National Institute for Health and Care Excellence

Guideline version (Draft for Consultation)

Alcohol interventions in secondary and further education

[B] Evidence reviews for targeted interventions

NICE guideline <number>

Evidence reviews

February 2019

Draft for Consultation

These evidence reviews were developed by Public Health Internal Guideline Development team

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ISBN:

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Targeted school-based alcohol prevention interventions

Review questions

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Introduction

Children and young people who drink alcohol increase their risk of injury, alcohol poisoning, violence, depression, sexually-transmitted diseases and damage to their development. This is especially true for children and young people who drink heavily. Drinking at an early age is also associated with a higher likelihood of alcohol dependence

PICO tables

The following tables contain a summary of the protocols.

Table 1: PICO inclusion criteria for school-based targeted interventions for 11 to 18 year olds

Population	Children and young people aged 11 up to and including 18 years in full time education considered 'at risk'.
Interventions	Targeted school-based programmes or pastoral support such as brief interventions or counselling
Comparator	The intervention of interest against a control group

Outcomes	• Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported
	• Age at first experience of drunkenness where reported
	• Amount and frequency of alcohol use
	• School attendance.
	• Alcohol related risky behaviour:
	  ○ unprotected or regretted sex
	  ○ violence and other antisocial behaviour
	  ○ criminal activity
	• Mental health and wellbeing
	• Adverse or unintended effects:
	  ○ an increased interest in trying alcohol.
	
	Qualitative outcome measures
	
	Views and experiences of:
	• teachers and practitioners delivering interventions (UK or countries similar to UK)
	• young people receiving interventions. (UK or countries similar to UK)
	• parents/carers of young people receiving the interventions (UK or countries similar to UK)

Table 2: PICO inclusion criteria for school-based targeted interventions for 18 to 25 year olds with SEND

Population	Young people aged 18 up to and including 25 years with an Education, Health and Care (EHC) plan considered 'at risk'.
Interventions	Targeted school-based programmes or pastoral support such as brief interventions or counselling
Comparator	The intervention of interest against a control group

Outcomes	• Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported
	• Age at first experience of drunkenness where reported
	• Amount and frequency of alcohol use
	• School attendance.
	• Alcohol related risky behaviour:
	  ○ unprotected or regretted sex
	  ○ violence and other antisocial behaviour
	  ○ criminal activity
	• Mental health and wellbeing
	• Adverse or unintended effects:
	  ○ an increased interest in trying alcohol.
	
	Qualitative outcome measures
	
	Views and experiences of:
	• teachers and practitioners delivering interventions (UK or countries similar to UK)
	• young people receiving interventions. (UK or countries similar to UK)
	• parents/carers of young people receiving the interventions (UK or countries similar to UK)

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual. Methods specific to this review question are described in the review protocol in Appendix A:.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy.

Public health evidence

Included studies

In total 9900 references were identified through systematic searches. There were 148 references included in the previous guideline. Of these, 79 references (title and abstract) were considered relevant to the new protocol. 1 additional paper was identified through another source. Of these references, 333 were ordered. Of these, 7 of the papers were unavailable. A total of 125 references were included across all reviews and 201 were excluded. Some studies were relevant for more than one review.

Table 3: Summary of study selection across guideline

Stage of selection	Number of papers
Screened	9980 papers
Ordered	333 papers
Excluded	208 papers (7 full texts were unavailable)
Included (guideline-wide)	125 papers
RQ 1.1 Universal classroom (11-18 years)	54 papers (32 RCTs)
RQ 1.2 Universal outside the classroom (11-18 years)	7 papers (6 RCTs)
RQ 1.3 Universal multicomponent (11-18 years)	43 papers (19 RCTs)
Universal qualitative review	9 papers (6 studies)
RQ 2.1 Targeted (11-18 years)	24 papers (16 RCTs; 1 qualitative study)
RQ 3.1 Universal classroom (18-25 years SEND)	0 papers
RQ 3.2 Universal outside the classroom (18-25 years SEND)	0 papers
RQ 3.3 Universal multicomponent (18-25 years SEND)	0 papers
RQ 4.1 Targeted (18-25 years SEND)	0 papers

For review question 2.1, a total of 24 articles incorporating 16 randomised-controlled trials (RCTs) were identified and included. One of these RCTs also provided qualitative data. See summary of studies (Table 4) included in this review and a brief outline of the interventions in these studies (Table 5). See Appendix D: for full evidence tables. No studies were identified for review question 4.1.

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2 **Table 4: Summary of studies included in the evidence review 2.1**

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Armitage 2014 [UK]	Classroom in a comprehensive school	67 adolescents aged 16-18 who drank alcohol	Very brief intervention (questionnaire) based on self-affirmation theory	Distractor task questionnaire	Mean alcohol consumption (units; 8 grams alcohol per day)
Castellanos 2006 [UK]	Secondary schools	224 students (mean age 14) considered to be 'high risk' based on having one of a set of personality profiles.	Personality-targeted brief intervention	No intervention control	Truancy Sex without contraception Sex with someone they don't know well Vandalism Shoplifting Panic attacks Depression symptoms
Clark 2010 [USA]	Alternative high schools	2249 students in 9th-12th grades (14 to 18 years) who have already exhibited truancy, academic failure, substance use, delinquency and other problem behaviours.	Project SUCCESS, a selective and indicated substance use prevention program that targets high risk students in secondary school settings	Control	Mean 30 day alcohol use Mean 30 day drinking to intoxication Mean violent behaviour
Conrod 2006 [Canada]	High school	297 high school students from Grades 9-12 (ages 14-17) considered to be "high risk" drinkers based on having one of a set of personality profiles.	A brief intervention consisting of psychoeducation, behavioural coping skills training and cognitive skills training.	No intervention control	Abstinence Binge drinking Drinking quantity Absence of drinking-related problems

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Conrod 2011 [UK]	Secondary school	347 adolescents (median age 14) determined as high-risk based on elevated scores on one of a set of personality traits.	Preventure, a personality-targeted intervention that involved personality-linked motivational processes.	No intervention control	Log drinking quantity/Frequency (QF), Frequency of binge drinking Problem drinking symptoms Coping motives Enhancement motives
Hallgren 2010 [Sweden]	High school	926 youths in the final two years of the Swedish high school system (18-19 years) that included those at risk.	PRIME for Life under 21 based on behavioural change model	No intervention control	Frequency (times/week) Quantity (units/occasion Binge drinking
Lammers 2015 [Netherlands]	Public secondary schools	699 students aged 13-15 with two risk factors for heavy alcohol consumption: Early onset of alcohol use One of four substance risk personalities for alcohol abuse	Preventure - Motivational interviewing and cognitive behavioural therapy adapted to personality profiles for substance abuse.	No intervention control	Binge drinking Alcohol use last month Problem drinking
McCambridge 2008 [UK]	Further education colleges	326 students aged 16-19 years who had weekly or more frequent cannabis use.	Motivational interviewing	Drug information and advice-giving (DIA) which was limited to a standardised protocol going through a series of leaflets.	Alcohol prevalence Mean 30 day frequency Mean units past week Mean Interactional problems score
Newbury-Birch 2014 [UK]	Schools	182 students aged 14-15 years who reported drinking in the last 6 months	Intervention 1: Feedback plus brief interactive session Intervention 2: Feedback plus brief	Feedback and advice leaflet plus PSHE	Units of alcohol consumed in 28 day period Percentage days' abstinence Drinks per drinking day Days, more than 2 units Acceptability

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
			interactive session plus family session		
Newton 2016 [Australia]	Schools	438 year 8 adolescents (ages 13-14) considered to be “high risk” drinkers based on having one of 4 personality profiles	Preventure, targeted intervention that involved personality-linked motivational processes.	Usual health education	Alcohol use Binge drinking Alcohol related harms (modified RAPI)
O’Leary-Barrett 2010; [UK]	Secondary school	1159 high risk year 9 students (14 -15 years) identified at screening survey	Adventure, Personality-targeted based on Preventure Programme	Statutory drug education according to national curriculum requirements.	Drinkers Binge drinkers Log drinking problems score (RAPI)
Shetgiri 2011 [USA]	Urban high school	108 9th grade students (14 -15 years) considered at risk	Substance-use prevention program design for at-risk 14-19 year olds considered to be a model program by the Substance Abuse and Mental Health Services Administration	Existing tutoring or other afterschool activities at the high school	Amount and frequency of alcohol School attendance Alcohol-related risky behaviour
Sussman 1998 [USA]	Continuation high schools	1074 students (mean age 16.7 years) considered at ‘high risk’	Project Towards No Drugs (TND)	Standard care	Alcohol users last 30 days School attendance
Wagner 2014 [USA]	High schools	514 adolescents aged 14-18 with at least 6 occasions of alcohol/other drug use and violence in the last 90 days	Guided self-change (GSC). A combined brief intervention with cognitive behavioural therapies	Standard care	Alcohol-days used (last 30 days) Aggressive behaviour number of days (last 30 days)

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Werch 2005 [USA]	Suburban high school	232 students in 11th and 12th grades (17 – 18 years) considered at-risk because they reported using alcohol in the last year	Brief intervention - Alcohol beverage-tailored programme	Minimal intervention control (brochure)	30 day frequency (multiple types of alcohol)
Winters 2007 [USA]	Urban public school system	78 students aged 13-17 years identified as being possible drug users	Brief intervention for adolescents only Brief intervention for adolescents and parents	Assessment control only	No. of alcohol use days No. of alcohol binge days

Table 5: Intervention details for studies included in evidence review 2.1

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Very brief intervention based on self-affirmation theory	Armitage 2014	To improve message processing and increase motivation to reduce alcohol consumption	Self-affirmation questionnaire with a series of "if-then" statements	Questionnaire administered under exam conditions in the classroom	Teachers supervised	Individual	Not reported	Single session
Preventure (personality-targeted intervention)	Castellanos 2006; Conrod 2006; Conrod 2011, Lammers 2015;	To target different motivational processes linked to four personality traits	Intervention manuals covering three main components: a) psychoeducation, b) motivational interviewing	Participants were guided in a goal-setting exercise designed to enhance motivation to explore personality and new ways of	Qualified therapist and a co-facilitator (a master's level research student)	Groups	90 minute sessions	2 sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
	Newton 2016		component, c) cognitive behavioural component	coping with one's personality.				
Project SUCCESS	Clark 2010	Based on the Residential Student Assistance Program (RSAP) model	4 components: 1) the Prevention Education series – four topic substance use prevention program taught in small groups; 2) individual and group counselling; 3) communication with parents; 4) referrals to community agencies	Students were screened to assess their own and family's use of alcohol and other drugs and their need for professional treatment or other services. Students screened as needing further attentions may receive individual counselling or take part in any of the 10 different small groups. Those requiring more intensive services were referred for community-based treatment.	Trained masters-level counsellors	Individuals, groups, parent communication and community referral	Full academic year	Education component included 6-8 weekly sessions
PRIME for Life under 21	Hallgren 2010	Lifestyle Risk Reduction Model	Curriculum guided by a program manual	Taught courses	Trained instructors	Group	5 months	2 day course or 10 hours

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Motivational interviewing	McCambridge 2008	Not reported	Not reported	Clear primacy was to be accorded to discussion of cannabis use, with discussion of the use of tobacco, alcohol and other drugs being secondary.	Research practitioners	Individual	1 hours	1 session
Feedback plus brief interactive session	Newbury-Birch 2014	Social learning theory	Manualised tool which was a six-step intervention	Combined structured advice and motivational interviewing techniques	School learning mentor	Individual	30 minutes	1 session
Feedback plus brief interactive session plus family	Newbury-Birch 2014	Sought to build upon the young person's motivation by encouraging the parents/family members to share their thoughts about the young person's drinking	Manualised tool which was a six-step intervention followed by a group family intervention. Parenting information leaflet	Combined structured advice and motivational interviewing techniques plus family session 1 month later	School learning mentor	Individual	30 minutes (individual) plus 60 minutes (family)	1 session
Adventure; Personality-targeted	O'Leary-Barrett 2010	Personality-targeted intervention aimed at	The interventions were conducted using manuals that	All exercises discussed thoughts, emotions, and behaviours in a	Teachers trained as facilitators and co-facilitators.	Group	90 minutes	2 sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
intervention		preventing alcohol misuse	incorporated psychoeducational, motivational enhancement therapy and included real-life "scenarios" shared by "high-risk" youth in the UK. All the exercises were encouraged discussion in a personality-specific way.	personality-specific way				
Project TND classroom only	Sussman 1998	Motivation-type activities - attitudinal perspective taking, stereotyping and health as a value.	Not reported	Health motivation, social skills and decision-making	Health educators	Group	3 consecutive weeks	9 x 50 minute sessions
Project TND classroom plus school-as community component	Sussman 1998	Theories that suggest that preventive effects can be obtained through encouraging students to engage in more healthful	Not reported	Events covered activities such as job training, sports participation, drug-free parties, drug-awareness week etc.	Health educators and volunteer school staff member	Group	6 months	9 x 50 minute sessions (for classroom component)

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
		interconnections with others at the school and beyond its borders.						
Guided self-change(GSC)	Wagner 2014	GSC is a combined brief motivational intervention (BMI) and cognitive behavioural therapies (CBT)	Not reported	GSC major treatment components include (a) weekly self-monitoring of behaviours targeted for change (b) treatment goal advice, with clients selecting their own goal (c) brief readings and homework assignments exploring high-risk situations, options and action plans (d) motivational strategies to increase clients; commitment to change, and cognitive relapse prevention procedures	5 master's degree level counsellors	Individual	Not reported	5 sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Alcohol beverage-tailored programme; brief intervention	Werch 2005	Change drinking patterns and perceptions in current drinkers	The intervention components included a screening questionnaire, brief one-on-one alcohol risk reduction consultation, provision of prevention messages matched to 6 alcoholic drinks, take home materials (tip sheet).	The 5-item screening questionnaire was administered just prior to implementing risk reduction consultation. The tip sheet was mailed to the participants 1 week after the consultation.	Trained research staff	Individual	Not reported	Not reported
BI-A - Brief intervention for adolescents only and BI-AP Brief intervention for adolescents and parents	Winters 2007	Motivational enhancement and cognitive behavioural therapy	Session 1 focused on drawing out information about the student's substance use and related consequences, evaluating the level of willingness to change. Session 2 focused on reviewing progress and	Individual sessions delivered using a motivational interviewing style	Therapists	Individual	60 minutes	Two sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
			identifying barriers to achieving goals.					

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Excluded studies

A total of 201 articles were identified for consideration but excluded. See Appendix J: for a full list of excluded studies.

Economic evidence

See separated document on cost-effectiveness review.

Economic model

See separate document on economic modelling.

Resource impact

Table 6: Summary of estimated resource impact should there be an increase in referrals to external services

Resource	Unit costs	Source	Total cost at x% additional activity	Total cost at y% additional activity
Alcohol services, children and adolescents, community contacts	£293	National reference costs 2017/18	£22,737 at 10% additional activity	£90,950 at 40% additional activity
Alcohol services, children and adolescents, outpatient attendances	£48	National reference costs 2017/18	£42,813 at 10% additional activity.	£171,252 at 40% additional activity

Evidence statements for 11 to 18 year olds

Quantitative evidence

Age at first use

No data reported

Age at first experience of drunkenness

No data reported

Amount and frequency of alcohol use

Alcohol use

Very low quality evidence was identified from 7 RCTs (results were not pooled). Six RCTs (Conrod 2006, McCambridge 2008, Shetgiri 2011, Sussman 1998, Lammers 2015 and Newton 2016) showed that there was no significant difference in alcohol users at 4-12 months for 'at risk' students receiving a school-based targeted intervention (usually brief interventions such as motivational interviewing) compared to the control group who received no intervention or usual education or minimal intervention The remaining 1 RCT (O'Leary-Barrett 2010) showed a significant difference in reduced drinking rates at 6 months for 'at risk' students receiving a personality-targeted group intervention compared to statutory drug education (aOR 0.6 95% CI 0.4, 0.8).

Mean alcohol frequency

Very low quality to low quality evidence was identified from 7 RCTs (results were not pooled). Six RCTs (Sussman 1998, Werch 2005, McCambridge 2008, Wagner 2014, Clark 2010 and Hallgren 2010) showed that there was no significant difference in reduced mean alcohol frequency for 'at risk' students receiving a school-based targeted intervention (usually brief interventions such as motivational interviewing) compared to the control group who received no intervention or usual education or minimal intervention at 4-12 months. The remaining RCT (Winters 2007) showed a significant difference in mean alcohol frequency at 6 months for 'at risk' students receiving brief intervention compared to assessment only (MD -1.56 95% CI -2.07, -1.02).

Binge drinking

Low quality evidence was identified from 4 RCTs. Three RCTs (O'Leary-Barrett 2010, Lammers 2015 and Newton 2016) showed no significant difference in binge drinking rates for 'at risk' students receiving a school-based targeted intervention (usually brief interventions such as motivational interviewing) compared to the control group who received no intervention or usual education or minimal intervention at 6-12 months (results were not pooled). The remaining RCT (Conrod 2006) showed a significant difference in reduced binge drinking rates at 4 months for 'at risk' students receiving personality-targeted group intervention compared to no treatment control (RR 0.7 95% CI 0.6, 0.9).

Mean alcohol consumption

Moderate quality evidence was identified from 3 RCTs (McCambridge 2008, Armitage 2014 and Newbury-Birch 2014). All 3 RCTs showed that there was no significant difference in reduction of mean alcohol consumption at 2-12 months for 'at risk' students receiving a school-based targeted intervention (usually brief interventions such as motivational interviewing) compared to the control group who received no intervention or usual education or minimal intervention (results were not pooled).

Mean alcohol quantity/frequency

Low quality evidence was identified from 2 RCTs (Conrod 2001 and O'Leary-Barrett 2010). Both RCTs showed that there is no significant difference in mean alcohol quantity/frequency at 6-12 months for 'at risk' students receiving a school-based targeted intervention (personality-targeted interventions) compared to the control group who received usual education or minimal intervention (results were not pooled).

School attendance

Absence from school

Low quality evidence from 2 RCTs was identified. 1 RCT (Shetgiri 2011) showed that there was a significant difference in favour of the control group for absence from school at 8 months for 'at risk' students receiving a school-based targeted intervention (resilience building through activities and counselling) compared to the control group who received usual education (RR 2.0 95% CI 1.0, 3.8). However, the absence was not necessarily due to alcohol.

The other RCT (Castellanos 2006) showed that there was a significant difference in favour of a school-based targeted intervention (a brief intervention) for absence from school at 6 months for 'at risk' students compared to the control group who received no intervention control (RR 0.4 95% CI 0.3, 0.7). However, the absence was not necessarily due to alcohol

Alcohol related risky behaviours

Been in a fight

Very low quality evidence from 1 RCT (Shetgiri 2011) showed that there was no significant difference for being in a fight at 8 months for 'at risk' students receiving a school-based targeted intervention (through activities and counselling) compared to the control group who received usual education RR 0.9 95% CI 0.4 to 1.8).

Aggressive behaviour

Moderate quality evidence from 1 RCT (Wagner 2014) suggests that there was a significant reduction at 6 months follow up for aggressive behaviour in 'at risk' students receiving a brief motivational intervention combined with cognitive behavioural therapies compared to control measured as mean number of days engaged in aggressive behaviour in the past month MD -1.5 95% CI -2.83 to -0.25).

Unprotected sex

Low quality evidence from 1 RCT (Castellanos 2006) showed that there was no significant difference for unprotected sex in 'at risk' students receiving a school-based targeted intervention (brief intervention) compared to control group (RR 1.0 95% CI 0.5 to 2.1).

Mental health and wellbeing

Problem drinking

Low quality evidence was identified from 2 RCTs (results were not pooled). One RCT (O'Leary-Barrett 2010) showed that there was no significant difference for problem drinking at 6 months in 'at risk' students receiving a school-based targeted intervention (personality-targeted intervention) compared to the control group who received no intervention or usual education or minimal intervention. The other RCT (Conrod 2011) showed that there was a significant reduction in alcohol problems for students receiving a personality-targeted intervention compared to usual education (MD not calculated).

Alcohol related harms

Low quality evidence from 1 RCT (Newton 2016) suggests that there is a significant difference for increased alcohol use problems in 'at risk' students receiving a school-based targeted intervention compared to control group (aRR 1.4 1.1 95% CI 1.1 to 1.7.).

Panic attacks

Low quality evidence from 1 RCT (Castellanos 2006) showed that there was a significant difference, favouring the intervention, for panic attacks in 'at risk' students receiving a school-based targeted intervention compared to control group (RR 0.7 95% CI 0.5 to 0.9).

Depression symptoms

Low quality evidence from 1 RCT showed that there was no significant difference for depressive symptoms in 'at risk' students receiving a school-based targeted intervention (brief intervention) compared to control group (MD 1.2 95% CI -0.21 to 2.61)).

Adverse or unintended effects

No data reported

Qualitative evidence

Acceptability

Moderate evidence from one UK study (Newbury-Birch 2014) reported on the views of learning mentors, young people and parents. The majority of participants were interviewed in a school. Young people and learning mentors mostly agreed that a brief intervention for secondary alcohol prevention was acceptable but that the calorie-content aspect was not. Parents and young people did not express a desire to engage in the brief intervention with family component or a benefit from doing so.

Evidence statements for SEND population (18 to 25 years)

No evidence was identified for this question.

Recommendations

1.1 Planning alcohol education

These recommendations are for school leaders, head teachers and governing bodies.

Organising alcohol education

1.1.1 Plan and deliver alcohol education (universal and targeted interventions) as part of a whole-school approach to personal, social, health and economic education (PSHE). For example:

- classroom curriculum activities
- pastoral support, school policies (including school ethos) and other actions to support pupils in the wider school environment

- activities that involve families and communities (see the section on making it as easy as possible for people to get involved, in the NICE guideline on community engagement).

1.1.5 Think about how to adapt alcohol education for pupils with special educational needs and disabilities so that it is tailored to take account of the pupil's learning needs, abilities and maturity (see chapter 6 of the Department for Education's SEND code of practice: 0 to 25 years).

1.1.6 Ensure all involved in giving the alcohol education sessions are aware of the process for handling confidential disclosures.

1.1.7 Ensure pupils understand that any information or concerns they disclose can be kept private unless there are safeguarding concerns.

1.1.8 Use existing school policies to deal with problems (such as bullying) that may arise if a pupil's disclosures are inappropriately shared by other pupils.

1.1.9 Use safeguarding arrangements to refer pupils for extra support if they have:

- raised concerns, for example about alcohol-related harm or

- had concerns raised about them (see the Department for Education's Keeping children safe in education).

1.1.10 Use clear referral pathways, for example into school nursing, school counselling, early help services, voluntary sector services, young people's drugs and alcohol services or to a youth worker, as needed.

1.3 Targeted interventions

Selecting pupils for targeted interventions

1.3.1 When selecting pupils to offer a targeted intervention to, avoid treating them in a way that could stigmatise them or that would encourage them to see themselves as likely to use alcohol or see it as normal behaviour.

1.3.2 Seek consent to include a pupil in a targeted intervention. This should be from the pupil themselves, or the pupil's parent or carer, as appropriate to the situation.

1.3.3 Offer a targeted individual or group intervention (for example counselling or a brief intervention) to pupils who are assessed as vulnerable to alcohol misuse.

Tailoring targeted interventions

1.3.4 For each person or group offered an intervention, identify their specific risk factors and any concerns about their behaviour so that the intervention can be tailored to their needs. Use information from sources such as:

- level of needs assessment

- formal sources of information about risk factors for example information provided by social services or through the whole-school approach

- informal sources of information about pupils' behaviour, (for example a member of the community informing the school after witnessing pupils drinking alcohol).

Avoiding unintended consequences of group interventions

1.3.5 Avoid normalising unhealthy drinking behaviours when delivering targeted group interventions. For example, by not having drinkers and non-drinkers in the same group.

Research recommendations

1. **How effective and cost-effective are individual, compared with group, school-based interventions for children and young people aged 11 to 18 in full-time education who are thought to be vulnerable to alcohol misuse?**

2. **How effective and cost-effective are school-based alcohol interventions targeted at young people aged 11 to 25 with SEND who are thought to be vulnerable to alcohol misuse?**

3. **How effective are school-based alcohol prevention interventions (universal or targeted) for young people aged 18 to 25 with SEND in full-time education?**

See Appendix K: for full research recommendations.

Rationale and impact

Why the committee made the recommendations

It is current practice for schools to use a whole-school approach for alcohol education (universal and targeted) and other health-related topics, as recommended in the original guideline, which has a PSHE component. In England universal alcohol education forms part of the usual curriculum through the health component of PSHE, which will be compulsory in all schools from 2020.

Evidence was identified on delivering universal alcohol-specific education programmes in a mix of approaches and components (for example in or outside of the classroom, on its own or in combination with family and/or community). This mixed evidence showed that effectiveness of specific universal alcohol education programmes is no better than universal alcohol education which in England is delivered as part of PSHE education as part of the usual curriculum so the committee thought that alcohol education can continue to be delivered through PSHE.

One of the elements of the whole-school approach is to involve parents and carers. Evidence was identified on universal alcohol programmes that involved parents, but it was inconclusive. The committee believed that limitations in study design, such as short follow-up, might explain this. The evidence also showed that it can be difficult to engage parents successfully (for example, to attend family education activities at school) and so the committee made a research recommendation to evaluate the different ways to engage with parents (research recommendation 5).

No evidence was identified for alcohol education specific to pupils with special educational needs and disabilities (SEND), and intervention studies carried out in schools often exclude pupils with SEND. Therefore the committee could not recommend any specific alcohol education adaptations for SEND pupils. But they thought it was important for schools to consider adapting alcohol education to the needs of their SEND pupils. The SEND code of

practice sets out how schools can ensure equality of access to the curriculum and inclusion in all school activities for SEND pupils. Therefore research is needed to evaluate the effectiveness of such interventions for this group and of alcohol education (research recommendations 1, 3, 4 and 6).

Alcohol education can touch on personal experiences or issues that could be sensitive or confidential in nature and may also involve a safeguarding issue. The evidence from qualitative studies suggested that pupils would be more comfortable discussing alcohol-related concerns if they were reassured that they could speak in confidence. Therefore the committee thought that it should be made clear to pupils how any concerns they raise will be dealt with. To make this possible, those in a position to hear these concerns must be aware of how to handle confidential disclosures. Expert testimony also suggested that schools should be prepared to deal with unintended consequences and so the committee made a recommendation that this should be planned for and anticipated.

The evidence from qualitative studies also showed that some pupils may be reluctant to share information in a group setting for fear of the information being shared, and of being teased or bullied by their peers. The committee wanted schools to be aware of this and suggested that following existing school policies, for example on bullying, should help to minimise this.

It is current practice for schools to have a process in place so that pupils know that they can speak confidentially, and to allow for concerns to be raised and local safeguarding processes to be followed. (For example, see Public Health England guidance on Safeguarding and promoting the welfare of children affected by parental alcohol and drug use: a guide for local authorities).

Alcohol education may bring to light some matters that may lead to safeguarding issues. Members advised that it is best practice that schools have clear referral pathways to relevant specialist agencies such as school nursing. The local availability of specialist agencies varies, so the committee suggested examples of services that fulfil this criterion. The committee then wanted to reinforce the need for all those providing alcohol education to be aware of safeguarding and of the referral pathways in place. This would help to provide as much support for pupils as possible. For example, the Early Help Assessment is designed to help ensure a pupil is offered the right support at an early stage. If these external specialist interventions are needed, the school needs to involve the pupil and their parents or carers. The committee thought that this would be a way of increasing the chances of success of any intervention by allowing them to consult and agree on the best approach for referral to these services.

Evidence suggests that targeted interventions for pupils who are vulnerable to alcohol misuse may be effective. These studies included individual or group brief interventions or counselling that are delivered over 1 to 5 sessions. The committee was unable to recommend specific details for these interventions because they thought this would be dependent on the pupil's specific needs. For example, one pupil may benefit from a one-off session whereas another pupil may need follow-up sessions or further support. It was not possible to determine the comparative effectiveness of individual interventions compared with group interventions, so the committee made a research recommendation (see research recommendations 2 and 4).

Experts told the committee that when planning an intervention, it is important to consider any potential unintended consequences. This supported the committee's view that care should

be taken to avoid 'labelling' or stigmatising pupils when selecting vulnerable pupils for a targeted intervention. For example, if a pupil needs to leave lessons for a counselling session, classmates or teachers might treat them differently, and they could be at increased risk of bullying. They may become withdrawn or defiant as a result, and increase the behaviour that the intervention is intended to prevent.

The committee was clear that seeking consent from the pupil or their guardian when offering any intervention is best practice. Also, for alcohol education to be successful the pupil must be a willing participant and seeking consent from them (or their families and carers) is an important part of following a whole-school approach

Impact of the recommendations on practice

The recommendations will aim to reinforce current best practice because they are based on existing processes that all schools should be following and will become mandatory. However, the statutory changes may mean that schools need to make changes in how they prioritise health education to give it equal status to other subjects in the curriculum.

Schools should already be considering adapting education for their SEND pupils so it is not anticipated that there will be any resource impact. Full details of the evidence and the committee's discussion are in evidence review 1: universal school-based alcohol interventions.

The recommendations will reinforce best practice because they are based on existing processes and on guidance on individual sessions for vulnerable people. Potentially group intervention will lead to savings but it is not clear how often these would be used.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

All adolescents (aged 11-18)

The committee considered the relative importance of the outcomes and agreed that age at first intoxication was the outcome that mattered most. This is because it is a known risk factor for other outcomes such as risky behaviour and carries an immediate risk for severe consequences in terms of injury, accidental or self-inflicted, but is also a risk factor for other more long term outcomes for health and wellbeing such as chronic alcohol use disorders, intellectual impairment, learning difficulty and other mental health outcomes but may also impact on resilience, and educational success.

Amount and frequency of alcohol use was considered important due to known impact on school based measures such as attendance, educational attainment, exclusion from school. Regular absence from school can affect educational success and the long term consequences of these outcomes can impact on subsequent employability.

It is also important to consider younger adolescents (age 11-15 years) separately to older adolescents (16 to 18 years) where the effects of alcohol can have wider impacts on younger adolescents compared to older adolescents. There are also differences in behavioural norms

for alcohol use across these two age subgroups such as the law allowing adolescents over the age of 16 to be bought beer, wine or cider by an adult with a meal.

Younger adolescents (aged 11-15)

Age at first whole drink is important because drinking before age 15 affects the body leading to a range of health issues such as weight changes, headaches and problems sleeping. The adolescent brain is still developing and alcohol can affect memory, reactions, learning ability and attention span which may result in poor academic attainment and truancy. The lower body weight of a young person and the limited ability to metabolise alcohol can cause alcohol intoxication to occur more rapidly compared to an adult. Short term effects of intoxication include reduced inhibition leading to increased levels of risky behaviour. (See Know the risks of drinking alcohol underage).

Young people (aged 16+)

Drinking alcohol when over the age of 15 can still have the health impacts seen in younger adolescents. In addition it was discussed that older adolescents and young people who drink, do not necessarily drink frequently but consume large quantities in one single occasion (binge drinking) leading to first intoxication occurring sooner along with the associated risky behaviours.

Outcomes important for schools and students

As alcohol use can impact on school measures, outcomes such as school attendance and increases risky and/or aggressive behaviour may serve as a proxy for identifying alcohol-related problems. These outcomes can enable schools to provide a duty of care to students demonstrating this behaviour and to other students who could be affected by this by accessing the appropriate support and/or advice that may be required.

The quality of the evidence

There were five studies included that were from the UK but all had varying reasons for identifying adolescents who were vulnerable to alcohol misuse. For example, eligibility criteria varied from personality traits to current drinkers or current cannabis users. However, this reflects the current situation for schools when identifying children and young people vulnerable to alcohol misuse.

The interventions were predominantly split into either brief one-to-one interventions or group interventions usually delivered over multiple-sessions. The evidence suggested some benefits for both types of approaches. Most interventions were delivered by a specialist provider such as therapists, masters-level counsellors or more specialist school-based providers such as health educators (including school nurses) or learning mentors. Only one of these interventions was adapted to be taught by teachers. The committee acknowledged that all schools should have access to a school nurse or public health nurse service that is funded by local authorities and could potentially deliver these types of interventions but this varies.

The committee recognised some methodological limitations as regards study design and conduct. In some studies, participants were told which intervention they were allocated to. Knowledge of intervention allocation may introduce bias in outcome reporting especially

where the outcomes are self-reported by the participants. All of the outcomes reported in this review were obtained through these measures.

Other studies did not specify whether participants were aware of their allocation to an intervention. This methodological limitation makes it difficult to ascertain if outcome reporting was subject to the bias introduced by knowledge of intervention allocation described above.

No evidence was identified for young people aged 18 to 25 with SEND, therefore the committee sought expert testimony.

Benefits and harms

The committee discussed the theoretical benefits and harms of targeted interventions in that they would expect to see after this intervention has been implemented. In terms of positive unintended consequences, implementing targeted interventions could be seen as a way to positively discuss alcohol and help to boost self-esteem and confidence. In addition, reduction in intoxication may lead to a reduction in other risky behaviours such as unplanned pregnancies.

The committee acknowledged that there could be unintended negative consequences from the interventions. Targeting individuals may also lead to them becoming stigmatised through labelling such as those who are identified as at risk if their parent or parents are problem drinkers.

As the interventions varied and the outcomes were measured on different scales or time points, the results could not be pooled. The evidence suggests that some targeted interventions may reduce alcohol use and frequency but the majority reported no significant difference compared with usual alcohol education. Although not significant, there was a general trend favouring the targeted interventions. One study reported an increase in absence from school, however truancy was a reason for eligibility in this trial. By preventing alcohol use and frequency, age at first intoxication, considered important by the committee, is potentially delayed or less frequent and consequently the associated risks are prevented or reduced.

For other alcohol outcomes, the evidence generally shows no difference for alcohol misuse or alcohol-related harms.

Most of the studies adjusted for baseline characteristics such as gender and socioeconomic status but most did not present separate subgroup data for this and it was therefore not possible to explore further.

No evidence was found for age at first drink, age at first experience of drunkenness. No evidence was reported for adverse effects.

Cost effectiveness and resource use

The economic evaluation explored the likely cost-effectiveness of an intervention in reducing problematic drinking, given its effectiveness and cost. The results showed that the cost of the intervention is a key driver of overall cost. The number of crime and hospital events also significantly affected the results due to their high associated costs. Interventions were most likely to be cost-saving in young people aged between 17 and 18 years, because baseline problematic drinking is highest in this subgroup. Interventions were least cost-saving when applied to children aged between 11 and 12 years. In this age group problematic drinking is

minimal (0.5%) so the committee did not think it appropriate to restrict access to alcohol education on the basis of this one outcome. The committee were also mindful of other limitations of the model which include lack of age appropriate outcomes, the short time horizon (1 year) and estimates of effectiveness based in other countries. Regarding the latter, in the UK alcohol education is included within PSHE. In other countries, education as normal – the comparator in many studies - may be more or less effective than PSHE. If it is less effective than PSHE, applying the incremental effectiveness to a UK population could overestimate the intervention's effectiveness. Due to a lack of data it was not possible to explore the cost-effectiveness of interventions in a SEND population.

If schools continue using existing processes for alcohol education, it is expected that there will be no significant impact. However, should there be increase in referrals to external specialist services, such as local drugs and alcohol services, there may be some cost implications

Other factors the committee took into account

Drinking behaviours are equally prevalent in both low and high socioeconomic status areas so this alone may not be enough to determine whether a young person is at risk. It may be possible to assess overall risk using local resources such as school health profiles. The committee discussed the fact that the number of children and young people drinking has been decreasing in recent years but those who drink are more likely to drink in a risky way

There are many reasons why a child or young person may be considered vulnerable to alcohol misuse. The committee noted that some may already be drinking in a risky way or using other substances or their behaviour at school implies there are underlying issues. The committee also considered that children whose parents have alcohol problems may be particularly vulnerable to alcohol misuse themselves. As these can be sensitive issues, the committee noted that it is possible that selecting a child or young person for a targeted intervention could inadvertently label them or stigmatise them.

Due to the varying reasons for being considered vulnerable to alcohol misuse, the committee acknowledged that there may be different ways that schools identify these children and young people. This is reflected in the evidence where studies used different types of screening and criteria that determined whether a student was "at risk". How to identify students for a targeted intervention was out of scope so the committee decided that using existing processes in schools for this would be appropriate.

The committee considered that the different reasons for vulnerability to alcohol misuse would require a more tailored approach to intervening. Therefore schools would need to be mindful of this and choose an appropriate intervention based on the needs of the child or young person. To inform this decision, the committee suggested that schools may rely on reports within school on behaviours that could act as a proxy to underlying alcohol use such as regular truancy or aggression. The committee noted that local safeguarding boards assess levels of need for individual children and this may be used as a source for assessing vulnerable children for an appropriate intervention. Another source could be information provided by the community, such as social services or informally from a member of the community, where behaviour outside of school can be flagged and inform an assessment of needs within school.

It is important that communication with parents/carers takes place to keep them informed with what is being implemented regarding alcohol education. In the event that the young

person is also a parent or is in care, then the local authority acts as the corporate parent. Some parents/carers may not want their child to take part in alcohol education for reasons such as cultural or religious beliefs so it is important that this is taken into consideration. The committee considered that one of the best ways to involve parents in alcohol education was through the 'whole-school approach'.

The interventions evaluated varied in terms of components, providers and methods of delivery (for example whether the intervention was delivered to an individual or a group). When the evidence was presented by these variables, it was not possible to ascertain whether there was a particular component or combination of components that was linked with effectiveness. Therefore the committee declined to make a recommendation related to how alcohol interventions should be delivered.

The committee discussed process evaluation of the interventions reviewed, however this was poorly reported across all studies and it is therefore difficult to determine whether interventions were implemented as they were designed to be. Where some process evaluation data was reported, it suggested that there was low uptake for parental components of interventions. This suggests that these components are not being successfully implemented and this can impact of the effectiveness of the interventions. The committee also noted that fidelity of interventions, where reported, was varied but that it implied that many interventions were not always delivered as completely as they should have been which can again impact on the effectiveness of the interventions

The committee considered that grouping children and young people together with different risk profiles may have unintended consequences through normalising unwanted behaviours and increasing their vulnerability. This was supported through expert testimony. The committee also noted that this environment may also increase the risk of substitution of alcohol with another substance. The topic experts noted that although there is a downward trend in the number of young people drinking in general, it's possible that young people might be substituting alcohol with other substances such as cannabis or using them as an alternative.

Expert testimony suggested that children aged 11 with mild to moderate learning disabilities are more likely than their peers to report using alcohol and risky alcohol drinking. Young adults aged 18 and older with learning disabilities are less likely to be drinking alcohol than their peers, but those who do tend to drink in a risky manner. Therefore the committee considered that it is important that targeted interventions are accessible to those with SEND that require support.

Appendices

Appendix A: Review protocols

A.1.1 Review protocol for school based alcohol intervention programmes for children and young people aged 11 to 18 years.

Field	Content
Review question	What school-based targeted[a] alcohol interventions and pastoral support are effective and cost effective in children and young people aged 11 up to and including 18 years?
Type of review question	Intervention and qualitative
Objective of the review	To identify which school-based targeted alcohol interventions and pastoral support are effective and cost effective for those children and young people aged between 11 and 18 years in delaying, reducing or stopping alcohol use. The purpose of this review is to identify which interventions work rather than which interventions work best. The review question will examine the effectiveness and cost effectiveness school-based selected/indicated alcohol interventions and whether effectiveness varies according to a range of factors including the person delivering the intervention, programme fidelity, the population receiving the intervention, population subgroups e.g gender, age, socioeconomic group, ethnicity, geographical area, children and young people with special educational needs and disabilities (SEND).
Eligibility criteria – population	Children and young people aged 11 up to and including 18 years in full time education considered 'at risk'.
Eligibility criteria – intervention(s)	Targeted school-based programmes or pastoral support such as brief interventions or counselling
Eligibility criteria – comparator(s)/control	The intervention of interest against a control group
Outcomes and prioritisation	age at first whole drink of alcohol (for those who have never drunk alcohol) where reported age at first experience of drunkenness [b] where reported amount and frequency of alcohol use school attendance. alcohol related risky behaviour: unprotected or regretted sex

[a] Targeted services and programmes: For young people who are not necessarily seeking help but are identified as being at 'risk on the basis of characteristics they themselves have, or on the basis of the group to which they belong.'

[b] Recent evidence suggests it is the age at which a young person first gets drunk that is a more important predictor of subsequent harmful drinking than age of first drink

Field	Content
	violence and other antisocial behaviour criminal activity mental health and wellbeing Adverse or unintended effects: an increased interest in trying alcohol. Qualitative outcome measures Views and experiences of: teachers and practitioners delivering interventions (UK or countries similar to UK) children and young people receiving interventions. (UK or countries similar to UK) parents/carers of children and young people receiving the interventions (UK or countries similar to UK) The qualitative outcome measures will be limited to UK or similar countries due to the varying contexts surrounding alcohol education/legislation in the different countries which may impact the generalisability of the interventions. Outcomes reported at 12 months will be prioritised over shorter outcomes, e.g. amount and frequency of alcohol use at 12 months will be prioritised over alcohol use at 3 months. However, outcomes reported at less than a year will only be reported if 12 month data is not available, being mindful that an academic year is divided into terms (around 3 months long).
Eligibility criteria – study design	Studies of effectiveness and cost effectiveness: Systematic reviews Randomised controlled trials (RCTs) including cluster RCTs. UK based qualitative studies of interventions shown to be effective Economic studies: Economic evaluations Cost-utility (cost per QALY) Cost benefit (i.e. Net benefit) Cost-effectiveness (Cost per unit of effect) Cost minimization Cost-consequence
Other inclusion exclusion criteria	Included studies There will be a scoping search carried out to identify any recent systematic reviews that directly relate to one or more of the scope questions and have been published since 1st December 2015. Any systematic reviews identified will be used as a source of primary studies or as a source of data.

Field	Content
	A full development search for individual studies will be carried out. As this is an update of existing guidance (PH7), the studies included in the evidence reviews supporting the recommendations being updated will be assessed against the new inclusion criteria. Studies will be included if they meet the new inclusion criteria. Full economic analyses and costing studies will be included. Included costing studies reporting any health outcomes will be noted in EPPI/the evidence tables and forwarded on for economic modelling and not for the purposes of this review. Only papers published in the English language will be included Only studies carried out in OECD countries will be included. Population Note: At risk' populations will be defined as per study definitions. Note: Populations that cover a broad age range will be included if the data for the age group of interest are reported separately. Note: In the UK or similar countries, school based interventions aimed at year 6 pupils (aged 10-11) through to sixth form (16 to 18) will be included. Note: In the US or similar countries, school-based interventions aimed at grades 6 to 12 (11 to 18 years) will be included. Interventions Statutory drug education that is part of the national science curriculum (see National Curriculum in England: science programmes of study Department of Education) will be excluded. Interventions that are more broadly focussed e.g. substance misuse prevention will be included if they report alcohol outcomes. Individual decisions will be taken on interventions that are stated as school based, but conducted off site. For example a school nurse employed by a local authority may be responsible for a number of schools or there may be schools that are part of a federation and share a school nurse or counsellor who may conduct the intervention with pupils from a number of schools away from school premises Comparators Controls to be defined as described in the studies. Studies with comparators within and between schools will be included. Settings Schools and colleges (See DfE Types of School) including: Academies Free schools Faith schools City technology colleges State boarding schools Private schools

Field	Content
	Alternative provisions e.g. pupil referral units (PRUs) Post 16-18 education provisions e.g. sixth form Local authority secure children's homes Secure training centres The following settings are excluded: Home Higher education institutions Young offender institutions (YOI) (and similar in other countries). .
Proposed sensitivity/sub-group analysis, or meta-regression	Where evidence allows subgroup analyses and/or meta-regression will be conducted. Depending on the evidence available some or all of the following will be explored. Subgroups of interest include: Baseline characteristics of the children and young people receiving the intervention age (11-15, 16-18) gender socioeconomic status ethnicity geographical area children and young people with special educational needs and disabilities (SEND) type of school setting e.g. mainstream, alternative provision, secure settings People delivering the intervention e.g. teacher, peer, other school staff or external provider Teacher Peer Other school staff External provider e.g school nurse People who have been trained to deliver the intervention Method of delivery Single component or multi-component Theories underlying the intervention If the evidence allows for intervention "variables or conditions" to be identified, a qualitative comparative analysis (QCA) may be conducted as well as a pairwise review. A QCA analysis allows the different causal contributions of the interventions to be explored.

Field	Content
Selection process – duplicate screening/selection/analysis	10% of the search results will be blind-screened by a second reviewer. Any disagreements will be resolved by the two reviewers, and escalated to a third reviewer if agreement cannot be reached. If the initial level of agreement is below 90%, a second round of blind-screening will be considered. 10% of data extraction and critical appraisal will be checked by a second reviewer. Any disagreements will be resolved by the two reviewers, and escalated to a third reviewer if agreement cannot be reached. Only 10% of the search results will be checked as this is an intervention and qualitative review and there is confidence that RCTs, controlled studies or related qualitative studies are unlikely to be missed at the sifting stage. The inclusion list will be checked with PHAC to ensure no studies are excluded inappropriately.
Data management (software)	EPPI Reviewer will be used: to store lists of citations to sift studies based on title and abstract to record decisions about full text papers to store extracted data. If meta-analysis is undertaken, Cochrane Review Manager 5 will be used to perform the analysis. Qualitative data will be analysed using EPPI Reviewer. Qualitative data will be summarised using an appropriate qualitative synthesis approach, for example, narrative synthesis.
Information sources – databases and dates	A date cut off of the year 2006 will be used. This is because this is an update of existing guidance published in 2007 and searches for the original guideline were completed in 2006. Citation search of studies included in the original guideline will be undertaken. The Medline strategy will be translated for use within the following databases: Primary Databases Medline and Medline in Process (OVID) Embase (OVID) CENTRAL (Wiley)) Cochrane Database of Systematic Reviews (Wiley) DARE (records up to March 2014 only) (Wiley) NHS EED (records up to March 2014 only) (Wiley) Econlit (Ovid) PsycINFO (Ovid) Social Policy and Practice (OVID) HMIC (OVID) ERIC (Proquest) Secondary Databases

Field	Content
	ASSIA (Proquest) CINAHL (EBSCO) Econ Papers (RePEc) National Guidelines Clearinghouse (US Dept. of Health and Human Services) Bibliomap (eppicentre) Dopher (eppicentre) Trophi (epicentre) Alcohol Studies Database Web searches will also be conducted. NICE Evidence Search , Google and Google Scholar will be searched for key terms and the first 50 results examined to identify any UK reports or publications relevant to the review that have not already been identified. Relevant results will be added to the Endnote database. Searches will also be conducted on the following key websites for relevant UK reports or publications: Websites PSHE association Public Health England Department of Health Department for Education Alcohol Research UK Public Health Institute Mentor-Adepis OFSTED National Foundation for Educational Research Research in Practice Education Endowment Foundation Office for Children's Commissioner Council for disabled children A study filter will not be applied. Citation searching of included studies will be undertaken. Results will be saved to an EndNote database and de-duplicated. Results will be provided to the Public Health team as RIS files, suitable for import into EPPI Reviewer. A record will be kept of number of records found from each database and of the strategy used in each database. A record will be kept of total number of duplicates found and of total results provided to the Public Health team.
Methods for assessing bias at	Standard study checklists will be used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual

Field	Content
outcome/study level	For intervention studies the Cochrane Risk of Bias 2 tool will be used and for qualitative studies, the Cochrane qualitative checklist will be used. Where appropriate, the risk of bias across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/ GRADE-CERQUAL will be used for qualitative findings. When performing GRADE and where RCTs are considered the best available evidence for the question and outcome in question, they will start as high quality evidence. Where RCTs are not the most appropriate study design for a particular question or outcome, GRADE will be modified to allow for the study design considered most appropriate to start as high quality.
Criteria for quantitative synthesis	Studies will be grouped according to the type of intervention as appropriate. For details please see section 6.4 of Developing NICE guidelines: the manual The outcomes of interest are likely to be reported in the studies as continuous data. Where appropriate the data will be dichotomised to enable the committee to make recommendations..
Methods for quantitative analysis – combining studies and exploring (in)consistency	It is anticipated that the studies included will be heterogeneous with respect to participants and interventions. Where meta-analysis is appropriate, a random effects model will be used to allow for the anticipated heterogeneity. This assumption will be tested will be tested with a fixed effects model. Data from different studies will be meta-analysed if the studies are similar enough in terms of population, interventions, comparators and outcomes. Methods for pooling cluster and individual randomised controlled trials will be considered where appropriate. Unexplained heterogeneity will be examined where appropriate with a sensitivity analysis. If the studies are found to be too heterogeneous to be pooled statistically, a narrative synthesis will be conducted.
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual
Review staff	Sarah Boyce (Technical Analyst) Aedin McSloy (Assistant Technical Analyst) Hugh McGuire (Technical Adviser) Rachel Adams (Information Specialist)

A.1.2 Review protocol for school based alcohol intervention programmes for children and young people aged 18 to 25 years

Field	Content
Review question	What school-based targeted[c] alcohol interventions and pastoral support are effective and cost effective among young people aged 18 up to and including 25 years with SEND?
Type of review question	Intervention and qualitative
Objective of the review	To identify which school-based targeted alcohol interventions and pastoral support are effective and cost effective harm reduction approaches among young people aged 18 up to and including 25 years with SEND. The purpose of this review is to identify which interventions work rather than which interventions work best. The review question will examine the effectiveness and cost effectiveness of universal classroom-based alcohol programmes and whether effectiveness varies according to a range of factors including the person delivering the intervention, programme fidelity, the population receiving the intervention, population subgroups e.g. gender, age, socioeconomic group, ethnicity, geographical area.
Eligibility criteria – population	Young people aged 18 up to and including 25 years with an Education, health and care (EHC) plan considered 'at risk'.
Eligibility criteria – intervention(s)	Targeted school-based programmes and pastoral support such as brief interventions or counselling
Eligibility criteria – comparator(s)/control	The intervention of interest against a control group
Outcomes and prioritisation	age at first whole drink of alcohol (for those who have never drunk alcohol) where reported age at first experience of drunkennessd where reported amount and frequency of alcohol use school attendance alcohol related risky behaviour: unprotected or regretted sex violence and other antisocial behaviour criminal activity mental health and wellbeing Adverse or unintended effects, such as an increased interest in trying alcohol. Qualitative outcome measures

[c] Targeted services and programmes: For young people who are not necessarily seeking help but are identified as being at 'risk on the basis of characteristics they themselves have, or on the basis of the group to which they belong

[d] Recent evidence suggests it is the age at which a young person first gets drunk that is a more important predictor of subsequent harmful drinking than age of first drink

Field	Content
	Views and experiences of: teachers and practitioners delivering interventions (UK or countries similar to UK) young people receiving interventions. (UK or countries similar to UK) parents/carers of young people receiving the interventions (UK or countries similar to UK) The qualitative outcome measures will be limited to UK or similar countries due to the varying contexts surrounding alcohol education/legislation in the different countries which may impact the generalisability of the interventions Outcomes reported at 12 months will be prioritised over shorter outcomes, e.g. amount and frequency of alcohol use at 12 months will be prioritised over alcohol use at 3 months. However, outcomes reported at less than a year will only be reported if 12 month data is not available, being mindful that an academic year is divided into terms (around 3 months long).
Eligibility criteria – study design	Studies of effectiveness and cost effectiveness: Systematic reviews Randomised controlled trials (RCTs) including cluster RCTs. Should the evidence from systematic reviews and RCTs be limited, the following study designs will be sought in descending priority: Quasi-experimental studies, such as non-randomised controlled trials and controlled before and after studies. UK based qualitative studies linked to included studies of effectiveness. Economic studies: Economic evaluations Cost-utility (cost per QALY) Cost benefit (i.e. Net benefit) Cost-effectiveness (Cost per unit of effect) Cost minimization Cost-consequence
Other inclusion exclusion criteria	Included studies There will be a scoping search carried out to identify any recent systematic reviews that directly relate to one or more of the scope questions and have been published since 1st December 2015. Any systematic reviews identified will be used as a source of primary studies or as a source of data. A full development search for individual studies will be carried out. Full economic analyses and costing studies will be included. Included costing studies reporting any health outcomes will be noted in EPPI/the evidence tables and forwarded on for economic modelling and not for the purposes of this review.

Field	Content
	Only papers published in the English language will be included Only studies carried out in OECD countries will be included. If it is clear from the full paper includes that there is no or virtually no evidence available to populate this review, a discussion will take place with the committee to determine which other approaches such as expert testimony, call for evidence and case studies should be considered. Population At risk' populations will be defined as per study definitions. Populations that cover a broad age range will be included if the data for the age group of interest are reported separately To note that this group are considered separately to SEND 11 to 18 as education likely to be provided in different settings and as 18 and over are also eligible to drink alcohol Interventions Statutory drug education that is part of the national science curriculum (see National Curriculum in England: science programmes of study Department of Education) Interventions that are more broadly focussed e.g. substance misuse prevention will be included if they report alcohol outcomes. Individual decisions will be taken on interventions that are stated as school based, but conducted off site. For example a school nurse employed by a local authority may be responsible for a number of schools or there may be schools that are part of a federation and share a school nurse or counsellor who may conduct the intervention with pupils from a number of schools away from school premises Comparators Controls to be defined as described in the studies Studies with comparators within and between schools will be included. Settings Further education colleges Specialist colleges The following settings are excluded: Higher education institutions
Proposed sensitivity/sub-group analysis, or meta-regression	Where evidence allows subgroup analyses and/or meta-regression will be conducted. Depending on the evidence available some or all of the following will be explored. Where evidence allows subgroup analyses and/or meta-regression will be conducted. Subgroups of interest include:

Field	Content
	Baseline characteristics of the young people receiving the intervention gender socioeconomic status ethnicity geographical area People delivering the intervention Teacher Peer Other school staff External provider People who have been trained to deliver the intervention Method of delivery Single component or multicomponent Theories underlying the intervention If the evidence allows for intervention "variables or conditions" to be identified, a qualitative comparative analysis (QCA) may be conducted as well as a pairwise review. A QCA analysis allows the different causal contributions of the interventions to be explored.
Selection process – duplicate screening/selection/analysis	10% of the search results will be blind-screened by a second reviewer. Any disagreements will be resolved by the two reviewers, and escalated to a third reviewer if agreement cannot be reached. If the initial level of agreement is below 90%, a second round of blind-screening will be considered. 10% of data extraction and critical appraisal will be checked by a second reviewer. Any disagreements will be resolved by the two reviewers, and escalated to a third reviewer if agreement cannot be reached. Only 10% of the search results will be checked as this is an intervention and qualitative review and there is confidence that RCTs, controlled studies or related qualitative studies are unlikely to be missed at the sifting stage. The inclusion list will be checked with PHAC to ensure no studies are excluded inappropriately.
Data management (software)	EPPI Reviewer will be used: to store lists of citations to sift studies based on title and abstract to record decisions about full text papers to store extracted data. If meta-analysis is undertaken, Cochrane Review Manager 5 will be used to perform the analysis. Qualitative data will be analysed using EPPI Reviewer. Qualitative data will be summarised using an appropriate qualitative synthesis approach, for example, narrative synthesis.
Information sources –	The Medline strategy will be translated for use within the following databases:

Field	Content
databases and dates	Primary Databases Medline and Medline in Process (OVID) Embase (OVID) CENTRAL (Wiley)) Cochrane Database of Systematic Reviews (Wiley) DARE (records up to March 2014 only) (Wiley) NHS EED (records up to March 2014 only) (Wiley) Econlit (Ovid) PsycINFO (Ovid) Social Policy and Practice (OVID) HMIC (OVID) ERIC (Proquest) Secondary Databases ASSIA (Proquest) CINAHL (EBSCO) Econ Papers (RePEc) National Guidelines Clearinghouse (US Dept. of Health and Human Services) Bibliomap (eppicentre) Dopher (eppicentre) Trophi (epicentre) Alcohol Studies Database Web searches will also be conducted. NICE Evidence Search , Google and Google Scholar will be searched for key terms and the first 50 results examined to identify any UK reports or publications relevant to the review that have not already been identified. Relevant results will be added to the Endnote database. Searches will also be conducted on the following key websites for relevant UK reports or publications: Websites PSHE association Public Health England Department of Health Department for Education Alcohol Research UK Public Health Institute Mentor-Adepis OFSTED National Foundation for Educational Research Research in Practice Education Endowment Foundation Office for Children's Commissioner Council for disabled children

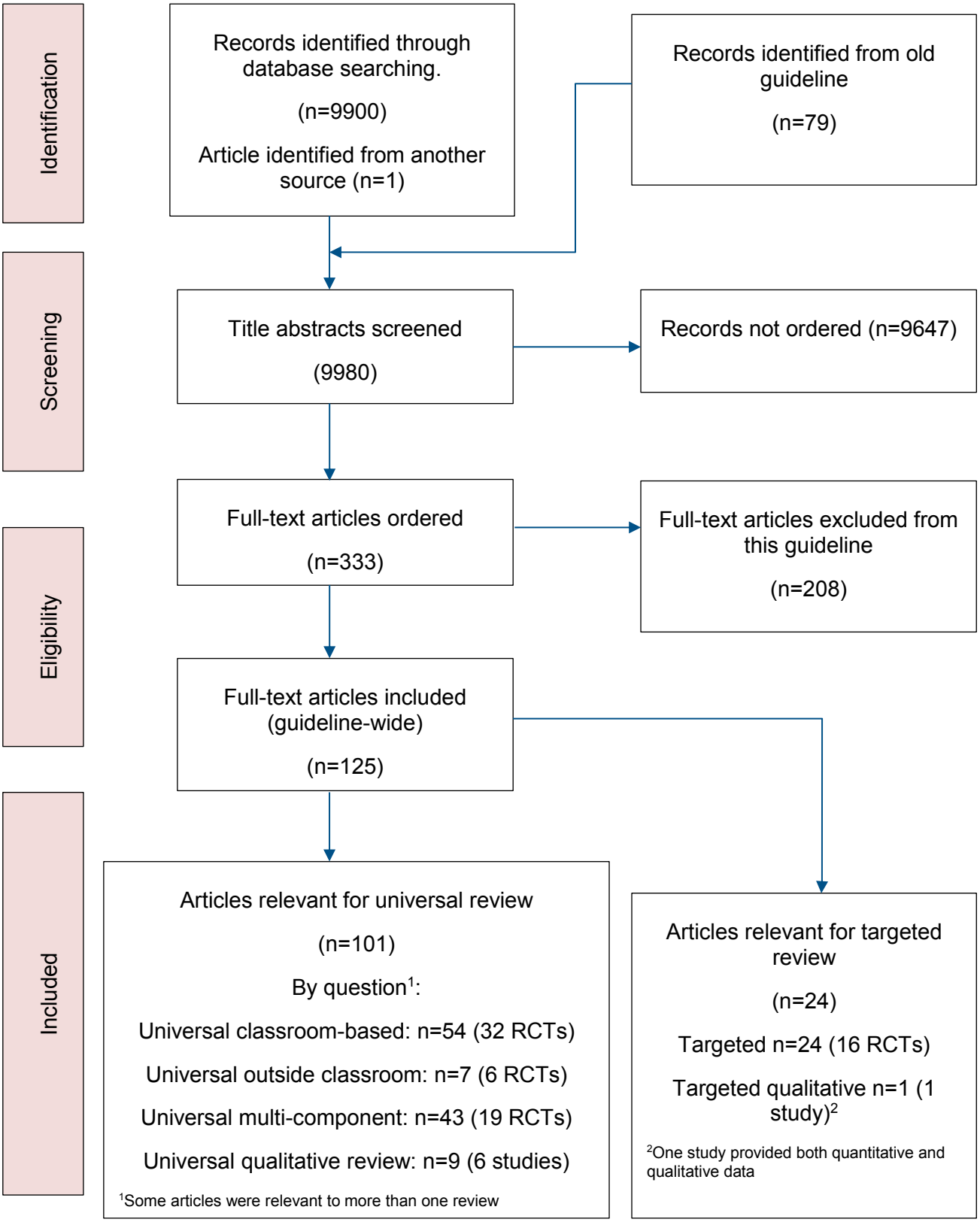
Field	Content
	A study filter will not be applied. Citation searching of included studies will be undertaken. Results will be saved to an EndNote database and de-duplicated. Results will be provided to the Public Health team as RIS files, suitable for import into EPPI Reviewer. A record will be kept of number of records found from each database and of the strategy used in each database. A record will be kept of total number of duplicates found and of total results provided to the Public Health team.
Methods for assessing bias at outcome/study level	Standard study checklists will be used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual For intervention studies the Cochrane Risk of Bias 2 tool will be used and for qualitative studies, the Cochrane qualitative checklist will be used. Where appropriate, the risk of bias across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/ GRADE-CERQUAL will be used for qualitative findings. When performing GRADE and where RCTs are considered the best available evidence for the question and outcome in question, they will start as high quality evidence. Where RCTs are not the most appropriate study design for a particular question or outcome, GRADE will be modified to allow for the study design considered most appropriate to start as high quality.
Criteria for quantitative synthesis	Studies will be grouped according to the type of intervention as appropriate. For details please see section 6.4 of Developing NICE guidelines: the manual The outcomes of interest are likely to be reported in the studies as continuous data. This will be discussed with the committee as to how the data will be reported for this review to enable them to make recommendations. This will most likely involve dichotomising the data.
Methods for quantitative analysis – combining studies and exploring (in)consistency	It is anticipated that the studies included will be heterogeneous with respect to participants and interventions. Where meta-analysis is appropriate, a random effects model will be used to allow for the anticipated heterogeneity. This assumption will be tested will be tested with a fixed effects model. Data from different studies will be meta-analysed if the studies are similar enough in terms of population, interventions, comparators and outcomes. Methods for pooling cluster and individual randomised controlled trials will be considered where appropriate. Unexplained heterogeneity will be examined where appropriate with a sensitivity analysis. If the studies are found to be too heterogeneous to be pooled statistically, a narrative synthesis will be conducted.

Field	Content
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual
Review staff	Sarah Boyce (Technical Analyst) Aedin McSloy (Assistant Technical Analyst) Hugh McGuire (Technical Adviser) Rachel Adams (Information Specialist)

Appendix B: Literature search strategies

See separate document on the guideline consultation page.

Appendix C: Public Health evidence study selection



Appendix D: Public Health evidence tables

D.1.1 Armitage 2014

Bibliographic reference	**Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology**			
Study type	Randomised controlled trial (individual)			
Study dates	Not reported			
Aim	To test the ability of a very brief intervention based on self-affirmation theory to reduce alcohol consumption in a sample of adolescents and to examine potential mediators of the effects			
Country/geographical location	UK			
Setting/School type	Classrooms in a comprehensive school			
Participant characteristics[e]	Description	67 adolescents aged 16-18 who drank alcohol		
		Intervention (n=32)		Control (n= 35)
	Age	16-18		
	Gender [f]	Male 30/67 (45%) Female 37/67 (55%)		
	Socioeconomic status	Not reported		
	Ethnicity	White 60/67 (90%)		
	Baseline drinking behaviour	Mean alcohol consumption (units, ie. 8 grams alcohol per day) (SD)	1.46 (1.60)	Mean Alcohol consumption (units) 1.47 (1.52)
Inclusion criteria	Adolescents who had drunk alcohol			

e Age, gender and ethnicity not reported separately for intervention and control group
f Percentages calculated by reviewer

Bibliographic reference	**Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology**		
Exclusion criteria	Not reported		
Number of Participants	67		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief name	P547	Very brief intervention based on self-affirmation theory
	Rationale/theory /Goal	P547	To improve message processing and increase motivation to reduce alcohol consumption
	Materials used	P547	Self-affirmation questionnaire with a series of “if-then” statements, divided into 4 parts: Pre-manipulation Self-affirming implementation intention/control Health-risk message Post-message reactions (ie. Message derogation and perceived threat)
	Procedures used	P547	Questionnaire administered under exam conditions in the classroom.
	Provider	P547	Teachers supervised
	Method of delivery	P547	Individual
	Location	P547	Classroom
	Duration	-	Not reported
	Intensity	P547	One session
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology		
	Actual treatment fidelity	-	Not reported
	Other details	P547	The participants were presented with the stem "If I feel threatened or anxious, then I will…" and then presented with 4 options including "…think about the things I value about myself". This encourage participants to write the self-affirming implementation intention out in full, they were prompted with "If…" at the beginning of the first blank line. The third page contained the self-affirming implementation questionnaire. The first, second and fourth pages included consent and ethics, instructions, a description of the government's alcohol guidelines and a health-risk message designed to reduce alcohol consumption.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P547	Distractor task questionnaire
	Rationale/theory /Goal	-	Not reported
	Materials used	P547	Questionnaire
	Procedures used	P547	Questionnaire administered under exam conditions in the classroom.
	Provider	P547	Teachers supervised
	Method of delivery	P547	Individual
	Location	P547	Classroom
	Duration	-	Not reported
	Intensity	P547	One session
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	**Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology**			
	Planned treatment fidelity	-	Not reported	
	Actual treatment fidelity	-	Not reported	
	Other details	P547	Distractor task containing no self-relevant statements but rather asked participants opinions on issues including “I think the color blue looks great on most people” with a “yes/no” answer. If the answer was “yes” they were asked to elaborate further. The third page contained the control questionnaire. The first, second and fourth pages included consent and ethics, instructions, a description of the government’s alcohol guidelines and a health-risk message designed to reduce alcohol consumption.	
Follow up	2 months			
Study Methods	Method of randomisation	Web based randomiser that determined the order of questionnaire pack distribution. The person randomising the questionnaires and the participants were blind with respect the condition. Participants returned their questionnaires via sealed boxes. The success of the randomisation was checked using a multivariate analysis of variance.		
	Method of allocation	Not reported		
	Statistical method(s) used to analyse data	Intention to treat analysis using last observation carried forward (LOCF)		
	Unit of allocation	Individual		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: Not reported	Reasons for not completing the study: Not reported	
Outcomes measures				
	Outcome		Intervention	Control

Bibliographic reference	Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology		
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Mean alcohol consumption (units; 8 grams alcohol per day)(SD)	1.29 (1.60)	1.60 (1.65)
	MD 95% CI (calculated by reviewer)	-0.3 (-1.10, 0.48)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Behavioural intention and self-efficacy		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Some concerns	The study performed an ITT with LOCF but does not report on attrition rates.
	School attendance	NA	

Bibliographic reference	Armitage CJ, Rowe R, Arden MA et al. (2014) A brief psychological intervention that reduces adolescent alcohol consumption. Journal of consulting and clinical psychology		
	Alcohol related risky behaviour such as unprotected or regretted sex	Some concerns	The study performed an ITT with LOCF but does not report on attrition rates.
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Source of funding	Not reported		
Comments	Limitations identified by authors: 2 months follow up used to fit in with academic year (rather than 6 months) and this is widely regarded as the time it takes for healthy habits to be established. Presence of teachers may have influenced the self-reports of alcohol consumption in some way. Limitations identified by reviewer: Each group received the health-risk message aimed at reducing alcohol consumption so it may not be possible to attribute the effects on alcohol consumption.		

D.1.2 Castellanos 2006

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
Study type	Randomised controlled trial (individual)		
Study dates	Not reported		
Aim	Examine the extent to which personality-targeted cognitive-behavioural interventions can also prevent the onset or reduce relevant psychological problems in youth.		
Country/geographical location	London, UK		
Setting/School type	12 Secondary schools		
Participant characteristics	Description		
		Intervention (n=224)	Control (n=199)
	Age	Mean age of full sample:14 years	
	Gender	Female n= 272 (64.3%), Male n= 151 (35.7%)[g]	

g Percentage and absolute numbers calculated

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
	Socioeconomic status	Not reported	Not reported
	Ethnicity[h]	White(European) 40%	
		Black African 14%	
		Black Caribbean 14%	
		South Asian 2%	
		East Asian 20%	
		Mixed 20%	
	SEND	Not reported	Not reported
	Baseline drinking behaviour	Not reported	Not reported
Inclusion criteria	Scores at least 1 standard deviation (SD) above the school mean on any one of the 4 personality risk subscales of the Substance Use Risk Profile Scale (SURPS); negative thinking (NT), anxiety sensitivity (AS), sensation seeking (SS), impulsive group (IMP). Voluntary so only those students who indicated interest in participating in the programme when they completed the survey were invited to take part.		
Exclusion criteria	Not reported		
Number of Participants	Participants included 103 NT, 108 AS, 96SS, 116 IMP; of whom 224 were randomly assigned to participate in the relevant personality-targeted intervention. 2776 students completed the initial questionnaire and only those randomly assigned to the experimental or control completed the 6 month post treatment questionnaires.		

h Absolute numbers calculate from percentages reported.

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief name	P648	Brief intervention
	Rationale/theory/Goal	P645	Targeting personality traits linked to risk for non-addictive psychopathology
	Materials used	P649	3 main components: (a) psycho-educational component, (b) a motivational intervention component and (c) a cognitive behavioural coping skills training component.
	Procedures used	-	Not reported
	Provider	P648	Qualified youth workers or counsellors and a co-facilitator. (Masters level research assistant).
	Method of delivery	P648	Group with number of students ranging from 2-9.
	Duration	P648	90 minutes
	Intensity	P648	2 sessions
	Tailoring/adaptation	P648	Canadian manual adapted for UK by including “scenarios” or real life experiences shared by high personality risk UK youth in specifically organised focus groups.
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details		The cognitive behavioural coping skills involved learning how to identify and challenge personality-specific cognitive distortions; truancy was directly addressed in the AS intervention manual, NT and SS intervention gave special emphasis on antisocial behaviour: binge-drinking and using fireworks in the SS group; stealing

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
			and reacting aggressively in the IMP group. Alcohol was targeted in all 4 interventions as a problematic way of coping,but was discussed in a personality-specific context in each intervention. Survey included personality, emotional and behavioural symptom inventories that were identical across the 2 assessments
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief name	P645	No intervention control
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported

Bibliographic reference	**Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658**		
Follow up	6 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Dichotomous: Chi-squared, NNT. Phi was used as an estimate of the effect size. For the one continuous variable (ie. Depression scores): d was used Missing data: Intention to treat analysis	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Intervention group: 92% attended both the intervention sessions and 83% (n=351) were assessed at 6 month post-treatment.	
Outcome Measures[i]			
	Outcome	Intervention (n=224)	Control (n=199)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use	Not reported	Not reported
	School attendance		
	Truancy	57 (25.5%)	56 (27.9%)
	RR 95% CI (calculated by reviewer)	0.4 (0.3, 0.7)	
	Alcohol related risky behaviour such as unprotected or regretted sex		
	Sex without contraception	18 (7.9%)	14 (7.2%)

i Absolute numbers calculated by reviewer from reported percentages

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
	RR 95% CI (calculated by reviewer)	1.0 (0.5 to 2.1)	
	Sex with someone they don't know well	19 (8.4%)	16 (7.9%)
	Vandalism	78(34.9%)	74 (37.1%)
	Shoplifting	54 (24.2%)	65 (32.9%)
	Mental health and wellbeing		
	Panic attacks	44 (19.5%)[j]	58 (29.1%)
	RR 95% CI (calculated by reviewer)	0.7 (0.5, 0.9)	
	Depression symptoms[k]	Mean 14.4 (SD 7.3)	Mean 15.6 (SD 7.4)
	MD 95% CI (calculated by reviewer)	1.2 (-0.21, 2.61)	
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	None		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	N/A	N/A
	Age at first experience of drunkenness where reported	N/A	N/A
	Amount and frequency of alcohol use	N/A	N/A
	School attendance	Some concerns	Subjective outcome. Randomisation methods not reported. No information on allocation concealment.
	Alcohol related risky behaviour such as unprotected or regretted sex	Some concerns	Subjective outcome. Randomisation methods not reported. No information on allocation concealment.

j Percentage having experienced a panic attack in the last 6 months.
k Based on the 7 item Brief Symptom Inventory (BSI) scale, 1= "not at all", 5= "often".

Bibliographic reference	Castellanos N and Conrod P (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658		
	Mental health and wellbeing	Some concerns	Subjective outcome. Randomisation methods not reported. No information on allocation concealment.
	Adverse or unintended effects	N/A	N/A
Source of funding	Not reported		
Comments	Difference in gender; girls were overrepresented in the AS (75.7%) and IMP (77.2%) groups.		

D.1.3 Clark 2010

Bibliographic reference	Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217				
Study type	Randomised controlled trial (cluster)				
Study dates	Not reported				
Aim	To evaluate the effects of Project SUCCESS on adolescents substance use				
Country/geographical location	USA				
Setting/School type	14 alternative high schools in Washington State				
Participant characteristics	Description	Students who have already exhibited truancy, academic failure, substance use, delinquency and other problem behaviours.			
		Intervention (n=735)		Control (n=955)	
	Age, Mean (SD)	16.79 (1.29)		16.64 (1.46)	
	Gender[l]	Male	382/735 (51.92%)	Male	468/955 (48.98%)
		Female	353/735 (48.02%)	Female	487/955 (50.99%)

l Numerators and female data calculated by reviewer from male percentages reported.

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**				
	Socioeconomic status	Not reported		Not reported	
	Ethnicity[m]	Caucasian	544/735 (74.01%)	Caucasian	750/955 (78.54%)
		African American	34/735 (4.62%)	African American	69/955 (7.22%)
		Hispanic	143/735 (19.46%)	Hispanic	119/955 (12.51%)
		Other	14/735 (1.90%)	Other	17/955 (1.78%)
	SEND	Not reported		Not reported	
	Baseline drinking behaviour[n]	Intervention (n=752)		Control (n=978)	
		Mean 30 day alcohol use (SD)	1.21 (1.37)	Mean 30 day alcohol use (SD)	1.20 (1.37)
		Mean 30 day drinking to intoxication (SD)	0.94 (1.29)	Mean 30 day drinking to intoxication (SD)	0.92 (1.27)
Inclusion criteria	Schools: A self-contained building or a self-contained area within another school building Total population of about 100-200 students in the ninth through twelfth grades Great majority of students likely to stay in the school for at least one semester Focus on youth with behavioural problems including delinquency Schools in the second cohort were required to have at least 100 students who were scheduled to attend school full time				
Exclusion criteria	Students: Night school only students Students involved in the state funded program "Running Start" which allows students to earn college credit while completing a high school program. These students spend most of the school day at local community colleges. Students in the second cohort that were contract-based or independent study students who only attended school to turn in assignments.				

m Numerators and other ethnicity data calculated by reviewer from percentages reported.
n Measured as number of occasions used in past 30 days; 0=0, 1=1-2, 2=3-5, 3=6-9, 4=10-19, 5=20-39 and 6=40 or more

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**		
Number of Participants	Authors are uncertain but have reported n=2249 as the number who participated in the study.		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P210	Project SUCCESS
	Rationale/theory/Goal	P209	Based on the Residential Student Assistance Program (RSAP) model
	Materials used	P210	4 components: 1) the Prevention Education series – four topic substance use prevention program taught in small groups; 2) individual and group counselling; 3) communication with parents; 4) referrals to community agencies
	Procedures used	P210	Students were screened to assess their own and family's use of alcohol and other drugs and their need for professional treatment or other services. Students screened as needing further attentions may receive individual counselling or take part in any of the 10 different small groups. Those requiring more intensive services were referred for community-based treatment.
	Provider	P210	Trained masters-level counsellors placed in schools but hired and supervised by community-based personnel
	Method of delivery	P210	Individuals, groups, parent communication and community referral
	Duration	P210	Full academic year
	Intensity	P210	Education component included 6-8 weekly sessions
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	P212	The average student received 3.5 (SD 3.2) Prevention education sessions 7/10 counselling groups were conducted (17% of intervention students attended).

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**		
	Other details		Counsellors were placed in the schools for 3 months in the spring on one academic year and for the entire following academic year. The initial 3 month period allowed for the introduction of the program to the school and to carry out the groundwork for implementation. One counsellor dropped out shortly after hiring but was successfully replaced at the start of the full academic year. Counsellors attended a 3 day in-person training conducted by the Student Assistance Services Corporation which supports the dissemination of Project SUCCESS. The replacement counsellor was trained by a local ESD staff member who trained Project SUCCESS staff in the past. All counsellors received additional training specific to conducting group counselling sessions.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	-	Control not further described
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**		
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	12 months and 24 months		
Study Methods	Method of randomisation	14 schools in two cohorts randomised a year apart (six in first year, eight in second year). Methods not reported.	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Intention to treat analysis and Hierarchical Linear Modelling. The intra-class correlation coefficient (ICC) was calculated.	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition[o]	Number of participants completing the study: 12 months 1650/2249 (73%) 24 months 1582/2249 (70%)	Reasons for not completing the study: Not reported

Outcomes measures			
	Outcome	Intervention	Control
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		

o Calculated by reviewer

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**		
	Mean 30 day alcohol use (SD), 12 months	1.25 (1.39)	1.27 (1.44)
		Reported as non-significant	
	Mean 30 day drinking to intoxication (SD), 12 months	0.90 (1.32)	0.94 (1.32)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour		
	Mean violent behaviour (number of times in a serious fight at school or work in the last 12 months [0,1-2,3-5,6-9 or 10+ times] using an item from the Monitoring the Future Survey) (SD)	0.35 (0.76)	0.38 (0.80)
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	24 months: mean 3 day alcohol and 3 day drinking to intoxication (Clark 2010) 12 and 24 months: mean 30 day cigarette use, mean 30 day marijuana use, mean 30 day other drug use. (Clark 2010) Attitudes and behavioural outcomes (Clark 2011)		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Some concerns	Randomisation methods not reported and uncertainty around the sample size for the trial.

Bibliographic reference	**Clark HK, Ringwalt CL, Hanley S et al (2010) Project SUCCESS' effects on the substance use of alternative high school students. Addictive behaviors 35 209-217**		
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	Some concerns	Randomisation methods not reported and uncertainty around the sample size for the trial.
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Source of funding	Two grants awarded to the second author by the Office of Juvenile Justice and Delinquency Prevention and Office of Justice Programs, US Department of Justice. [Government]		
Comments	Limitations identified by authors Study may have been underpowered. There were low participation levels in the interventions which reflects the characteristics of the students and the unorthodox structure of the alternative schools recruited. Limitations identified by reviewer Inconsistent reporting of number of participants at baseline. Schools and students received financial incentives but both intervention and control schools received the same amounts.		
Additional reference	Clark HK, Ringwalt CL, Shamblen SR et al (2011) Project SUCCESS' effects on substance use-related attitudes and behaviours: a randomized controlled trial in alternative high schools. Journal of drug education 41(1) 17-44		

D.1.4 Conrod 2006

Bibliographic reference	**Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63**
Study type	Randomised controlled trial (individual)
Study dates	Not reported
Aim	To evaluate the effect of interventions targeting personality profiles considered linked to alcohol misuse.

Bibliographic reference	**Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63**			
Country/geographical location	British Columbia, Nova Scotia, Canada			
Setting/School type	High school			
Participant characteristics[p]	Description	297 high school students from Grades 9-12 (ages 14-17) considered to be “high risk” drinkers based on having one of the following personality profiles: Anxiety sensitivity (AS) n = 111 Hopelessness (H) n = 40 Sensation seeking (SS) n = 146		
		Intervention (n= 166)		Control (n=131)	
	Age[q]	≤14 15 16 17 ≥18	14 (8.4%) 58 (34.9%) 64 (38.6%) 24 (14.5%) 6 (3.6%)	≤14 15 16 17 ≥18	18 (13.7%) 43 (32.8%) 45 (34.4%) 14 (10.7%) 11 (8.4%)
	Gender	94 (57%) female 72 (43%) male		72 (55%) female 59 (45%) male	
	Socioeconomic status	Family Income			
		<$25,000 <$40,000 <$55,000 <$70,000 >$70,000	25 (15.3%) 41 (24.5%) 44 (26.4%) 24 (14.7%) 32 (19.0%)	<$25,000 <$40,000 <$55,000 <$70,000 >$70,000	23 (17.5%) 26 (19.8%) 36 (27.8%) 19 (14.3%) 27 (20.6%)
	Ethnicity	Not reported		Not reported	

p Baseline characteristics measured by self-report questionnaire; (Stewart & Devine 2000)
q Absolute numbers for age and SES calculated by reviewer

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63			
	SEND	Not reported	Not reported	
	Baseline drinking behaviour[r]	Drinks per occasion		
		1 or 2 3 or 4 5 or 6 7 to 9 10 or more	56 (34.0%) 33 (19.8%) 40 (24.1%) 13 (8.0%) 24 (14.2%)	1 or 2 3 or 4 5 or 6 7 to 9 10 or more	39 (29.5%) 18 (14.0%) 27 (20.9%) 20 (15.5%) 27 (20.2%)
		Binge drinker	77 (46.1%)	Binge drinker	73 (55.7%)
		Drinking frequency			
		< monthly 1 per month 2-3 times per month Weekly Daily or almost	60 (36.3%) 34 (20.6%) 46 (27.5%) 24 (14.4%) 2 (1.3%)	< monthly 1 per month 2-3 times per month Weekly Daily or almost	39 (29.7%) 17 (13.3%) 41 (31.3%) 31 (23.4%) 3 (2.3%)
		Drinking problems (The Rutgers Alcohol Problems Index, RAPI)	Mean score 14.40 SD 18.52	Drinking problems (The Rutgers Alcohol Problems Index, RAPI)	Mean score 15.54 SD 17.43
Inclusion criteria	Staged process that involved 4882 students. Screened as using alcohol in the last 4 months Scored at least 1 standard deviation (SD) above the sample mean on either the Arnett Inventory of Sensation Seeking-Intensity subscale (AISS-I), Childhood Anxiety Sensitivity Index (CASI) or the Hopelessness subscale of the Substance Use Risk Profile Scale (SURPS). The top 16% of the samples determined at stage 2 were eligible. Students from stage 3 who indicated interest in participation and provided parental consent were randomised.			
Exclusion criteria	Not reported			
Number of Participants	297 (intervention n=166; comparator n = 131)			

r Absolute numbers calculated by reviewer

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P555	Brief interventions
	Rationale/theory/Goal	P555	Incorporated principles from the motivational and cognitive-behavioural literatures
	Materials used	P555	The interventions consisted of 3 main components: (a) psychoeducation, (b) behavioural coping skills training and (c) cognitive skills training.
	Procedures used	P555	Students were educated about the personality variable in question. They were then encouraged to discuss the short-term reinforcing properties of problem coping strategies.
	Provider	P555	Master's level therapist and a co-facilitator (a bachelor's level research assistant or undergrad psychology student)
	Method of delivery	P555	Groups (2 to 7 students)
	Location	-	Not reported
	Duration	P555	Delivered over 2 weeks
	Intensity	P555	2 x 90 minutes sessions
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P555	Participants were provided with the manual and a poster at the end of the session. The manual contained extra practice sheets.

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63		
			The two principle investigators supervised group training sessions of study therapists and co-facilitators using a common training protocol. Therapists were also observed running group sessions and provided with feedback and were told to stick closely to the material covered in the manuals.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P550	No treatment control
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	4 months		

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Intention-to-treat analysis. Students who did not complete the follow-up assessment were assigned initial drinking and binge drinking status at follow-up. The main effects of the intervention were assessed using chi-square analyses.	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 265 (89%) Intervention 151/166 (91%), 84 (56%) female, 67 (44%) male Comparator 115/131 (88%), 63 (55%) female, 52 (45%) male	Reasons for not completing the study: Not reported
Outcomes measures			
	Outcome	Intervention	Control
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	N/A	N/A
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Abstinence, 4 months [s]	37/166 (22%)	18/131 (14%)
	Drinkers, 4 months[t]	129/166 (78%)	113/131 (86%)

s Numerators for abstinence and binge drinking calculated by percentage reported
t Imputed by reviewer

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63			
	RR 95% CI (calculated by reviewer)	0.9 (0.8, 1.0)		
	Binge drinking, 4 months	70/166 (42%)	79/131 (60%)	
	RR 95% CI (calculated by reviewer)	0.7 (0.6, 0.9)		
	Drinking quantity, 4 months – mean (SD), alcohol consumption scale	2.0 (1.7) 3 to 4 drinks per drinking occasion	2.6 (1.7) 5 to 6 drinks per drinking occasion	
	School attendance	Not reported	Not reported	
	Alcohol related risky behaviour	Not reported	Not reported	
	Mental health and wellbeing			
	Absence of drinking-related problems (modified RAPI), 4 months – n/Ns	61(37%)	29 (22%)	
	Adverse or unintended effects	Not reported	Not reported	
Other outcomes measured	Subgroup analyses by personality type			
Risk of bias by outcome	Outcome	Overall RoB	Comments	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA		
	Age at first experience of drunkenness where reported	NA		
	Amount and frequency of alcohol use	Some concerns	Randomisation methods not reported. Unclear if participants were aware of allocation. Outcomes were self-reported.	
	School attendance	NA		
	Alcohol related risky behaviour such as unprotected or regretted sex	NA		

Bibliographic reference	Conrod PJ, Stewart SH, Corneau NM (2006) Efficacy of Cognitive-Behavioural Interventions Targeting Personality Risk Factors for Youth Alcohol Misuse. Journal of Clinical child and adolescent psychology 35(4) 550-63		
	Mental health and wellbeing	Some concerns	Randomisation methods not reported. Unclear if participants were aware of allocation. Outcomes were self-reported.
	Adverse or unintended effects	NA	
Source of funding	Not reported		
Comments	Limitations identified by author The H subgroups was smaller as only the British Columbia site tested the efficacy of the H intervention. The drinking problems variable was severely skewed in the sample and could not be corrected using square-root or log transformations. The study did not follow up beyond 4 months. Participants had to volunteer to take part in the study indicating that there was possible selection bias in that those who took part were more motivated to change. Limitations identified by reviewer Included only participants that were baseline drinkers. There may have been individuals who had the personality 'risks' but not already drinking. It is not clear how the interventions were delivered in schools. Individuals were randomised to each school would have intervention and control groups. There is a potential for contamination here.		

D.1.5 Conrod 2011[u]

Bibliographic reference	Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306
Trial registration	NCT00344474
Study type	Randomised controlled trial (individual)
Study dates	2005 to 2008
Aim	To examine the long-term effects of personality-targeted intervention of drinking quantity, frequency and problem drinking.

u Data reported from 2nd wave of the trial only as no outcomes of interest reported from 1st wave (Conrod 2008) or combined analysis (Conrod 2010)

Bibliographic reference	**Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306**				
Country/geographical location	UK				
Setting/School type	13 secondary schools across 12 London boroughs				
Participant characteristics	Description	Adolescents determined as high-risk based on elevated scores on the following personality traits: Hopelessness (H) Anxiety-sensitivity (AS) Sensation-seeking (SS) Impulsivity (IMP)			
		Intervention (n=190)		Control (n=157)	
	Age, mean	14.2 years		14.7 years	
	Gender[v]	Female	123 (64.7%)	Female	107 (68.2%)
		Male	67 (35.3%)	Male	50 (31.8%)
	Socioeconomic status	Not reported		Not reported	
	Ethnicity[wx]	White	66/188 (35.1%)	White	61/155 (39.4%)
		South Asian	29/188 (15.4%)	South Asian	28/155 (18.1%)
		Afro-Caribbean	57/188 (30.3%)	Afro-Caribbean	39/155 (25.2%)
		Mixed	25/188 (13.3%)	Mixed	15/155 (9.7%)
		Other	11/188 (5.9%)	Other	12/155 (7.7%)
	SEND	Not reported		Not reported	
	Baseline drinking behaviour[y]	Mean alcohol use (SD)			
		Log quantity x frequency (QF) of alcohol	0.48 (0.46)	Quantity/frequency (QF) of alcohol	0.46 (0.47)

v Male data calculated by reviewer from female data reported
w 4 participants did not report ethnicity
x Denominators calculated by reviewer from data reported
y Alcohol measures were log transformed

Bibliographic reference	Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306				
		(Quantity measured as 0-10+ drinks/typical day; Frequency measured as never to almost daily)			
		Log binge frequency (Frequency of 5+ drinks consumed per occasion in last 6 months. [4+ drinks for girls])	0.12 (0.20)	Binge frequency	0.12 (0.20)
		Log problem drinking (Rutgers Alcohol Problem index, RAPI. Number of times experienced negative outcomes from alcohol in the last 6 months).	0.27 (0.30)	Problem drinking	0.23 (0.33)
		Mean drinking motives (SD) Drinking motives questionnaire (DMQ). 20 items assessing social, enhancement, coping and conformity motives for alcohol use. Frequency of alcohol use in response to different motives measured on a 5-point scale (1=never to 5 =always). Coping and enhancement subscales used here.			
		Coping	6.82 (3.35)	Coping	7.33 (4.30)
		Enhancement	7.95 (5.11)	Enhancement	8.63 (5.73)
Inclusion criteria	Informed assent by children and consent by parents. Scored more than one standard deviation above the school mean on one of the four personality risk subscales of the Substance Use Risk Profile Scale (SURPS)				
Exclusion criteria	Reporting unreliable data which was detected using sham items on the questionnaire and by visual screening of the response sheet for visible patterns.				

Bibliographic reference	**Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306**		
Number of Participants	364 randomised; 17 excluded at follow up for unreliable data reducing the total to 347		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P296	Preventure; Personality-targeted intervention
	Rationale/theory/Goal	P297	To target different motivational processes linked to four personality traits
	Materials used	P299	Intervention manuals covering three main components: a) psychoeducation, b) motivational interviewing component, c) cognitive behavioural component
	Procedures used	P300	Participants were guided in a goal-setting exercise designed to enhance motivation to explore personality and new ways of coping with one's personality. Psychoeducational strategies were used to educate about the target personalities.
	Provider	P299	Qualified therapist and a co-facilitator (a master's level research student)
	Method of delivery	P299	Groups
	Location	P299	School
	Duration	P299	90 minute sessions
	Intensity	P299	2 sessions
	Tailoring/adaptation	-	None
	Modifications	-	None
	Planned treatment fidelity	P300	Interventions were only considered complete if all the sections and exercises in the manual were completed. Co-facilitators provided assistance to students who required one-to-one assistance and ensured the therapist kept to the treatment protocol. If sessions were not complete, therapists were instructed to arrange a third session.

Bibliographic reference	Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306		
	Actual treatment fidelity	-	Not reported
	Other details	P300	The principle investigator trained and supervised one research therapist (a British Psychological Society, Chartered Counselling Psychologist) who delivered all the interventions (under supervision to keep the materials covered in the manuals consistent across the intervention groups).
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P300	Standard drug education provided in National Curriculum
	Rationale/theory/Goal	-	N/A
	Materials used	-	N/A
	Procedures used	-	N/A
	Provider	-	N/A
	Method of delivery	-	N/A
	Location	-	N/A
	Duration	-	N/A
	Intensity	-	N/A
	Tailoring/adaptation	-	N/A
	Modifications	-	N/A
	Planned treatment fidelity	-	N/A

Bibliographic reference	Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306		
	Actual treatment fidelity	-	N/A
	Other details	-	N/A
Follow up	6 months, 12 months, 18 months and 24 months		
Study Methods	Method of randomisation	Participants picked a paper from a box	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Intention-to-treat analyses and non-ITT analyses in the event of non-effects in the ITT sample anticipating an attrition rate of 20-30% by the end of the study. Analysis of covariance (ANCOVA) for continuous outcome measures, controlling for baseline demographic variables were used to assess intervention effects on the full ITT sample (n=347).	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition[z]	Number of participants completing the study: Intervention: 6 months 164/196 (83.6%) 12 months 127/196 (64.7%) 18 months 124/196 (63.2%) 24 months 124/196 (63.2%) Control: 6 months 134/168 (79.8%) 12 months 114/168 (67.9%) 18 months 96/168 (57.1%) 24 months 94/168 (56.0%)	Reasons for not completing the study: 17 people (intervention n=6, control n=11) were excluded from the analyses for providing unreliable data.

z Percentages calculated by reviewer

Bibliographic reference	**Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306**		
Outcomes measures[aa]	Outcome	Intervention n= 190	Control n=157
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Log drinking quantity/Frequency (QF), mean (SD),12 months	0.53 (0.32)	0.59 (0.35)
	Unable to calculate MD as log transformation method not reported. Reported as non-significant.		
	Frequency of binge drinking, mean (SD), 12 months	0.17 (0.14)	0.15 (0.14)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour	Not reported	Not reported
	Mental health and wellbeing		
	Log problem drinking symptoms (RAPI), mean (SD), 12 months	0.25 (0.27)	0.30 (0.29)
	Unable to calculate MD as log transformation method not reported. Reported as significant.		
	Coping motives, mean (SD), 12 months	7.39 (2.29)	7.84 (2.36)
	Enhancement motives, mean (SD)	8.99 (2.78)	9.06 (2.57)
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Drinking QF, frequency of binge drinking, problem drinking, coping and enhancement motives at 6, 18 and 24 months.		
	Outcome	Overall RoB	Comments

aa Means and standard deviations are derived from log-transformed scores which were estimated with baseline drinking variables

Bibliographic reference	**Conrod PJ, Castellanos-Ryan N, Mackie C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of Consulting and clinical psychology 79(3), 296-306**		
Risk of bias by outcome	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Some concerns	Participants picked a paper from a box but it is not clear whether the paper stated the intervention or not.
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	
	Mental health and wellbeing	Some concerns	Participants picked a paper from a box but it is not clear whether the paper stated the intervention or not.
	Adverse or unintended effects	NA	
Source of funding	Action on Addiction [charity], PJC salary supported by NIHR and CM supported by Medical Research Council/Economic and Social Research Council Interdisciplinary Postdoctoral Research Fellowship.		
Comments	Limitations identified by authors Efficacy of the intervention was not examined using a placebo-controlled approach. Limitations identified by reviewer None		
Additional reference	Conrod PJ, Castellanos N, Mackie C (2008) Personality- targeted interventions delay the growth of adolescent drinking and binge drinking. Journal of child psychology and psychiatry and allied disciplines: official organ of the Association of Child Psychology and Psychiatry 49 (2) 181-190		
Additional reference	Conrod PJ, Castellanos-Ryan N, Strang J (2010) Brief, Personality-targeted coping skills interventions and survival as a non-drug user over a 2-year period during adolescence. Archives of General Psychiatry 67(1) 85-93		

D.1.6 Hallgren 2010

Bibliographic reference	Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229				
Study type	Randomised controlled trial (cluster)				
Study dates	Not reported				
Aim	To evaluate the alcohol-preventive efficacy of the PRIME for Life curriculum among Swedish high school students				
Country/geographical location	Sweden				
Setting/School type	23 Swedish high schools in Stockholm				
Participant characteristics	Description	Swedish high-school students including high-risk students			
		Intervention (n=501)		Control (n= 425)	
	Age, range	18-19 years[bb] (total population)			
	Gender	Not reported		Not reported	
	Socioeconomic status	Not reported		Not reported	
	Ethnicity	Not reported		Not reported	
	SEND	Not reported		Not reported	
	Baseline drinking behaviour (dichotomous)[ccdd]	Alcohol consumers (total population)		843/926 (91%)	
		2-4 drinking occasions per month (total population)		491/926 (53%)	
		Consumed 3 and 6 standard units of alcohol per drinking occasion (1 unit = 10g alcohol), (total population)		491/926 (53%)	
		Consumed 7 units or more of alcohol per drinking occasion (total population)		343/926 (37%)	
		Frequency (times/week), mean (SD)	0.82 (0.79)	Frequency (times/week), mean (SD)	0.77 (0.82)

bb Age not reported per group
cc Numbers calculated by reviewer from percentages reported
dd Data not reported for each group

Bibliographic reference	**Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229**				
	Baseline drinking behaviour (continuous)	Quantity (units/occasion), mean (SD)	5.95 (3.38)	Quantity (units/occasion), man (SD)	5.70 (3.22)
		Binge drinking (points)	1.47 (0.93)	Binge drinking (points)	1.39 (0.96)
		AUDIT (total score), mean (SD)	8.05 (4.54)	AUDIT (total score)	7.82 (4.50)
Inclusion criteria	Youth in the final two years of the Swedish high school system (18-19 years)				
Exclusion criteria	Schools for disadvantaged students				
Number of Participants	926 (intervention n=501; control n=425)				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P217	PRIME for Life under 21		
	Rationale/theory/Goal	P217	Lifestyle Risk Reduction Model Builds on a combination of prevailing prevention theories e.g. social learning theory,		
	Materials used	P219	Curriculum guided by a program manual		
	Procedures used	P219	Taught courses		
	Provider	P219	Trained instructors		
	Method of delivery		Group		
	Location	P219	Classroom		
	Duration	P219	5 months		
	Intensity	P219	2 day course (or 10 hours)		
	Tailoring/adaptation	P219	A translation and cultural adaptation of the US “PRIME for Life under 21”. Targets youth at-risk and/or subjects charged with alcohol and/or drug violations.		

Bibliographic reference	Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229		
	Modifications	P219	Smaller exercise book and more emphasis on youth-related issues
	Planned treatment fidelity	P219	Instruction variability was minimised by the curriculum being guided strictly by the program manual
	Actual treatment fidelity	P219	85% was taught as intended. The 15% variation was reported as being due to time restraints. (Two classes required the course to be compressed to one day).
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P219	No intervention control
	Rationale/theory/Goal	-	N/A
	Materials used	-	N/A
	Procedures used	-	N/A
	Provider	-	N/A
	Method of delivery	-	N/A
	Location	-	N/A
	Duration	-	N/A
	Intensity	-	N/A
	Tailoring/adaptation	-	N/A
	Modifications	-	N/A

Bibliographic reference	**Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229**		
	Planned treatment fidelity	-	N/A
	Actual treatment fidelity	-	N/A
	Other details	P219	There were no potentially confounding education programs taking place at the time of the study or at the follow up time points.
Follow up	5 months and 20 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Differences between conditions over time were analysed with repeated measures ANOVA and differences between conditions were analysed with t-tests. The intra-class correlation coefficient (ICC) was calculated.	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Intervention: 5 months 435/501 (87%) 20 months 400/501 (80%) Control: 5 months 383/425 (90.1%) 20 months 334/425 (78.6%)	Reasons for not completing the study: Not reported

Bibliographic reference	**Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229**				
Outcomes measures	Outcome	Intervention		Control	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported		Not reported	
	Age at first experience of drunkenness where reported	Not reported		Not reported	
	Amount and frequency of alcohol use	5 months (n=435)	20 months (n=400)	5 months (n=383)	20 months (n=334)
	Frequency (times/week), mean (SD)	0.91 (0.87)	1.33 (1.09)	0.78 (0.82)	1.26 (1.13)
	N adjusted for clustering using ICC 0.02[ee]	326	Not used in analysis	287	Not used in analysis
	MD 95% CI (calculated by reviewer), 5 months	0.13 (-0.00, 0.26)			
	Quantity (units/occasion), mean (SD)	5.35 (3.28)	4.61 (3.16)	5.52 (3.77)	4.48 (2.94)
	Binge drinking (points)	1.40 (0.96)	1.46 (0.96)	1.30 (0.98)	1.27 (0.96)
	AUDIT (total score), mean (SD)	7.15 (4.11)	7.29 (5.0)	6.82 (4.13)	7.16 (4.98)
	School attendance	Not reported		Not reported	
	Alcohol related risky behaviour	Not reported		Not reported	
	Mental health and wellbeing	Not reported		Not reported	
	Adverse or unintended effects	Not reported		Not reported	
Other outcomes measured	Changes in knowledge, attitudes, intentions and risk perception				
Source of funding	Swedish Social Ministry [Government] and the Swedish Council for Working Life and Social Research				
Risk of bias by outcome	Outcome	Overall RoB		Comments	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA			

ee ICC from Clark 2010

Bibliographic reference	Hallgren AM, Sjölund T,Kallmen H et al (2010) Modifying alcohol consumption among high school students. An efficacy trial of an alcohol risk reduction program (PRIME for Life). Health Education 111(3) 216-229		
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Some concerns	Methods of randomisation not reported
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Comments	Limitations identified by authors None Limitations identified by reviewer 18-19 year olds can legally purchase alcohol in bars, restaurants and nightclubs but not from Swedish retail alcohol monopoly "Systembolaget" where the minimum age is 20 years.		

D.1.7 Lammers 2015

Bibliographic reference	Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109
Trial registration	NTR1920
Study type	Randomised controlled trial (cluster)
Study dates	September 2010 to December 2011
Aim	To test the effectiveness of the Preventure programme on drinking behaviour of young adolescents in secondary education in the Netherlands
Country/geographical location	Netherlands

Bibliographic reference	**Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109**				
Setting/School type	15 public secondary schools				
Participant characteristics	Description	Students aged 13-15 with two risk factors for heavy alcohol consumption: Early onset of alcohol use One of four substance risk personalities for alcohol abuse			
		Intervention (n=343)		Control (n=356)	
	Age, mean (SD)	13.9 (0.98)		14.1 (0.77)	
	Gender[ff]	Male	161/343 (47%)	Male	203/356 (57%)
		Female	182/343 (53%)	Female	153/356 (43%)
	Socioeconomic status	Not reported		Not reported	
	Ethnicity	Not reported		Not reported	
	SEND	Not reported		Not reported	
	Baseline drinking behaviour	Alcohol use	206/343 (60%)	Alcohol use	210/356 (59%)
		Binge drinking	168/343 (49%)	Binge drinking	132/356 (36%)
Inclusion criteria	Schools: Had at least 600 students <25% of students were from migrant populations Did not offer special education Students: Life-time prevalence of alcohol use (i.e. having drunk at least one lass of alcohol) Belonged to one of the four personality high-risk groups for heavy drinking (AS,SS,NT or IMP). Informed consent from student and his/her parents.				
Exclusion criteria	Not reported				
Number of Participants	699 (intervention n=343, control n = 356)				

ff Female data calculated by reviewer from male percentages reported.

Bibliographic reference	Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1103	Preventure
	Rationale/theory/Goal	P1103	Motivational interviewing and cognitive behavioural therapy adapted to personality profiles for substance abuse. Uses the effective component of persuasiveness of individualised feedback.
	Materials used	P1103	The intervention used student manual.
	Procedures used	P1103	The first group session used psychoeducation strategies to educate about the target personality variable and associated problematic coping behaviours. The second session encouraged students to identify and challenge personality-specific cognitive thoughts leading to problematic behaviours.
	Provider	P1104	3 qualified counsellors and two co-facilitators
	Method of delivery	P1103	Groups (average 6 people)
	Location	P1103	School
	Duration	P1103	2 sessions spread over 2 weeks
	Intensity	P1103	2 x 90 minutes sessions
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P1104	The counsellors had practised the two-groups sessions at a school (not recruited for the Preventure trial) with supervision and feedback. The first two sessions for each counsellor in the intervention schools were observed by a supervisor who had participated in the Preventure training session and were provided with feedback during four peer-reviewing meetings under the guidance of the same supervisor.
	Actual treatment fidelity	-	Not reported

Bibliographic reference	Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109		
	Other details	P1104	Counsellors and co-facilitators attended a 2-day training session led by the developers of the original intervention (Dr P J Conrod and Dr N Castellanos from Kings College London).
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1104	No intervention control
	Rationale/theory/Goal	-	N/A
	Materials used	-	N/A
	Procedures used	-	N/A
	Provider	-	N/A
	Method of delivery	-	N/A
	Location	-	N/A
	Duration	-	N/A
	Intensity	-	N/A
	Tailoring/adaptation	-	N/A
	Modifications	-	N/A
	Planned treatment fidelity	-	N/A
	Actual treatment fidelity	-	N/A

Bibliographic reference	**Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109**				
	Other details	-	N/A		
Follow up	12 months				
Study Methods	Method of randomisation	Carried out by a randomisation scheme stratified by level of education and school size			
	Method of allocation	Allocation of schools to trial conditions was conducted by an independent member of the research group using a computer generated allocation sequence			
	Statistical method(s) used to analyse data	Intention to treat analyses using two methods for missing data: one using last observation carried forward and the other using multiple regression imputation. The TYPE=COMPLEX procedure in Mplus was used to correct for the potential non-independence (complexity) as well as clustering of the data.			
	Unit of allocation	School			
	Unit of analysis	Individual			
	Attrition	Number of participants completing the study: Intervention 246/343 (72%) Control 284/356 (80%)	Reasons for not completing the study: discontinued intervention, not present during measurement, changing schools.		
Outcomes measures					
	Outcome		Intervention	Control	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported		Not reported	Not reported	
	Age at first experience of drunkenness where reported		Not reported	Not reported	
	Amount and frequency of alcohol use[gg]				
	Binge drinking		147/343 (42.9%)	175/356 (49.2%	
	Adj OR 95% CI for binge drinking (as reported)		1.05 (0.99, 1.11)		
	Alcohol use last month		185/343 (53.9%)	219/356 (61.5%)	

gg ITT sample calculated using last observation carried forward.

Bibliographic reference	Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109		
	Abstinence	158/343 (46.1%)	137/356 (38.5%)
	Adj OR 95% CI for alcohol use (as reported)	0.99 (0.86, 1.14)	
	Problem drinking	127/343 (37.0%)	159/356 (44.7%)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Binge drinking, alcohol use and problem drinking using multiple regression imputation[hh]		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Low	No concerns identified.
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Source of funding	Supported by the Dutch Medical Research Counsil, ZonMW.		
Comments	Limitations identified by authors Only students who volunteered and had parental consent were eligible for the study. Self-reporting may have led to measurement errors although this was minimised by guaranteeing confidentiality.		

hh Not reported here as methods of imputation not described.

Bibliographic reference	**Lammers J, Goossens F, Conrod P et al (2015) Effectiveness of a selective intervention program targeting personality risk factors for alcohol misuse among young adolescents: results of a cluster randomized controlled trial. Addiction 110 1101-1109**
	There were differences at baseline. Did not use a placebo controlled design. Limitations identified by reviewer Uncertain of confidence in data reporting as numerators/denominators are the same in both ITT analyses but have produced different ORs.
Additional reference:	Lammers J, Goossens F, Conrod P et al (2017) Effectiveness of a selective alcohol prevention program targeting personality risk factors: Results of interaction analyses. Addictive behaviors 71; 82-88

D.1.8 McCambridge 2008

Bibliographic reference	**McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818**			
Study type	Randomised controlled trial (individual)			
Study dates	Interventions delivery during 2004-2005 academic year			
Aim	To test the effectiveness of motivational interviewing (MI) in comparison with drug information and advice (DIA) to reduce drug-related risk among young cannabis users not seeking help.			
Country/geographical location	UK			
Setting/School type	Further education colleges (non- traditional educational and training institutions catering to large numbers of 16-18year old students) in London			
Participant characteristics	Description			
		Intervention (n=164)		Control (n= 162)	
	Age	Mean age years (SD)	18.0 (1.0)	Mean age years (SD)	17.9 (1.7)
	Gender[ii]	Male Female	112 (68%) 52 (32%)	Male Female	113 (70%) 49 (30%)

ii Female number and percentage calculated by reviewer

Bibliographic reference	McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818				
	Socioeconomic status	Not reported			
	Ethnicity	White Black Asian Mixed/other	18 (11%) 87 (53%) 32 (20)% 27 (16%)	White Black Asian Mixed/other	17 (10%) 82 (51%) 30 (19%) 33 (20%)
	SEND	Not reported			
	Baseline drinking behaviour	Ever drank alcohol	130 (79%)	Ever drank alcohol	124(77%)
		Prevalence (current drinkers)	106 (65%)	Prevalence (current drinkers)	109 (67%)
		Mean (SD) 30 day frequency	4.4 days (5.8)	Mean (SD) 30 day frequency	4.4 days (6.5)
		Mean (SD) units past week	6.3 units (12.1)	Mean (SD) units past week	6.1 units (11.8)
		Mean (SD) AUDIT score[jj] 10 item questionnaire: Score: 0-7 Lower risk 8-15, Increasing risk 16-19 Higher risk 20+ Possible dependence	5.1(6.1)	Mean (SD) AUDIT score	5.8(6.4)

jj AUDIT: Alcohol Use Disorders Identification Test. 10 item screening tool to assess for hazardous or harmful alcohol use.

Bibliographic reference	**McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818**		
Inclusion criteria	16-19 years old Weekly or more frequent cannabis use Literacy sufficient for questionnaire completion English language		
Exclusion criteria	Not reported		
Number of Participants	326 (164 intervention, 162 control)		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief name	P1810	Motivational interviewing
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	P1811	Clear primacy was to be accorded to discussion of cannabis use, with discussion of the use of tobacco, alcohol and other drugs being secondary.
	Provider	P1811	Majority of interventions were delivered by 4 research practitioners. Practitioner 1(JM) was a study author and academic practitioner. Practitioners 2 to 4 were psychology graduates who were employed specifically as research practitioners. 8 college-based practitioners also delivered the sessions. College-based practitioners attended a 2 day training workshop and had individual supervision sessions with researchers.
	Method of delivery	P1811	Individual
	Location	-	Not reported
	Duration	P1811	1 hour
	Intensity	P1811	1 session

Bibliographic reference	McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P1811	Fidelity to MI was assessed using the Motivational Interviewing Treatment Integrity code version 2 (MITI)[kk] on the audio recordings.
	Actual treatment fidelity	P1816	MI fidelity was not high; to examine the extent of fidelity to MI, MITI summary scores were compared with recommended standards; while the mean level of empathy was similar to that recommended for basic proficiency, mean scores for MI spirit, fewer reflections in relation to questions, fewer open rather than closed questions and fewer MI adherent rather than non-adherent other utterances used fell below this standard. The mean proportion of reflections were above the recommended threshold. In the core DIA feature of information giving there was a mean of 4.3 (SD 3.6) episodes per session
	Other details	P1812	Eligibility from questionnaires distributed by college staff who were frequently aware of those eligible and by the researcher who was blind to study allocation. At study entry this was conducted in informal areas within the college. No data on numbers approached nor on consent. At follow-up, occasional appointments were made with individuals away from the college (eg. cafes). Participants also asked to consent to saliva sample at study entry and at 3 months prior to data collection without intention to undertake biochemical validation, however data from those who refused to provide a saliva sample were thus excluded from analysis 2. MI intervention structure included rapport building, consideration of costs and benefits of drug use, discussion of values and goals, risks, problems and concerns, decision-making and either self-monitoring or change as appropriate.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1811	Drug information and advice-giving (DIA)
	Rationale/theory/Goal	-	Not reported

kk This measure comprises 2 global ratings and 7 behaviour counts. 6 summary measures are derived from this instrument and comparison is made with recommended standards based upon expert opinion.

Bibliographic reference	McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818		
	Materials used	P1811	The first leaflet dealt with cannabis and subsequent leaflets addressed alcohol, cigarette smoking and other drug use according to selections made by the participant.
	Procedures used	P1811	Taking young people through a standardised protocol, consisting of progress through a series of harm reduction information leaflets along with guidance on how to manage the discussion. Young people were to be asked the opportunity to ask questions and seek advice about related personal issues
	Providers/deliverers	P1811	The same group of trained practitioners who delivered the intervention also delivered the control.
	Method of delivery	P1811	Individual
	Location	-	Not reported
	Duration	P1811	1 session
	Intensity	P1811	1 hour
	Planned treatment fidelity	P1811	Consent sought for audio recording of sessions; yielding totals of 94 MI sessions and 104 DIA sessions.
	Actual treatment fidelity	P1816	In the core DIA feature of information giving there was a mean pf 40.1 (SD 18.0) episodes per session
	Other details	P1811	In order to preserve the contrast with MI, practitioner behaviours designed to focus discussion on personalised risk were intended to be absent from the DIA intervention.
Follow up	3 months follow up took place during academic year and 6 months follow up completed before the end of the year.		
Study Methods	Method of randomisation	Computerised individual randomisation by local clinical trials unit	
	Method of allocation	Allocation was concealed and stratified by college. Allocations were communicated via telephone or email to researchers to maintain concealment.	

Bibliographic reference	McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818		
	Statistical method(s) used to analyse data	2 sets of analysis were undertaken. 'Intention to treat' analysis considered the entire study population with last observations carried forward for missing data. Outcomes evaluated a priori in per protocol analyses for baseline users of the drug in question who attended interventions and participated in the follow up study. Two-sided significance tests were used throughout Logistic and multiple regression models were used for binary and continuous data respectively. Analyses were undertaken using STATA software. The Huber/White sandwich estimator of variance was used to control for the effects of clustered recruitment in colleges.	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study:[ll] 3 months follow up rate Intervention 132/164 (80%) Control 137/162 (85%) 6 months follow up rate Intervention 131/164 (80%) Control 133/162 (82%) At follow up, occasional appointments were made with individuals away from the college in places such as cafes. There was no between-group difference in attrition not in time to follow-up at either 3 month or 6 months.	Reasons for not completing the study: More frequent cannabis smokers were more likely to be lost to follow up at both intervals, those with greater personal income at 3 months, males and those with lower AUDIT scores at 6 months. Also variation in attrition by ethnic group at 6 months; white 86% (30/35), black 76%(128/169), Asian 95% (59/62), mixed/other 78% (47/60).

ll Calculated by reviewer from numbers lost to follow up

Bibliographic reference	**McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818**				
Outcomes measures	Outcome	Intervention		Control	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported		Not reported	
	Age at first experience of drunkenness where reported	Not reported		Not reported	
	Amount and frequency of alcohol use	3months	6months	3months	6months
	Alcohol prevalence Abstinence	93/164 (57%) 71/164 (43%)	101/164 (62%) 63/164 (38%)	102/162 (63%) 60/162 (37%)	97/162 (60%) 65/162 (40%)
	OR 95% CI for alcohol prevalence, 6 months (as reported)	1.41 (0.86, 2.33)			
	Mean (SD) 30 day frequency (days drinking)	4.0 days (5.5)	4.0 days (5.6)	3.7 days (5.7)	4.2 days (6.3)
	data used = mean difference (95% CI) in change score at 6 months	0.45 (-1.19 to 2.09)			
	Mean (SD) units past week	5.9 units (12.1)	4.7 units (9.9)	5.7 units (11.2)	8.3 units (22.8)
	data used = mean difference (95% CI) in change score at 6 months	3.51 (-0.48 to 7.5)			
	Mean (SD) AUDIT score	4.6 (5.6)	4.6 (5.2)	5.7 (11.2)	8.3 (22.8)
	School attendance	Not reported		Not reported	
	Alcohol related risky behaviour	Not reported		Not reported	
	Mental health and wellbeing Mean (SD) Interactional problems score[mm]	0.3(0.8)	0.2(0.6)	0.3(0.9)	0.2(0.7)
	Adverse or unintended effects	Not reported		Not reported	
Other outcomes measured	Outcome data collected for cannabis and nicotine use, but not reported in this evidence table.				

mm Interactional problems score is a measure of interactional problems which counts the number of relationship problems that the young person themselves attribute to their own use was used for each substance. Measurement scale nor reported.

Bibliographic reference	McCambridge J, Slym RL, Strang J (2008) Randomised controlled trial of motivational interviewing compared with drug information and advice for early intervention among young cannabis users. Addiction 103, 1809-1818		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Low	No concerns identified
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	
	Mental health and wellbeing	Low	No concerns identified
	Adverse or unintended effects	NA	
Source of funding	The first author (JM) acknowledged Health Services Research Fellowship from the Wellcome Trust (071301). Assistance also received from several individuals (see study for details), the Big Lottery Fund and Action on Addiction.[Charity]		
Comments	Limitations identified by reviewer: College staff approached students they suspected would be eligible, possible selection bias. College practitioners delivered sessions to students that they potentially knew. Limitations identified by author: Attrition varied by the factors stated previously. Self-reported data among those refusing to provide a saliva sample suggest unreliability. No random allocation of practitioners to colleges or individuals therefore not possible to separate college-level effects from practitioner effects. Participants were paid £10 per episode of data collection.		

D.1.9 Newbury-Birch 2014

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)
Trial registration	ISRCTN07073105
Study type	Randomised controlled trial (cluster) [Pilot study]

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**				
Study dates	November 2011 to December 2012				
Aim	To explore the feasibility and acceptability for a cRCT of Alcohol screening and brief intervention to reduce hazardous drinking in younger adolescents				
Country/geographical location	UK				
Setting/School type	Seven schools across one geographical area in the North East of England				
Participant characteristics	Description	Students who reported drinking in the last 6 months			
			Intervention 1 (n=54)	Intervention 2 (n=75)	Control (n= 53)
	Age	Range 14-15 years			
	Gender[nn]	Male	24 (44.5%)	28 (37%)	23 (43.4%)
		Female	30 (55.5%	47 (63%)	30 (56.6%)
	Socioeconomic status	Not reported			
	Ethnicity	White	54 (100.0%)	74 (98.7%)	51 (96.2%)
	SEND	Not reported			
	Baseline drinking behaviour [oo] A-SAQ (last 6 months) [Adolescent Single Alcohol question with a choice of six responses to indicate levels of harmful drinking]	Four of more times but not every month	17(31.5%)	22(29.3%)	18(34.0%)
		Once or more per month but not every week	19(35.2%)	28 (37.3%)	16 (30.2%)
		Every week but not every day	17(31.5%)	25 (33.3%)	19 (35.9%)
		Every day	1 (1.9%)	0	0
Inclusion criteria	Minimum A-SAQ score of reporting drinking more than three units at least four or more times in the last 6 months				

nn Absolute numbers and female data calculated by reviewer from male percentages reported.
oo Absolute numbers calculated by reviewer from percentages reported.

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**		
	Left name on screening questionnaire Consent		
Exclusion criteria	Already seeking help for an alcohol use disorder Receiving help from child and adolescent mental health services Consent not given by parents		
Number of Participants	182 (intervention 1 n=54; intervention 2 n=75; control n=53)		
Intervention 1	TIDieR Checklist criteria	Paper/ Location	Details
	Brief name	P15	Intervention 1: Feedback plus brief interactive session
	Rationale/theory/Goal	P16	Social learning theory
	Materials used	P15	Manualised tool which was a six-step intervention
	Procedures used	P15	Combined structured advice and motivational interviewing techniques
	Provider	P14	School learning mentor
	Method of delivery	P15	Individual
	Location	P15	School learning mentor's office
	Duration	P15	30 minute session
	Intensity	P15	1 session
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P52	Learning mentors were asked to record at least one session each

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)		
			The BECCI tool was used to measure fidelity (designed specifically to measure the microskills of behaviour change counselling and MI).
	Actual treatment fidelity	P52	Only 6 recordings of session were made. Audio recordings were rated by a qualified member of the team. The mean BECCI score for the six recorded interventions was '2.5', which suggested that the learning mentors were all found to be delivering behaviour change counselling to 'some extent' or to 'a good deal' as assessed with the BECCI. The median BECCI score was '2.55', with the range 1.9–3.0 (individual scores were 1.9, 2.1, 2.3, 2.8, 2.9 and 3.0).
	Other details	P15	It was expected that young people would be taken out of class to attend appointments with learning mentors Learning mentors were trained in study procedures and intervention delivery.
Intervention 2	TIDieR Checklist criteria	Paper/ Location	Details
	Brief name	P17	Intervention 2: Feedback plus brief interactive session plus family session
	Rationale/theory/Goal	P17	Sought to build upon the young person's motivation by encouraging the parents/family members to share their thoughts about the young person's drinking
	Materials used	P17	Manualised tool which was a six-step intervention followed by a group family intervention. Parenting information leaflet
	Procedures used	P17	Combined structured advice and motivational interviewing techniques plus family session 1 month later
	Provider	P17	School learning mentor
	Method of delivery	P17	Individual plus family
	Location	P17	Within the school or in a community centre nearby
	Duration	P17	30 minutes (individual) plus 60 minutes (family)
	Intensity	P17	1 session

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	See intervention 1
	Actual treatment fidelity	-	See intervention 1
	Other details	P17	The intervention would take place only if the young person consented to parental involvement and parents subsequently agreed to take part
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief name	P15	Feedback and advice leaflet plus PSHE
	Rationale/theory/Goal	-	Not reported
	Materials used	P15	Alcohol information leaflet
	Procedures used	P15	Young people who were in the control group schools met with the learning mentor who explained the study to them. They were told that they may be drinking alcohol in a way which may be harmful to them. Once consented to the study the young people were given the alcohol leaflets mentioned above to take away and read.
	Provider	P15	Learning mentor
	Method of delivery	P15	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**					
	Tailoring/adaptation	P15	The leaflet was age appropriate for 14-15 year olds			
	Modifications	-	Not reported			
	Planned treatment fidelity	-	Not reported			
	Actual treatment fidelity	-	Not reported			
	Other details	P15	All students recruited to the trial received the information leaflet			
Follow up	12 months					
Study Methods	Method of randomisation		Not reported			
	Method of allocation		Allocation to trial arm was conducted by the study statistician			
	Statistical method(s) used to analyse data		Intention to treat analysis; per protocol analysis. Data collected was summarised with descriptive statistics by trial arm.			
	Unit of allocation		School			
	Unit of analysis		Individual			
	Attrition[pp]		Number of participants completing the study: Intervention 1 n=49 (91%) Intervention 2 n=67 (89%) [n = 57 (85%) received intervention1 instead: n=50 no consent given for intervention 2; n=5 no consent from family given; n=2 young person withdrew consent for intervention 2; n=10 unable to arrange intervention 2] Control n=44 (83%)		Reasons for not completing the study: No consent to follow-up Repeatedly absent at follow-up Moved school at follow-up Complex behavioural need/substance misuse issue at follow-up School withdrew case as ineligible	
Outcomes measures						
	Outcome			Intervention 1 (n = 49)	Intervention 2 (n=67)	Control (n=44)

pp Percentages calculated by reviewer

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)			
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported	Not reported
	Amount and frequency of alcohol use	Mean, (SD)		
	Units of alcohol consumed in 28 day period	22.6 (25.4)	19.1 (34.1)	27.6 (47.9)
		Pooled mean 20.6 (30.7)[qq]		
	Ns adjusted for clustering using ICC 0.02[rr]	81		31
	MD 95% CI (calculated by reviewer)	-7.0 (-18.6, 4.63)		
	Percentage days' abstinence	91.5% (6.8)	91.2% (10.4)	90.8% (8.7)
	Drinks per drinking day	8.1 (5.7)	7.9 (6.2)	9.3 (8.1)
	Days, more than 2 units	1.9 (1.9)	1.8 (2.4)	2.1 (2.3)
	School attendance	Not reported	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported	Not reported
Qualitative study	Research question(s)	Is it feasible to deliver ASBI in schools in England?' and 'What are the likely eligibility, consent, participation and retention rates of young people in a UK-relevant trial of ASBI compared with standard practice?		
	Data collection	Semi-structured interviews conducted between May and August 2012		
		"Key topics for interviews with young people and their parents included consent procedures; parental involvement in interventions; the comprehensibility and burden of study measures and follow-up procedures; and the appropriateness of school-led health promotion work across the school–home interface."		
	Method and process of analysis	Interview data was analysed thematically using the Framework approach.		

qq Imputed by reviewer
rr ICC from Clark 2010

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**		
	Population and sample collection	6 lead liaisons [not reported further for this review] 13 learning mentors (3 control, 3 intervention 1, 7 intervention 2) 27 young people (8 control, 7 intervention 1, 12 intervention 2) 7 parents (N/A control, N/A intervention 1, 7 intervention 2) All lead liaisons were approached for the study. Learning mentors were sampled according to socioeconomic positioning of the school and study condition. Young people were sampled according to socioeconomic status of school, gender and intervention. Parents were sampled according to socioeconomic status of school and whether intervention 2 had taken place.	
	Results	Key themes	
	Young people	School as an appropriate setting	"the authority that teachers hold within their role may be conflicted if they were privy to young people's alcohol consumption" and that "learning mentors..[are] the 'right' member of staff to deliver the intervention" "young people felt that they could talk to learning mentors about alcohol" "Because the mentors I know, he's really canny so we had a good talk about it. So he made us get all my questions out so it was fine after . . . Every time he sees me he just asks me how I'm doing and that, so it's fine, really. I'm not worried about what. Because he said it would be private so I'm fine with him knowing."
		Acceptability of screening	"most young people felt fully informed about the research project…[but] some young people [said] that teachers who were supervising did not always explain the screening survey" "they were often unclear about the implications of including their name on the survey rather than anonymously" "I'm always used to doing tests and obviously you put your name down, and I thought it was a bit like a test really. I just put my name down, then when Miss called us I was like 'Damn it'." Young people said they took part just to be helpful rather than the need for advice on alcohol. "a number of young people did comment that they were concerned that teachers or fellow pupils may read their answers over their shoulder."

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)		
			"There were some young people who reported that 'there were quite a few people taking the mick with it, saying they were out every weekend drinking three bottles of vodka . . .'" "However, most young people who were interviewed stated that they did give honest and accurate responses about their drinking behaviour." ". . . if you're doing something that's about your well-being . . . your like habits and stuff like that you've got to be mature about it; you've got to be serious. You can't be writing stuff like that on a survey. Like somebody's going to use for you know however long it is like feeding the results for and stuff like that. I just think it's a bit silly to be honest."
		Acceptability of intervention 1	"Young people generally found the intervention acceptable, with some young people commenting that they found the advice given to be informative." "It contained the information that I needed and things that I wasn't sure about, it explained a lot. What alcohol does and how it can affect us. I think you need more things like that in school, talking about it more, because kids when I was thirteen you don't understand it." There were mixed views on the calorie-focused element of the intervention. "conflicting views with some reporting interest at this information, whereas for other young people who were concerned about weight, the calorie focus of the intervention did have unexpected consequences. They discussed ensuring they did not eat on the day of a drinking episode or going for a run the day after a drinking occasion to counteract the excess calories." "young people commented that the act of writing down their drinking patterns and calculating units made them see their drinking in a different way" ". . . because putting it on paper how many units I was taking in was quite bad. So with my exams coming through, I'm taking them now, it was like cut down."
		Acceptability of intervention 2	Young people who agreed to their parents being involved reported "that their parents had existing knowledge about their drinking and this was the primary factor influencing their

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			participation in intervention 2. In contrast, if their parent did not know about their drinking then young people were far less inclined to consent to a family intervention session." "If my mum had no idea about my drinking and she came in and we had to discuss it. I don't know how I would've dealt with that." ". . . it is just a private part, which is why I didn't want to bring her in."
	Learning mentors delivering the intervention	School as an appropriate setting	"addressing alcohol use by young people [is] a legitimate function of the school". "alcohol is part of a wider range of issues faced by young people, that are considered within personal, social and health education" "questioned whether young people would feel able to discuss their alcohol use within a school setting, highlighting the fear of ramifications" "found it challenging to incorporate organising and delivering the intervention in their working week" "I mean that's just one of those things, [it was] much more than I thought it was going to be but I'd still do it again because I believe in it, if I believe in something then I'll make time for it." "Although it was acknowledged that there was an additional burden of time, most learning mentors felt that they could feasibly include delivering ASBI within their role" "I make my own timetable if you like. So I am not stuck to – I need to be here, here and here at certain times; so I can fit it in there. I can just go 'Right I will just clear my diary for two days and just see – and fit all them in'." "did not perceive addressing alcohol with young people to be an additional risk" "A lot of the things we talk about at the moment aren't education related they're to do with could be self-esteem or stress or we've had chats with people about eating disorders things like that you know we've had deep, I'm saying we as in I'm talking about the mentors because we do a similar job you know what I mean, we have spoken about lots of different things so again its necessary in our job role it's not something that we sort of feel forced to do."
		Acceptability of training	"training and associated documents, such as the manual prepared them fully for the study"

Bibliographic reference	Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)		
			"No I thought, we were all trained very well and we had loads of paperwork, loads of information and loads of prompts which were excellent, you know, you could read through a stage one, two, three, four, step one, two, three right through erm, lots of ideas here that we could ask, and I thought, you know, we were very well prepared." "…the after-training support was very important" "[Researcher] came in quite a lot as well and we managed, we had quite a lot of time to talk to her you know and get advice from her and information . . . it was really handy to have her there to bounce questions off her and things like that so I felt that worked really well" "study training and involvement was perceived to have lasting benefit for the school. Learning mentors discussed benefits to their professional development"
		Acceptability of screening	"expressed some concern about confidentiality and the impact this may have upon accuracy of reporting highlighting the potential for young people either to exaggerate or under report their alcohol use"
		Acceptability of intervention 1	"..enabled a logical yet flexible flow to the process of intervention delivery and, crucially, that it was engaging and interactive in style." There were mixed views on the calorie-focused element of the intervention. "… a minority of learning mentors had avoided talking in any depth with young people about the calorie content of alcoholic drinks because of concerns that this could potentially exacerbate existing anxieties about weight."
		Acceptability of intervention 2	"described communicating with and involving parents as a standard part of their role. However, others anticipated major barriers to parental involvement, and were concerned that it crossed an 'unspoken boundary' in relation to the school–home divide." "difficult to contact parents to discuss participation" "there was a concern that only those young people and parents in lesser need of support around alcohol use would take part" ". . the parents of the kids you really need to see tend not to turn up . . . You know so I don't feel as though we got the ones, and the ones that were on the list didn't want their parents

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**		
			involved, they were probably ones that you know, were the park drinkers or the you know that did it behind somebody's back."
	Parents	School as an appropriate setting	"…schools offered great opportunity for positive influence upon young people as well as access to adults they could trust outside the home environment" "the authority that teachers hold within their role may be conflicted if they were privy to young people's alcohol consumption" and that "learning mentors..[are] the 'right' member of staff to deliver the intervention"
		Acceptability of intervention 2	"questioned the relevance of intervention 2 to their individual situation" "already benefited from an open and trusting relationship" "intervention 2 did not teach them anything that they did not already know" "I mean it's not really something that affects us a great deal, we're possibly not the right people for you to be talking to, because it doesn't have much of an impact on our lives . . . for what you're trying to gain from this we might not be the right people to talk to because we're open, we talk about everything and it's not an issue in our house."
	All participants	Acceptability of intervention 2	"shared the view that the intervention was not effective in engaging the parents and young people who may benefit from this intervention." "parents and young people did not express a desire to engage in intervention 2"
Other outcomes measured	AUDIT (0-40), AUDIT-C (0-12) and A-SAQ scores for total population		
Risk of bias	Quantitative study		
	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**		
	Amount and frequency of alcohol use	High	The majority of one intervention group received the other intervention and all participants, school staff and researchers were aware of the intervention allocation.
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
	Qualitative study		
	Item	Yes/No/Can't tell	Comments
	1. Was there a clear statement of the aim of the research?	Yes	Questions and aims clearly stated
	2. Is a qualitative methodology appropriate?	Yes	The research aimed to assess feasibility and acceptability of a proposed cluster randomised trial so qualitative methodology is appropriate for collecting views and experiences to inform this.
	3. Was the research design appropriate to address the aims of the research?	Yes	Semi-structured interviews were used to inform a more in-depth understanding of the overarching research questions for the study. Data was collected until saturation was reached.
	4. Was the recruitment strategy appropriate to the aims of the research?	Yes	Sampling was based on criteria that would enable the recruitment of the people most likely to be involved in delivering/receiving the intervention.
	5. Was the data collected in a way that addressed the research issue?	Yes	Semi-structured interviews would have allowed for questions/responses to be focused. Interviews lasted between 20 and 90 minutes and were all

Bibliographic reference	**Newbury-Birch D, Scott S, O'Donnell, A et al (2014) A pilot feasibility cluster randomised controlled trial of screening and brief alcohol intervention to prevent hazardous drinking in young people aged 14-15 years in a high-school setting (SIPD JR-HIGH) Public health research 2(6)**		
			digitally recorded, with the resultant data transcribed verbatim by professional transcribers
	6. Has the relationship between researcher and participants been adequately considered?	Can't tell	Not described but unlikely to be of importance as the researchers were not directly involved in training/delivering the intervention.
	7. Have ethical issues been taken into consideration?	Yes	The research study was granted ethical approval in November 2011 by Newcastle University, which acted as a sponsor for the research
	8. Was the data analysis sufficiently rigorous?	Yes	Thematic approach used using a clear narrative that showed a balance of positive and negative comments and summarised clearly.
	9. Is there a clear statement of findings?	Yes	The findings are clear and thoroughly discussed
	10. How valuable is the research?	Yes	The research shows clearly that brief intervention is generally acceptable in a school setting but that brief intervention with family component was not favourable.
Source of funding	The National Institute for Health Research Public Health Research programme		
Comments	Limitations identified by authors None Limitations identified by reviewer Pilot study for acceptability and feasibility so main focus was not the effectiveness of the interventions. The majority of one intervention group received the other intervention and all participants, school staff and researchers were aware of the intervention allocation.		

D.1.10 Newton 2016

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**				
Study type	Randomised controlled trial (cluster)				
February 2012 9for 3 years)	February 2012 (for 3 years)				
Aim	To evaluate the long-term effectiveness of Preventure over 3 years				
Country/geographical location	Australia				
Setting/School type	190 schools in New South Wales				
Participant characteristics[ss]	Description	438 year 8 adolescents (ages 13-14) considered to be “high risk” drinkers based on having one of the following personality profiles: Anxiety sensitivity (AS) Sensation seeking (SS) Impulsivity (IMP) Negative thinking (NT)			
		Intervention (n= 202) N(clusters)=7		Control (n=236) N(clusters) = 7	
	Age, mean (SD)	13.4 years (0.47)			
	Gender [tt]	38 (18.8%) female 164 (81.2%) male		151 (63.8%) female 85 (36.2%) male	
	Socioeconomic status	Not reported			
	Ethnicity	Not reported			
	SEND	Not reported			
	Baseline drinking behaviour	Frequency of drinking (past 6 months)			
		Never	152 (75.2%)	Never	195 (82.6%)

ss Baseline characteristics measured by self-report questionnaire; (Stewart & Devine 2000)
tt Female data calculated from male percentages reported

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**				
		Less than monthly Once a month 2-3 times a month Weekly Daily or almost daily Missing	36 (17.8%) 7 (3.5%) 2 (1.0%) 0 (0.0%) 2 (1.0%) 3 (1.5%)	Less than monthly Once a month 2-3 times a month Weekly Daily or almost daily Missing	31 (13.1%) 6 (2.5%) 3 (1.3%) 0 (0.0%) 0 (0.0%) 1 (0.4%)
		Frequency of binge drinking (past 6 months)			
		Never Less than monthly Once a month 2-3 times a month Weekly Daily or almost daily Missing	177 (87.6%) 13 (6.4%) 5 (2.5%) 1 (0.5%) 1 (0.5%) 2 (1.0%) 3 (1.5%)	Never Less than monthly Once a month 2-3 times a month Weekly Daily or almost daily Missing	223 (94.5%) 9 (3.8%) 3 (1.3%) 0 (0.0%) 0 (0.0%) 0 (0.0%) 1 (0.4%)
		Alcohol-related harms (The Rutgers Alcohol Problems Index, RAPI)	Mean score 0.98 SD 1.10	Alcohol-related problems (The Rutgers Alcohol Problems Index, RAPI)	Mean score 1.54 SD 1.11
Inclusion criteria	Scored at least 1 standard deviation (SD) above the sample mean on Substance Use Risk Profile Scale (SURPS). Parental consent				
Exclusion criteria	Not reported				
Number of Participants	438 (intervention n=202; comparator n = 236)				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**		
	Brief Name	P1057	Preventure brief intervention
	Rationale/theory/Goal	P1057	Personality-targeted
	Materials used	P1057	The interventions consisted of 3 main components: (a) psychoeducation, (b) behavioural coping skills training and (c) cognitive skills training.
	Procedures used	P1057	Students were encouraged to explore the ways of coping with their personality through a goal-setting exercise
	Provider	P1057	Qualified facilitator (registered clinical psychologist) and a co-facilitator (minimum of a Bachelor of Psychology Honours degree)
	Method of delivery	P1057	Groups
	Location	-	Not reported
	Duration	P1057	90 minutes
	Intensity	P1057	2 sessions 1 week apart
	Tailoring/adaptation	P1057	Adapted for Australian youth
	Modifications	-	Not reported
	Planned treatment fidelity	P1061	The Facilitation Criteria Scale was used to assess treatment fidelity.
	Actual treatment fidelity	P1061	Five groups were scored (14% of all groups). The facilitator was rated as adhering 'totally' to the content of the Preventure manual in 35% of the sessions and 'almost totally' in the remaining 65% of the sessions. The facilitators rated that they had established a good rapport in 81% of the sessions, were unsure about rapport in 15% of cases and felt they did not establish a good rapport in 4% of sessions.
	Other details	P1057	The principle investigator supervised the delivery of the full intervention at two pilot schools. Facilitators and co-facilitators participated in a 3-day workshop

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**		
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name		Usual health education classes
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**		
Follow up	Post-test, 12-months, 24 months and 36 months		
Study Methods	Method of randomisation	Blocked randomisation conducted by an external researcher using the online program Research Randomiser	
	Method of allocation	Schools were unaware of the interventions undertaken in the other trial groups	
	Statistical method(s) used to analyse data	Intention-to-treat analysis using the full-information maximum likelihood (FIML) estimation to handle missing data.. Latent growth models ICC calculated to adjust for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants not completing the study (present at baseline but absent from all follow ups): 22 (5%)	Reasons for not completing the study: Absence, failure to remember login details for survey completion, incorrect coding and answering fewer than 80% of the items in the survey.
Outcomes measures			
	Outcome	Intervention (n=140)	Control (n=208)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Alcohol use, 12 months Abstinence, 12 months[uu]	41/140 (29.1%) 99/140 (70.9%)	50/208 (24.1%) 158/208 (75.9%)

uu Imputed by reviewer

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**		
	Effective samples sizes adjusted for clustering using ICC 0.03[vv]	40/137	49/204
	RR 95% CI (calculated by reviewer)	1.2 (0.9, 1.7)	
	Binge drinking, 12 months	19/140 (13.4%)	24/208 (11.3%)
	Effective samples sizes adjusted for clustering using ICC 0.03[ww]	11/82	14/121
	RR 95% CI (calculated by reviewer)	1.25 (0.7, 2.1)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour	Not reported	Not reported
	Mental health and wellbeing		
	Alcohol related harms (modified RAPI), 12 months – n/Ns	83/140 (59.0%)	91/208 (43.8%)
	Effective samples sizes adjusted for clustering using ICC 0.03[xx]	48/82	53/121
	RR 95% CI (calculated by reviewer)	1.3 (1.0, 1.8)	
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Outcomes at 6 months, 24 months and 36 months.		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not applicable	Not applicable
	Age at first experience of drunkenness where reported	Not applicable	Not applicable

vv ICC as reported in the paper
ww ICC as reported in the paper
xx ICC as reported in the paper

Bibliographic reference	**Newton NC, Conrod PJ, Slade T et al (2016) The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial. The journal of child psychology and psychiatry 57(9) 1056-1065**		
	Amount and frequency of alcohol use	Some concerns	Not clear if participants were aware of intervention allocation; subjective outcomes.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable
	Mental health and wellbeing	Some concerns	Not clear if participants were aware of intervention allocation; subjective outcomes
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Health and Medical Research Council		
Comments	Limitations identified by author Relies solely on self-report data Limitations identified by reviewer None		

D.1.11 O'Leary-Barrett 2010

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**
Study type	Randomised controlled trial (cluster)
Study dates	Not reported
Aim	To examine the efficacy of teacher-delivered personality-targeted interventions for alcohol-misuse
Country/geographical location	UK

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**				
Setting/School type	21 secondary schools across 9 London boroughs				
Participant characteristics	Description	1159 high-risk (HR) students identified at screening survey with one of the following personality traits: Negative thinking (NT) n=271 Anxiety-sensitivity (AS) n=315 Impulsivity (IMP) n=277 Sensation-seeking (SS) n=296			
		Intervention (n=696)		Control (n=463)	
	Age[yy]	Year 9 students		Year 9 students	
	Gender[zz]	Male	380 (54.6%)	Male	260 (56.2%)
		Female	316 (45.4%)	Female	203 (43.8%)
	Socioeconomic status	Not reported		Not reported	
	Ethnicity[aaa]	White	285 (40.9%)	White	185 (40.0%)
		Other	411 (59.1%)	Other	278 (60.0%)
	SEND	Not reported		Not reported	
	Baseline drinking behaviour (previous 6 months)[bbb]	Drinkers	296 (42.5%)	Drinkers	175 (37.9%)
		Binge drinkers	155 (22.3%)	Binge drinkers	95 (20.6%)
		Non-drinkers	400 (57.5%)	Non-drinkers	288 (62.1%)
		Log Quality-Frequency (QF) score, mean (SD)	0.26 (0.33)	Log Quality-Frequency (QF) score, mean (SD)	0.22 (0.33)

yy Mean age per group not reported. Overall sample n=2,506 including low-risk students mean age = 13.7 years
zz Absolute numbers and female data calculated from male percentage reported.
aaa Absolute numbers and other ethnicity data calculated from white ethnicity percentage reported.
bbb Absolute numbers and non-drinkers calculated from percentages reported

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**				
		Log Drinking-problem scores (Rutgers Alcohol Problem Index, RAPI), mean (SD)	0.98 (0.13)	Log Drinking-problem scores (Rutgers Alcohol Problem Index, RAPI), mean (SD)	0.96 (0.12)
Inclusion criteria	Year 9 students who met personality risk criteria which was defined as scoring 1 standard deviation above the school mean on one of four subscales of the Substance Use Risk Profile Scale: sensation-seeking, impulsivity, anxiety-sensitivity and hopelessness. Able to provide consent from parent/guardian.				
Exclusion criteria	Not reported				
Number of Participants	1,159 (intervention n=696, control n=463)				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P955	Adventure; Personality-targeted based on Preventure Programme		
	Rationale/theory/Goal	P954	Personality-targeted intervention aimed at preventing alcohol misuse		
	Materials used	P957	The interventions were conducted using manuals that incorporated psychoeducational, motivational enhancement therapy and included real-life "scenarios" shared by "high-risk" youth in the UK. All the exercises were encouraged discussion in a personality-specific way. All participants received statutory drug education according to national curriculum requirements. (see comparator)		
	Procedures used	P957	All exercises discussed thoughts, emotions, and behaviours in a personality-specific way		
	Provider	P957	Teachers trained as facilitators and co-facilitators.		

Bibliographic reference	O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963		
	Method of delivery	P957	Group sessions (average of 6 adolescents)
	Location	-	Not reported
	Duration	P957	90 minute group sessions
	Intensity	P957	2 sessions
	Tailoring/adaptation	-	Not reported
	Modifications	P955	Use of school staff to deliver the intervention rather than skilled trial therapists
	Planned treatment fidelity		Facilitators were assessed on the 5 core counselling skills considered essential for the delivery of the intervention. Treatment quality was also measured using Young and Beck's Cognitive Therapy Scale on 11 key therapeutic skills. The scale was rated 0 (poor) to 6 (excellent). This was evaluated independently by a PhD clinical psychologist. A scale was developed by the principal investigator and trial therapist to assess adherence to the 12 core components of the Preventure programme.
	Actual treatment fidelity	P958	98.4% of the observed sessions were rated as having "achieved" or "partly achieved" the core counselling skills and 65.6% were considered to "achieve" all 5 components. For treatment quality the mean score was 3.6 (between "satisfactory" and "good"). Trained members of research staff observed 76 (41.7%) of the sessions to assess fidelity and intervention quality and each facilitator was observed running at least one intervention session. 88.2% of the observed sessions were rated as having "achieved" or "partly achieved" the 12 core components and 64.5% were rated as having "achieved" most components.
	Other details		Training was given to up to 4 staff members per intervention school. It involved a 3-day workshop reviewing principles of cognitive-behavioural therapy, motivational-enhancement therapy and general counselling. Techniques specific to the Preventure Programme were taught. A minimum of 4 hours supervised practice with older pupils from the school followed.

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**		
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P957	Statutory drug education according to national curriculum requirements.
	Rationale/theory/Goal	P957	Alcohol, tobacco, illicit drugs. Information about the detrimental health effects from abuse of alcohol and illicit drugs and the risk of misusing prescribed medication.
	Materials used	-	Not reported
	Procedures used	P957	Typically taught throughout the year as part of the Science, Citizenship and Personal, Social, Health and Economic Wellbeing curriculum or as specific drug-education days.
	Provider	-	Not specified but likely teachers
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	P957	Throughout the year
	Intensity	-	Not reported.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**			
Follow up	6 months			
Study Methods	Method of randomisation	Not reported		
	Method of allocation	Not reported		
	Statistical method(s) used to analyse data	Intention-to-treat analyses. Pearson χ2 and two-tailed independent t tests compared group differences at 6 month follow up. Regression analysis were performed examining effects of gender, ethnicity and baseline drinking. Non-independence observations were adjusted for using tests based on the Huber-White sandwich estimate of variance.		
	Unit of allocation	Schools		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: n=1,008 (87%)	Reasons for not completing the study: Not reported	
Outcomes measures	Outcome		Intervention (n=696)	Control (n=463)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported		Not reported	Not reported
	Age at first experience of drunkenness where reported		Not reported	Not reported
	Amount and frequency of alcohol use[ccc]			
	Drinkers, 6 months Abstinence[ddd]		348/696 (50.0%) 348/696 (50.0%)	263/463 (56.8%) 200/463 (43.2%)
	Adj OR 95% CI for drinkers, 6 months (as reported)		0.6 (0.4, 0.8)	

ccc Absolute numbers calculated by percentages reported
ddd Calculated by reviewer

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**		
	Binge drinkers, 6 months	173/696 (24.9%)	131/463 (28.2%)
	Adj OR 95% CI for binge drinkers, 6 months (as reported)	1.0 (0.6, 1.4)	
	Log QF score, mean (SD)	0.30 (0.33)	0.34 (0.33)
	Unable to calculate MD as log transformation method not reported. Reported as non-significant.		
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour	Not reported	Not reported
	Mental health and wellbeing		
	Log drinking problems score (RAPI), mean (SD)	0.92 (0.13)	0.99 (0.14)
	Unable to calculate MD as log transformation method not reported. Reported as non-significant.		
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Logistic and linear regressions predicting drinking behaviours by covariates of gender, ethnicity, baseline drinking rates and intervention status. (NB not reported here as no absolute data reported in the paper). Binge-drinking within drinkers.		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	Some concerns	Randomisation methods not reported
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	

Bibliographic reference	**O'Leary-Barrett M, Mackie CJ, Castellanos-Ryan N et al. (2010) Personality-targeted interventions delay uptake of drinking and decrease risk of alcohol-related problems when delivered by teachers. Journal of the American Academy of Child & Adolescent Psychiatry 49(9) 954-963**		
	Mental health and wellbeing	Some concerns	Randomisation methods not reported
	Adverse or unintended effects	NA	
Source of funding	Sponsor: Kings College London Collaborator: Action on Addiction [charity]		
Comments	Limitations identified by authors None Limitations identified by reviewer The authors note that 121 (17.4%) of the intervention group did not receive the intervention but did not report the same information for the control group. 3 schools were excluded from the trial, 1 intervention, 2 control.		
Additional reference	Conrod PJ, O'Leary-Barrett M, Newton N et al. (2013) Effectiveness of a selective, personality- targeted prevention program for adolescent alcohol use and misuse. JAMA Psychiatry 70(3) 334-342		
Additional reference	O'Leary-Barrett M, Castellanos-Ryan N, Pihl RO et al (2016) Mechanisms of Personality-Targeted Intervention Effects on Adolescent Alcohol misuse, internalizing and externalizing symptoms. Journal of Consulting and Clinical Psychology 84(5) 438-452		

D.1.12 Shetgiri 2011

Bibliographic reference	**Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940**
Study type	Randomised controlled trial (individual)
Study dates	Study recruitment July-August 2008
Aim	To assess the effects of a school-based program on reducing violence and substance use among primarily Latino high school students
Country/geographical location	USA
Setting/School type	1 urban high school in California

Bibliographic reference	**Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940**			
Participant characteristics	Description	Ninth-grade high school students considered at risk.		
		Intervention (n=40)	Control (n=46)	
	Age (years)	Mean 14.4	Mean 13.9	
	Gender[eee]	Male 20 (51%)	Male 15 (33%)	
		Female 20 (49%)	Female 31 (67%)	
	Socioeconomic status	Not reported	Not reported	
	Ethnicity	Latino 32 (81%)	Latino 34 (75%)	
		African American 3 (8%)	African American 4 (9%)	
		White 2 (4%)	White 2 (4%)	
		American Indian/ Alaskan Native 1 (2%)	American Indian/ Alaskan Native 1 (2%)	
		Asian/ Pacific 0 (0)%)	Asian/ Pacific 2 (4%)	
		Other 2 (5%)	Other 3 (6%)	
	SEND	Not reported	Not reported	
	Baseline drinking behaviour	Used alcohol in the last 12 months 5 (12%)	Used alcohol in the last 12 months 13 (29%)	
Inclusion criteria	Consented ninth-grade students identified as at risk for poor educational outcomes by eighth-grade teachers or academic counsellors. At-risk status determined by middle-school personnel based on high absenteeism in eighth grade (<80% attendance), high numbers of disciplinary actions in eighth grade (failing ≥2 classes) or a high level of family dysfunction that may affect student functioning in high school (e.g. multiple moves during school year, lack of parental involvement or family conflict).			
Exclusion criteria	Not reported			
Number of Participants	108 randomised (intervention n=53, control n=55)			

eee Number of people and female data calculated by reviewer from percentages reported

Bibliographic reference	Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P933	Substance-use prevention program design for at-risk 14-19 year olds considered to be a model program by the Substance Abuse and Mental Health Services Administration
	Rationale/theory/Goal	P933	To reduce violence and substance use among in predominantly Latino high school students
	Materials used	-	Not reported
	Procedures used	P934	Resilience through activities and counselling designed to build social skills, effective communication skills, anger management, conflict resolution, healthy relationships and student-led discussions about violence exposure, alcohol and smoking. Students also participated in field trips and community service activities after school, weekends or over the summer.
	Provider	P934	School clinical social worker who attended a 2-day training program to learn how to implement the intervention.
	Method of delivery	P934	Group (6-9 students)
	Location	-	Not reported
	Duration	P934	45 minutes
	Intensity	P934	Weekly for a year (28 sessions)
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940		
	Actual treatment fidelity	P934	Two researchers attended 40% of the groups to ensure consistency across groups.
	Other details		Facilitators attended a 2-day training program to learn how to implement the intervention and were periodically assessed to maintain fidelity to the original program. The same groups of 6-9 students met with the same facilitator throughout the year.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P934	Existing tutoring or other afterschool activities at the high school
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940			
	Actual treatment fidelity	-	Not reported	
	Other details	-	Not reported	
Follow up	8 months			
Study Methods	Method of randomisation	Students were randomly assigned by rolling a dice Odd numbers were assigned to the intervention group and even numbers to the control group		
	Method of allocation	Concealment methods not reported		
	Power information	Power analysis determined that enrolling at least 30 students to each group could detect differences in grade point average (GPA) or 0.8% or greater and differences in suspension rates of 75%		
	Statistical method(s) used to analyse data	Per protocol analyses. Intervention and control groups were compared using t tests for continuous variables and X2 tests for dichotomous variables.		
	Unit of allocation	Individual		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: Intervention 40/53 (75%) Control 46/55 (84%)	Reasons for not completing the study: Not reported	
Outcomes measures[fff]	Outcome		Intervention (n=40)	Control (n=46)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported		Not reported	Not reported
	Age at first experience of drunkenness where reported		Not reported	Not reported
	Amount and frequency of alcohol use			

fff Absolute numbers calculated by reviewer from percentage reported.

Bibliographic reference	**Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940**		
	Used alcohol in past 30 days Abstinence	6/40 (16%) 34/40 (84%)	10/46 (21%) 36/46 (79%)
	RR 95% CI for used alcohol in past 30 days (calculated by reviewer)	0.7 (0.3, 1.7)	
	Skipped school without an excuse in past 12 months	17/40 (43%)	10/46 (21%)
	RR 95% CI for (calculated by reviewer)	2.0 (1.0, 3.8)	
	No. times tardy to school in past year, mean (SD)	9.6 (not reported)	7.6 (not reported)
	No. times absent from school in past year, mean (SD)	15.1 (not reported)	10.2 (not reported)
	Alcohol related risky behaviour		
	Been in a physical fight in the past 12 months	13/40 (32%)	12/46 (26%)
	Been in a physical fight in the past 3 months	9/40 (23%)	12/46 (24%)
	RR 95% CI for (calculated by reviewer)	0.9 (0.4, 1.8)	
	Been in trouble with the police in past 12 months	7/40 (18%)	12/46 (26%)
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Mean 9th-grade grade point average Smoked cigarettes in past 30 days Used marijuana in past 30 days Used other illegal drug in past 30 days Suspended or expelled from school in past 12 months		
	Outcome	Overall RoB	Comments

Bibliographic reference	Shetgiri R, Kataoka, S, Lin H et al (2011) A randomized controlled trial of a school-based intervention to reduce violence and substance use in predominantly Latino high school students. Journal of the National Medical Association 103 (9,10) 932-940		
Risk of bias by outcome	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	
	Amount and frequency of alcohol use	High	Only outcome assessors were blinded but these outcomes were subjective. Participants and trial personnel were aware of intervention allocation.
	School attendance	Low	These outcomes were measured from school administrative data so unlikely to be affected by knowledge of allocation.
	Alcohol related risky behaviour such as unprotected or regretted sex	High	Only outcome assessors were blinded but these outcomes were subjective. Participants and trial personnel were aware of intervention allocation.
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Source of funding	Robert Wood Johnson Foundation Clinical Scholars Program and the Clinical Research Scholars Program at the University of Texas Southwestern Medical Center		
Comments	Limitations identified by authors Small sample size Baseline differences in alcohol consumption between groups with a larger amount of baseline drinkers in the control group Limitations identified by reviewer Follow up was 8 months but many of the outcome measures were for the past 12 months which would have included 4 months prior to the intervention being delivered.		

D.1.13 Sussman 1998

Bibliographic reference	**Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342**			
Study type	Randomised controlled trial (cluster)			
Study dates	1994-1995			
Aim	To evaluate a large-scale indicated drug abuse prevention program, for 'high risk' students			
Country/geographical location	USA			
Setting/School type	21 continuation high schools (alternative schools)			
Participant characteristics[ggg]	Description	2863 students considered at 'high risk'.		
			Classroom N(clusters) = 7	School as community N(clusters) = 7	Control N(clusters) = 7
	Age	Years, mean (SD)	16.7 (0.8)		
	Gender	Male (%)	62%		
		Female (%)[hhh]	38%		
	Socioeconomic status	Not reported			
	Ethnicity	White (%)	37%		
		Latino (%)	46%		
		Asian American (%)	4%		
		African American (%)	8%		
		Native American (%)	3%		
		Other (%)	2%		
	SEND	Not reported			
	Baseline drinking behaviour	Not reported			

ggg Baseline characteristics not reported by arm
hhh Calculated from male data reported

Bibliographic reference	**Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342**		
Inclusion criteria	Continuation schools		
Exclusion criteria	Atypical size (<50 or >500 students)		
Number of Participants	1074 in analyses		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P633	Project TND classroom only
	Rationale/theory/Goal	P633	Motivation-type activities - attitudinal perspective taking, stereotyping and health as a value.
	Materials used	-	Not reported
	Procedures used	P633	Health motivation, social skills and decision-making
	Provider	P633	Health educators
	Method of delivery	P634	Group
	Location	P634	Classroom
	Duration	P634	3 consecutive weeks
	Intensity	P634	9 sessions (3 x 50 mins per week)
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342		
	Actual treatment fidelity	-	Not reported
	Other details	P634	Nine project staff health educators were assigned to instruct at program schools. Each health educator was instructed in each session and practiced and observed each session before teaching. 2.5hrs of training was completed for each session.
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P634	Project TND classroom plus school-as community component
	Rationale/theory/Goal	P634	Theories that suggest that preventive effects can be obtained through encouraging students to engage in more healthful interconnections with others at the school and beyond its borders.
	Materials used	-	Not reported
	Procedures used	P634	Events covered activities such as job training, sports participation, drug-free parties, drug-awareness week etc. Weekly Associated Student Body Core Group (ASB) meetings and events
	Provider	P634	Health educators and volunteer school staff member
	Method of delivery	P634	Group
	Location	P634	Classroom and outside classroom
	Duration	P634	6 months
	Intensity	-	See Project TND classroom
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Comparison	TIDieR Checklist criteria	P634	Standard care
	Brief Name	-	Not reported
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342				
	Planned treatment fidelity	-	Not reported		
	Actual treatment fidelity	-	Not reported		
	Other details	-	Not reported		
Follow up	One year, five years				
Study Methods	Method of randomisation	Blocked randomisation based on drug use prevalence			
	Method of allocation	Not reported			
	Statistical method(s) used to analyse data	Clusters were adjusted for ITT not done ANCOVA			
	Unit of allocation	Schools			
	Unit of analysis	Individual			
	Attrition[iii]	Number of participants completing the study: 1074	Reasons for not completing the study: Not reported		
Outcomes measures and effect size.					
	Outcome	Classroom (n=375) N(clusters) = 7	School as community (n=381) N(clusters) = 7	Control (n=318) N(clusters) = 7	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported	Not reported	

iii Percentages calculated by reviewer from numbers reported

Bibliographic reference	Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342			
	Age at first experience of drunkenness where reported	Not reported	Not reported	Not reported
	Amount and frequency of alcohol use			
	[Sun 2006] Mean alcohol use in past 30 days (SD)	7.8 (18.3)	7.5 (17.2)	8.5 (20.6)
	Pooled mean (SD)[jjj]	7.65 (17.7)		
	Effective sample sizes calculated with ICC 0.01	430		181
	MD 95% CI (calculated by reviewer)	0.85 (-2.39, 4.09)		
	[Sun 2006] Alcohol users last 30 days, n (%)	217 (57.9%)	229 (60.2%)	183 (57.6%)
		Pooled 446 (59.0%)		
	Effective sample sizes calculated with ICC 0.01[kkk]	297/504		122/212
	RR 95% CI (calculated by reviewer)	1.0 (0.9, 1.1)		
	Abstinence[lll]	158 (42.1%)	152 (39.8%)	135 (42.4%)
	School attendance	Not reported	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported	Not reported
	Adverse or unintended effects			
Other outcomes measured	Outcomes for cigarettes, marijuana and hard drugs. Outcomes for years 2-3 and 4-5			
	Outcome	Overall RoB	Comments	

jjj Imputed by reviewer
kkk ICC as reported in the paper
lll Imputed by reviewer

Bibliographic reference	Sussman S, Dent CW, Stacy AW et al (1998) One-year outcomes of project towards no drug abuse. Preventative medicine 27, 632-342		
Risk of bias by outcome	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not applicable	Not applicable
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	Some concerns	Methods of allocation concealment not reported. Not clear if participants were aware of intervention allocation and used subjective outcomes. High attrition.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National institute on drug abuse		
Comments	Limitations by author: None Limitations by reviewer: None		
Additional reference	Sussman S, Sun P, McCuller W et al (2003) Project Towards no drug abuse: two year outcomes of a trial that compares health educator delivery to self-instruction. Preventive Medicine 37 155-162		
Additional reference	Sun W, Skara S, Sun P et al (2006) Project towards no drug abuse: Long-term substance use outcomes evaluation. Preventive Medicine 42 188-192		

D.1.14 Wagner 2014

Bibliographic reference	**Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139**				
Study type	Randomised controlled trial (individual)				
Study dates	Not reported				
Aim	To evaluate the efficacy of a school-based brief motivational intervention (BMI)/cognitive behavioural therapies (CBT), Guided self-change (GSC), for addressing substance use and aggressive behaviour.				
Country/geographical location	Miami, USA				
Setting/School type	High schools ranging from rural to suburban to urban (16 high schools). Recruited during assembly presentations.				
Participant characteristics	Description				
		Intervention (n=279)		Control (n=235)	
	Age	Mean years	16.14	Mean years	15.15
	Gender[mmm]	Male	162 (58%)	Male	143 (61%)
		Female	117 (42%)	Female	92 (39%)
	Socioeconomic status	Not reported		Not reported	
	Ethnicity[nnn]	White(non-Hispanic)	25 (9%)	White(non-Hispanic)	(3%)
		Hispanic	156 (56%)	Hispanic	(58%)
		African-American	58 (21%)	African-American	(25%)
		Other	42 (15%)	Other	(13%)
	SEND	Not reported		Not reported	
	Baseline drinking behaviour	Alcohol abuse	40%	Alcohol abuse	41%
		Alcohol dependence	52%	Alcohol dependence	20%

mmm Absolute numbers and female data calculated from male percentage reported.
nnn Absolute numbers calculate from percentages reported.

Bibliographic reference	**Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139**				
		Mean number of drinks/drinking days	3.27(3.50)	Mean number of drinks/drinking days	3.64 (4.05)
		Max number of drinks/drinking days	4.79 (5.39)	Max number of drinks/drinking days	4.95 (5.54)
Inclusion criteria	14-18 years of age (2) at least 6 occasions of alcohol or other drug (AOD) use in the past 90 days, as indexed by the Personal Experience Screening Questionnaire (3) at least 1 act of recreational or predatory violence in the past 90days- relational violence included hitting or threatening to hit a family member or someone outside the family; predatory violence included the use of force or strong-arms methods to obtain money or things from people, involvement in gang fights, attacking someone with the intent of seriously hurting or killing them, and carrying a hidden weapon.				
Exclusion criteria	Repeated dangerous behaviour such as drinking while driving (2) current suicidal risk as identified using the General Health Questionnaire (3) significant health problems related to drinking (eg. Withdrawal symptoms, blackouts) (4) pregnancy families, as determined by self-report (5) cognitive impairments or developmental delays, as indicated by school evaluations and educational placement				
Number of Participants	514 adolescents aged 14-18 years old (intervention n= 254, control n= 235)				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P4	Guided self-change (GSC)		
	Rationale/theory/Goal	P4	GSC is a combined brief motivational intervention (BMI) and cognitive behavioural therapies (CBT)		
	Materials used	-	Not reported		
	Procedures used	P4	GSC major treatment components include (a) weekly self-monitoring of behaviours targeted for change (b) treatment goal advice, with clients selecting their own goal (c) brief readings and homework assignments exploring high-risk situations, options and action plans (d) motivational strategies to increase clients; commitment to change, and cognitive relapse prevention procedures.		

Bibliographic reference	Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139		
	Provider	P6	5 master's degree level counsellors who initially received 2 weeks of project specific training using written session-by session treatment manuals. Role play exercises evaluated clinical competency in conducting GSC; once judged competent by the clinical supervisor, counsellors were assigned participants.
	Method of delivery	P4	One to one
	Location	P5	Each of the schools provided secure, on-site offices in which the study's one-to-one assessment and intervention sessions were conducted.
	Duration	-	Not reported
	Intensity	P4	5 sessions (1 per week)
	Tailoring/adaptation	P4	Originally developed for adults and adapted for teenagers
	Modifications	P4	GSC remained the same as the adult version, but materials were modified for this intervention as follows (a) make language, illustrations, and examples developmentally appropriate for adolescents (b) applicable to both AOD use and violence (c) address stress, coping and social skills in relation to high-risk situations.
	Planned treatment fidelity	P6	Clinical supervision meetings were conducted in order to maintain adherence and fidelity. Audio recorded with 10% of session audio recordings randomly selected and rated on a 5 point, multi-item GSC adherence scale by undergraduate assistants blind to project goals.
	Actual treatment fidelity	P6	Average adherence ratings were 4.25 (SD = 0.59)
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P6	Standard care
	Rationale/theory/Goal	P6	Education/ brief assessment/referral-only which is the standard of care in schools without a formal substance abuse or early intervention program.

Bibliographic reference	Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139		
	Materials used	-	Not reported
	Procedures used	P6	Variety of educational lessons intended to prevent the onset of AOD use and violence. With indicated students, school counsellors were available to provide brief AOD and/or violence assessments, as well as referral to outside treatment providers.
	Provider	P6	School personnel
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details		Standard care participants were assessed on the same schedule as GSC.
Follow up	Baseline, post-intervention, 3 and 6 months follow up		
Study Methods	Method of randomisation	Random number generator, qualifying participants were assignment to receive GSC (odd number) or standard care (even number).	
	Method of allocation	Not reported	

Bibliographic reference	**Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139**		
	Statistical method(s) used to analyse data	Structural equation modelling	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: n=514 Allocated to intervention (n=279), did not receive intervention (n=25) Lost to follow up intervention group (n= 58) Lost to follow up control group(n=55)	Reasons for not completing the study: Did not receive intervention: 22 withdrew from school, 1 was incarcerated, 2 enrolled in patient treatment. Lost to follow up reasons: withdrew from school and could not be reached for both groups.

Outcome Measures			
	Outcome	Intervention (n=279)	Control (n=235)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Post-Intervention assessment: Alcohol-days used	1.23 (2.23)	2.30 (2.48)
	3 months follow up: Alcohol-days used (last 30 days)	1.01 (1.62)	1.61 (1.89)
	6 months follow up: Alcohol-days used (last 30 days)	1.32 (2.45)	1.61 (1.89)
	MD 95% CI (calculated by reviewer)	-0.29 (-0.67, 0.09)	

Bibliographic reference	Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139		
	School attendance	Not reported	Not reported
	alcohol related risky behaviour such as unprotected or regretted sex		
	Post-Intervention assessment: Aggressive behaviour number of daysooo	5.08(5.36)	2.30(2.48)
	3 months follow up: Aggressive behaviour number of days (last 30 days)	3.77(7.35)	3.69(7.19)
	6 months follow up: Aggressive behaviour number of days (last 30 days)	3.95(8.40)	2.41(6.05)
	MD 95% CI (calculated by reviewer)	-1.5 (-2.83, -0.25)	
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured			
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	N/A	N/A
	Age at first experience of drunkenness where reported	N/A	N/A
	Amount and frequency of alcohol use	Some concerns	Subjective outcome. Randomisation and concealment methods not reported. No information on blinding.
	School attendance	N/A	N/A
	Alcohol related risky behaviour such as unprotected or regretted sex		

ooo Participants were provided with a definition and examples of aggressive behaviour and participants indicated the days on which they engaged in aggressive behaviour; the specific types of violent behaviour were not recorded.

Bibliographic reference	**Wagner EF, Hospital MM, Graziano JN et al (2014) A Randomised Controlled Trial of Guided Self-Change with Minority Adolescents. Journal of Consulting and Clinical Psychology 82(6) 1128-1139**		
		Some concerns	Subjective outcome. Randomisation and concealment methods not reported. No information on blinding.
	Mental health and wellbeing	N/A	N/A
	Adverse or unintended effects	N/A	N/A
Source of funding	Supported by a grant from the National Institute on Alcohol Abuse and Alcoholism.		
Comments	Each participant received $15 gift card for each completed assessment. Missing data were accommodated using the Full Information Maximum Likelihood (FIML) method. Due to sample size limitations, formal identification tests for ethnicity were conducted between Hispanics and African-Americans. Limitations: Despite being a non-treatment –seeking high school students, our sample more resembled a clinical sample than a community sample. Final assessment contact took place only 6 months post treatment. Relied entirely on self-report for measuring behaviours, potentially some bias. Sample representative of the adolescent population in the Miami-Dade county, but not very representative of the adolescent population of other counties in the US.		

D.1.15 Werch 2005

Bibliographic reference	**Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290**		
Study type	Randomised controlled trial (individual)		
Study dates	Fall of 2002		
Aim	Evaluation of alcohol brief intervention in current drinkers		
Country/geographical location	USA		
Setting/School type	Suburban high school in northeast Florida		
	Description	Students considered ‘at-risk’ because they reported using alcohol in the last year	
		Intervention (n=115)	Control (n=117)
	Age	Mean 17.01 years (SD 0.68)	

Bibliographic reference	**Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290**		
Participant characteristics[ppp]	Gender	Male 97 (41.6%)[qqq]	
		Female 135 (58.4%)	
	Socioeconomic status	Not reported	
	Ethnicity	White 122 (53.0%)	
		Black 86 (37.0%)	
		Other 21 (9.1%)	
	SEND	Not reported	
	Baseline drinking behaviour	Reported drinking in the last 30 days	140 (60.3%)
Inclusion criteria	11th and 12th grade Parental consent and youth assent		
Exclusion criteria	Did not use alcohol in the past year		
Number of Participants	232		

Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P284	Alcohol beverage-tailored programme; brief intervention
	Rationale/theory/Goal	P286	Change drinking patterns and perceptions in current drinkers
	Materials used	P285	The intervention components included a screening questionnaire, brief one-on-one alcohol risk reduction consultation, provision of prevention messages matched to 6 alcoholic drinks, take home materials (tip sheet).
	Procedures used	P285	The 5-item screening questionnaire was administered just prior to implementing risk reduction consultation. The tip sheet was mailed to the participants 1 week after the consultation.

ppp Participant characteristics not reported per group. Absolute numbers and male data calculated from female percentage reported
qqq Male data and absolute numbers calculated by reviewer from female percentages reported.

Bibliographic reference	Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290		
	Provider	P285	Trained research staff
	Method of delivery	P286	Face to face
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P285	Consultations were administered using a standardised protocol designed to provide scripted, motivational communications by a trained risk reduction interventionist.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P286	Minimal intervention control
	Rationale/theory/Goal	-	Not reported
	Materials used	P286	A brochure mailed out to control participants “Alcohol prevention teen talk: Alcohol and risky behaviours” The brochure included information about risks when under the influence of alcohol, alcohol effects on the brain, alcohol use problems, alcohol facts or fiction resources to help with an alcohol problem.

Bibliographic reference	Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290		
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	4 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	MANCOVA; Per protocol analysis	

Bibliographic reference	Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290		
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition[rrr]	Number of participants completing the study: 201 (87%; 100 intervention participants and 101 control participants)	Reasons for not completing the study: Not reported
Outcomes measures			
	Outcome	Intervention (n=100)	Control (n=101)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	30 day frequency	Estimated marginal mean (SE)	
	Beer	0.61 (0.12)	0.86 (0.12)
	Wine	0.20 (0.06)	0.16 (0.06)
	Coolers	0.52 (0.11)	0.58 (0.11)
	Fortified wine	0.05 (0.03)	0.08 (0.03)
	Distilled spirits[sss]	0.71 (0.13) SD (1.30)	0.79 (0.13) SD (1.31)
	MD 95% CI (calculated by reviewer)	-0.08 (-0.44, 0.28)	
	Malt liquor	0.10 (0.07)	0.33 (0.07)
	30 day quantity	Estimated marginal mean (SE)	
	Beer	0.74 (0.12)	0.85 (0.12)
	Wine	0.13 (0.05)	0.17 (0.05)

rrr Calculated by reviewer from percentage and number of drop outs per group reported.
sss Used in the analysis as has the highest mean values.

Bibliographic reference	Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290		
	Coolers	0.67 (0.11)	0.58 (0.11)
	Fortified wine	0.08 (0.03)	0.08 (0.03)
	Distilled spirits	0.68 (0.13)	0.77 (0.12)
	Malt liquor	0.08 (0.05)	0.24 (0.05)
	30 day heavy use	Estimated marginal mean (SE)	
	Beer	0.19 (0.06)	0.24 (0.06)
	Wine	0.02 (0.02)	0.03 (0.02)
	Coolers	0.07 (0.05)	0.14 (0.05)
	Fortified wine	0.00 (0.00)	0.00 (0.00)
	Distilled spirits	0.17 (0.07)	0.29 (0.07)
	Malt liquor	0.04 (0.05)	0.13 (0.05)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Alcohol risk factors		
Risk of bias by outcome	Outcome	Overall RoB	Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA	
	Age at first experience of drunkenness where reported	NA	

Bibliographic reference	**Werch C, Jobli E, Moore ML et al (2005) A brief experimental alcohol beverage-tailored program for adolescents. Journal of studies on alcohol 66(2) 284-290**		
	Amount and frequency of alcohol use	Some concerns	No information provided on blinding. There is a possibility of contamination too.
	School attendance	NA	
	Alcohol related risky behaviour such as unprotected or regretted sex	NA	.
	Mental health and wellbeing	NA	
	Adverse or unintended effects	NA	
Source of funding	National Institute on Alcohol Abuse and Alcoholism grant		
Comments	Limitations identified by authors Small sample so may be unable to generalise to other student populations. Short follow up. Limitations identified by reviewer Potential for intervention contamination as sample was from a single school. Other comments Incentives for participation included gift certificates, sweets and $10 for each data collection. The 75-item High Potency Alcohol Beverage Youth survey was used to collect data on beverage-specific alcohol consumption and risk factors.		

D.1.16 Winters 2007

Bibliographic reference	**Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254**
Study type	Randomised controlled trial (individual)
Study dates	Not reported
Aim	To evaluate the use of 2 brief interventions to reduce drug use among 14 to 17 year olds
Country/geographical location	USA not reported but assumed from study information)

Bibliographic reference	**Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254**				
Setting/School type	Urban public school system				
Participant characteristics[ttt]	Description	78 students identified as being possible drug users			
			Intervention BI-A (n=26)	Intervention BI-AP (n= 26)	Control (n=26)
	Age	Mean, years	15.4	15.8	15.5
	Gender	Male	16 (62%)	15 (58%)	17 (67%)
		Female	10 (38%)	11 (42%)	9 (33%)
	Socioeconomic status	Not reported			
	Ethnicity	White	21 (81%)	21 (79%)	22 (83%)
		Non white	5 (19%)	5 (21%)	4 (17%)
	SEND	Not reported			
	Baseline drinking behaviour[uuu] (Timeline Followback, TLFB)	Mean no. of alcohol use days	5.9	5.4	6.2
		Mean no. of alcohol binge days (5+ drinks per occasion for males, 4+ drinks per occasion for females)	2.4	2.1	2.3
Inclusion criteria	All students who presented for a chemical assessment were screened if the student was caught with drugs during school, caught with drugs in possession or referred by a teacher over concerns of drug use. They were eligible for the study if: Aged between 13 and 17 years of age Met diagnostic criteria for DSM-IV substance use disorder Assent (student) and consent (parent) provided				

ttt Absolute numbers calculated by reviewer from percentages reported
uuu Standard deviations not reported

Bibliographic reference	**Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254**		
Exclusion criteria	Met diagnostic criteria for DSM-IV substance dependence disorder Taking part in another drug treatment program Were perceived to need more intensive services		
Number of Participants	78 (Intervention BI-A n=26; intervention BI-AP n=26; control n=26)		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P251	BI-A - Brief intervention for adolescents only
	Rationale/theory /Goal	P249	Motivational enhancement and cognitive behavioural therapy
	Materials used	P251	Session 1 focused on drawing out information about the student's substance use and related consequences, evaluating the level of willingness to change. Students could choose to follow abstinence or reduce substance use goals. Session 2 focused on reviewing progress and identifying barriers to achieving goals.
	Procedures used	P251	Individual sessions delivered using a motivational interviewing style
	Provider	P251	Therapists
	Method of delivery	P251	Individual
	Location	P251	Conducted in the school typically at the end of the school day. Assessment interviews were carried out at baseline and at each follow up in person by an experience research assistant.
	Duration	P251	60 minutes
	Intensity	P251	Two sessions
	Tailoring/adaptation	-	Not reported

Bibliographic reference	Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254		
	Modifications	-	Not reported
	Planned treatment fidelity	P251	Treatment integrity was monitored through weekly supervision meetings, checklists of essential components and audiotape reviews of each session.
	Actual treatment fidelity	-	Not reported
	Other details	P251	The two therapists who delivered the intervention had experience in delivering structured treatment to substance abusers in a school setting.
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P251	BI-AP Brief intervention for adolescents and parents
	Rationale/theory/Goal	P249	Motivational enhancement and cognitive behavioural therapy
	Materials used	P251	Session 1 and 2 was exactly the same as BI-A. Session 3 involved the same MI style aimed at parents informed by an integrative behavioural and family therapy approach.
	Procedures used	P251	Individual sessions delivered using a motivational interviewing style
	Provider	P251	Therapists
	Method of delivery	P251	Individual
	Location	P251	Conducted in the school typically at the end of the school day. Assessment interviews were carried out at baseline and at each follow up in person by an experience research assistant.
	Duration	P251	60 minutes
	Intensity	P251	Two sessions for adolescents, 1 session for parents
	Tailoring/adaptation	-	Not reported

Bibliographic reference	Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254		
	Modifications	-	Not reported
	Planned treatment fidelity	P251	Treatment integrity was monitored through weekly supervision meetings, checklists of essential components and audiotape reviews of each session.
	Actual treatment fidelity	-	Not reported
	Other details	P251	The two therapists who delivered the intervention had experience in delivering structured treatment to substance abusers in a school setting.
Comparison	Name/Type	Assessment only control	
	Focus	N/A	
	Providers/deliverers	An experienced research assistant conducted the assessment interviews as per the intervention groups.	
	Method of delivery	N/A	
	Length	N/A	
	Duration	N/A	
	Intensity	N/A	
	Other details	N/A	
	Treatment fidelity	N/A	
Follow up	1 month and 6 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	

Bibliographic reference	Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254			
	Statistical method(s) used to analyse data	Repeated measures analysis of variance.		
	Unit of allocation	Individual		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 77/78 (99%)vvv (1 person missing from control group only)	Reasons for not completing the study: Did not complete the 1 month or 6 months assessments so was excluded from the analysis.	
Outcomes measures				
	Outcome	Intervention BI-A (n=26)	Intervention BI-AP (n=26)	Control (n=25)
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported	Not reported
	Age at first experience of drunkenness where reported	Not reported	Not reported	Not reported
	Amount and frequency of alcohol use			
	No. of alcohol use days (6 months), Mean (SD)	4.5 (0.9)	3.8 (1.2)	5.7 (1.1)
	Pooled mean (SD) for both interventions	4.15 (1.06)		
	MD 95% CI (calculated by reviewer)	-1.56 (-2.07, -1.02)		
	No. of alcohol binge days (6 months), Mean (SD)	1.8 (1.0)	1.2 (0.9)	2.4 (1.4)
	School attendance	Not reported	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported	Not reported

vvv Percentage calculated by reviewer

Bibliographic reference	Winters KC and Leitten (2007) Brief Intervention for drug-abusing adolescents in a school setting. Psychology and Addictive Behaviours 21(2)249-254			
	Mental health and wellbeing			
	Personal consequences scale (PCS) [11-item self-report scale focusing on negative consequences; score 1 for strongly disagree to 4 for strongly agree. Range 1-44 points], Mean (SD)	11.7 (1.6)	11.3 (1.2)	13.9 (2.1)
	Adverse or unintended effects	Not reported	Not reported	Not reported
Other outcomes measured	Number of illicit drug use days. 1 month outcomes not reported.			
Risk of bias by outcome	Outcome	Overall RoB		Comments
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	NA		
	Age at first experience of drunkenness where reported	NA		
	Amount and frequency of alcohol use	Some concerns		No information provided on blinding. There is a possibility of contamination too.
	School attendance	NA		
	Alcohol related risky behaviour such as unprotected or regretted sex	NA		.
	Mental health and wellbeing	NA		
	Adverse or unintended effects	NA		
Source of funding	Robert Wood Johnson Foundation Grant and National Institute of Drug Abuse Grant			
Comments				

Appendix E: Forest plots

No forest plots were made in this guideline as the results could not be pooled.

Appendix F:GRADE tables

F.1.1 Age at first use

No data reported

F.1.2 Age at first experience of drunkenness

No data reported

F.1.3 Amount and frequency of alcohol use

F.1.3.1 Alcohol use

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted intervention [h]	Control	Relative (95% CI)	Absolute	Quality
Alcohol use (follow-up 4-12 months[a]; assessed with: Self-report measures[c])											
Conrod 2006 McCambridge 2008 Shetgiri 2011 Sussman 1998 O'Leary Barrett 2010	RCT RCT RCT cRCT cRCT	Very serious [d]	N/A[e]	No serious indirectness[f]	Serious[g]	None	129/166 101/164 6/40 297/504 348/696	113/131 97/162 10/46 122/212 263/463	RR 0.9 (0.8, 1.0)[i] OR 1.41 (0.86, 2.33)[j] RR 0.7 (0.3, 1.7) [i] aRR 1.0 (0.9, 1.1)[k] aOR 0.6 (0.4, 0.8)[l]		VERY LOW

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted intervention [h]	Control	Relative (95% CI)	Absolute	Quality
Lammers 2015	cRCT						185/343	219/356	aOR 0.99 (0.86, 1.14)[j]		
Newton 2016	cRCT						40/137	49/204	aRR 1.2 (0.9, 1.7)[k]		

(a) Outcome measures varied in follow-up (4-12 months) and how they were measured. Alcohol use was measured as use in the last month, last 4 months, last 8 months or last 12 months.

(b) Interventions given in studies varied (e.g. delivered to individuals or a group)

(c) Outcomes were self-reported by participants and were not objective.

(d) Two studies judged at a high risk of bias due to participants being aware of intervention allocation with a subjective outcome. Three studies did not provide enough information on allocation concealment so were rated with some concerns. Two studies judged as having a low risk of bias.

(e) Studies were could not be pooled so unable to measure inconsistency.

(f) Studies meet eligibility criteria in protocol.

(g) All 95% confidence intervals cross the line of no effect.

(h) For cluster RCTs effective sample sizes have been calculated by the reviewer.

(i) RR calculated by reviewer

(j) OR as reported in the paper

(k) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC in paper.

(l) RR calculated by reviewer using effective samples sizes to adjust for clustering. Use average ICC from published ICCs in other studies in this outcome.

F.1.3.2 Mean alcohol frequency

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions	Control	Relative (95% CI)	Absolute	Quality
Mean alcohol frequency (follow-up 4-12 months[a]; measured with: Self-reported measures[c])											
Werch 2005	RCT	Serious[d]	N/A[e]	no serious indirectness[f]	Serious[g]	none	100	101	MD -0.08 (-0.44, 0.28)[i]		LOW
Winters 2007	RCT						52	25	MD -1.56 (-2.07, -1.02)[i]		
McCambridge 2008	RCT						164	162	MD 0.45 (-1.19, 2.09)[j]		
Wagner 2014	RCT						279	235	MD -0.29 (-0.67, 0.09)[i]		
Hallgren 2010	cRCT						326[h]	287[h]	aMD 0.13 (-0.00, 0.26)[k]		
Sussman 1998	cRCT						430[h]	181[h]	aMD 0.85 (-2.39, 4.09)[k]		
30 day alcohol use (follow up 12 months; measured with: Self-reported measures											
Clark 2010	cRCT	Serious[l]	N/A[e]	no serious indirectness[f]	very serious[m]	none	Not reported	Not reported	Intervention group Mean 1.25 (SD = 1.39) Control Mean 1.27 (SD = 1.44)	Not reported	VERY LOW

(a) Outcome measures varied in follow-up (4-12 months) and how they were measured. Alcohol frequency was measured as frequency per week, in the last month or the last 6 months.

(b) Interventions given in studies varied (e.g. delivered to individuals or a group)

(c) Outcomes were self-reported by participants and were not objective.

(d) Some studies did not provide enough information on allocation concealment where subjective outcomes are reported so were rated with some concerns. One study judged to have a low risk of bias.

(e) Studies were could not be pooled so unable to measure inconsistency.

(f) Studies meet eligibility criteria in protocol.
(g) Most 95% confidence intervals cross the line of no effect.
(h) For cluster RCTs effective sample sizes have been calculated by the reviewer.
(i) MD calculated by reviewer
(j) MD in change from baseline as reported in the paper
(k) MD calculated by reviewer using effective samples sizes to adjust for clustering. Use average ICC from published ICCs in other studies for a similar outcome.
(l) Study did not describe randomisation methods or allocation concealment for subjective outcomes
(m) Mean differences not reported. Not possible to assess imprecision

F.1.3.3 Binge drinking

Quality assessment							No of participants		Effect		
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions[g]	Control[g]	Relative (95% CI)	Absolute	Quality
Binge drinking (follow-up 4-12 months[a]; assessed with: Self-reported measures[b])											
Conrod 2006 O'Leary-Barrett 2010 Lammers 2015 Newton 2016	RCT cRCT cRCT cRCT	Serious[c]	N/A[d]	no serious indirectness [e]	serious [f]	none	70/166 173/696 147/343 11/82	79/131 131/463 175/356 14/121	RR 0.7 (0.6, 0.9)[h] aOR 1.0 (0.6, 1.4)[i] aOR 1.05 (0.99, 1.11)[i] aRR 1.25 (0.7, 2.1)[j]		LOW

(a) Outcome measures varied in follow-up (4-12 months) and how they were measured. Binge drinking was measured as prevalence in the last month, last 4 months, last 6 months or last 12 months.
(b) Outcomes were self-reported by participants and were not objective.
(c) Some studies did not provide enough information on allocation concealment so were rated with some concerns as outcomes were self-reported.
(d) Studies were could not be pooled so unable to measure inconsistency.
(e) Studies meet eligibility criteria in protocol.
(f) Most 95% confidence intervals cross the line of no effect.

(g) For cluster RCTs effective sample sizes have been calculated by the reviewer.
(h) RR calculated by reviewer
(i) OR as reported in the paper
(j) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC in paper.

F.1.3.4 Mean alcohol consumption

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions	Control	Relative (95% CI)	Absolute	Quality
Mean alcohol consumption (follow-up 2-12 months[a]; measured with: Self-reported measures[c])											
McCambridge 2008 Armitage 2014 Newbury-Birch 2014	RCT RCT cRCT	Serious[d]	N/A[e]	no serious indirectness[f]	no serious imprecision[g]	none	164 32 81[h]	162 35 31[h]	MD 3.51 (-0.48, 7.5)[j] MD -0.3 (-1.10, 0.48)[i] aMD -7.0 (-18.6, 4.63)[k]		MODERATE

(a) Outcome measures varied in follow-up (2-12months) and how they were measured. Alcohol consumption was measured as amount consumed per day, in the last week or the last month.
(b) Interventions given in studies varied (e.g. motivational interviewing or questionnaire-based)
(c) Outcomes were self-reported by participants and were not objective.
(d) One study judged at a high risk of bias due to participants being aware of intervention allocation with a subjective outcome One study did not provide enough information on allocation concealment where subjective outcomes are reported so was rated with some concerns. One study rated as having a low risk of bias.
(e) Studies were could not be pooled so unable to measure inconsistency.
(f) Studies meet eligibility criteria in protocol.
(g) Most 95% confidence intervals cross the line of no effect.

(h) For cluster RCTs effective sample sizes have been calculated by the reviewer.
(i) MD calculated by reviewer
(j) MD in change scores as reported in the paper
(k) MD calculated by reviewer using effective samples sizes to adjust for clustering. Use average ICC from published ICCs in other studies for a similar outcome

F.1.3.5 Mean alcohol quantity/frequency

Quality assessment							No of participants		Effect		
Studies[b]	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**School-based targeted interventions**	**Control**	**Relative (95% CI)**	**Absolute**	**Quality**
Mean alcohol quantity/frequency (follow-up 6-12 months[a]; measured with: Self-reported measures[c])											
Conrod 2011	RCT	Serious[d]	N/A[e]	no serious indirectness[f]	Serious[g]	none	190	157	Intervention Log mean 0.53 (SD = 0.32) Control Log mean 0.59 (SD 0.35)		LOW
O'Leary-Barrett 2010	cRCT	Serious[d]	N/A[e]	no serious indirectness[f]	Serious[g]	none	696	463	Intervention Log mean 0.30 (SD = 0.33) Control Log mean 0.34 (SD = 0.33)		LOW

(a) Outcome measures varied in follow-up (6-12 months) and how they were measured. Alcohol quantity x frequency was measured for the last 6 months or last 12 months.
(b) Interventions given in studies varied in who delivered them (e.g. qualified therapists or school teachers)
(c) Outcomes were self-reported by participants and were not objective.
(d) Studies did not provide enough information on allocation concealment where subjective outcomes are reported so were rated with some concerns.
(e) Studies were could not be pooled so unable to measure inconsistency.
(f) Studies meet eligibility criteria in protocol.

(g) All 95% confidence intervals cross the line of no effect.

F.1.4 School attendance

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions	Control	Relative (95% CI)	Absolute	Quality
Absence from school (follow-up 6-8 months[a]; assessed with: School Register and self-reported measure[c])											
Castellanos 2006 Shetgiri 2011	RCT RCT	Serious[d]	N/A[e]	no serious indirectness[f]	serious imprecision[g]	none	57/224 17/40	56/199 10/46	RR 0.4 (0.3, 0.7)[h] RR 2.0 (1.0, 3.8)[h]		LOW

(a) Outcome measures varied in follow-up (6-8 months) and how they were measured. Absence from school was measured as occurrences of the last 6 months or last 12 months.

(b) Population and interventions given in studies varied (e.g. Latino high school students and UK secondary school students; individuals or group interventions)

(c) Outcomes were self-reported by participants and were not objective in one study (Castellanos 2006) but recorded on a school register.

(d) One study judged as having some concerns due to participants being aware of intervention allocation but had an objective outcome. The other study did not provide enough information on allocation concealment so was rated with some concerns due to the subjective outcome.

(e) Studies were could not be pooled so unable to measure inconsistency.

(f) Studies meet eligibility criteria in protocol.

(g) One 95% confidence interval cross the line of no effect.

(h) RR calculated by reviewer

F.1.5 Alcohol-related risky behaviours

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions	Control	Relative (95% CI)	Absolute	
Been in a fight (follow-up 8 months; assessed with: Self-reported measures[a])											
Shetgiri 2011	RCT	very serious[b]	N/A[c]	no serious indirectness[d]	Serious[e]	none	9/40	12/46	RR 0.9 (0.4, 1.8) [g]		VERY LOW
Aggressive behaviour (follow-up 6 months; measured with: Self-reported measures[a])											
Wagner 2014	RCT	Serious[f]	N/A[c]	no serious indirectness[d]	No serious imprecision[h]	none	279	235	MD -1.5 (-2.83, -0.25)		MODERATE
Unprotected sex (follow-up 6 months; assessed with: Self-reported measures[a])											
Castellanos 2006	RCT	serious[f]	N/A[c]	no serious indirectness[d]	Serious[e]	none	18/224	14/199	RR 1.0 (0.5, 2.1) [g]		LOW

(a) Participants were aware of intervention allocation. Outcomes were self-reported by participants and were not objective
(b) Study judged to be high risk of bias due to participants and all trial personnel being aware of intervention allocation with subjective outcomes Single study.
(c) Single study so inconsistency not applicable.
(d) Studies meet eligibility criteria in protocol
(e) 95% CI crosses the line of no effect.
(f) Study did not provide enough information on allocation concealment for subjective outcomes
(g) Relative risk calculated by reviewer
(h) 95% CI does not cross the line of no effect

F.1.6 Mental health and wellbeing

Quality assessment							No of participants		Effect		
Studies[b]	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	School-based targeted interventions	Control	Relative (95% CI)	Absolute	Quality
Problem drinking (follow-up 4-6 months[a]; measured with: Self-reported measures[c])											
Conrod 2011	RCT	Serious[d]	N/A[e]	no serious indirectness[f]	serious[g]	none	188	155	Intervention Log mean 0.25 (SD = 0.27) Control Log Mean 0.30 (SD = 0.29)		LOW
O'Leary-Barrett 2010	cRCT	Serious[d]	N/A[e]	no serious indirectness[f]	serious[g]	none	696	463	Intervention Log mean 0.92 (SD = 0.13) Control Log mean 0.99 (SD = 0.14)		LOW
Alcohol related harms (follow-up 12 months; assessed with: Self-reported measures)											
Newton 2016	cRCT	Serious[d]	N/A[h]	no serious indirectness[f]	serious[i]	none	48/82	53/121	aRR 1.3 (1.0, 1.8)[k]		LOW
Panic attacks (follow-up 6 months; assessed with: Self-reported measures)											
Castellanos 2006	RCT	Serious[d]	N/A[h]	no serious indirectness[f]	serious[i]	none	44/224	58/199	RR 0.7 (0.5, 0.9)[j]		LOW
Depression symptoms (follow-up 6 months; measured with: Self-reported measures; Better indicated by lower values)											
Castellanos 2006	RCT	Serious[d]	N/A[h]	no serious indirectness[f]	serious[i]	none	224	199	MD 1.2 (-0.21, 2.61)[l]	Not reported	LOW

(a) Outcome measures varied in follow-up (4-12months) and how they were measured. Problem drinking was measured as occurrences in the last 6 months or last 12 months.

(b) Interventions given in studies varied in who delivered them (e.g. qualified therapists or school teachers)
(c) Outcomes were self-reported by participants and were not objective.
(d) Studies did not provide enough information on allocation concealment where subjective outcomes are reported so were rated with some concerns.
(e) Studies were could not be pooled so unable to measure inconsistency.
(f) Studies meet eligibility criteria in protocol.
(g) All 95% confidence intervals cross the line of no effect.
(h) Single study so inconsistency is not applicable
(i) Not possible to check imprecision as data not reported.
(j) RR calculated by reviewer
(k) ARR and number of events /sample size calculated by reviewer using average ICC for similar studies
(l) MD calculated by reviewer.

F.1.7 Adverse or unintended effects

No data reported

F.1.8 Grade CERQUAL: Acceptability

Summary of review finding	Studies contributing to the review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Acceptability of intervention 1: Intervention 1 was found to be mostly acceptable. The calorie-focused content resulted in	Newbury-Birch 2014	Minor methodological limitations	Not applicable as one study included	Serious concerns about adequacy (only 1 study so data is limited)	No concerns about relevance	Moderate confidence

Summary of review finding	Studies contributing to the review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
mixed views from both young people and learning mentors.						
Acceptability of intervention 2: Parents who did engage in intervention 2 found the intervention to be acceptable, but most young people and their parents who were offered did not participate in this intervention. Parents and young people did not express a desire to engage in this intervention or a benefit from doing so. Learning mentors, parents and young people questioned the utility of an intervention which they believed	Newbury-Birch 2014	Minor methodological limitations	Not applicable as one study included	Serious concerns about adequacy (only 1 study so data is limited)	No concerns about relevance	Moderate confidence

Summary of review finding	Studies contributing to the review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
was not engaging the 'right' people.						

Appendix G: Economic evidence study selection

See separate document on cost-effectiveness review..

Appendix H: Health economic evidence profiles

See separate document on cost-effectiveness review.

Appendix I: Health economic analysis

See separate document on cost-effectiveness review.

Appendix J: Excluded studies

Public Health studies

Study	Reason for exclusion
1. Agabio Roberta; Trincas Giuseppina; Floris Francesca; Mura Gioia; Sancassiani Federica; Angermeyer Matthias C, A Systematic Review of School-Based Alcohol and other Drug Prevention Programs, Clinical practice and epidemiology in mental health : CP & EMH, 11, suppl1m6, 102-12, 2015	Systematic review. Used as source for RCTs only
2. Allara E; Angelini P; Gorini G; Bosi S; Carreras G; Gozzi C; Martini A; Tamelli M; Storani S; Faggiano F, A prevention program for multiple health-compromising behaviors in adolescence: baseline results from a cluster randomized controlled trial, Preventive medicine, 71, 20-26, 2015	Baseline data only
3. Allen Debby; Coombes Lindsey; Foxcroft David R, Cultural accommodation of the Strengthening Families Programme 10-14: UK Phase I study, Health education research, 22, 4, 547-60, 2007	Cultural adaptation of US programme for UK application. Comments only on US version but UK version included in the review.
4. Arnaud N; Baldus C; Elgan T H; Tonnesen H; De Paepe; N; Csemy L; Thomasius R, Moderators of outcome in a web-based substance use intervention for adolescents, Sucht, 61, 6, 377-387, 2015	Not school-based intervention
5. Baldus Christiane; Thomsen Monika; Sack Peter-Michael; Bröning Sonja; Arnaud Nicolas; Daubmann Anne; Thomasius Rainer, Evaluation of a German version of the Strengthening Families Programme 10-14: a randomised controlled trial, European Journal of Public Health, 26, 6, 953-959, 2016	Not school based
6. Balvig Flemming; Holmberg Lars, The Ripple Effect: A Randomized Trial of a Social Norms Intervention in a Danish Middle School Setting, Journal of	No outcomes of interest. Perceptions of alcohol only

Study	Reason for exclusion
Scandinavian Studies in Criminology & Crime Prevention, 12, 1, 3, 2011	
7. Barrett Emma L; Newton Nicola C; Teesson Maree; Slade Tim; Conrod Patricia J, Adapting the personality-targeted Preventure program to prevent substance use and associated harms among high-risk Australian adolescents, Early intervention in psychiatry, 9, 4, 308-15, 2015	No qualitative data reported
8. Beatty Shelley E; Cross Donna S; Shaw Therese M, The impact of a parent-directed intervention on parent-child communication about tobacco and alcohol, Drug and alcohol review, 27, 6, 591-601, 2008	Intervention was in parents of school children not the children themselves
9. Bell RM; Ellickson PL; Harrison ER, Do drug prevention effects persist into high school? How project ALERT did with ninth graders., Preventive medicine, 22, 4, 463-83, 1993	no usable data reported
10. Berridge Bonita J; Cheetham Ali; McKay-Brown Lisa; Lubman Dan I, Improving help-seeking among adolescents: A school-based intervention, Australian and New Zealand Journal of Psychiatry, 49, 10, 945-946, 2015	Letter
11. Bobrowski KJ; Pisarska A; Staszewski KO; Borucka A, Effectiveness of alcohol prevention program for pre-adolescents., Psychiatria polska, 48, 3, 527-39, 2014	Article in Polish
12. Bodin MC; Strandberg AK, The Orebro prevention programme revisited: a cluster-randomized effectiveness trial of programme effects on youth drinking., Addiction (Abingdon, England), 106, 12, 2134-43, 2011	Intervention delivered to parents not children
13. Boendermaker, W. J.; Veltkamp, R. C.; Peeters, M., Training Behavioral Control in Adolescents Using a Serious Game, Games for health journal, 6, 6, 351-357, 2017	Study has active comparators only
14. Bonell, C.; Allen, E.; Warren, E.; McGowan, J.; Bevilacqua, L.; LeGood, R.; Wiggins, M.; Mathiot, A.; Fletcher, A.; Scott, S.; et al., A multi-component school environment intervention reduces bullying and risky behaviour and improves mental health and quality of life: findings from the inclusive cluster	Abstract only

Study	Reason for exclusion
randomized controlled trial, Journal of adolescent health. Conference: society for adolescent health and medicine annual meeting 2018. United states, 62, 2supplement1, 9, 2018	
15. Botvin Gilbert J; Griffin Kenneth W, Life skills training: preventing substance misuse by enhancing individual and social competence, New directions for youth development, 2014, 141, 57-11, 2014	Non-RCT
16. Botvin Gilbert J; Griffin Kenneth W, School-based programmes to prevent alcohol, tobacco and other drug use, International review of psychiatry (Abingdon, England), 19, 6, 607-15, 2007	Systematic review. Used as source for RCTs only
17. Botvin GJ Schinke, S. P; Epstein J A; Diaz T, Effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority youths., Psychology of Addictive Behaviors, 8, 116-127, 1994	No outcomes of interest Active comparator,
18. Botvin GJ; Baker E; Filazzola AD; Botvin EM, A cognitive-behavioral approach to substance abuse prevention: one-year follow-up., Addictive behaviors, 15, 1, 47-63, 1990	No usable data
19. Botvin GJ; Schinke SP; Epstein JA, Effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority adolescents: Two-year follow-up results., Psychology of Addictive Behaviors, 9, 3, 183-194, 1995	Active comparator only
20. Brody Gene H; Yu Tianyi; Chen Yi-fu; Kogan Steven M; Smith Karen, The Adults in the Making Program: Long-Term Protective Stabilizing Effects on Alcohol Use and Substance Use Problems for Rural African American Emerging Adults, Journal of Consulting and Clinical Psychology, 80, 1, 17-28, 2012	Not school-based
21. Broning Sonja; Kumpfer Karol; Kruse Katja; Sack Peter-Michael; Schaunig-Busch Ines; Ruths Sylvia; Moesgen Diana; Pflug Ellen; Klein Michael; Thomasius Rainer, Selective prevention programs for children from substance-	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
affected families: A comprehensive systematic review, Substance Abuse Treatment, Prevention, and Policy, 7, 2012	
22. Brooks S G, School-based substance abuse prevention: An initial review of the red ribbon certified schools program, Journal of Global Drug Policy and Practice, 7, 4, 1-28, 2013	Non-RCT
23. Bukstein O G, Personality-targeted interventions delivered by teachers may be effective at reducing alcohol use, Evidence-Based Mental Health, 16, 4, 100, 2013	Commentary
24. C Mason WA; Kosterman R; Haggerty KP; Hawkins JD; Redmond C; Spoth RL; Shin, Gender moderation and social developmental mediation of the effect of a family-focused substance use preventive intervention on young adult alcohol abuse., Addictive behaviors, 34, 599-605, 2009	Family-focused intervention only.
25. Cairns Georgina; Purves Richard; McKell Jennifer, Combining school and family alcohol education: A systematic review of the evidence, Health Education, 114, 6, 451-472, 2014	Systematic review. Used as source for RCTs only
26. Caplan M; Weissberg RP; Grober JS; Sivo PJ; Grady K; Jacoby C, Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use., Journal of consulting and clinical psychology, 60, 1, 56-63, 1992	No alcohol outcomes
27. Caria Maria Paola; Faggiano Fabrizio; Bellocco Rino; Galanti Maria Rosaria, The influence of socioeconomic environment on the effectiveness of alcohol prevention among European students: a cluster randomized controlled trial, BMC public health, 11, 312, 2011	Post-hoc analysis of Faggiano 2008. No usable data
28. Caria MP; Faggiano F; Bellocco R; Galanti MR, Effects of a school-based prevention program on European adolescents' patterns of alcohol use., The Journal of adolescent health : official publication of the Society for Adolescent Medicine, 48, 2, 182-8, 2011	Post-hoc analysis of Faggiano 2008. No usable data
29. Carlson Joan M; Agley Jon; Gassman Ruth A; McNelis Angela M; Schwindt Rhonda; Vannerson Julie; Crabb David;	University students

Study	Reason for exclusion
Khaja Khadija, Effects and durability of an SBIRT training curriculum for first-year MSW students, Journal of Social Work Practice in the Addictions, 17, 12, 135-149, 2017	
30. Carney Tara; Myers Bronwyn J; Louw Johann; Okwundu Charles I, Brief school-based interventions and behavioural outcomes for substance-using adolescents, Cochrane Database of Systematic Reviews, , 1, 2016	Systematic review. Used as source for RCTs only
31. Champion K E; Newton N C; Teesson M, Prevention of alcohol and other drug use and related harm in the digital age: What does the evidence tell us?, Current Opinion in Psychiatry, 29, 4, 242-249, 2016	Systematic review. Used as source for RCTs only
32. Chapman Meredith K, Risky sex and alcohol-related behaviors and cognitions in adolescents: Evaluating a values-based intervention, Dissertation Abstracts International: Section B: The Sciences and Engineering, 78, 12be, no-specified, 2018	Mostly college students. Results-High school student's data not disaggregated.
33. Chou CP; Montgomery S; Pentz MA; Rohrbach LA; Johnson CA; Flay BR; MacKinnon DP, Effects of a community-based prevention program on decreasing drug use in high-risk adolescents., American journal of public health, 88, 6, 944-8, 1998	Universal intervention for high risk groups only
34. Clark H K; Ringwalt C L; Hanley S; Shamblen S R, Project ALERT's effects on adolescents' prodrug beliefs: A replication and extension study, Health Education and Behavior, 37, 3, 357-376, 2010	No outcomes of interest
35. Clayton RR; Cattarello AM; Johnstone BM, The effectiveness of Drug Abuse Resistance Education (project DARE): 5-year follow-up results., Preventive medicine, 25, 3, 307-18, 1996	No outcomes of interest
36. Colby, Suzanne M.; Orchowski, Lindsay; Magill, Molly; Murphy, James G.; Brazil, Linda A.; Apodaca, Timothy R.; Kahler, Christopher W.; Barnett, Nancy P., Brief Motivational Intervention for Underage Young Adult Drinkers: Results from a Randomized Clinical Trial, Alcoholism: Clinical & Experimental Research, 42, 7, 1342-1351, 2018	Not school-based

Study	Reason for exclusion
37. Collier Crystal; Henriksen Richard C, Teachers' Perceptions of a Multiple High-Risk Behavior Prevention Program and Delivery of Universal Programming, Qualitative Report, 17, 19, 2012	Not generalisable to the UK setting
38. Connell AM; Dishion TJ; Yasui M; Kavanagh K, An adaptive approach to family intervention: linking engagement in family-centered intervention to reductions in adolescent problem behavior., Journal of consulting and clinical psychology, 75, 4, 568-79, 2007	Combined universal and targeted interventions
39. Conrod Pj; Castellanos N; Mackie C, Personality-targeted interventions delay the growth of adolescent drinking and binge drinking, Journal of child psychology and psychiatry, and allied disciplines, 49, 2, 181-190, 2008	Duplicate
40. Conrod Pj; O'Leary-Barrett M; Newton N; Topper L; Castellanos-Ryan N; Mackie C, The adventure trial: two-year outcomes and moderators of personalitytargeted interventions for adolescent alcohol misuse, Alcoholism, clinical and experimental research, 37, 298a, 2013	Conference abstract
41. Conrod Pj; Stewart Sh; Comeau N; Maclean Am, Efficacy of cognitive-behavioral interventions targeting personality risk factors for youth alcohol misuse, Journal of clinical child and adolescent psychology, 35, 4, 550-563, 2006	Duplicate
42. Coombes L; Allen D; Foxcroft D; Guydish J, Motivational interviewing for the prevention of alcohol misuse in young people, Cochrane Database of Systematic Reviews, , 2, cd007025, 2008	Systematic review. Used as source for RCTs only
43. Copeland A L; Williamson D A; Kendzor M S; Businelle C J; Rash M K; Patterson S M, A School-Based Alcohol, Tobacco, and Drug Prevention Program for Children: The Wise Mind Study, Cognitive Therapy and Research, 34, 6, 522-532, 2010	Participants age falls outside of inclusion criteria
44. Cronce Jessica M; Bittinger Joyce N; Liu Junny; Kilmer Jason R, Electronic Feedback in College Student Drinking Prevention and Intervention, Alcohol research : current reviews, 36, 1, 47-62, 2014	Review article

Study	Reason for exclusion
45. Cummings M; Whitlock A; Draper M; Renschler L; Bastian K; Cox C C; Visker J D, "all Stars" for at-risk middle school students in an afterschool setting: A pilot program, Journal of Substance Use, 19, 6, 444-447, 2014	Non-RCT
46. D'Amico Ej; Houck Jm; Hunter Sb; Miles Jn; Osilla Kc; Ewing Ba, Group motivational interviewing for adolescents: change talk and alcohol and marijuana outcomes, Journal of consulting and clinical psychology, 83, 1, 68-80, 2015	No school based programme
47. Davies Emma L; Matley Fiona A. I, Research on school-based interventions needs more input from teachers, Education & Health, 35, 3, 14-16, 2017	Non RCT
48. Davis Jp; Houck Jm; Rowell Ln; Benson Jg; Smith Dc, Brief Motivational Interviewing and Normative Feedback for Adolescents: change Language and Alcohol Use Outcomes, Journal of substance abuse treatment, 65, 66-73, 2016	Active comparator only
49. Dawson Anneka, Talk About Alcohol: Evaluating a secondary school intervention, British Journal of School Nursing, 8, 9, 455-456, 2013	Review article
50. Dent CW; Sussman S; Stacy AW, Project Towards No Drug Abuse: generalizability to a general high school sample., Preventive medicine, 32, 6, 514-20, 2001	No extractable data
51. Dietrich Timo; Rundle-Thiele Sharyn; Schuster Lisa; Connor Jason P, A systematic literature review of alcohol education programmes in middle and high school settings (2000-2014), Health Education, 116, 1, 50-68, 2016	Systematic review. Used as source for RCTs only
52. Donaldson SI; Graham JW; Piccinin AM; Hansen WB, Resistance-skills training and onset of alcohol use: evidence for beneficial and potentially harmful effects in public schools and in private Catholic schools., Health psychology : official journal of the Division of Health Psychology, American Psychological Association, 14, 4, 291-300, 1995	No outcomes of interest
53. Donaldson SI; Thomas CW; Graham JW; Au JG; Hansen WB, Verifying drug abuse prevention program effects using reciprocal best friend reports., Journal of	No outcomes of interest

Study	Reason for exclusion
behavioral medicine, 23, 6, 585-601, 2000	
54. Doumas Diana M, Web-based personalized feedback: is this an appropriate approach for reducing drinking among high school students?, Journal of substance abuse treatment, 50, 76-80, 2015	No outcomes of interest
55. Doumas Diana M; Esp Susan; Johnson Jaime; Trull Rhiannon; Shearer Kristen, The eCHECKUP TO GO for High School: Impact on risk factors and protective behavioral strategies for alcohol use, Addictive Behaviors, 64, 93-100, 2017	No outcomes of interest
56. Doumas Diana M; Esp Susan; Turrisi Rob; Hausheer Robin; Cuffee Courtney, A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students, Addictive behaviors, 39, 1, 231-8, 2014	Duplicate
57. Doumas DM; Hausheer R; Esp S; Cuffee C, Reducing alcohol use among 9th grade students: 6 month outcomes of a brief, Web-based intervention., Journal of substance abuse treatment, 47, 1, 102-5, 2014	Duplicate
58. Elek E; Wagstaff D A; Hecht M L, Effects of the 5th and 7th grade enhanced versions of the keepin' it real substance use prevention curriculum, Journal of Drug Education, 40, 1, 61-79, 2010	Enrolled at 5th grade (so population was too young)
59. Ellickson PL; Bell RM, Drug prevention in junior high: a multi-site longitudinal test., Science (New York, N.Y.), 247, 4948, 1299-305, 1990	No usable data
60. Ellickson PL; Bell RM; McGuigan K, Preventing adolescent drug use: long-term results of a junior high program., American journal of public health, 83, 6, 856-61, 1993	No usable data
61. Ellickson PL; McCaffrey DF; Ghosh-Dastidar B; Longshore DL, New inroads in preventing adolescent drug use: results from a large-scale trial of project ALERT in middle schools., American journal of public health, 93, 11, 1830-6, 2003	No extractable data
62. Elliot DL; Goldberg L; Moe EL; Defrancesco CA; Durham MB; McGinnis	Data only over 18s reported

Study	Reason for exclusion
W; Lockwood C, Long-term Outcomes of the ATHENA (Athletes Targeting Healthy Exercise & Nutrition Alternatives) Program for Female High School Athletes., Journal of alcohol and drug education, 52, 2, 73-92, 2008	
63. Evers KE; Paiva AL; Johnson JL; Cummins CO; Prochaska JO; Prochaska JM; Padula J; Gokbayrak NS, Results of a transtheoretical model-based alcohol, tobacco and other drug intervention in middle schools., Addictive behaviors, 37, 9, 1009-18, 2012	Only subgroup data for those who have used substances
64. Faggiano F; Vigna-Taglianti F; Burkhart G; Bohrn K; Cuomo L; Gregori D; Panella M; Scatigna M; Siliquini R; Varona L; van der Kreeft P; Vassara M; Wiborg G; Galanti MR, The effectiveness of a school-based substance abuse prevention program: 18-month follow-up of the EU-Dap cluster randomized controlled trial., Drug and alcohol dependence, 108, 12, 56-64, 2010	Post-hoc analysis of Faggiano 2008. No usable data
65. Faggiano Fabrizio; Galanti Maria Rosaria; Bohrn Karl; Burkhart Gregor; Vigna-Taglianti Federica; Cuomo Luca; Fabiani Leila; Panella Massimiliano; Perez Tatiana; Siliquini Roberta; van der Kreeft; Peer; Vassara Maro; Wiborg Gudrun; Group E U-Dap Study, The effectiveness of a school-based substance abuse prevention program: EU-Dap cluster randomised controlled trial, Preventive medicine, 47, 5, 537-43, 2008	Did not disaggregate the data by intervention arm.
66. Faggiano Fabrizio; Richardson Clive; Bohrn Karl; Galanti M Rosaria; Group E U-Dap Study, 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, 170-3, 2007	Baseline data only for Faggiano 2008.
67. Fearnow-Kenney MD; Wyrick DL; Jackson-Newsom J, Initial Indicators of Effectiveness for a High School Drug Prevention Program, American Journal of Health Education, 34, 2, 66-71, 2003	No alcohol outcomes
68. Flynn A B; Falco M; Hocini S, Independent evaluation of middle school-based drug prevention curricula	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
a systematic review, JAMA Pediatrics, 169, 11, 1046-1052, 2015	
69. Foxcroft David R; Coombes Lindsey; Wood Sarah; Allen Debby; Almeida Santimano Nerissa Ml; Moreira Maria Teresa, Motivational interviewing for the prevention of alcohol misuse in young adults, Cochrane Database of Systematic Reviews, , 7, 2016	Not school-based
70. Foxcroft David R; Tsertsvadze Alexander, Universal alcohol misuse prevention programmes for children and adolescents: Cochrane systematic reviews, Perspectives in public health, 132, 3, 128-34, 2012	Systematic review. Used as source for RCTs only
71. Foxcroft David R; Tsertsvadze Alexander, Universal multi-component prevention programs for alcohol misuse in young people, Cochrane Database of Systematic Reviews, , 9, 2011	Systematic review. Used as source for RCTs only
72. Foxcroft David R; Tsertsvadze Alexander, Universal school-based prevention programs for alcohol misuse in young people, Cochrane Database of Systematic Reviews, , 5, 2011	Systematic review. Used as source for RCTs only
73. Fulkerson Jayne A; Pasch Keryn E; Perry Cheryl L; Komro Kelli, Relationships between alcohol-related informal social control, parental monitoring and adolescent problem behaviors among racially diverse urban youth, Journal of community health, 33, 6, 425-33, 2008	Reported baseline survey data only
74. Furr-Holden CD; Ialongo NS; Anthony JC; Petras H; Kellam SG, Developmentally inspired drug prevention: middle school outcomes in a school-based randomized prevention trial., Drug and alcohol dependence, 73, 2, 149-58, 2004	1st Grade students (USA)
75. Gatta Michela; Svanellini Lorenza; Rotondo Cristina Gatto; Maurizio Salis; Schiff Sami; Ferruzza Emilia, Focus Groups in the Prevention of Teenagers' Alcohol Misuse, Journal of Groups in Addiction & Recovery, 11, 1, 3-20, 2016	Results not reported by randomised group
76. Georgie J; MacArthur; Sean Harrison; Deborah M; Caldwell; Matthew Hickman; Rona Campbell, Peer-led interventions to prevent tobacco, alcohol and/or drug use among young people aged 11-21 years: a systematic review	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
and meta-analysis, Addiction (Abingdon, England), 111, 3, 391-407, 2016	
77. Gilder David A; Geisler Jennifer R; Luna Juan A; Calac Daniel; Monti Peter M; Spillane Nichea S; Lee Juliet P; Moore Roland S; Ehlers Cindy L, A pilot randomized trial of Motivational Interviewing compared to Psycho-Education for reducing and preventing underage drinking in American Indian adolescents, Journal of substance abuse treatment, 82, 74-81, 2017	Not school-based Active comparator
78. Giles Steven M; Pankratz Melinda M; Ringwalt Christopher; Hansen William B; Dusenbury Linda; Jackson-Newsom Julia, Teachers' Delivery Skills and Substance Use Prevention Program Outcomes: The Moderating Role of Students' Need for Cognition and Impulse Decision Making, Journal of Drug Education, 40, 4, 395-410, 2010	Intervention was in teachers to improve delivery of All starts curriculum
79. Gmel G; Venzin V; Marmet K; Danko G; Labhart F, A quasi-randomized group trial of a brief alcohol intervention on risky single occasion drinking among secondary school students., International journal of public health, 57, 6, 935-44, 2012	Quasi-randomised. Results - Not all schools were randomised and the data available was not disaggregated.
80. Gonzales NA; Dumka LE; Millsap RE; Gottschall A; McClain DB; Wong JJ; Germán M; Mauricio AM; Wheeler L; Carpentier FD; Kim SY, Randomized trial of a broad preventive intervention for Mexican American adolescents., Journal of consulting and clinical psychology, 80, 1, 1-16, 2012	Family-focused intervention only
81. Gonzales, N. A.; Jensen, M.; Tein, J. Y.; Wong, J. J.; Dumka, L. E.; Mauricio, A. M., Effect of middle school interventions on alcohol misuse and abuse in mexican American high school adolescents five-year follow-up of a randomized clinical trial, JAMA Psychiatry, 75, 5, 429-437, 2018	Family-focused intervention only
82. Gordon Chloe S; Howard Steven J; Kervin Lisa K; Jones Sandra C, Gender Effects in a Multischool Alcohol Media Literacy Study With Preadolescents, Health education & behavior : the official publication of the Society for Public Health Education, , 1090198117731601, 2017	A quasi-experimental wait-list control design

Study	Reason for exclusion
83. Gordon Judith S; Andrews Judy A; Hampson Sarah H; Gunn Barbara; Christiansen Steven M; Jacobs Thomas, Postintervention Effects of "Click City®: Alcohol" on Changing Etiological Mechanisms Related to the Onset of Heavy Drinking, Health Education & Behavior, 44, 4, 626-637, 2017	No outcomes of interest Intention to drink only
84. Gorman D M; Conde E; Huber J C; Jr, The creation of evidence in 'evidence-based' drug prevention: a critique of the Strengthening Families Program Plus Life Skills Training evaluation, Drug and alcohol review, 26, 6, 585-93, 2007	Non-RCT
85. Gosin M; Marsiglia FF; Hecht ML, Keepin' it R.E.A.L.: a drug resistance curriculum tailored to the strengths and needs of pre-adolescents of the southwest., Journal of drug education, 33, 2, 119-42, 2003	Literature review with summary of Hecht 2003.
86. Graham JW; Johnson CA; Hansen WB; Flay BR; Gee M, Drug use prevention programs, gender, and ethnicity: evaluation of three seventh-grade Project SMART cohorts., Preventive medicine, 19, 3, 305-13, 1990	No outcomes of interest
87. Griffin K W; Botvin G J, Evidence-Based Interventions for Preventing Substance Use Disorders in Adolescents, Child and Adolescent Psychiatric Clinics of North America, 19, 3, 505-526, 2010	Review article
88. Griffin Kenneth W; Botvin Gilbert J; Nichols Tracy R, Effects of a school-based drug abuse prevention program for adolescents on HIV risk behavior in young adulthood, Prevention science : the official journal of the Society for Prevention Research, 7, 1, 103-12, 2006	Alcohol outcomes not reported separately
89. Hale Daniel R; Fitzgerald-Yau Natasha; Mark Viner; Russell, A Systematic Review of Effective Interventions for Reducing Multiple Health Risk Behaviors in Adolescence, American Journal of Public Health, 104, 5, e19-41, 2014	Systematic review. Used as source for RCTs only
90. Hall Bruce W; Bacon Tina P; Ferron John M, Randomized Controlled Evaluation of the "Too Good for Drugs" Prevention Program: Impact on Adolescents at Different Risk Levels for	No useable data as only modelling data reported

Study	Reason for exclusion
Drug Use, Journal of Drug Education, 43, 3, 277-300, 2013	
91. Hansen WB; Graham JW, Preventing alcohol, marijuana, and cigarette use among adolescents: peer pressure resistance training versus establishing conservative norms., Preventive medicine, 20, 3, 414-30, 1991	Active comparator only
92. Harris Jennifer S; Stewart David G; Stanton Brayden C, Urge surfing as aftercare in adolescent alcohol use: A randomized control trial, Mindfulness, 8, 1, 144-149, 2017	Both groups received a school-based intervention
93. Hennessy Emily A; Tanner-Smith Emily E, Effectiveness of brief school-based interventions for adolescents: a meta-analysis of alcohol use prevention programs, Prevention science : the official journal of the Society for Prevention Research, 16, 3, 463-74, 2015	Systematic review. Used as source for RCTs only
94. Hickman Matthew; Caldwell Deborah M; Busse Heide; MacArthur Georgina; Faggiano Fabrizio; Foxcroft David R; Kaner Eileen F S; Macleod John; Patton George; White James; Campbell Rona, Individual-, family-, and school-level interventions for preventing multiple risk behaviours relating to alcohol, tobacco and drug use in individuals aged 8 to 25 years, Cochrane Database of Systematic Reviews, , 11, 2014	Protocol only
95. Hodder R K; Freund M; Wolfenden L; Bowman J; Nepal S; Dray J; Kingsland M; Yoong S L; Wiggers J, Systematic review of universal school-based 'resilience' interventions targeting adolescent tobacco, alcohol or illicit substance use: A meta-analysis, Preventive Medicine, 100, 248-268, 2017	Systematic review. Used as source for RCTs only
96. Hopson Laura M; Steiker Lori K, Methodology for Evaluating an Adaptation of Evidence-Based Drug Abuse Prevention in Alternative Schools, Children & Schools, 30, 2, 116-127, 2008	Protocol only
97. Ingels Justin B; Corso Phaedra S; Kogan Steve M; Brody Gene H, Cost-effectiveness of the strong African American families-teen program: 1-year	Cost effectiveness

Study	Reason for exclusion
follow-up, Drug and alcohol dependence, 133, 2, 556-61, 2013	
98. Johnson CA; Pentz MA; Weber MD; Dwyer JH; Baer N; MacKinnon DP; Hansen WB; Flay BR, Relative effectiveness of comprehensive community programming for drug abuse prevention with high-risk and low-risk adolescents., Journal of consulting and clinical psychology, 58, 4, 447-56, 1990	nNon-RCT
99. Johnson M; Jackson R; Guillaume L; Meier P; Goyder E, Barriers and facilitators to implementing screening and brief intervention for alcohol misuse: a systematic review of qualitative evidence, Journal of public health (Oxford, England), 33, 3, 412-21, 2011	Systematic review. Used as source for RCTs only
100. Jones Lisa; James Marilyn; Jefferson Tom; Lushey Clare; Morleo Michela; Stokes Elizabeth; Sumnall Harry; Witty Karl; Bellis MA; Sabazia Anguillara, A review of the 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, Liverpool: National Collaborating Centre for Drug Prevention, Liverpool John Moores University, , 2007	Systematic review. Used as source for RCTs only Systematic review. Used as source for RCTs only
101. Kerr S; Lawrence M; Darbyshire C; Middleton A R; Fitzsimmons L, Tobacco and alcohol-related interventions for people with mild/moderate intellectual disabilities: a systematic review of the literature, Journal of intellectual disability research : JIDR, 57, 5, 393-408, 2013	Systematic review. Used as source for RCTs only
102. Kiewik M; VanDerNagel E L. J; Kemna E M. L; Engels C M. E. R; DeJong A J. C, Substance Use Prevention Program for Adolescents with Intellectual Disabilities on Special Education Schools: A Cluster Randomised Control Trial, Journal of Intellectual Disability Research, 60, 3, 191-200, 2016	No outcomes of interest
103. Komro Kelli A; Livingston Melvin D; Wagenaar Alexander C; Kominsky Terrence K; Pettigrew Dallas W; Garrett Brady A; Cherokee Nation Prevention Trial; Team, Multilevel Prevention Trial of Alcohol Use Among American Indian	No usable data

Study	Reason for exclusion
and White High School Students in the Cherokee Nation, American journal of public health, 107, 3, 453-459, 2017	
104. Korczak Dieter; Steinhauser Gerlinde; Dietl Markus, Prevention of alcohol misuse among children, youths and young adults, GMS health technology assessment, 7, doc04, 2011	Systematic review. Used as source for RCTs only
105. Koutakis N; Stattin H; Kerr M, Reducing youth alcohol drinking through a parent-targeted intervention: the Orebro Prevention Program., Addiction (Abingdon, England), 103, 10, 1629-37, 2008	Quasi experimental design
106. Kreft IG, An illustration of item homogeneity scaling and multilevel analysis techniques in the evaluation of drug prevention programs., Evaluation review, 22, 1, 46-77, 1998	Multilevel analysis of Hansen and Graham 1991
107. Kupersmidt Janis B; Scull Tracy M; Benson Jessica W, Improving media message interpretation processing skills to promote healthy decision making about substance use: the effects of the middle school media ready curriculum, Journal of health communication, 17, 5, 546-63, 2012	No alcohol outcomes. Alcohol use intentions only
108. Lammers, Jeroen; Goossens, Ferry; Conrod, Patricia; Engels, Rutger; Wiers, Reinout W.; Kleinjan, Marloes, Effectiveness of a selective alcohol prevention program targeting personality risk factors: Results of interaction analyses, Addictive behaviors, 71, 82-88, 2017	Duplicate
109. Larimer Me; Berglund M; Witkiewitz K; Dillworth T; Lee Cm; Lewis M; Kilmer J; Johnsson K; Andersson C; Pace T; Fossos N, An international comparison of a web-based personalized feedback intervention in high school students usa and Sweden, Alcoholism: clinical and experimental research., 37, 260a, 2013	Conference abstract
110. Lee N K; Cameron J; Battams S; Roche A, What works in school-based alcohol education: A systematic review, Health Education Journal, 75, 7, 780-798, 2016	Systematic review. Used as source for RCTs only
111. Lemstra Mark; Bennett Norman; Nannapaneni Ushasri; Neudorf Cory; Warren Lynne; Kershaw Tanis; Scott	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
Christina, A systematic review of school-based marijuana and alcohol prevention programs targeting adolescents aged 10--15, Addiction Research & Theory, 18, 1, 84-96, 2010	
112. Longshore Douglas; Ellickson Phyllis L; McCaffrey Daniel F; St Clair; Patricia A, School-based drug prevention among at-risk adolescents: effects of ALERT plus, Health education & behavior : the official publication of the Society for Public Health Education, 34, 4, 651-68, 2007	No extractable data
113. Lubman D I; Cheetham A; Jorm A F; Berridge B J; Wilson C; Blee F; McKay-Brown L; Allen N; Proimos J, Australian adolescents' beliefs and help-seeking intentions towards peers experiencing symptoms of depression and alcohol misuse, BMC public health, 17, 1, 658, 2017	Baseline data from RCT, evaluated barriers to professional help
114. Lunstead Julie; Weitzman Elissa R; Kaye Dylan; Levy Sharon, Screening and brief intervention in high schools: School nurses' practices and attitudes in Massachusetts, Substance Abuse, 38, 3, 257-260, 2017	Evaluation of screening tools No qualitative data
115. Lynam DR; Milich R; Zimmerman R; Novak SP; Logan TK; Martin C; Leukefeld C; Clayton R, Project DARE: no effects at 10-year follow-up., Journal of consulting and clinical psychology, 67, 4, 590-3, 1999	No outcomes of interest
116. M Gorman Dennis; Eugenia Conde, The making of evidence-based practice: the case of Project ALERT, Children and Youth Services Review, 32, 2, 214-222, 2010	Review article
117. Mallett Kimberly A; Turrisi Rob; Ray Anne E; Stapleton Jerod; Abar Caitlin; Mastroleo Nadine R; Tollison Sean; Grossbard Joel; Larimer Mary E, Do Parents Know Best? Examining the Relationship Between Parenting Profiles, Prevention Efforts, and Peak Drinking in College Students, Journal of applied social psychology, 41, 12, 2904-2927, 2011	Not school-based
118. Mares S H; van der Vorst; H; Vermeulen-Smit E; Lichtwarck-Aschoff A; Verdurmen J E; Engels R C, Results of the 'in control: no alcohol!' pilot study,	Not school based

Study	Reason for exclusion
Health education research, 27, 2, 214-225, 2012	
119. Marsiglia Flavio F; Kulis Stephen S; Booth Jaime M; Nuno-Gutierrez Bertha L; Robbins Danielle E, Long-term effects of the keepin' it REAL model program in Mexico: substance use trajectories of Guadalajara middle school students, The journal of primary prevention, 36, 2, 93-104, 2015	No extractable data
120. Marsiglia, Flavio F; Kulis, Stephen S; Kiehne, Elizabeth; Ayers, Stephanie L; Libisch Recalde, Carlos A; Sulca, Lucia Barros, Adolescent substance-use prevention and legalization of marijuana in Uruguay: A feasibility trial of the keepin'it REAL prevention program, Journal of Substance use, 23, 5, 457-465, 2018	No usable data
121. Martin Kerry; Nelson Julie; Lynch Sarah, Effectiveness of school-based life-skills and alcohol education programmes: a review of the literature, , 2013	Systematic review. Used as source for RCTs only
122. Maslowsky Julie; Whelan Capell; Julie; Moberg D Paul; Brown Richard L, Universal School-Based Implementation of Screening Brief Intervention and Referral to Treatment to Reduce and Prevent Alcohol, Marijuana, Tobacco, and Other Drug Use: Process and Feasibility, Substance abuse : research and treatment, 11, 1178221817746668, 2017	No qualitative data reported
123. McCambridge J; Day M, Randomized controlled trial of the effects of completing the Alcohol Use Disorders Identification Test questionnaire on self-reported hazardous drinking, Addiction (abingdon, england), 103, 2, 241-248, 2008	University students
124. McCambridge J; Hunt C; Jenkins RJ; Strang J, Cluster randomised trial of the effectiveness of motivational interviewing for universal prevention., Drug and alcohol dependence, 114, 23, 177-84, 2011	Active comparator only
125. McCambridge J; Strang J, The efficacy of single-session motivational interviewing in reducing drug consumption and perceptions of drug-	Age range 16-20 years but results not disaggregated.

Study	Reason for exclusion
related risk and harm among young people: results from a multi-site cluster randomized trial., Addiction (Abingdon, England), 99, 1, 39-52, 2004	
126. Melendez-Torres, G. J.; Tancred, T.; Fletcher, A.; Thomas, J.; Campbell, R.; Bonell, C., Does integrated academic and health education prevent substance use? Systematic review and meta-analyses, Child: Care, Health & Development, 44, 4, 516-530, 2018	Systematic review. Used as source for RCTs only
127. Melnyk B M; Jacobson D; Kelly S; Belyea M; Shaibi G; Small L; O'Haver J; Marsiglia F F, Promoting healthy lifestyles in high school adolescents: A randomized controlled trial, American Journal of Preventive Medicine, 45, 4, 407-415, 2013	Active comparator only
128. Menrath I; Mueller-Godeffroy E; Pruessmann C; Ravens-Sieberer U; Ottova V; Pruessmann M; Erhart M; Hillebrandt D; Thyen U, Evaluation of school-based life skills programmes in a high-risk sample: A controlled longitudinal multi-centre study, Journal of Public Health (Germany), 20, 2, 159-170, 2012	Intervention group included some non-randomised schools; data not disaggregated
129. Mogro-Wilson Cristina; Allen Elizabeth; Cavallucci Christine, A brief high school prevention program to decrease alcohol usage and change social norms, Social Work Research, 41, 1, 53-62, 2017	A quasi experimental research design
130. Moore Graham F; Littlecott Hannah J; Turley Ruth; Waters Elizabeth; Murphy Simon, Socioeconomic gradients in the effects of universal school-based health behaviour interventions: a systematic review of intervention studies, BMC public health, 15, 907, 2015	Systematic review. Used as source for RCTs only
131. Neighbors Clayton; Larimer Mary E; Lostutter Ty W; Wood Briana A, Harm Reduction and Individually Focused Alcohol Prevention, International Journal of Drug Policy, 17, 4, 304-309, 2006	Review article
132. Newbury-Birch D; O'Neil S; Gilvarry E; Howel D; Stamp E; Laing K; McColl E; McGovern R; Harle Lc; O'Donnell A; Tate; Coulton S; Deluca P;	Abstract only

Study	Reason for exclusion
Drummond C; McArdle P; Kaner E, A feasability trial of alcohol screening and brief interventions for risky drinking in young people in a high school setting in the UK: sips jr-high, Alcoholism: clinical and experimental research., 37, 147a, 2013	
133. Newbury-Birch D; O'Neil S; O'Donnell A; Coulton S; Howel D; McColl E; Stamp E; Graybill E; Gilvarry E; Laing K; McGovern R; Deluca P; Drummond C; Harle C; McArdle P; Tate L; Kaner E, A pilot feasiblity C-RCT of screening and brief alcohol intervention in young people aged 14-15 in a high school setting: sips Jr-high, Alcoholism: clinical and experimental research, 38, 127a, 2014	Abstract only
134. Newton Nicola C; Champion Katrina E; Slade Tim; Chapman Cath; Stapinski Lexine; Koning Ina; Tonks Zoe; Teesson Maree, A systematic review of combined student- and parent-based programs to prevent alcohol and other drug use among adolescents, Drug and alcohol review, 36, 3, 337-351, 2017	Systematic review. Used as source for RCTs only
135. Newton Nicola C; Conrod Patricia J; Rodriguez Daniel M; Teesson Maree, A pilot study of an online universal school-based intervention to prevent alcohol and cannabis use in the UK, BMJ open, 4, 5, e004750, 2014	No qualitative data reported
136. Newton, N. C.; Champion, K. E.; Slade, T.; Chapman, C.; Stapinski, L.; Koning, I.; Tonks, Z.; Teesson, M., A systematic review of combined student- and parent-based programs to prevent alcohol and other drug use among adolescents, Drug and alcohol review, 36, 3, 337-351, 2017	Systematic review. Used as source for RCTs only
137. O'Neil Stephanie, Screening and brief alcohol intervention to prevent hazardous drinking in adolescents aged 14–15 years in a high-school setting (SIPS JR-HIGH) : a feasibility pilot trial, Lancet, , 2012	Abstract only
138. Onrust Simone A; Otten Roy; Lammers Jeroen; Smit Filip, School-based programmes to reduce and prevent substance use in different age groups: What works for whom? Systematic review and meta-regression	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
analysis, Clinical psychology review, 44, 45-59, 2016	
139. Palmer RF; Graham JW; White EL; Hansen WB, Applying multilevel analytic strategies in adolescent substance use prevention research., Preventive medicine, 27, 3, 328-36, 1998	Multilevel analysis of Hansen and Graham 1991
140. Pereira Ana Paula Dias; Paes Angela Tavares; Sanchez Zila M, Factors associated with the implementation of programs for drug abuse prevention in schools, Revista de saude publica, 50, 44, 2016	Cross-sectional study
141. Perrier-Menard E; Castellanos-Ryan N; O'Leary-Barrett M; Girard A; Conrod P J, The impact of youth internalising and externalising symptom severity on the effectiveness of brief personality-targeted interventions for substance misuse: A cluster randomised trial, Addictive Behaviors, 75, 138-144, 2017	No useable data as only modelling data reported
142. Perry CL; Grant M, A cross-cultural pilot study on alcohol education and young people., World health statistics quarterly. Rapport trimestriel de statistiques sanitaires mondiales, 44, 2, 70-3, 1991	No usable data
143. Piper DL; Moberg DP; King MJ, The healthy for life project: Behavioral outcomes, Journal of Primary Prevention, 21, 1, 47-73, 2000	Intervention schools could choose which intervention they were allocated to. Intervention data not pooled vs control
144. Riesch SK; Brown RL; Anderson LS; Wang K; Canty-Mitchell J; Johnson DL, Strengthening families program (10-14): effects on the family environment., Western journal of nursing research, 34, 3, 340-76, 2012	Family-focused intervention only. Pupils randomised at age 10
145. Ringwalt C; Ennett ST; Holt KD, An outcome evaluation of Project DARE (Drug Abuse Resistance Education), Health Education Research, 6, 3, 327-337, 1991	Age group too young (under 11 only).
146. Ringwalt Christopher L; Pankratz Melinda M; Hansen William B; Dusenbury Linda; Jackson-Newsom Julia; Giles Steven M; Brodish Paul H, The potential of coaching as a strategy to improve the effectiveness of school-based substance use prevention curricula, Health education & behavior :	Study compared coached and noncoached implementation All Stars curriculum

Study	Reason for exclusion
the official publication of the Society for Public Health Education, 36, 4, 696-710, 2009	
147. Rongione D; Erford B T; Broglie C, Alcohol and other drug abuse counseling outcomes for school-aged youth: a meta-analysis of studies from 1990 to 2009, Counseling Outcome Research and Evaluation, 2, 1, 8-24, 2015	Not school-based
148. Rothwell Heather; Segrott Jeremy, Preventing alcohol misuse in young people aged 9-11 years through promoting family communication: an exploratory evaluation of the Kids, Adults Together (KAT) Programme, BMC public health, 11, 810, 2011	Non-RCT
149. Rundle-Thiele S; Schuster L; Dietrich T; Russell-Bennett R; Drenna J; Leo C: Connor, J.P, Maintaining or changing a drinking behavior? GOKA's short-term outcomes., Journal of Business Research, 68, 10, 2155-2163, 2015	No relevant alcohol outcomes
150. Schulte; M T; Monreal T K; Kia-Keating M; Brown S A, Influencing Adolescent Social Perceptions of Alcohol Use to Facilitate Change through a School-Based Intervention, Journal of Child & Adolescent Substance Abuse, 19, 5, 372-390, 2010	Non-RCT
151. Schwinn Traci M; Schinke Steven P, Preventing Alcohol Use Among Late Adolescent Urban Youth: 6-Year Results From a Computer-Based Intervention, Journal of Studies on Alcohol and Drugs, 71, 4, 535-8, 2010	No not school-based
152. Segrott Jeremy; Rothwell Heather; Hewitt Gillian, Preventing alcohol misuse in young people : an exploratory cluster randomised controlled trial of the Kids, Adults Together (KAT) programme, Public Health Research, 3, 15, 2015	Age group too young (Under 11s only)
153. Segrott Jeremy; Rothwell Heather; Pignatelli Ilaria; Playle Rebecca; Hewitt Gillian; Huang Chao; Murphy Simon; Hickman Matthew; Reed Hayley; Moore Laurence, Exploratory Trial of a School-Based Alcohol Prevention Intervention with a Family	Age group too young (Under 11s only)

Study	Reason for exclusion
Component, Health Education, 116, 4, 410-431, 2016	
154. Shin, YoungJu; Miller-Day, Michelle; Hecht, Michael L.; Krieger, Janice L., Entertainment-Education Videos as a Persuasive Tool in the Substance Use Prevention Intervention "keepin' it REAL", Health Communication, 33, 7, 896-906, 2018	Active comparator only
155. Shortt AL; Hutchinson DM; Chapman R; Toumbourou JW, Family, school, peer and individual influences on early adolescent alcohol use: first-year impact of the Resilient Families programme., Drug and alcohol review, 26, 6, 625-34, 2007	No outcomes of interest
156. Sigelman CK; Rinehart CS; Sorongon AG; Bridges LJ; Wirtz PW, Teaching a coherent theory of drug action to elementary school children., Health education research, 19, 5, 501-13, 2004	Includes children under the age of 11. Data not disaggregated.
157. Simons-Morton B; Haynie D; Saylor K; Crump AD; Chen R, The effects of the going places program on early adolescent substance use and antisocial behavior., Prevention science : the official journal of the Society for Prevention Research, 6, 3, 187-97, 2005	No extractable data
158. Slater MD; Kelly KJ; Edwards RW; Thurman PJ; Plested BA; Keefe TJ; Lawrence FR; Henry KL, Combining in-school and community-based media efforts: reducing marijuana and alcohol uptake among younger adolescents., Health education research, 21, 1, 157-67, 2006	Quasi-randomised Data not disaggregated
159. Sloboda Z; Pyakuryal A; Stephens PC; Teasdale B; Forrest D; Stephens RC; Grey SF, Reports of substance abuse prevention programming available in schools., Prevention science : the official journal of the Society for Prevention Research, 9, 4, 276-87, 2008	No qualitative data reported
160. Smith EA; Swisher JD; Vicary JR, Evaluation of Life Skills Training and Infused-Life Skills Training in a Rural Setting: Outcomes at Two Years, Journal of Alcohol and Drug Education, 48, 1, 51-70, 2004	Active comparator only

Study	Reason for exclusion
161. Soole DW; Mazerolle L; Rombouts S, School-based drug prevention programs: A Review of What Works, Australian & New Zealand Journal of Criminology, 41, 2, 259-286, 2008	Systematic review. Used as source for RCTs only
162. Spaeth M; Weichold K; Silbereisen RK; Wiesner M, Examining the differential effectiveness of a life skills program (IPSY) on alcohol use trajectories in early adolescence., Journal of consulting and clinical psychology, 78, 3, 334-48, 2010	A longitudinal quasi-experimental design
163. Spirito A; Hernandez L; Marceau K; Cancilliere M K; Barnett N P; Graves H R; Rodriguez A M; Knopik V S, Effects of a brief, parent-focused intervention for substance using adolescents and their sibling, Journal of Substance Abuse Treatment, 77, 156-165, 2017	Active comparator only
164. Spirito Anthony; Hernandez Lynn; Cancilliere Mary Kathryn; Graves Hannah; Barnett Nancy, Improving parenting and parent-adolescent communication to delay or prevent the onset of alcohol and drug use in young adolescents with emotional/behavioral disorders: A pilot trial, Journal of Child & Adolescent Substance Abuse, 24, 5, 308-322, 2015	Not school based
165. Spoth R; Redmond C; Shin C; Greenberg M; Clair S; Feinberg M, Substance-use outcomes at 18 months past baseline: the PROSPER Community-University Partnership Trial., American journal of preventive medicine, 32, 5, 395-402, 2007	Randomised but schools could choose which intervention they had. Data not disagregated
166. Spoth Richard; Shin Chungyeol; Guyll Max; Redmond Cleve; Azevedo Kari, Universality of effects: an examination of the comparability of long-term family intervention effects on substance use across risk-related subgroups, Prevention science : the official journal of the Society for Prevention Research, 7, 2, 209-24, 2006	Family-focused interventions only
167. Spoth Richard; Trudeau Linda; Guyll Max; Shin Chungyeol; Redmond Cleve, Universal intervention effects on substance use among young adults mediated by delayed adolescent	Family-focused interventions only

Study	Reason for exclusion
substance initiation, Journal of consulting and clinical psychology, 77, 4, 620-32, 2009	
168. St Pierre TL; Osgood DW; Mincemoyer CC; Kaltreider DL; Kauh TJ, Results of an independent evaluation of Project ALERT delivered in schools by Cooperative Extension., Prevention science : the official journal of the Society for Prevention Research, 6, 4, 305-17, 2005	No usable data
169. Stolle M; Stappenbeck J; Wendell A; Thomasius R, Family-based prevention against substance abuse and behavioral problems: Culture-sensitive adaptation process for the modification of the US-American Strengthening Families Program 10-14 to German conditions, Journal of Public Health, 19, 4, 389-395, 2011	Family-focused intervention only.
170. Stormshak Elizabeth A; Connell Arin M; Veronneau Marie-Helene; Myers Michael W; Dishion Thomas J; Kavanagh Kathryn; Caruthers Allison S, An ecological approach to promoting early adolescent mental health and social adaptation: family-centered intervention in public middle schools, Child development, 82, 1, 209-25, 2011	Family-focused interventions only
171. Strom H K; Adolfsen F; Fossum S; Kaiser S; Martinussen M, Effectiveness of school-based preventive interventions on adolescent alcohol use: a meta-analysis of randomized controlled trials, Substance abuse treatment, prevention, and policy, 9, 48, 2014	Systematic review. Used as source for RCTs only
172. Strom Henriette Kyrrestad; Adolfsen Frode; Handegard Bjorn Helge; Natvig Henrik; Eisemann Martin; Martinussen Monica; Koposov Roman, Preventing alcohol use with a universal school-based intervention: results from an effectiveness study, BMC public health, 15, 337, 2015	Quasi-experimental design
173. Tanner-Smith E E; Risser M D, A meta-analysis of brief alcohol interventions for adolescents and young adults: Variability in effects across alcohol measures, American Journal of Drug and Alcohol Abuse, 42, 2, 140-151, 2016	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
174. Tanner-Smith Emily E; Lipsey Mark W, Brief alcohol interventions for adolescents and young adults: a systematic review and meta-analysis, Journal of substance abuse treatment, 51, 1-18, 2015	Systematic review. Used as source for RCTs only
175. Tanner-Smith Emily E; Steinka-Fry Katarzyna T; Hennessy Emily A; Lipsey Mark W; Winters Ken C, Can brief alcohol interventions for youth also address concurrent illicit drug use? results from a meta-analysis, Journal of youth and adolescence, 44, 5, 1011-23, 2015	Systematic review. Used as source for RCTs only
176. Tebb Kathleen P; Erenrich Rebecca K; Jasik Carolyn Bradner; Berna Mark S; Lester James C; Ozer Elizabeth M, Use of theory in computer-based interventions to reduce alcohol use among adolescents and young adults: a systematic review, BMC public health, 16, 517, 2016	Systematic review. Used as source for RCTs only
177. Tebes J K; Feinn R; Vanderploeg J J; Chinman M J; Shepard J; Brabham T; Genovese M; Connell C, Impact of a Positive Youth Development Program in Urban After-School Settings on the Prevention of Adolescent Substance Use, Journal of Adolescent Health, 41, 3, 239-247, 2007	Quasi-experimental design
178. Teesson M; Newton N C; Slade T; Carragher N; Barrett E L; Champion K E; Kelly E V; Nair N K; Stapinski L A; Conrod P J, Combined universal and selective prevention for adolescent alcohol use: a cluster randomized controlled trial, Psychological medicine, 47, 10, 1761-1770, 2017	Combined universal and targeted interventions
179. Teesson M; Newton N C; Slade T; Chapman C; Allsop S; Hides L; McBride N; Mewton L; Tonks Z; Birrell L; Brownhill L; Andrews G, The CLIMATE schools combined study: A cluster randomised controlled trial of a universal Internet-based prevention program for youth substance misuse, depression and anxiety, BMC Psychiatry, 14, 1, 32, 2014	Protocol only
180. Teesson M; Newton Nc; Barrett El, Australian school-based prevention programs for alcohol and other drugs: a systematic review (Provisional abstract),	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
Drug and Alcohol Review, 31, 6, 731-736, 2012	
181. Thush C; Wiers RW; Moerbeek M; Ames SL; Grenard JL; Sussman S; Stacy AW, Influence of motivational interviewing on explicit and implicit alcohol-related cognition and alcohol use in at-risk adolescents., Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors, 23, 1, 146-51, 2009	No useable data as only modelling data reported
182. Toumbourou Jw; Gregg Me; Shortt Al; Hutchinson Dm; Slaviero Tm, Reduction of adolescent alcohol use through family-school intervention: a randomized trial, Journal of adolescent health, 53, 6, 778-784, 2013	No extractable data
183. Tripodi SJ; Bender K; Litschge C; Vaughn MG, Interventions for reducing adolescent alcohol abuse: a meta-analytic review, Archives of pediatrics & adolescent medicine, 164, 1, 85-91, 2010	Systematic review. Used as source for RCTs only
184. Valente TW; Ritt-Olson A; Stacy A; Unger JB; Okamoto J; Sussman S, Peer acceleration: effects of a social network tailored substance abuse prevention program among high-risk adolescents., Addiction (Abingdon, England), 102, 11, 1804-15, 2007	No useable data as only regression analyses reported
185. Van Hout; M C; Foley M; McCormack A; Tardif E, Teachers' perspectives on their role in school-based alcohol and cannabis prevention, International Journal of Health Promotion and Education, 50, 6, 328-341, 2012	No qualitative data reported
186. Van Ryzin; Mark J; Stormshak Elizabeth A; Dishion Thomas J, Engaging parents in the family check-up in middle school: longitudinal effects on family conflict and problem behavior through the high school transition, The Journal of adolescent health : official publication of the Society for Adolescent Medicine, 50, 6, 627-33, 2012	Family-focused interventions only
187. Velicer WF; Redding CA; Paiva AL; Mauriello LM; Blissmer B; Oatley K; Meier KS; Babbin SF; McGee H; Prochaska JO; Burditt C; Fernandez AC, Multiple behavior interventions to prevent substance abuse and increase	Active comparator only

Study	Reason for exclusion
energy balance behaviors in middle school students., Translational behavioral medicine, 3, 1, 82-93, 2013	
188. Véronneau Mh; Dishion Tj; Connell Am; Kavanagh K, A randomized, controlled trial of the family check-up model in public secondary schools: examining links between parent engagement and substance use progressions from early adolescence to adulthood, Journal of consulting and clinical psychology, 84, 6, 526-543, 2016	No extractable data
189. Vicary JR; Henry KL; Bechtel LJ, Life Skills Training Effects for High and Low Risk Rural Junior High School Females, Journal of Primary Prevention, 25, 4, 399-416, 2004	Active comparator only
190. Vigna-Taglianti F D; Galanti M R; Burkhart G; Caria M P; Vadrucci S; Faggiano F, "Unplugged," a European school-based program for substance use prevention among adolescents: overview of results from the EU-Dap trial, New directions for youth development, 2014, 141, 67-2, 2014	Secondary publication of Faggiano 2008
191. Vigna-Taglianti F; Vadrucci S; Faggiano F; Burkhart G; Siliquini R; Galanti M R, Is universal prevention against youths' substance misuse really universal? Gender-specific effects in the EU-Dap school-based prevention trial, Journal of Epidemiology & Community Health, 63, 9, 722-728, 2009	Post-hoc analysis of Faggiano 2008. No usable data
192. Vogl Laura E; Teesson Maree; Newton Nicola C; Andrews Gavin, Developing a school-based drug prevention program to overcome barriers to effective program implementation: The CLIMATE Schools: Alcohol Module, Open J Prev Med, 2, 3, 410-422, 2012	No qualitative data reported
193. Voogt Carmen V; Kleinjan Marloes; Poelen Evelien A. P; Lemmers Lex A. C. J; Engels Rutger C. M. E, The effectiveness of a web-based brief alcohol intervention in reducing heavy drinking among adolescents aged 15-20 years with a low educational background: a two-arm parallel group cluster randomized controlled trial, BMC public health, 13, 694, 2013	Age range 15-20 years old but results not disaggregated.

Study	Reason for exclusion
194. Walton Maureen A. M. P. H. PhD; Ngo Quyen M. PhD; Chermack Stephen T. PhD; Blow Frederic C. PhD; Ehrlich Peter F. M. D; Bonar Erin E. PhD; Cunningham Rebecca M. M. D, Understanding Mechanisms of Change for Brief Alcohol Interventions Among Youth: Examination of Within-Session Interactions, Journal of Studies on Alcohol and Drugs, 78, 5, 725, 2017	Emergency department setting
195. Werch CE; Carlson JM; Pappas DM; Edgemon P; DiClemente CC, Effects of a brief alcohol preventive intervention for youth attending school sports physical examinations., Substance use & misuse, 35, 3, 421-32, 2000	Not a school setting.
196. Werch Chudley E; Bian Hui; Moore Michele J; Ames Steven C; DiClemente Carlo C; Thombs Dennis; Pokorny Steven B, Brief multiple behavior health interventions for older adolescents, American journal of health promotion : AJHP, 23, 2, 92-6, 2008	Non-RCT
197. Werch Chudley E; Moore Michele J; DiClemente Carlo C, Brief Image-Based Health Behavior Messages for Adolescents and Their Parents, Journal of Child & Adolescent Substance Abuse, 17, 4, 19-40, 2008	Active comparator only
198. West B; Abatemarco D; Ohman-Strickland PA; Zec V; Russo A; Milic R, Project Northland in Croatia: results and lessons learned., Journal of drug education, 38, 1, 55-70, 2008	Non-RCT
199. Williams CL; Grechanaia T; Romanova O; Komro KA; Perry CL; Farbakhsh K, Russian-American partners for prevention. Adaptation of a school-based parent-child programme for alcohol use prevention., European journal of public health, 11, 3, 314-21, 2001	Comparison of Russian and American implementations Did not compare to a control group.
200. Winters KC; Fahnhorst T; Botzet A; Lee S; Lalone B, Brief intervention for drug-abusing adolescents in a school setting: outcomes and mediating factors., Journal of substance abuse treatment, 42, 3, 279-88, 2012	Randomised to two intervention groups only; control group not randomised
201. Winters Ken C; Lee Susanne; Botzet Andria; Fahnhorst Tamara; Nicholson Ali, One-year outcomes and	Randomised to two intervention groups only; control group not randomised

Study	Reason for exclusion
mediators of a brief intervention for drug abusing adolescents, Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors, 28, 2, 464-74, 2014	

Appendix K: Research recommendations

K.1.1.1 How effective are individual, compared with group, school-based interventions for children and young people aged 11 to 18 in full-time education who are deemed vulnerable to alcohol misuse?

Criterion	Explanation
Population	Children and young people aged 11-18 years in full time education including those with SEND considered vulnerable to alcohol misuse
Setting	School
Intervention	Targeted individual
Comparators	Targeted group
Outcomes	Age at first whole drink or age at first unsupervised whole drink Age at first experience of binge drinking Units of alcohol consumed in the last 30 days Alcohol-related risky behaviours Alcohol-related absence from school Mental health and wellbeing Measures of alcohol knowledge, awareness and resilience Adverse effects and unintended consequences • Increased use of other substances (e.g. cannabis) Process evaluation using guidance from the MRC framework
Study design	Study design should be an RCT with the purpose of measuring effectiveness. This can be an individual or cluster RCT as appropriate for the intervention
Timeframe	3 years

K.1.1.2 How effective and cost-effectiveness are school-based interventions targeted at young people aged 18 to 25 with SEND who are deemed vulnerable to alcohol misuse?

Criterion	Explanation

Population	Young people aged 18 - 25 years with SEND in full time education considered vulnerable to alcohol misuse
Intervention	Targeted school-based interventions
Comparators	Control
Outcomes	Age at first experience of binge drinking Units of alcohol consumed in the last 30 days Alcohol-related risky behaviours Alcohol-related absence from school Mental health and wellbeing Measures of alcohol knowledge, awareness and resilience Adverse effects and unintended consequences • Increased use of other substances (e.g. cannabis) Process evaluation using guidance from the MRC framework
Study design	Study design should be an RCT with the purpose of measuring effectiveness. This can be an individual or cluster RCT as appropriate for the intervention
Timeframe	3 years

K.1.1.3 How effective are school-based alcohol prevention interventions (universal or targeted) for young people aged 18 to 25 with SEND in full-time education?

Criterion	**Explanation**
Population	Young people aged 18 - 25 years with SEND in full time education including those considered vulnerable to alcohol misuse.
Intervention	Universal alcohol education Targeted alcohol interventions
Outcomes	Age at first experience of binge drinking Units of alcohol consumed in the last 30 days Alcohol-related risky behaviours Alcohol-related absence from school Mental health and wellbeing Measures of alcohol knowledge, awareness and resilience Adverse effects and unintended consequences • Increased use of other substances (e.g. cannabis)

	Process evaluation using guidance from the MRC framework
Study design	Systematic review of non-RCT evidence
Timeframe	2 years

K.1.1.4 What methods and techniques help secondary schools to effectively engage with parents and carers as part of a whole-school approach to promote and support alcohol education?

Criterion	**Explanation**
Population	Children, teachers and other school staff and parents
Intervention	Alcohol education that engages parents through the whole school approach.
Outcomes	Views and experiences of children, teachers and other schools staff and parents Process evaluation using guidance from the MRC framework
Study design	Systematic review of qualitative evidence
Timeframe	2 years

Appendix L: Expert testimony

L.1 Unintended consequences

Section A	
Name:	Dr G.J. Melendez-Torres
Role:	Academic
Institution/Organisation (where applicable):	DECIPHer, Cardiff University
Guideline title:	Alcohol: school-based interventions
Guideline Committee:	PHAC C
Subject of expert testimony:	Adverse effects of Public Health interventions
Evidence gaps or uncertainties:	[Research questions or evidence uncertainties that the testimony should address are summarised below]
Adverse effects and unintended effects of school-based alcohol interventions	

Section B
Summary testimony:
In my testimony, I drew substantially on work undertaken with colleagues that drew attention to the importance of measuring, anticipating, and—importantly—theorising harms in public health interventions. This 'theorising' is intended to describe a way of understanding how interventions might work to produce harms that is generalizable enough to cover multiple related instances of the intervention, but not so broad that it is unhelpful to evaluators and implementers. The product of this theorising is a dark logic model, or a logic model that describes pathways to harm arising from public health interventions (Bonell, Jamal, Melendez-Torres & Cummins, 2015). Two general types of harms might accrue as a result of a public health intervention: paradoxical effects, when the intervention worsens the outcomes it sought to ameliorate or prevent, and harmful externalities, when an intervention causes negative 'side effects' either to individuals or elsewhere in ecological systems. Evaluators have three broad tools available to them to discern what the pathways to these harms might be. The first is to think about unintended interactions between structure and agency. For example, do government recruitment targets lead to perverse 'targeting' of students? The second is to consider how the intervention in its context is different or similar to other interventions in different or similar contexts. For example, how might moving from a universal to a targeted intervention approach in the same context introduce new pathways to harm; or how might evidence from targeted interventions from other contexts be used to understand potential pathways to harm in the present context? The third is to talk to stakeholders in developing the intervention logic model, as they are likely to have insights on how harms might arise in the course of the intervention. Finally, it is important to consider that a) adverse effects are underevaluated in the public health intervention literature; b) anticipating harms from the start of evaluation is important to avoid the limitations of post hoc theorising; and c) because harms may be diffuse and, in the case of harmful externalities, not immediately anticipated by the intervention's proposed function, it is of value to start from the interaction of context and mechanism in theorising and appreciating possible harms. These arguments are not methodological. Rather, they are ethical in nature. To the extent that systematic reviews are limited by the evidence that undergirds them, it is important to use these reviews as both 'jumping-off' points in undertaking this theorising and agenda-setting opportunities to outline which studies should be undertaken to address evidence gaps.
References to other work or publications to support your testimony' (if applicable):
Bonell, C., Jamal, F., Melendez-Torres, G.J., & Cummins, S. (2015). 'Dark logic': theorising the harmful consequences of public health interventions. Journal of Epidemiology and Community Health 69: 95-98.

L.2 Learning disabilities

Section A	
Name:	Professor Chris Hatton
Role:	Academic
Institution/Organisation (where applicable):	Lancaster University and Public Health England
Guideline title:	Alcohol: school-based interventions
Guideline Committee:	PHAC C
Subject of expert testimony:	Young people with learning disabilities and alcohol
Evidence gaps or uncertainties:	[Research questions or evidence uncertainties that the testimony should address are summarised below]
Age at first drink in children and young people with SEND Age at first experience of drunkenness in children and young people with SEND	

Section B:
Summary testimony:

The testimony focused on research concerning self-reported alcohol usage and attitudes to alcohol amongst children and young people with mild/moderate learning disabilities. The group of children with mild/moderate learning disabilities corresponds with the SEND category of 'Moderate Learning Difficulties' (MLD) used in DfE statistics. Two studies reported in detail in the testimony used secondary analysis of nationally representative cohort studies of children and young people where it was possible to extract a sub-sample of children or young people with mild/moderate learning disabilities.

DfE National Pupil Database best estimates are that there are 28,564 children/young people with a primary need of MLD with an Education Health and Care Plan (EHCP), and a further 231,149 children with a primary need of MLD at the SEN Support level. These numbers have dropped by 30% from 2010 to 2017, with children with a primary need of MLD being more likely to be boys, more likely to be eligible for Free School Meals, increasingly placed in special rather than mainstream schools, and more likely than children without SEN to experience authorised and unauthorised school absences, and fixed period and permanent school exclusions (Department for Education, 2018; Hatton & Glover, forthcoming).

The first study described a secondary analysis of the Millennium Cohort Study, using self-report data from children at age 11 years (Emerson et al., 2016). Children with learning disabilities were identified using data from cognitive tests at ages 3, 5, 7 and 11 years and parental report at age 7 years – 460 children (3.6% of the total) were identified in this way. In total, 402 children with learning disabilities and 12,159 children without learning disabilities completed self-report questions at age 11 years.

Overall, 15.8% of children with learning disabilities (vs 13.2% of other children) reported ever having had an alcoholic drink. Children with learning disabilities were significantly more likely than their peers to report:

- Having had 5 or more alcoholic drinks on one occasions (3.4% vs 0.8%)
- Having used alcohol in the previous 4 weeks (5.3% vs 2.9%)

Some but not all of the increased risks were attenuated by adjusting for socio-economic factors. Children with learning disabilities accounted for 9% of all children with potentially harmful levels of drinking (having either been intoxicated or having had five or more alcoholic drinks on one occasion).

In terms of attitudes to alcohol at age 11, children with mild/moderate learning disabilities were:

- More likely than their peers to agree with the positive benefits of drinking (e.g. As a way to make friends 16.1% vs 6.5%).
- Less likely than their peers to agree with the social and physical costs of drinking (e.g. Drinking alcohol gets in the way of school work 68.8% vs 81.8%).
- The gap in attitudes between children with and without learning disabilities increased as questions asked about increased levels of alcohol use (e.g. Say that there is no risk of people harming themselves if they try one or two alcoholic drinks

25.9% vs 6.0%; Say that there is no risk of people harming themselves if they drink four or five alcoholic drinks almost every day 18.2% vs 1.9%).

The second study described a secondary analysis of the Next Steps annual panel study following a cohort of young people from age 13/14 years in 2004 (Wave 1) to age 19/20 years in 2010 (Wave 7) (Robertson et al., 2018). Overall, 15,214 people were surveyed in Wave 1, and 8,147 young people in Wave 7, 54% of the original Wave 1 sample.

Next Steps survey data were linked to the DfE National Pupil Database 2004 and 2006, enabling the identification of young people with a primary or secondary need of MLD at statement/School Action Plus levels. At Wave 1, 527 young people (3.5% of the total sample) were identified as MLD, with a higher prevalence of boys than girls and a higher prevalence of young people with MLD eligible for Free School Meals. By Wave 7 there were 206 young adults with MLD in the Next Steps sample, 39% of the original subsample (a lower retention rate than for other young people).

Under the age of 18, both young men with learning disabilities (62% vs 80%) and young women with learning disabilities (46% vs 80%) were less likely than other young people to report that they had ever had an alcoholic drink. However, at this age young men (43% vs 43%) and young women (28% vs 35%) were not less likely to report that they were a regular drinker than other young people.

At age 18+ years, both young men with learning disabilities (10% vs 24%) and young women with learning disabilities 6% vs 14%) were less likely to describe themselves as a regular drinker. Higher numbers described themselves as usually getting drunk when they did drink alcohol – again this was less likely for young men with learning disabilities (39% vs 54%) and young women with learning disabilities (27% vs 53%) compared to their peers.

For both young men and young women with learning disabilities at age 18+, the biggest predictor of the risk of being a regular drinker and usually getting drunk was being bullied, whereas for other young people bullying was not a predictor but spending more spare time with friends was and socio-economic factors were protective.

In similar secondary analysis work with adults with mild/moderate learning disabilities, men with learning disabilities were more likely than their peers to report drinking alcohol daily (14.5% vs 6.4%; women 5.0% vs 3.4%; Robertson et al., 2014), and other work suggests lower levels of alcohol use in more restrictive residential settings for adults with learning disabilities (Robertson et al., 2000).

Overall, it appears that young men with mild/moderate learning disabilities in particular may be at elevated risk of developing problematic alcohol use, with bullying a potentially relevant factor.

Although Public Health England have produced recent guidance relating to substance misuse amongst people with learning disabilities (PHE, 2018), evidence on the

effectiveness of alcohol interventions amongst young people with learning disabilities is lacking.

References to other work or publications to support your testimony' (if applicable):

Department for Education (2018). *Special educational needs in England: January 2018*. London: Department for Education.

Emerson E, Robertson J, Baines S & Hatton C (2016). Predictors of self-reported alcohol use and attitudes toward alcohol among 11-year-old British children with and without intellectual disability. *Journal of Intellectual Disability Research 60(12)*; 1212-1226.

Hatton C & Glover G (forthcoming). *People with learning disabilities in England 2017*. London: Public Health England.

Public Health England (2018). *People with learning disabilities – making reasonable adjustments. Guidance: substance misuse.* https://www.gov.uk/government/publications/reasonable-adjustments-for-people-with-learning-disabilities/substance-misuse

Robertson J, Emerson E, Baines S & Hatton C (2014). Obesity and health behaviours of British adults with self-reported intellectual impairments: cross sectional survey. *BMC Public Health*. 14:219. DOI: 10.1186/1471-2458-14-219.

Robertson J, Emerson E, Baines S & Hatton C (2018). Self-reported smoking, alcohol and drug use among adolescents and young adults with and without mild to moderate intellectual disability, *Journal of Intellectual & Developmental Disability*, DOI: 10.3109/13668250.2018.1440773

Robertson J, Emerson E, Gregory N, Hatton C, Turner S, Kessissoglou S & Hallam A (2000). Lifestyle related risk factors for poor health in residential settings for people with intellectual disabilities. *Research in Developmental Disabilities,* **21**, 469-486.