventure trial details: <http://clinicaltrials.gov/ct2/show/NCT00776685>
- Preventing teenage binge drinking, *Your Mental Health Research: understand, prevent, cure*, Institute of Psychiatry, King's College London (2008-2009): <http://alumni.kcl.ac.uk/Document.Doc?id=5>
- E-mail communication with Dr Patricia Conrod, Department of Addictions, Division of Psychological Medicine, Institute of Psychiatry, King's College, London, [patricia.conrod@iop.kcl.ac.uk](mailto:patricia.conrod@iop.kcl.ac.uk)

## 6. THEME 4: PROMOTE RESPONSIBLE SELLING AND SERVING OF ALCOHOL TO YOUNG PEOPLE

### 6.1 Data Extraction Tables

#### Theme 4: Interventions to promote responsible selling and serving of alcohol to young people (for ages 14-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Banning glassware from nightclubs</b></p> <p><b>2006</b></p> <p><b>Forsyth <i>et al.</i> 2008</b></p> <p><b>UK</b></p>	<p>Nightclub patrons were recruited using mixed methods (<math>N=31</math>). Twenty-six interviewees were <math>\leq 27</math> years and 5 were <math>&gt; 27</math> years. In-depth interviews were conducted May to September 2006.</p> <p>8 nightclubs in the centre of Glasgow were chosen in consultation with local police (mix of high and low levels of recorded crime) all serving alcohol until 3.00am at weekends, charging admissions and mainstream rather than niche venues, were observed between February and May 2006.</p> <p>Glasgow, United Kingdom</p>	<p>A ban on glassware for all venues holding an Entertainment Licence (i.e. venues serving alcohol after midnight) in Glasgow city centre from the 2<sup>nd</sup> February 2006. The policy aimed to phase out glass (other than safety glass) and replace it with plastic or aluminium, with the exception of wine and champagne glasses. Part of range of measures aiming to reduce violence in the city's night-time economy.</p>	<p><b>Evaluation Design:</b> field observations using qualitative and quantitative methods plus 30 minute semi-structured depth interviews.</p> <p><b>Attitudes:</b> Partial effects reported descriptively. Patrons reported feeling safer in all-plastic nightclubs than in others. Older patrons tended to be more pro-glass or anti-plastic than younger interviewees and some younger patrons were either unaware of the ban or failed to see why this issue should be controversial.</p> <p><b>Behaviours:</b> Partial positive effects reported descriptively. Exemptions to the ban had enabled some premises (three out of eight) to continue to serve alcoholic drinks in glass vessels, and injurious violence resulting from these practices was observed. Disorder in all-plastic venues (which included the two premises with the most incidents) was observed to incur less injury risk</p>

**Theme 4: Interventions to promote responsible selling and serving of alcohol to young people (for ages 14-27 years)**

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Underage alcohol sales in supermarkets and liquor stores under the Alcohol Licensing &amp; Catering Act</b></p> <p><b>2000-</b></p> <p><b>Gosselt et al. 2007</b></p> <p><b>Netherlands</b></p>	<p>150 supermarkets (which sell &lt;15% ABV drinks only) and 150 liquor stores from 3 representative Dutch regions, including rural and urban areas, visited at different times of the day, Monday to Friday during Dec 2005 to Feb 2006..</p> <p>Amsterdam (west), Enschede (north-east) and Eindhoven (south), Netherlands</p>	<p>The Alcohol Licensing and Catering Act prohibits retailers to sell milder alcoholic beverages (&lt;15% alcohol) to &lt;16 year olds and strong alcohol beverages (≥15% alcohol) to &lt;18 year olds. Since 2000 retailers are obliged to ask for identification (ID) and verify age when young people buy alcohol.</p>	<p><b>Evaluation Design:</b> A cross-sectional ‘mystery shopper’ study using 4 adolescents from each of the 3 regions who were judged to look typical of their age group. Following a strict protocol, the 15 year-olds visited 150 supermarkets and 75 liquor stores to purchase a &lt;15% ABV drink and a snack; the 17 year-olds visited 75 liquor stores to purchase a ≥15% ABV drink and snack. If asked, mystery shoppers gave a false age but had to show their real ID if asked. At the end of the transaction, when payment is requested, the shopper reveals they only have €0.50 and chooses to purchase the snack only.</p> <p><b>Behaviours:</b> Sales to under age test youth were found to be very high. 86% of all (N=300) buying attempts succeeded. For supermarkets, 88% of all purchase attempts succeeded. A significant difference was found in liquor stores between 15 year-olds successful attempts to purchase a milder alcohol beverage (77%) and the 17 year-olds successful attempts for stronger alcoholic beverages (89%) (p&lt;.05). The success rate for 17 year-olds in liquor stores did not differ from 15 year-olds in supermarkets. In 72% of the store visits, mystery shoppers were not asked their age or for ID. When vendors asked shoppers’ age (4% visits), all purchase attempts succeeded. When vendors asked for ID (12% visits), or first asked the mystery shoppers’ age and then asked for ID (12% of the visits), the overall success rate dropped to 36% and 43% respectively. ID checks had some preventive effect, but 39% of buying attempts succeeded even when under-age ID was shown.</p> <p>Female mystery shoppers were significantly more successful in purchase attempts than males (p&lt;.001) and vendors were significantly more likely to ask for age (p&lt;.001) and ID (p&lt;.001) for males than female adolescents.</p>

#### Theme 4: Interventions to promote responsible selling and serving of alcohol to young people (for ages 14-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Bartender Educational Programme</b></p> <p><b>Delivery year not stated (pre-2002)</b></p> <p><b>Johnsson &amp; Berglund 2009, 2003</b></p> <p><b>Sweden</b></p>	<p>University Freshmen/"Freshers" (first year undergraduates arriving before 1<sup>st</sup> term commences). N=660 at baseline. Study sample of N=188 high risk drinkers (AUDIT test), mean age = 21 (SD±3) years.</p> <p>Lund Institute of Technology, Lund University</p>	<p><i>Cognitive Behavioural Alcohol Program (CBAP)</i>: a 10 hour educational alcohol skills training programme given in 5 different sessions over 1 week intervals. Mixed gender groups of 8-10 students. Covered: identifying high-risk drinking situations; providing accurate information about alcohol; identifying personal risk factors; challenging myths and positive expectations; establishing appropriate and safer drinking goals; managing high-risk drinking situations, and learning from mistakes.</p> <p><i>Written mailed minimal intervention (PMMI)</i>: normative feedback describing the student's consumption compared with all other Freshers, (i.e. the upper quartile with the highest score). Included recommendations to drink less and telephone numbers for health organisations.</p>	<p><b>Evaluation Design:</b> An RCT where the student body quartile with the highest AUDIT scores at Baseline were randomised to a CBAP or PMMI group. No control group included in the design. The AUDIT questionnaire was used at baseline and 1-year follow-up as an indicator of alcohol misuse..</p> <p><b>Behaviours:</b> Some reductions in alcohol use indicators were found 1 year after the intervention in both intervention groups but without a control group, it is not possible to draw any conclusions on efficacy. There were no significant differences in the total 10-item AUDIT scale between the CBAP and PMMI groups and no significant differences between men and women. Both groups improved (reduced) their total AUDIT scores significantly at the 1 year assessment, which could be explained as a regression to the mean.</p>
<p><b>Pakka Project and Regionsprosjeket</b></p> <p><b>2006-2007</b></p> <p><b>Rossow et al. 2008</b></p> <p><b>Finland and Norway</b></p>	<p>Under age appearing &lt;18s in Finland (n=290) across 66 shops with 290 purchase attempts, and Norway (n=170)</p>	<p>Pakka project: The Pakka project was delivered between 2004 and 2008 in two Finnish regions. The intervention had 3 main goals: (1) to decrease heavy drinking occasions and related acute problems; (2) to decrease under-age drinking; and (3) to develop a model for a sustainable prevention structure at the local level. This consisted of 3 interacting core components: (1) community mobilization and policy changes; (2) youth social alcohol access, consumption and problems; and (3) responsible beverage service and selling.</p> <p>Following intervention purchase attempts were made in supermarkets and grocery stores (80%), kiosks and gas stations (13%), and monopoly outlets (7%).</p>	<p><b>Evaluation Design:</b> Quasi-experimental design.</p> <p><b>Behaviours:</b> Some reductions in underage sales in monopoly outlets were reported. Finnish results: salespeople asked the buyers to present an ID card in 57% of the cases, and in 99% of cases the buyers were denied purchase of alcohol. In 43% of the attempts the salespeople did not ask for an ID card and sold alcohol, and in 1% of the attempts the salespeople asked for an ID card but sold alcohol anyway. Bivariate analyses showed that the proportion of buyers who were asked to present an ID card was significantly higher in monopoly outlets compared to other types of outlets, and the proportion who succeeded in purchasing alcohol was significantly higher in grocery stores, kiosks and petrol stations (46%) compared to monopoly outlets (14%).</p> <p>Norwegian Results: The Norwegian buyers were asked to present an ID card in 50% of the attempts, which in the vast majority of cases led to denial of purchase. A little over half (55%) of the purchase attempts resulted in purchase of beer.</p>

#### Theme 4: Interventions to promote responsible selling and serving of alcohol to young people (for ages 14-27 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>STAD (Stockholm Prevents Alcohol and Drug Problems) Project Responsible Beverage Service (RBS) Training</b></p> <p><b>1996, 1998, 2001</b></p> <p><b>Wallin &amp; Andréasson 2004</b></p> <p><b>Sweden</b></p>	<p>Licensed premises (restaurants with/without a bar, bars/pubs, nightclubs) in northern Stockholm received the intervention RBS training. <i>N</i>=84 at baseline, <i>N</i>=60 at 1<sup>st</sup> follow-up and <i>N</i>=56 at 2<sup>nd</sup> follow-up. Southern Stockholm licensed premises were used as a control: <i>N</i>=80 at baseline, <i>N</i>=53 at 1<sup>st</sup> follow-up and <i>N</i>=60 at 2<sup>nd</sup> follow-up.</p>	<p>A 2-day training programme in responsible beverage service (RBS) for serving staff, restaurant owners and doormen. Covers alcohol law (including encouragement to ask for ID and legal responsibilities regarding underage serving), medical effects, restaurant-related crimes, drugs and conflict management. [NB: the legal age limit for on-sales in Sweden is 18 years and 20 years for off-sales.]</p>	<p><b>Evaluation Design:</b> A repeated measures study design. As for previous measures, in the 2<sup>nd</sup> follow-up (2001), fourteen 18-year olds (11 boys) were selected by an expert panel as looking under 18 years. Paired visits were made in the evening to each licensed premises and each ordered a beer. After the visit a study protocol was completed including an estimate of servers' age. (As the baseline study (1996) showed no seasonal differences, one measure was used for each follow-up resulting in half the number of purchase attempts.)</p> <p><b>Behaviours:</b> There were no statistically significant differences between the intervention and control areas. Overall, the frequency of alcohol service for adolescents in all study groups decreased from baseline 45% of 600 visits (1996) to 41% of 252 visits (1998) then 32% of 238 visits (2001) in the follow-ups; the decrease in 2001 was statistically significant compared to the baseline in 1996. Neither the age nor gender of the serving staff was related to the likelihood of being served.</p>
<p><b>STAD (Stockholm Prevents Alcohol and Drug Problems) Project Responsible Beverage Service (RBS) Training</b></p> <p><b>1996, 1999, 2001</b></p> <p><b>Wallin et al. 2005, Andréasson et al. 2000</b></p> <p><b>Sweden</b></p>	<p>Licensed premises (restaurants with/without a bar, bars/pubs, nightclubs) in north central Stockholm received the intervention RBS training. <i>N</i>=47 at baseline, <i>N</i>=61 at 1<sup>st</sup> follow-up and <i>N</i>=56 (incl. 36 RBS-trained) at 2<sup>nd</sup> follow-up. South central Stockholm licensed premises were used as a control: <i>N</i>=45 at baseline, <i>N</i>=42 at 1<sup>st</sup> follow-up and <i>N</i>=44 (incl. 9 RBS-trained) at 2<sup>nd</sup> follow-up.</p>	<p>A 2-day training programme in responsible beverage service (RBS) for serving staff, restaurant owners and doormen. Covers alcohol law, medical effects, restaurant-related crimes, drugs and conflict management. Additional components of STAD include community mobilization and enforcement.</p>	<p><b>Evaluation Design:</b> Two male actors (23 and 27 years, baseline) portraying intoxicated patrons visited the licensed premises in an evening for 30-45 minutes and attempted to order beer in a scenario chosen by an expert panel. Observers were present at each visit.</p> <p><b>Behaviours:</b> Sustained positive effects were reported. The results from the 2<sup>nd</sup> follow-up (2001) showed a statistically significant improvement over those of earlier measures, with a refusal rate of 70% compared with 47% in 1999 and 5% in 1996. At 2<sup>nd</sup> follow-up, there were improvements in both study areas – premises in south central Stockholm (82%) refused alcohol more often compared with north central Stockholm (61%).</p> <p>At baseline, 72% of servers were estimated to have been aged 20-35 years.</p>

**Theme 4: Interventions to promote responsible selling and serving of alcohol to young people (for ages 14-27 years)**

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p><b>Alcohol Sales to Underage Adolescents: Evaluation of a Police Intervention</b></p> <p><b>1998-1999</b></p> <p><b>Willner <i>et al.</i> 2000</b></p> <p><b>UK</b></p>	<p>Pairs of 13 and 16 year old girls and boys (total of 62 underage confederates) made 470 attempted test purchases in phase 1 and 348 in phase 2 post intervention across 4 different types of retail outlet (corner shops, off-licences, pubs and supermarkets) in the South East and North East of England.</p>	<p>An initial phase of test purchasing was carried out in both intervention and control areas (number of attempts=470).</p> <p>Following phase 1 of test purchasing a police intervention was administered in test areas consisting of a letter from the area police commander which was sent to all licensed premises within the test areas. This letter reported the headline figures from phase 1 of test purchasing, reminded licencees of their legal obligation with respect to sale of alcohol to minors, recommended that proof of age should be sought for anyone who appeared to be below the age of 21, recommended that only a passport or prove-it card issued by the Portman Group be accepted as proof of age and indicated that the police would be shortly instituting a campaign in which they would themselves carry out test purchasing for evidentiary purposes.</p> <p>The contents of the letter were reiterated in personal visits to premises, telephone calls to regional and area managers of outlets. A press release was issued and received extensive coverage in local media. A total of 11 test purchases were carried out by a 13 year old boy resulting in 3 sales with the offending licensees warned that any further offences would result in prosecution and details were publicized in the local media.</p> <p>No intervention was administered in control areas. Following the police intervention a 2<sup>nd</sup> phase of test purchasing was carried out (number of attempts=348) in both intervention and control areas.</p>	<p><b>Evaluation Design:</b> Unobtrusive naturalistic field study conducted in two urban locations using an intervention/control design.</p> <p><b>Behaviours:</b> Post intervention there was no evidence that the police intervention reduced sales of alcohol to 13 or 16-year-olds.</p> <p>At baseline, sales resulted from 88.1% of purchase attempts by 16-year-old girls, 77% of attempts by 16-year-old boys, 41.6% of 13-year-old girls and 4.1% of 13-year-old boys. Data was generally comparable across locations, alcohol types and outlet types. Refusals were more likely when another vendor was present. 80% of sales to 16-year-olds and 65% of sales to 13-year-old girls were made without challenge. "Prove-It" ID cards were requested in fewer than 12% of purchase attempts in both age groups. Alcohol vendors reported that they rarely encountered underage customers or refused sale though 90% of vendors said that if they became suspicious, they would request ID. Only two vendors believed that they were likely to suffer adverse consequences if they sold alcohol to minors.</p>

## 6.2 Case Studies

### 6.2.1 Bartender Education Programme

**Lead agency:** No data available on intervention lead. Programme evaluation was undertaken by the faculties of medicine at the University of Lund and Malmo University, and supported by the Swedish Council for Social Research and the National Institute of Public Health.

**Resources:** No data available regarding programme costs or the resources required to implement the project.

**Target groups and behaviours:** The explicit aim of the programme was to reduce alcohol consumption amongst students drinking in university bars. Structured training designed to modifying serving practices was provided to student bartenders.

**Context:** The pilot intervention took place in Lund University, Sweden which has a registered student population of 37,000 students, representing approximately 25% of the town's population. The intervention also formed part of the alcohol prevention programmes delivered in six other Swedish universities. The training provided to bartenders was based on the Alcohol Skills Training Programme (ASTP) developed by Formme et al (1994) and the Swedish version of the Responsible Beverage Service (RBS) programme (Andreasson et al 2000 and Wallin et al 2002)

**Intervention:** The intervention was conducted in bars each serving unique student communities or "nations". These are described as forming the centre of student social life outside the academic setting. Each bar had between 5-10 (average eight) student bartenders (male and female) serving both food and drink. Most were relatively inexperienced in bar work and had not previously received formal training. Servers were not bar employees and received free drink in lieu of monetary payment. The training consisted of interactive lectures and group work delivered by experts, over six sessions and lasted twelve hours in total. The course covered a range of issues including personal attitudes and expectancies regarding drinking, facts and myths about the effects of alcohol, "optimal" blood alcohol levels, and techniques for refusing intoxicated patrons and for preventing intoxication.

**Evaluation:** The evaluation was conducted as a randomised control trial. Students visited 12 student bars on campus during normal drinking times, at baseline (n=664) and at one and five month post-intervention follow-up (n=658 and n=593 respectively). Bars were randomly ascribed intervention and control status (six in each group) and stratified according to size of bar membership ("small", "medium" and "large"). Bar server training was delivered to bartenders in the intervention group (n=40). The control group received no training. Pre-post measures of breath alcohol concentration (BrAC) and reported social atmosphere within the bar environment using a visual analogue scale (VAS) were taken at each stage. VAS measures covered three separate categories, "cosy", "high" and "rowdy". Measures were taken on the same evening during periods of peak demand on one occasion between the hours of 11 pm and 2 am without prior notification to patrons or bartenders.

Results at one month follow-up showed reductions in BrAC scores in the intervention group (for both male and female patrons) when compared to control. Changes were also observed in VAS scores, with significant decreases in the "rowdy" category in intervention compared to control over the same period. No changes were observed between intervention and control

groups in the bars in the “cosy” and “high” categories. Changes were not sustained at five months follow-up.

Authors conclude that server training can be a significant component in the prevention of alcohol problems in student bars, but that central policy changes (such as closer cooperation with licensing and policing authorities) are required to sustain gains. They also conclude that training needs to be delivered at a frequency that keeps pace with bar staff turnover.

Sample size and the levels at which BrAC cut-off points were set were identified as potential study limitations.

**Time frame:** Whilst the evaluation results reported in 2003 relate to a pilot project conducted at the University of Lund, a continuous programme was delivered annually to bartenders on six university campuses across Sweden.

**Information sources:**

- Andreasson S, Lindewald B and Rehnman C (2000). Over-serving patrons in licensed premises in Stockholm. *Addiction*, **95**(3): 359-363.
- Formme K, Marlatt G, Baer J and Kivlahan D (1994). The alcohol skills training programme: a group intervention for young adult drinkers. *Journal of Substance Abuse Treatment*, **11**: 143-154.
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## 6.2.2 A Police Intervention to Reduce Alcohol Sales to Under-age Adolescents

**Lead agency:** This was collaboration between the Universities of Wales, Leeds and Reading and with Thames Valley and West Yorkshire police forces, with support from the UK Home Office. The project was guided by a steering group with representation from key stakeholders.

**Resources:** The research and test purchasing was funded by a £107,000 two year extended project grant from the Alcohol Education Research Council. The communications intervention with licensees was resourced and delivered by Thames Valley Police.

**Target groups and behaviours:** The initiative was designed to reduce the sale of alcohol to adolescents below the legal drinking age (i.e. aged 18) at point of purchase and targeted licensees and counter staff in four different types of outlet; corner shops, off-licences supermarkets and bars.

**Context:** The intervention was conducted in two non-coterminous urban locations, both university cities in England, UK. In both sites alcohol test purchases were carried out in part urban, part suburban and part semi-rural areas.

**Intervention:** All licensed premises in the intervention area were sent a letter from the local area police commander: reporting headline figures from the baseline study (no data regarding individual vendors was shared with the police force). The letter also reminded vendors of their legal obligation regarding sales to minors; recommended that proof of age should be sought from anyone that appeared under the age of 21; highlighted which forms of identification were acceptable; and instructed vendors that the local police force would be mounting a campaign in the near future in which they would be undertaking test purchases. The letter was followed up by personal calls and visits to most licensed premises in the intervention area and by a press release which resulted in coverage of the initiative in local newspapers and on local radio. The press coverage included information relating to cautions made to three local vendors who had previously failed test purchases conducted by the local police force. This was independent of the research team and at a time when the police force operated a no prosecution policy for this offence.

**Evaluation:** Evaluation of the project involved unobtrusive observation of vendor's response to purchase attempts made by specially trained minors under the legal age (aged 13-16 years, male and female). It used an opportunistic quasi-experimental design with an intervention and control area, and baseline (n=470) and follow-up (n=348). Test purchases followed a protocol with extensive safeguards to protect "confederates" or minors who volunteered as test purchasers.

In addition to the use of observational techniques, a structured telephone survey was also conducted following the initial baseline stage with a randomly selected sub-sample of vendors stratified by outlet type in the two study areas (n=95). The survey assessed vendors' perceptions of the scale and nature of underage sales locally, their response to the problem and the perceived threat of prosecution.

Results data were found to be comparable across locations, alcohol types and outlet types. Positive sales were higher amongst female and older test purchasers, (83 % for 16 year-olds compared to 25% for 13 year-olds). There was little evidence of the intervention reducing sales to those under the legal age. In fact, sales increased post-intervention, although this was probably a research effects artefact - test purchasers at the post-intervention phase were a higher average age and were more experienced than at baseline phase. The evidence confirmed that alcohol was readily available for young people under the legal drinking age who wish to purchase it. Positive effects on decreasing access and availability were short-lived. This may suggest that intervention actions need to be sustained over a longer period. The authors conclude that the research findings support calls for improved training for vendors, an increase in the recommended perceived age threshold for challenging young people, changes to the way that proof of age cards identify the bearer's age; as well as more potent law enforcement regimes involving active prosecution. The results were instrumental in guiding the content of the Youth and Criminal Justice Act (2000) legalising alcohol test purchasing in England and Wales.

Acknowledged limitations of the study included uncertainties regarding the ability to generalise the findings to other regions and more rural areas; and the possibility that test purchasers may have been more confident in their actions than peers making similar purchase attempts under real conditions

**Time frame:** The initiative was a one-off project delivered in four stages over a nine month period between Aug 1998 and Apr 1999: baseline test purchases Aug-Dec 1998, telephone survey Jan 1999, vendor intervention Feb 1999, follow-up test purchases Mar-Apr 1999.

**Information sources:**

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## 7. THEME 5: PROTECT YOUNG PEOPLE FROM THE CONSEQUENCES OF ALCOHOL ABUSE BY OTHERS

### 7.1 Data Extraction Tables

#### Theme 5: Interventions to protect young people from the consequences of alcohol abuse by others (for ages 0-13 years)

Intervention Name, Year(s) of Delivery, Authors and Country	Participants & Setting	Intervention	Results
<p>“Tuesday Group” family support service</p> <p>Delivery year not stated</p> <p>Dumaret <i>et al.</i> 2009</p> <p>France</p>	<p>22 families with children aged ≤6 years with motor, mental or sensory impairment who attend a day treatment centre (CAMSP).</p> <p>The CAMSP (<i>Centres d’Action Médico-Sociale Précoce</i>) in Roubaix, Northern France</p>	<p>The “Tuesday Group” (TG), a family support service, operates in a day treatment centre for young children. Families from extremely poor environments and those suffering from alcoholism, domestic violence, and mental health problems are referred to this support group. Its purpose is to prevent future alcohol-affected pregnancies, reduce child abuse, and enhance parenting skills. Weekly meetings are held for 2 hours with around 15 families. There is no agenda, parents decide on discussion topics, manual activities, group games etc. Transportation is arranged for those who cannot use public transport. Observation by professionals and volunteers identifies families’ social or medical needs.</p>	<p><b>Evaluation Design:</b> A qualitative study with a comprehensive psychosocial approach. Data was collected from a variety of sources, past and present, including CAMSP records. An outside researcher conducted 90 minute semi-structured interviews: family history, household and financial management, social relationships, support networks, parental roles, health (alcohol use in the couple and the extended family, health care habits), and memories of the TG. Data was interpreted by content analysis. 21 of 22 mothers were interviewed twice, 8 fathers/partners were interviewed (2 twice).</p> <p><b>Behaviour:</b> Positive effects on this small sample were descriptively reported. The elimination of maternal alcoholism improved the daily lives of families and overall wellbeing. Alcoholic mothers who stopped drinking (9 out of 11) separated from alcoholic spouses (or the partner also stopped). In 13 out of 17 cases, severe intra-family violence and neglect decreased.</p>
<p>FCP (Family Competence Programme)</p> <p>2005-2006</p> <p>Orte <i>et al.</i> 2008</p> <p>Spain</p>	<p>31 families with a total of 58 adult men and women, and 35 children (mean age 10.6 years) took part in the programme delivered in the Balearic Islands in Spain.</p>	<p>The FCP is based upon the Strengthening Families Programme. It is a multi-component programme that aims to reduce the influence of risk factors associated with alcohol and drug use while increasing children’s resilience by reinforcing the main protective factors. The programme combined training in parenting skills, work with the entire family and children’s social skills during 14 weekly sessions. The sessions were led by trained and experienced group leaders. Activities focused on increasing positive interactions, incorporating/increasing rewards for good behaviour of children, improving communication, learning to formulate requests and applying clear and contingent consequences. Alcohol and drugs was one of the core themes examined in the programme</p>	<p><b>Evaluation Design:</b> Quasi-experimental design with experimental and unmatched control groups and pre and post treatment measures. Participants self report measures and data supplied by children’s teachers was used in the analysis.</p> <p><b>Behaviour:</b> Positive effects on behaviours associated with increased risk of alcohol misuse were found. For example, family communication improved in the experimental groups in relation to clear family rules concerning alcohol (<math>F_{1/4} 2.978</math>; <math>p_{1/4} 0.056</math>), (<math>t_{1/4} 72.077</math>; <math>p_{1/4} 0.042</math>), (<math>d_{1/4} 0.445</math>).</p>

## 7.2 Case Studies

### 7.2.1 The “Tuesday Group”

**Lead agency:** Delivered by an autonomous multidisciplinary team combining health and social welfare professionals from local authorities in Roubaix, Northern France. Research evaluating the project was conducted by the Centre de Recherché Medicine Sciences, Sante de Societe in Villejuif, France.

**Resources:** Day treatment centres, (the project setting) jointly funded by local authority Departments for the Protection of Maternal and Children’s Health (20%) and Social Security (80%) and run on an autonomous basis to reflect local need. Grant funding to evaluate the project was provided by the regional councils of North and Pas-de-Calais and the Foundation de France

**Target groups and behaviours:** The Tuesday Group (TG) is a support group which works with parents (mainly mothers) with children up to six years old. The families are from poor environments and may be suffering from alcoholism, domestic abuse and mental health problems. The Group provides specific aid and early intervention strategies to prevent future alcohol-affected pregnancies, reduce child abuse and neglect and enhance parenting skills. Its primary target is families struggling with transgenerational alcoholism. Consequently much of the Group’s work is focussed on addressing the intergenerational impact of prenatal alcohol exposure on maternal and child development.

**Context:** The TG forms part of the family support service in Roubaix. It is based in the day treatment centre for young children Centres d’Action Medic-Sociale Percoce (CAMSP). Such centres aim to provide care for children from birth through to age six with motor, mental and sensory impairment, and to offer family counselling and child care. The Roubaix centre is unique in that it was moved in 1981 to the heart of an economically depressed area to encourage greater engagement with parents living in disadvantaged circumstances. As part of this development, in 1985-86 the TG was set up to provide guidance and support that respects families, their values and social identities. In this way, rather than regarding parents as in anyway “deficient” or “abusive”, the TG aims to engage with parents as individuals in difficulty, living in insecure conditions and under constant stress.

**Intervention:** The TG is founded on the concept of open and continuous access. Families can meet with familiar staff from a multidisciplinary team, combining paediatricians, social workers, teachers and therapists. Families are normally directed to the Group by local welfare services and social workers, the only exclusionary criteria being aggressive or violent behaviour. Participation is on a voluntary basis, with meetings taking place once a week year-round, and around 15 families taking part at any one time. Parents lead the meetings, decide on topics for discussion and share know-how and experiences. The meetings themselves do not have a set agenda, but instead encourage the free exchange of ideas between families, professionals and volunteers. The TG also provided opportunities for parents to share in manual labour, practical activities such as sewing and cooking, and for children to participate through group games and activities or involvement in individual treatments and therapies.

The approach is described as being beneficial for both parents and professionals. From the parents perspective participation reveals new and constructive ways of working and of

accessing treatment and information. From the professionals perspective it offers opportunities to observe parent-child interaction, assists in identifying family needs and helps lay the groundwork for providing support.

**Evaluation:** This aimed to assess the projects impact on families and parent-child relationships. The prospective study design involved families who: had confronted alcoholism and who had participated for a minimum of a year; had children who were taken on by the project before the age of 4.5 years; and had children who been assessed more than five years after participation ceased. A total of 22 families met all three criteria over the seven year study period, all of whom agreed to take part. Two data collection methods were used to evaluate family outcomes and experiences: analysis of children's medical records and institutional files, and semi-structured interviews with parents (n=30, 22 mothers and eight fathers). Most parents were interviewed on two occasions.

All families demonstrated multiple forms of disadvantage. For example, as well as dealing with alcoholism; 17 families dealt with incidents of domestic abuse and in ten families at least one parent suffered from mental illness, in some cases severe. However, for half of the families, judicial educational measures from child welfare services (court orders) ceased either during or following participation in the Group. Higher birth weights and absence of malformations in new births were also observed. Parents also reported positive experiences and consequences of participating in the Group. These included: pleasure of "normal" social contact; opportunity for children to play; ability to talk to others with similar problems; increased self-confidence and autonomy; engagement in alcohol detoxification treatments; and mentoring of pregnant alcoholic women as a new found career path. Overall, authors reported family functioning to have improved substantially in twelve cases, slightly in six cases and to have remained unchanged in four cases.

The authors concluded that a key learning point to emerge from the evaluation is the importance of providing a safe and trusting environment for engaging hard-to-reach families who suffer from multiple social and health problems. The ability of the Tuesday Group to achieve this is evidenced by the number of families who participated in the subsequent evaluation undertaken by an external research team. While the sample size, self-reporting methods and absence of a control group limits the reliability of evaluation data, the findings do provide compelling evidence for the value of improving contextual conditions to bringing about improvements in parental functioning and emergence from social exclusion.

**Time frame:** The Tuesday Group is an on-going initiative first established in 1985. The evaluation findings reported here relate to the study period 1989 to 1995.

**Information sources:**

- Dumaret AC, Constantin-Kuntz M and Titran M (2009). Early intervention in poor families confronted with alcohol abuse and violence: Impact on families, social integration and parenting. *Families in Society: The Journal of Contemporary Social Services*, **90**(1): 11-17. DOI 10.1606/1044-3894.3840.
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- Email communication with Dr Annick-Camille Dumaret, Lead Investigator, Institut National de la Santé et de la Recherche Médicale (CERMES), France: [Dumaret@vjf.cnrs.fr](mailto:Dumaret@vjf.cnrs.fr)

### 7.2.2 Family Competence Programme

**Lead agency:** The programme was authored and delivered by Proyecto Hombre in Spain, an agent of the World Federation of Therapeutic Communities (WFTC) and a consultative member of the UN Economic and Social Council. The evaluation was conducted by researchers from the Department of Education and Science and Specific Didactics, University of the Balearic Islands, Palma, Spain.

**Resources:** Research was funded by the Spanish Ministry of Science and Technology, the Spanish Ministry of Health and Consumer Affairs and the Balearic Ministry of the Economy.

**Target groups and behaviours:** The Family Competence Programme (FCP) supports parents who are alcohol and drug users in the final phase of addiction treatment, their partners and their children aged 7-14 years. The programme aims to reduce the influence of risk factors associated with alcohol and drug use while increasing children's resilience.

**Context:** FCP was based on the Strengthening Families Programme (SFP) originally devised in the USA in the mid-1980's and then later adapted by the University of the Balearic Islands, Socio-Educational Training and Research Group to reflect Spanish socio-cultural contexts and to specifically benefit parents undergoing addiction treatment for substance misuse.

**Intervention:** The FCP is designed to increase family competence and prevent maladaptive behaviour in children of drug users undergoing treatment. FCP aims to do this by improving: family relationships; parenting skills; children's behaviour and social skills; and by reducing/preventing alcohol and drug abuse. It is a programme combining skills development courses (social, life and parenting) for families and is delivered by specifically trained therapists over 14 weekly sessions each lasting 2-3 hours. Each session is divided into two parts, in the first hour parents and children undertake group work separately and in the second hour families are reunited to practice the skills learnt. The latter sessions also incorporate therapeutic play to strengthen parent-child bonds and relationships. As well as the formal sessions the programme also provides additional resources such as meals, childcare and other incentives (not specified in reports) to facilitate attendance which is voluntary.

**Evaluation:** The programme was evaluated using a quasi-experimental design with unmatched control group and pre- and post-treatment measures. Participants in the control group were subject to the same inclusion and exclusion criteria as the intervention group, and were also Proyecto Hombre patients undergoing treatments in drug-free programmes. Two applications of the programme were evaluated over the periods Jan-May 2005 and Oct 2005 – Jan 2006 both in Palma, Spain. The control groups were drawn from four other Spanish cities: Seville; Cordoba; Alicante; and Barcelona. A total of 97 participants (34 families) took part, 47 participants (15 families) in the experimental group and 46 participants (16 families) in the control group. Four participants (three families) dropped out. Methods employed combined participant (parent and child) self-reports using validated scaled instruments and information supplied by the children's teachers. Programme attendance records also formed part of the analysis.

Attendance levels were high for a programme of this type, remaining at over 70%. It is speculated that these high retention levels may have been influenced by participation in Proyecto Hombre drug withdrawal programmes in which the FCP was embedded. Aggregate

results from the two applications evaluated showed improvements in key areas targeted by the programme, namely: family relationships; parental education skills; and children's behaviour and social skills. No direct alcohol outcomes were reported, reflecting the fact that alcohol behaviours were a secondary objective of the programme, and reducing risk factors for alcohol misuse was the primary aim. The positive results suggest the SFP, the programme from which the FCP was originally adapted, is sufficiently robust to be adapted to culturally different populations. Acknowledged limitations of the study were sample breadth and possible social desirability bias in self-reporting (although this was in part addressed through verifications from teacher evaluations). Authors recommend further research with larger samples.

**Time frame:** Proyecto Hombre was selected as the implementation agency in 2004 and following the launch of the Programme in 2005, data collection for the evaluation was conducted over two 14 week periods between Jan 2005 and Jan 2006.

**Information sources:**

- Orte C, Touza C, Ballester L and March M (2008). Children of drug dependent parents: prevention programme outcomes. *Educational Research*, **50**(3): 249-260.

## **8. COMMENTS ON THE PROCESS OF SCOPING THE EVIDENCE BASE AND CASE STUDY COMPILATION**

### **8.1 Comments on Scoping Study Objectives, Criteria and Rationale**

The literature search identified peer reviewed papers, published 2000-2010, on European interventions with aims relevant to at least one of the five priority intervention themes.

The ISI Web of Knowledge™ was used to conduct a comprehensive literature search (see Section 2.3 for details on methodology). Using this database enabled the search to be limited to European region interventions and to capture original non-English language publications in 57+ languages, providing they have created an English language abstract. Most non-English language peer review papers do have an accompanying English language abstract and this is therefore a quick and efficient way to scan the multi-language evidence base. A limitation of the Web of Science database however, is that it refines and classifies results by country, using authors' address data, not geographic location of the intervention. This filter strategy excludes any European intervention evaluation article written by an author with a non-European affiliation at the time of publication, for example an author, based in the USA at the time of submission. The database would also classify an article written by an English and French researcher, for example, as originating from France and England, even if the intervention had been implemented in Poland only. This limitation was obviously overcome in this exercise by simply reading the paper, providing of course it was captured in the original search. Also, it does not arise if the location of the intervention is included in the abstract or keywords, (although this data is commonly omitted from an abstract).

Research activity follows the policy and practice arena to some degree, and the body of research literature during the period 2000-2010 reflects the historically greater level of domestic alcohol policy activity of Nordic countries compared to other countries in Europe. Alcohol policy in the interest of public health and social order has been well established in Northern Europe, particularly Sweden and Finland for over fifty years. In other parts of Europe, alcohol policy has in the past been more limited (e.g. restricted to treatment and acute intervention and less emphasis on universal and preventive measures); and has tended to be economically-oriented than public health focused. More recently, national policies of countries that have joined the European Union have been modified to conform with and/or more closely align with European regional policy. Other parts of Europe have more recently become more active in alcohol control policy. It is highly likely therefore, that the geographic asymmetry in research evidence apparent in the results of the pilot exercise will be gradually rebalanced, in line with a convergence of scale and scope of alcohol policy and evaluation of impact (Babor 2010, pp 2-4; Cisneros Örnberg 2009).

Some studies described in peer-reviewed *conference* abstracts (*i.e. not journal articles*) were excluded because the abstracts omitted all/most key information about the intervention, evaluation design or results, and full papers were also likely to be incomplete and with little signposting to source further information.

The five themes were sub-classified by age bands. For interventions that included, but did not specifically target young people within the specified age ranges, an inclusion criterion that the results should include a breakdown by age, and a majority of participants should be

within the age range was applied. However, none of the studies identified in the original searches were excluded because of the majority age criterion.

Some themes clearly have more relevance to some ages than others. For example, interventions relevant to theme 4 (under-age selling of alcohol and responsible selling of alcohol to those of legal drinking age) almost exclusively targeted age ranges 14-17 and 18-27.

One theme was selected to demonstrate the impact of the age bands classification on data collation and presentation by including all three age groups. Theme 3 was selected for this purpose because it is the theme most universally relevant to all young people; because the evidence base for this theme was substantial in total and across all ages; and because it is a critically important theme to the aims and objectives of RAYPRO.

There was some overlap of studies relevant to themes. Fourteen were relevant to both theme one and theme three; four were relevant to both theme one and theme four; one study was relevant to theme three and theme four. In total, 19 studies were relevant to more than one theme.

## **8.2 Selecting Case Studies from the Scoping Study**

Fifteen interventions from the scoping study results were selected for the case study analysis and reporting. A minimum of two interventions for each theme were selected. The number of interventions selected for case study analysis was in proportion to the total number of interventions identified for each of the five themes and age ranges. Additionally, the selection aimed to achieve some representation across all the geographic regions (Northern Europe, Eastern Europe and Mediterranean/Southern Europe), although this was constrained by substantial differences in the numbers of publications captured in the scoping search: forty two interventions were classified as Northern European; two as Eastern European; seven originated in Mediterranean countries and two multi-country interventions spanned regional boundaries.

Fourteen of the case study interventions selected for case study write up reported a positive impact on alcohol related behaviours. One case study (3.2.2: “Motivational Interviewing”) reported no effects. This was included, to provide insight on the implications for processing and exclusion of unsuccessful interventions. Additionally, two more case studies (4.2.1 “The Conductor Seguro” and 5.2.3 “The Alcohol Expectancy Challenge”) were found on further investigation to have been less successful than reported in the original information source.

## **8.3 Comments on Case Study Reporting**

### **8.3.1 Information Needs**

A minimum “completeness of reporting” standard was built in to the pilot process, by selecting initially from peer reviewed sources. In most instances, availability of more detailed implementation information through other channels (e.g. an intervention’s website, grey literature reports or contact with the paper’s lead author) was applied as an additional selection criterion to reflect the purpose of the database. Four interventions selected for case

study analysis (3.2.3 “The Örebro Prevention Programme”; 3.2.4 “The Trelleborg Project”; 3.2.5 “Unplugged” the EU-Dap school prevention programme; 5.2.2 “IPSY”) had been included in a previous synthesis report on alcohol education in schools (Institute for Social Marketing 2009) for the EAHF. To exclude these would have resulted in the omission of some important examples and an unbalanced mix. There is minimal reporting repetition because the case study information in this report is structured around the good practice database reporting fields, and includes limited conceptual or theoretical discussion – a key focus of the earlier schools report.

In compiling the case studies, a pragmatic assessment of balancing detail necessary for transferable learning, and avoiding excess technical or project-specific data has been made. The language and content of the case studies is intended to be accessible to a wide, non-academic audience who are nonetheless informed and engaged with the issue.

#### **8.4 Comments on Quality and Reliability of Peer Reviewed Sources of Information**

Few of the papers and other information sources reported sufficient implementation details such as logistics and coordination or costs and dates of intervention for transferable learning. A tendency for journal articles to provide more information on evaluation costs, funding source and limitations of evaluation research than parallel implementation information was noted. Implementation costs were frequently completely absent. This is not surprising. The primary role of research papers is to report on the scientific evaluation measured by specific indicators, not to provide a comprehensive appraisal of the whole intervention process and its outcomes.

Another reason for incomplete reporting of information relevant to the objectives of RAYPRO was because objectives of some evaluations only partially aligned. Examples of partially aligned research aims included: comparative analyses of interventions rather than evaluation of effectiveness; mapping/testing of mediating influences; and treating alcohol use as a proxy measure or intermediate outcome of a broader social welfare objective. For example, case studies 7.2.1 “The Tuesday Group” and 7.2.2 “Family Competence Programme” both used reductions in risk factors for alcohol misuse, not alcohol consumption, as the primary indicators of effectiveness.

The historical origin and development of interventions were often not reported, or were reported superficially. This information can be critical. Contextual factors and ongoing development of interventions can impact delivery, acceptability, effectiveness, and cost-efficiency. It is also relevant when assessing potential transferability of apparent good practice exemplars or interventions that have been serially refined and tested over a developmental period. Case study 5.2.1 “Social and Emotional Training” is a good example of an intervention that has been developed and refined over a number of years, with follow-on reporting at each stage.

In some instances, however, determining if publications by the same author(s)/research team refer to one intervention, a series of linked interventions, or secondary analysis of data is more problematic. For example, development of the “Preventure” personality-targeted intervention (case study 5.2.4) was reported over a number of years. As new developments were introduced, tested and then retained or rejected in subsequent trials, results were published. However, the articles did not communicate the chronology or linkages between the

studies very clearly. Direct correspondence with personnel directly involved can and often did clarify this but for some interventions this may not be possible.

Users' and clients' evaluation and perspective are typically under-reported in the peer reviewed evidence base. This is especially true for the most rigorous outcome evaluations, where the emphasis is on research design and statistical tests.

A strong tendency for peer reviewed publications to report positive outcomes, and under report ineffective or inconclusive outcomes is recognised and widely reported with respect to all scientific research reporting. The pilot found clear evidence of bias towards reporting indicators of success, and lost opportunities to learn from unsuccessful initiatives. The pilot found examples of selective reporting of positive effects within interventions. For example, where partial effects are found, reporting frequently focused mainly on measures that indicated impact and omitted reference to, or details on indicators of ineffectiveness. For example, the surprising finding that EU-Dap (case study 3.2.5) was ineffective in reducing alcohol consumption amongst girls in some countries is under-reported to date (although this can be explained in this case as an artefact of the time lag between research and secondary analysis of results).

Promising results of interventions with small sample sizes which may not be reproducible or reliable can also lead to positive effects bias. Correspondence with the author of the "Alcohol Expectancy Challenge" (case study 5.2.3) for example, revealed that since publishing initially, further research could not reproduce positive effects of this small study. This approach has now been abandoned by the original team, but their decision and reason for it had not been publicly/formally reported but the original paper remains in the public domain.

The theoretical framework underpinning intervention and/or research design is sometimes not provided. In some instances, this may reflect its omission from outset, that is, in design and planning of the intervention. Or, it may be implicit but not reported. Its absence however, may impair understanding situation/context-specific influencers' of process and outcomes and therefore overlook critical factors for successful transferability. Its absence also undermines subsequent comparative analysis of interventions.

Some interventions did not measure, or did not report statistical data for behavioural outcomes. Where quantitative data was reported, a range of outcome measures was apparent. Each outcome measure has its merits and a diversity of measures is sometimes necessary and desirable. Individual projects are tailored to address different problems, in different settings and to bring about different effects, often with different levels of resourcing. However, a lack of consistency in measurement can make cross-comparison difficult.

## **8.5 Comments on Quality and Reliability of Data from all Sources of Information**

### **8.5.1 Documentary Sources**

The tendency for paper to selectively highlight successful initiatives and under-report unsuccessful initiatives is noted above. Non-peer reviewed reporting may be more susceptible to this bias, especially where clear outcome objectives are not defined from the outset. This

was not apparent in the compilation of case studies, but this may have been because these were built on information sources that have already been subject to scrutiny.

Grey and peer reviewed literature use a wide range of measures to report outcome/impact.

For alcohol related behaviours measures used included: prevalence of alcohol use; level of binge drinking (last 7/last 30 days/life time); units of alcohol consumed (in last drinking occasion/last 7/last 30 days); AUDIT or similar drinking screening tool scores; level of accessing alcohol related services; level of drunkenness and frequency of drunkenness; rates of alcohol related accidents and motor vehicle offences vehicle; level of BAC (blood alcohol content), and BrAC (breath alcohol content) .

Measures used to assess alcohol related knowledge included factual and interpretive/critical knowledge. Knowledge measures included knowledge of alcohol content, e.g. number of units, and legal BAC level; measures of critical understanding included recognition that alcohol is a drug, that problem drinking can lead to violence and crime, that alcohol abuse can harm others; recognition of an individual alcohol problem; acquisition of protective life skills, coping strategies and refusal skills.

For alcohol related attitudes, the range of outcome measures included: levels of critical analysis and risk assessment; perceptions of “normal” and “acceptable” alcohol consumption patterns; perceptions about personal alcohol consumption patterns; attitudes to under-age drinking; self-efficacy in relation to reduced or complete abstinence from alcohol consumption; and alcohol outcome expectancies, including arousal expectancies.

In some instances, reporting was found to be more descriptive than interpretive or analytical. This presents a dilemma for third party reporting. Reporting uncritically potentially contribute to the dissemination of misleading reports. However, taking a proactive review role may be equally misleading if access to original information sources and validation opportunities is constrained.

Similarly, apparent inconsistency in the use of terminology and/or the use of inappropriate or unusual language in the information presented may be misleading if left uncorrected, but third party interpretation that alters meaning should be verified. This is not always feasible or practicable.

For interventions delivered over time or in complex ways, capturing marginal contribution can be very challenging. For interventions delivered through an embedded service, complete and accurate cost data is also unlikely to be available unless a formal economic evaluation has been conducted. For example, case study 3.2.1, the “Healthy School and Drugs Project” was a national twelve year programme with multiple inputs, aims and outcomes, and clearly an evolving contextual background. Data on cost, environmental changes over time, as well as the relative contributions of intervention and other influencing factors such as structural change does not appear to be available or easily calculable.

## **8.5.2 Personal Informant Sources**

Direct contact with stakeholders is a very useful mechanism for cross-checking, corroborating and supplementing information drawn from peer-reviewed articles and grey

literature. This exercise found an overall response rate to enquiries of about 50%. It is likely that a number of potential informants had moved on to new roles/institutions since studies were published; others may simply have had conflicting priorities.

Informants' responses are influenced by their own priorities and perspective which can influence how information is reported and interpreted. In addition, memories fade which can be an issue when asking informants to recall historic details.

Language was sometimes found to create barriers to information and knowledge sharing. Most non-native English speakers report in English to very high standards but sometimes, errors can create ambiguity or misinformation. For non-English language resources, translation is a significant investment and can be difficult to assess which resources represent value for money before translation is commissioned. Translation may also change meaning or obscure more nuanced analysis and interpretation.

Some stakeholders do not wish to disclose identity, contact details and/or details of the intervention. This may especially be the case where effects were limited. This may further contribute to an overall bias towards positive effects which overlooks learning from experience derived from unsuccessful initiatives.

## **8.6 Limitations and Opportunities Observed During Scoping and Case Study Compilation Processes:**

### ***Observed Limitations:***

A strong tendency for peer reviewed publications to report positive outcomes, and under report ineffective or inconclusive outcomes is recognised and widely reported with respect to all scientific research. Promising results of interventions with small sample sizes which may not be reproducible or reliable can also lead to positive effects bias. The pilot found clear evidence of bias towards reporting indicators of success, and lost opportunities to learn from unsuccessful initiatives. The pilot found examples of selective reporting of positive effects within interventions. For example, where partial effects are found, reporting frequently focused mainly on measures that indicated impact and omitted reference to, or details on indicators of ineffectiveness.

Some interventions did not measure, or did not report statistical data for behavioural outcomes. Where quantitative data was reported, grey and peer reviewed literature were found to use a wide range of measures to report outcome/impact. Each outcome measure has its merits, and a diversity of measures is sometimes necessary and desirable. Individual projects are tailored to address different problems, in different settings and to bring about different effects, often with different levels of resourcing. However, a lack of consistency in measurement can make cross-comparison difficult.

Academic databases provide both a comprehensive source of the most up to date and historic data, as well as acting as a filter and quality control tool. On the whole, the pilot found peer reviewed sources of information to be more analytic and critical than grey literature sources.

Contextual factors and ongoing development of interventions can impact delivery, acceptability, effectiveness, and cost-efficiency. It is also relevant when assessing potential transferability of apparent good practice exemplars or interventions that have been serially

refined and tested over a developmental period. The benefits of peer reviewed data sources were undermined to some extent by lack of detailed reporting on implementation. Grey literature however was not found to be a particularly rich source of this information either.

In some instances, reporting was found to be more descriptive than interpretive or analytical. This presents a dilemma for third party reporting. Reporting uncritically potentially contributes to the dissemination of misleading reports. However, taking a proactive review role may be equally misleading if access to original information sources and validation opportunities is constrained.

Similarly, apparent inconsistency in the use of terminology and/or the use of inappropriate or unusual language in the information presented may be misleading if left uncorrected, but third party interpretation that alters meaning should be verified.

For interventions delivered over time or in complex ways, capturing marginal contribution can be very challenging. For interventions delivered through an embedded service, complete and accurate cost data was usually unavailable.

The theoretical framework underpinning intervention and/or research design was not always reported. Its absence may impair understanding situation/context-specific influencers of process and outcomes and therefore critical factors in transferability. Its absence also undermines subsequent comparative analysis of interventions.

Users' and clients' evaluation and perspective were largely under-reported in the peer reviewed evidence base.

Many interventions identified in the pilot reported short-term effects which were not sustained. Where programme effects over time were monitored, these were frequently found to reduce or disappear after a period of time post-intervention, although there are some notable exceptions. Effects over time are not explicitly addressed in short term evaluations.

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## Appendix 1: Search Strategy for Web of Science® via Web of Knowledge<sup>SM</sup>

Databases: Science Citation Index Expanded (SCI-Expanded), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A&HCI) and Conference Proceedings Citation Index - Science (CPCI-S)

1. Topic=(alcohol\* SAME sale\*)
2. Topic=(alcohol\* SAME sell\*)
3. Topic=(alcohol\* SAME buy\*)
4. Topic=(alcohol\* SAME purchas\*)
5. Topic=(alcohol SAME serv\*)
6. Topic=(alcohol SAME use)
7. Topic=(alcohol SAME abus\*)
8. Topic=(alcohol SAME misus\*)
9. Topic=(dr?nk SAME driver\$)
10. Topic=(dr?nk SAME driving)
11. Topic=(under-age SAME drink\*)
12. Topic=(alcohol\* SAME drink\*)
13. Topic=(alcohol\* SAME beverage\$)
14. Topic=("substance use")
15. Topic=("substance abuse")
16. Topic=("substance misuse")
17. Topic=("drug use")
18. Topic=("drug abuse")
19. Topic=("drug misuse")
20. #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1
21. #19 OR #18 OR #17 OR #16 OR #15 OR #14
22. #21 OR #20
23. Topic=(program\$ OR programme\$)
24. Topic=(campaign\$)
25. Topic=(intervention\$)
26. Topic=(evaluation\$)
27. Topic=(strategy OR strategies)
28. Topic=(project\$)
29. Topic=(pilot\$)
30. Topic=(trial\$)
31. Topic=(event\$)
32. Topic=(policy OR policies)
33. #32 OR #31 OR #30 OR #29 OR #28 OR #27 OR #26 OR #25 OR #24 OR #23
34. #33 AND #22

Notes on Web of Science® search rules:

- Topic searches title, abstract and keywords
- The asterisk (\*) represents any group of characters, including no character
- The question mark (?) represents any single character
- The dollar sign (\$) represents zero or one character
- *Under-age* finds records containing under-age and under age
- *Alcohol SAME sale* finds records containing the words alcohol and sale in the same sentence.