

Alcohol interventions in secondary and further education

[A] Evidence review for universal interventions

NICE guideline NG135

Evidence reviews

August 2019

Final

*These evidence reviews were developed
by Public health – Internal Guideline
Development team*

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ISBN: 978-1-4731-3491-1

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Universal classroom-based alcohol prevention interventions

Review questions

RQ 1.1: What universal classroom-based alcohol interventions are effective and cost effective in children and young people aged 11 up to and including 18 years?

RQ 3.1: What universal classroom-based alcohol interventions are effective and cost effective among young people aged 18 to 25 years with (special educational needs and disabilities) SEND?

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 universal classroom interventions for 11 up to and including 18 year olds

Population	Children and young people aged 11 up to and including 18 years in full time education.
Interventions	Universal classroom based alcohol interventions delivered by a teacher, peer, other school staff or external provider
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none">• 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:<ul style="list-style-type: none">○ unprotected or regretted sex○ violence and other antisocial behaviour○ criminal activity• Mental health and wellbeing• Adverse or unintended effects:<ul style="list-style-type: none">○ an increased interest in trying alcohol.

Table 2: PICO inclusion criteria for universal classroom interventions for 18 up to and including 25 year olds with SEND

Population	Children and young people aged 18 up to and including 25 years with an Education, health and care (EHC) plan.
Interventions	Universal classroom based alcohol interventions delivered by a teacher, peer, other school staff or external provider
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ unprotected or regretted sex ○ violence and other antisocial behaviour ○ criminal activity • Mental health and wellbeing • Adverse or unintended effects: <ul style="list-style-type: none"> ○ an increased interest in trying alcohol.

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 reference 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)

Stage of selection	Number of papers
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 1.1, a total of 54 articles incorporating 32 randomised-controlled trials (RCTs) were identified and included (see Table 4 for a summary of studies included in this review). A total of 20 interventions were evaluated in the studies (see Table 5 for more details on these interventions). The full evidence tables are in Appendix D: for full evidence tables. No studies were identified for review question 3.1 (SEND population).

Table 4: Summary of studies included in review question 1.1

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Bannink 2014 [The Netherlands]	Secondary school	1256 students in the third and fourth years (age 15 to 16 years)	E-health4Uth	Assessment only	<ul style="list-style-type: none"> Alcohol consumption (5 or more drinks on 1 occasion in the past 4 weeks) Been drunk or tipsy in the past 4 weeks Condom use
Botvin 1990 [USA]	High school	5954 seventh grade students (12-13 years)	Life skills training (LST)	Control (not specified)	<ul style="list-style-type: none"> Drinking frequency per month Drinking quantity per occasion Drunkenness frequency per month
Botvin 2001 [USA]	High school	3621 seventh grade students (12-13 years)	Life skills training (LST)	Usual curriculum	<ul style="list-style-type: none"> Drinking frequency per month Drinking quantity per occasion Drunkenness frequency per month
Champion 2016 [Australia]	Secondary school	1103 year eight students (13-14 years)	Climate Schools: Alcohol and Cannabis	Usual curriculum	<ul style="list-style-type: none"> Alcohol use, 6 months Frequency of binge drinking
Doumas 2014 [USA]	High school	513 ninth grade students (14-15 years)	eCHECKUP to GO	Usual curriculum	<ul style="list-style-type: none"> Drinking frequency per week Drinking quantity per week Alcohol-related consequences (RAPI)
Doumas 2017 [USA]	High school	221 high school seniors (17-18 years)	eCHECKUP to GO	Assessment only	<ul style="list-style-type: none"> Drinking quantity per week Drinking to intoxication frequency per month Alcohol-related consequences (RAPI)
Eisen 2002 [USA]	Middle school	7426 sixth grade students (11-12 years)	Skills for Adolescence (SFA)	Usual curriculum	<ul style="list-style-type: none"> Lifetime alcohol use 30 day alcohol use

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
					<ul style="list-style-type: none"> • 30 day binge drinking (3+ drinks)
Gabrhelik 2012 [Czech Republic]	Primary school	1753 sixth grade students (11-13 years)	Unplugged	Usual curriculum	<ul style="list-style-type: none"> • 3 day drunkenness
Griffin 2009 [USA]	Middle school	178 eighth grade students (13-14 years)	The BRAVE	Usual curriculum	<ul style="list-style-type: none"> • Alcohol use • 30 day drunkenness
Hanewinkel 2017 [Germany]	Secondary school	4163 students (15-16 years)	Klar bleiben ("Stay clear headed")	Usual curriculum	<ul style="list-style-type: none"> • Lifetime prevalence • Binge drinking frequency
Hausheer 2018 [USA]	High school	205 students (mean age 14.33)	eCHECKUP to GO	Usual curriculum	<ul style="list-style-type: none"> • Drinking status
Hecht 2003 [USA]	Middle school	6035 seventh grade students (12-13 years)	Keepin' it REAL	Control (not specified)	<ul style="list-style-type: none"> • 30 day alcohol use
Jander 2016 [The Netherlands]	Secondary school	2649 students (15-19 years)	Alcohol alert	Assessment only	<ul style="list-style-type: none"> • 30 day binge drinking • Weekly consumption
Lynch 2015 [UK]	Secondary school	3060 students in year 7 (11-12 years)	In:tuition	Usual curriculum	<ul style="list-style-type: none"> • Frequency of drinking per month
Malmberg 2014 [The Netherlands]	Secondary school	3542 first grade students (12-13 years)	Healthy School and Drugs	Usual curriculum	<ul style="list-style-type: none"> • Lifetime prevalence • 28 day alcohol use • 28 day binge drinking
Midford 2014 [Australia]	Secondary school	1746 year eight students (13-14 years)	The Drug Education in Victorian Schools (DEVs) programme	Usual curriculum	<ul style="list-style-type: none"> • Alcohol use past 12 months • Risky drinking • Alcohol consumption per occasion
Morgenstern 2009 [Germany]	Secondary school	1875 seventh grade students (12-13 years)	School-based alcohol education intervention	Usual curriculum	<ul style="list-style-type: none"> • Lifetime alcohol use • Lifetime binge drinking • Lifetime drunkenness

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Newton 2009 [Australia]	Private secondary school	944 year eight students, (13-14 years)	Climate Schools: Alcohol and Cannabis	Usual curriculum	<ul style="list-style-type: none"> • Weekly alcohol consumption • Frequency of drinking to excess on one occasion • Truancy • Alcohol harms • Psychological distress
Perry 2003 [USA]	High school	7261 seventh grade students (12-13 years)	DARE curriculum	Delayed programme	<ul style="list-style-type: none"> • Change from baseline alcohol use (past month) • Change from baseline violent behaviour and intentions
Portelli 2018 [Malta]	Secondary school	119 students (mean age 14.28 – 14.32 years)	Alcohol Expectancy challenge	Information only	<ul style="list-style-type: none"> • 30 day alcohol consumption
Ringwalt 2009 [USA]	Middle school	5883 sixth grade students (11-12 years)	Project ALERT	Control (not specified)	<ul style="list-style-type: none"> • Lifetime alcohol use • 30 day alcohol use
Rohrbach 2010 [USA]	High schools (regular and continuation)	3346 students (mean age 14.8 -15 years)	Project Toward no Drug Abuse (TND)	Control (not specified)	<ul style="list-style-type: none"> • 30 day alcohol use
Shope 1992a [USA]	Elementary/middle schools	1332 fifth grade students (10-11 years)	Alcohol Misuse Prevention Study (AMPS) curriculum	Control (not specified)	<ul style="list-style-type: none"> • Alcohol use (quantity x frequency) • Alcohol misuse
Shope 1992b [USA]	Elementary/middle schools	1354 fifth grade students (10-11 years)	Alcohol Misuse Prevention Study (AMPS) curriculum	Control (not specified)	<ul style="list-style-type: none"> • Alcohol use (quantity x frequency) • Alcohol misuse
Shope 1992c [USA]	Elementary/middle schools	1257 sixth grade students (11-12 years)	Alcohol Misuse Prevention Study (AMPS) curriculum	Control (not specified)	<ul style="list-style-type: none"> • Alcohol use (quantity x frequency) • Alcohol misuse
Shope 1992d [USA]	Elementary/middle schools	1413 sixth grade students (11-12 years)	Alcohol Misuse Prevention Study (AMPS) curriculum	Control (not specified)	<ul style="list-style-type: none"> • Alcohol use (quantity x frequency) • Alcohol misuse

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Shope 1994 [USA]	Elementary/middle schools	3989 sixth grade students (11-12 years)	Alcohol misuse prevention study (AMPS) curriculum (enhanced)	Control (not specified)	<ul style="list-style-type: none"> Alcohol use (quantity x frequency) Alcohol misuse
Sloboda 2009 [USA]	Middle/High school	17,320 seventh grade students (12-13 years)	Take Charge of Your Life (TCYL)	Control (not specified)	<ul style="list-style-type: none"> 30 day alcohol use 14 day binge drinking Drunkenness in past 12 months
Spoth 2002 [USA]	Middle/High school	1664 seventh grade students (12-13 years)	Life skills training (LST)	Minimal contact control	<ul style="list-style-type: none"> 30 day alcohol use Weekly drunkenness
Sun 2008 [USA]	High schools	2734 students (13 to 19 years)	Project Toward no Drug Abuse (TND)	Usual curriculum	<ul style="list-style-type: none"> 30 day alcohol use
Vogl 2009 [Australia]	Secondary school	1466 year eight students (13-14 years)	CLIMATE alcohol program	Control school alcohol education	<ul style="list-style-type: none"> 3 month quantity x frequency 3 month frequency of drinking to excess on one occasion Alcohol-related harms
Williams 2016 [USA]	Middle school	358 seventh grade students (12-13 years)	Keepin' it REAL	Usual curriculum	<ul style="list-style-type: none"> Alcohol initiation

Table 5: Intervention details for review question 1.1

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Alcohol Alert	Jander 2016	I-change model	Computer game	Online baseline questionnaire followed by 3 session the game "What happened?"	Computer	Individual	4 months	3 sessions
Alcohol Expectancy Challenge	Portelli 2018	The Health Belief Model	Not reported	List of "good" and "not so good" alcohol facts. Discussion, presentation on hazard of teenage drinking and assertiveness tips.	Health psychology doctorate student	Group	Not reported	3 x 45 minute sessions
AMPS and AMPS (enhanced)	Shope 1992a; 1992b; 1992c; 1992d; 1994	Social learning theory	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.	Discussion, class activities and role-playing.	Trained project staff teachers	Group	4 weeks. Booster sessions in sixth grade. Enhanced AMPS delivered over 3 years	4 x 45 minute sessions Enhanced AMPS: 45 minute sessions. 8 sessions in 6th grade, 5 sessions in 7th grade and 4 sessions in 8th grade
CLIMATE and CLIMATE: Alcohol and Cannabis	Newton 2009; Vogl 2009; Champion 2016	Harm minimisation to decrease alcohol (and cannabis) use.	Internet-based or CD-ROM interactive online cartoons	Role-plays, problem-solving activities and skill rehearsal	Computer and teachers	Group	One year	6 x 40 min lessons (alcohol module) in term 1 and 6 x lessons (alcohol and cannabis module) 6 months later Online cartoon component was 15-20 mins long
DARE curriculum	Perry 2003	Resistance skills, character building and citizenship skills	Not reported	Not reported	Police officers	Group	Not reported	10 sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
DEVS	Midford 2014	Social learning theory, post-structuralist subjectivity theory and cognitive dissonance theory.	Student workbooks, trigger videos and teacher manuals.	Not reported	Teachers	Groups	2 years	10 lessons in year 8 and 8 lessons in year 10
eCHECKUP TO GO	Doumas 2014; 2017; Hausheer 2018	Social norming theory and enhancement models to change perceptions of peer drinking norms, alcohol beliefs and alcohol expectancies.	Online assessment with information on alcohol consumption, drinking behaviour and consequences.	Personalised normative feedback following online assessment	Computer	Individual	30 minutes	Not reported
EHealth4Uth	Bannink 2014	To assess health-risk behaviour and well-being	Internet	Online self-report questionnaire with tailored feedback.	Computer	Individual	45 minutes	One session
Healthy School and Drugs	Malmberg 2014	To prevent or postpone the onset of use of alcohol, tobacco and marijuana. The lessons were based on the Attitude-Social Influence-Self-Efficacy (ASE) model.	Computer-based	The lessons consist of small films, animations and several types of interactive tasks. Students had access to chatrooms and forums.	Computer	Individual	2 years	4 lessons (alcohol), 3 lessons (tobacco) and 3 lessons (marijuana)
In:tuition	Lynch 2015	Focus on alcohol and self-awareness, attitudes and behaviour, personal choices, emotions, communication skills and assertive	Computer/paper-based	Not reported	Teachers Computer	Group	Not reported	12 x 40 minute sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
		behaviour, peer influence and goal setting.						
Keepin' it REAL	Hecht 2003; Williams 2016	Culturally grounded intervention using a cultural resiliency model that incorporates traditional ethnic values and practices that promote protection against drug use.	Not reported	In class lessons	Teachers	Group	2 years	10 session plus booster session in second year
Klar Bleiben	Hanewinkel 2017	Aims to reduce binge drinking and to develop a responsible attitude to alcohol	Class contract, posters, teacher's brochure with instructions, cards for postal feedback, class activities, DVD, and parents' information leaflet	Students agreed to refrain from binge drinking for 9 weeks. Drinking behaviour was recorded in class every two weeks. Classes that remain "binge-free" entered a raffle to win prizes.	Teachers	Group	9 weeks	Not reported
LST	Botvin 1990; 2001; Spoth 2002	To facilitate the development of personal and social skills with particular emphasis on skills for coping with social influence for substance use.	Teacher's manual and student guide, video material and a 15 minute relaxation audiotape	Demonstrations, behavioural rehearsal, feedback and reinforcement and behavioural homework assignments.	Teachers	Group	3 years	12 curriculum units taught in 15 class periods (45 minutes) with booster sessions in the 2nd and 3rd years.
Project ALERT	Ringwalt 2009	Programme seeks to motivate students not to use substances	Not reported	Guided class discussions, small group activities, role-	Teachers or other	Group	2 years	11 x 45 minute lessons in year 1 and 3 booster sessions in year 2

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
		and to provide the skills to resist inducements from peers to use substances and to support attitudes and beliefs that mitigate substance use.		playing exercises and videos.	school staff			
Project TND	Rohrbach 2010; Sun 2008	Based on cognitive misperception correction. Targets substance use and violence-related behaviours through the use of motivation, skills and decision-making.	Not reported	Interactive teaching techniques and instruction to students	Teachers	Group	4 weeks	12 sessions lasting 45 minutes each
School-based intervention	Morgenstern 2009	Based on theories that address social influences and enhance motivation to avoid substance use.	Class units, student booklets and booklets for parents	Not reported	Teachers	Group	3 months	4 class units
Skills for Adolescence	Eisen 2002	Utilises social influence and social cognitive approaches to teach cognitive-behavioural skills for building self-esteem and personal responsibility, communicating effectively, making better decisions, resisting social	Teacher manuals and student workbooks	Curriculum was taught in sessions	Teacher	Group	1 year	40 x 35-45 minute sessions

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
		influences and asserting rights, and increasing knowledge and consequences of drug use.						
TCYL	Sloboda 2009	TCYL demonstrates the personal, social and legal risks and consequences of the use of these substances.	Curriculum	Active or constructivist learning through problem-solving and role-playing	Police officers (trained DARE officers)	Group	1 year in 7th grade and 1 year in 9th grade	10 lessons in 7th grade and 7 booster lessons in 9th grade
The Brave	Griffin 2009	Based on social learning theory to address economic disadvantages while working to prevent used of alcohol and other drugs.	Curriculum-based classroom exercises (Life Skills Curriculum, Violence Prevention Curriculum, and violence prevention videotapes, manhood development training curriculum for African Americans focusing on behavioural maturity, success norms and responsible	Skill-building through reinforced practice (role-plays) and opportunities to practice skills across social contexts Ancillary components for developing and monitoring of career goals, mentoring, peer-to-peer goal monitoring and reinforcement, vocational field trips, vocational speakers' bureau and case referral.	The BRAVE Program staff	Group	7-8 months	2-3 x 90 minute classes per week over 9 weeks

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
			gender expectations)					
Unplugged	Gabrhelik 2012	Designed to delay drug initiation and suspend progression from early stage to heavier drug use..	Teacher's handbook and student workbook	Not reported	Teachers	Group	1 school year	12 x 45 minute lessons

Excluded studies

A total of 201 articles were excluded from this guideline. See Appendix G: for a full list of excluded studies and the reasons for exclusion.

Evidence statements

Universal classroom interventions (11-18 year olds)

Age at first whole drink

Low quality evidence from one RCT showed no significant difference in alcohol initiation at 12 months for students aged 12-13 years receiving the Keepin' in REAL programme compared to control (aOR 0.84 95% CI 0.42 to 1.66).

Age at first experience of drunkenness

No data reported

Amount and frequency of alcohol

Alcohol use

Very low quality evidence was identified from 9 RCTs (results were not pooled). Five of these RCTs (Spoth 2002, Sun 2008, Rohrbach 2009, Midford 2014 and Lynch 2015) showed no difference in alcohol use for students receiving a universal classroom-based intervention compared to the control group who received usual teaching or unspecified control. Two RCTs reported a significant reduction in alcohol use for students receiving a universal classroom-based intervention (curriculum-based activities or computer-based modules) compared to usual education (RR 0.2 95% CI 0.1 to 0.4 [Griffin 2009] and aOR 0.69 95% CI 0.50 to 0.96 [Champion 2016]). The remaining two RCTs showed a significant increase in alcohol use for students receiving a universal classroom-based intervention (police-officer delivered DARE curriculum or E-Learning modules) compared to non-specified control or usual teaching (aRR 1.09 95% CI 1.01 to 1.18 [Sloboda 2009] and aRR 1.2 95% CI 1.0 to 1.5 [Malmberg 2014]).

Low quality evidence from 1 RCT (Perry 2003) reported no significant difference in 30-day alcohol use at 12 months for boys or girls receiving the DARE curriculum versus control (boys: mean change in 30-day alcohol use [measured with 7 undefined response categories] 0.11 vs 0.14; girls: mean change 0.13 vs 0.12; both reported as not significant).

Low to very low quality evidence from 2 RCTs reported no significant difference in 30-day alcohol use at 12 months for a universal classroom-based intervention versus control or usual curriculum (number of people drinking in the last 30 days: 22.85% vs 23.18%, % difference -0.33 [Eisen 2002]; 22.1% vs 19.7%; difference not reported [Ringwalt 2009]).

Low quality evidence from 1 RCT (Hecht 2003) reported a significant reduction in 30-day alcohol use at 14 months for students receiving the keepin' it REAL curriculum compared to control (30-day alcohol use [sum of average of number of drinks (1=none to 9= more than 30) and frequency in days (1=none to 6=16-30)] MD -0.232, 95% CI not reported).

Evidence from 1 RCT (Hausheer 2018) reported no significant difference in alcohol drinking status at 3 months for students receiving a universal web-based intervention compared to control. (Point estimate and 95% CI not reported).

Binge drinking

Very low quality evidence was identified from 7 RCTs (results were not pooled). Four of the RCTs (Midford 2014, Bannink 2014, Champion 2016 and Hanewinkel 2017) showed no difference in binge drinking at for students receiving a universal classroom-based intervention compared to the control group who received usual teaching or unspecified control. One RCT showed a significant reduction in binge drinking for students receiving a computer based intervention compared to a baseline questionnaire only (aOR 0.40 95% CI 0.18 to 0.83 [Jander 2016]). The remaining two RCTs showed a significant increase in binge drinking for students receiving a universal classroom-based intervention (police-officer delivered DARE curriculum or E-Learning modules) compared to non-specified control or usual teaching (aRR 1.14 95% CI 1.01 to 1.27 [Sloboda 2009] and aRR 1.3 95% CI 1.1 to 1.5 [Malmberg 2014]).

Very low quality evidence from 1 RCT (Eisen 2002) showed no significant difference in 30 day binge drinking (3+ drinks per occasion) at 12 months for students receiving Skills for Adolescence programme compared to those receiving usual drug education (30 day binge drinking: 12.67% vs 13.11%; % difference -0.44).

Drunkness

Very low quality evidence was identified from 6 RCTs (Griffin 2009, Spoth 2002, Sloboda 2009, Gabrhelik 2012, Bannink 2014 and Doumas 2017). All six RCTs showed no difference in drunkness for students receiving a universal classroom-based intervention (lesson or computer-based) compared to the control group who received usual teaching or unspecified control (results were not pooled).

Low quality evidence from 1 RCT (Botvin 2001) reported a significant difference in drunkness frequency at 12 months for students receiving Life Skills Training (LST) vs usual curriculum. (Mean drunkness frequency [9 point scale ranging from 1 = never to 9 = more than once a day]: 1.17 vs 1.26; MD not reported; favours intervention).

Very low quality evidence from 1 RCT (Botvin 1990) reported no significant difference in drunkness frequency at 3 years for students receiving Life Skills Training (LST) vs control. (Mean drunkness frequency [9 point scale ranging from 1 = never to 9 = more than once a day]: 2.31 vs 2.32; MD not reported).

Mean alcohol consumption

Very low quality evidence was identified from 3 RCTs (results not pooled). Two of the RCTs (Jander 2016 and Doumas 2017) showed no difference in weekly consumption of alcohol for students receiving a universal classroom-based intervention (lesson or computer-based) compared to the control group who assessment only. The remaining RCT (Newton 2009) showed a significant reduction in weekly alcohol consumption for students receiving an internet-based programme compared to the control group receiving usual education (aMD -5.93 95% CI -6.49 to -5.37).

Three other RCTs provided very low to low quality evidence for number of drinks consumed per occasion. One study (Botvin 2001) reported that Life Skills Training (LST) vs usual curriculum significantly reduced the number of drinks consumed on each occasion (mean drinking quantity [scale of 1=don't drink to 6= more than 6 drinks]: 1.51 vs 1.68; MD not reported). Two studies reported no significant difference at 12 months (Hanewinkel 2017) or 3 years (Botvin 1990) for number of drinks consumed per occasion for students receiving Klar bleiben or Life Skills training respectively compared to usual curriculum or control (mean drinks per occasion: 4.67 to 4.81; MD not reported and mean drinking quantity [scale of 1=don't drink to 6= more than 6 drinks] 2.65 vs 2.65; MD not reported).

Evidence from one RCT (Portelli 2018) showed no significant difference for number of alcoholic drinks consumed in the past month for students the alcohol expectancy challenge compared to control. (MD and 95% CI not reported).

Quantity x frequency of alcohol

Very low quality evidence was identified from 5 RCTs (Shope 1992a, Shope 1992b, Shope 1992c, Shope 1992d, Shope 1994). All 5 RCTs showed no significant difference in weekly quantity x frequency of alcohol at for students receiving a universal classroom-based intervention compared to the control group who received usual teaching or unspecified control (results were not pooled).

Low quality evidence from 1 RCT (Vogl 2009) showed a significant difference for weekly alcohol consumption (measured as quantity x frequency) at 12 months for girls receiving the Climate Alcohol program compared to control school education (mean 0.99 vs 2.25). There were no significant differences between the groups for boys.

Low quality evidence from 1 RCT (Doumas 2014) showed no significant difference in quantity x frequency of alcohol use at 6 months for students receiving eCHECKUP TO GO compared with control (mean 1.17 vs 1.06; reported as non-significant).

Mean alcohol frequency

Low to very low quality evidence from 2 RCTs (Botvin 1990 and Botvin 2001) showed no significant difference in mean drinking frequency at 3 years or 12 months for students receiving Life Skills Training compared to control (mean drinking frequency [9-point scale: 1 = never, 2 = tried but do not drink, 3 = less than once a month to 9 = more than once a day]: 3.17 vs 3.15; MD not reported [Botvin 1990; 1.77 vs 1.99, MD not reported [Botvin 2001]).

Low quality evidence from 1 RCT (Doumas 2014) showed no significant difference in weekly drinking quantity at 6 months for students receiving eCHECKUP TO GO compared with control (mean 0.90 vs 0.82; reported as non-significant).

Lifetime prevalence

Low quality evidence was identified from 3 RCTs (results were not pooled). Two of these RCTs (Morgenstern 2009 Hanewinkel 2017) showed no significant difference for lifetime prevalence for students receiving a universal classroom-based intervention compared to usual curriculum. The remaining RCT (Malmberg 2014) showed a significant increase in lifetime prevalence for students receiving a computer-based programme compared to usual teaching (aRR 1.2 95% CI 1.0 to 1.3).

Low to very low quality from two other RCTs showed no significant difference for Lifetime alcohol use at 12 months for students receiving a universal classroom-based intervention versus control or usual curriculum (66.97% vs 66.33%, % difference 0.64 [Eisen 2002]; 63.5% vs 59.9%, difference not reported [Ringwalt 2009]).

School attendance

Truancy

Low quality evidence from one RCT (Newton 2009) showed that the Climate Schools programme significantly reduced truancy in students compared to those receiving usual health classes (mean truancy on a 5 point Likert scale [1 (0 days) to 5 (10+ days)]: 1.21 vs 1.42; favours intervention).

Alcohol-related risky behaviour

Alcohol misuse

Very low quality evidence was identified from 5 RCTs (Shope 1992a, Shope 1992b, Shope 1992c, Shope 1992d, Shope 1994). All 5 RCTs showed no significant difference in alcohol misuse (overindulgence, trouble with peers and adults) for students receiving a universal classroom-based intervention compared to the control group who received usual teaching or unspecified control (results were not pooled).

Alcohol harms

Low quality evidence from 1 RCT (Midford 2014) showed that the Drug Education in Victorian Schools (DEVS) programme significantly reduced alcohol harms (sum of harms on a 10 item scale for feeling sick/hungover to regretted sex and getting in trouble with police, parents or school) compared to usual drug education (mean 3.8 vs 5.7; MD not reported).

Violent behaviour and intentions

Low quality evidence from 1 RCT (Perry 2003) reported no significant difference in violent behaviour and intention [5 item scale; range 5-23] at 12 months for boys or girls receiving the DARE curriculum versus control (boys: mean change 0.57 vs 0.54; girls: mean change 0.23 vs 0.26; both reported as not significant).

Unprotected or regretted sex

Moderate quality evidence from one RCT (Bannink 2014) showed a significant increase in use of condoms during intercourse for a subgroup of students (those reporting as sexually active) receiving the Ehealth4Uth programme compared to control (OR 2.09 95% CI 1.04 to 4.22).

Mental health and wellbeing

Alcohol-related harms

Low quality evidence was identified from 2 RCTs. One RCT (Newton 2009) showed a significant reduction in alcohol related-harms for students receiving the Climate Schools programme compared to the control group who received usual health classes (aMD -5.27 95% CI -6.53 to -4.01). The second RCT (Domas 2017) showed no significant difference in alcohol-related harms for students receiving the eCHECKUP TO Go computer programme compared to control.

Psychological distress

Moderate quality evidence from one RCT (Newton 2009) showed that the Climate Schools programme showed a significant decrease in psychological distress for students compared to those receiving usual health classes (aMD -1.42 95% CI -3.19 to 0.35).

Adverse or unintended effects

No data reported

Universal classroom interventions (18-25 year olds with SEND)

No evidence was identified.

Universal school-based alcohol interventions outside of the classroom

Review questions

RQ 1.2 What universal school-based (outside of the classroom) alcohol interventions are effective and cost effective in children and young people aged 11 up to and including 18 years?

RQ 3.2 What universal school-based (outside the classroom) alcohol interventions are effective and cost effective among young people aged 18 up to and including 25 years with SEND?

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 table

The following tables contain a summary of the protocols

Table 6: PICO inclusion criteria for universal interventions outside the classroom for 11 up to and including 18 year olds

Population	Children and young people aged 11 up to and including 18 years in full time education.
Interventions	Universal school-based alcohol interventions delivered outside the classroom.
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none">• 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:<ul style="list-style-type: none">○ unprotected or regretted sex○ violence and other antisocial behaviour○ criminal activity• Mental health and wellbeing• Adverse or unintended effects:<ul style="list-style-type: none">○ an increased interest in trying alcohol.

Table 7: PICO inclusion criteria for universal interventions outside the classroom for 18 up to and including 25 year olds with SEND

Population	Children and young people aged 18 up to and including 25 years with an Education, health and care (EHC) plan.
Interventions	Universal school-based alcohol interventions delivered outside the classroom.
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ unprotected or regretted sex ○ violence and other antisocial behaviour ○ criminal activity • Mental health and wellbeing • Adverse or unintended effects: <ul style="list-style-type: none"> ○ an increased interest in trying alcohol.

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 reference 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 8: 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)

Stage of selection	Number of papers
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 1.2, a total of 7 articles incorporating 6 randomised-controlled trials (RCTs) were identified and included (see Table 9 for a summary of studies included in this review). A total of 7 interventions were evaluated in the studies (see Table 10 for more details on these interventions). The full evidence tables are in Appendix D:for full evidence tables. No studies were identified for review question 3.2.

Table 9: Summary of public health included in review question 1.2

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Colnes 2001 [USA]	High school	76 high school students in grades 9 -11 (age 15-17)	Super Leader Peer Leadership Training	Control (unspecified)	<ul style="list-style-type: none"> • Frequency of alcohol use • Frequency of getting drunk
D'Amico 2002 [USA]	High school	300 adolescents aged 14-19	Risk Skills Training Program (RSTP) Abbreviated Drug Abuse and Resistance Education (DARE-A)	No intervention control	<ul style="list-style-type: none"> • Weekly drinking • Risky drinking
D'Amico 2012 [USA]	Middle school	8,932 students in the 6th to 8th grade (11-13 years)	CHOICE	Control (unspecified)	<ul style="list-style-type: none"> • Lifetime drinking • Past month alcohol use • Past month heavy drinking
Werch 1996 [USA]	High school	138 6th to 8th grade students (11-13 years)	Start Taking Alcohol Risks Seriously (STARS)	No intervention control	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day heavy drinking • Negative drinking consequences
Werch 2003 [USA]	Middle/High school	381 students (mean age 13.2 years)	Sport plus	Minimal intervention control	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day alcohol quantity • 30 day heavy use • Alcohol-related problems
Werch 2005a [USA]	High school	604 9th and 11th grade students (15 – 17 years)	Project SPORT	Minimal intervention control	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day alcohol quantity • 30 day heavy use

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
					<ul style="list-style-type: none">• Alcohol-related problems

1

Table 10: Intervention details for review question 1.2

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Super Leader Peer Leadership Training	Colnes 2001 [USA]	To provide comprehensive peer-leadership training that incorporates state-of-the-art strategies to reduce substance use.	Not reported	Residential training-retreats, after-school leadership programme, program-wide activities and support services.	Trained professionals	Group	Single training retreat	4 days including the weekend (afterschool Thursday to Sunday)
Risk Skills Training Program (RSTP)	D'Amico 2002 [USA]	To target multiple risk behaviours and adolescents' personal beliefs and consequences experienced from these behaviours.	Not reported	Interactive group sessions, motivational techniques. Adolescents were provided with personalised written and graphic feedback.	Group leader (unspecified)	Group	Single session	1 x 50 minute session
Abbreviated Drug Abuse and Resistance Education (DARE-A)	D'Amico 2002 [USA]	Focused on increasing knowledge and understanding of the deleterious effects of substance use.	Not reported	Not reported	Police officer (Certified DARE instructor)	Group	Single session	1 x 50 minute session
CHOICE	D'Amico 2012 [USA]	Social Learning Theory, Decision-Making Theory and Self-Efficacy Theory. Focused on normative feedback.	Not reported	Group discussion, role-plays	Bachelor- or Masters-educated project staff	Group	5 sessions over school year	1 x 30 minute session per week for 5 sessions
Start Taking Alcohol Risks	Werch 1996 [USA]	Based on the Multi-Component Motivational Stages (McMOS) prevention	Consultation protocols, a prescription recommendation and	Brief consultations	School nurses	Individual	Not reported	Brief initial health consultation and six-weekly

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
Seriously (STARS)		model underpinned by the Health Belief Model, Social Learning Theory and Behavioural Self-Control theory	a contract agreement to avoid future alcohol use.					follow up consultations
Sport plus (Sport Consultation Plus Alcohol Preventive Consultation)	Werch 2003 [USA]	Not reported	A list of messages, addressing 5 risk/protective factors including influenceability, social norms, negative outcome expectancies, positive outcome expectancies, and self-efficacy and behavioural capability	Brief consultations	Nurses	Individual	Not reported	25 minute consultation
Project SPORT	Werch 2005 [USA]	Based on the Integrative Behavior-Image Model (BIM), Multicomponent Motivational Stages (McMOS) model, Social Cognitive Theory, Behavioral Self-Control Theory, Social Bonding Theory and Health Belief Model	Tailored and scripted communications and prevention messages that promote and active lifestyle and the conflict between this lifestyle and consuming alcohol	Brief 7 item Health and Fitness screen followed by SPORT fitness consultation	Trained fitness specialists (various including nurses and certified health education specialists)	Individual	Single session	Brief 12 minute (approx.) consultation.

Excluded studies

A total of 202 articles were identified for consideration but were excluded from this guideline. See Appendix G: for a full list of excluded studies and the reasons for exclusion.

Evidence statements

Universal interventions outside of the classroom (11 to 18 year olds)

Age at first whole drink

No data reported

Age at first experience of drunkenness

No data reported

Amount and frequency of alcohol use

30 day mean alcohol frequency

Very low quality evidence was identified from 2 RCTs (Werch 2003 and Werch 2005). Both RCTS showed no difference in 30-day alcohol frequency for students receiving a universal nurse-led brief intervention compared to the control group who minimal intervention control e.g. leaflets/postcards (results were not pooled).

Low quality evidence from another RCT (Werch 1996) showed no difference for 30-day alcohol frequency for students receiving a brief nurse intervention compared to no intervention (mean 30 day frequency]: 0.16 vs 0.39 reported as not significant).

30 day mean alcohol quantity

Very low quality evidence was identified from 2 RCTs (Werch 2003 and Werch 2005). Both RCTS showed no difference in 30-day alcohol quantity for students receiving a universal nurse-led brief intervention compared to the control group who minimal intervention control e.g. leaflets/postcards (results were not pooled).

Low quality evidence from 1 RCT (Werch 1996) showed no difference for 30-day alcohol quantity for students receiving a brief nurse intervention compared to no intervention (mean 30 day quantity]: 0.13 vs 0.25; reported as not significant).

30 day mean alcohol heavy use

Very low quality evidence was identified from 2 RCTs (Werch 2003 and Werch 2005). One RCT (Werch 2003) showed no difference in 30-day alcohol heavy use for students receiving a universal nurse-led brief intervention compared to the control group who minimal intervention control e.g. leaflets/postcards. The other RCT (Werch 2005) showed borderline significance in reducing 30-day alcohol heavy use for students receiving a universal nurse-led brief intervention compared to control (MD -0.14 (-0.28, -0.00)).

Very low quality evidence from 1 RCT (Werch 1996) showed a significant difference in 30 day heavy use for students receiving a brief nurse consultation compared with no intervention (30 day heavy use 0/60 [0%] vs 3/64 [5%], reported as significant).

Very low quality evidence from 1 RCT (D'Amico 2012) showed no difference in 30 day heavy use for students receiving a voluntary after-school programme compared with no intervention (30 day heavy use 4.5% vs 6.1%, OR 0.78 95% CI not reported; reported as non-significant).

30 day alcohol use

Very low quality evidence from 2 RCTs (Werch 1996 and D'Amico 2012) showed no difference in 30 day alcohol use for students receiving either a brief nurse consultation or voluntary after-school programme compared with no intervention (results were not pooled).

Lifetime alcohol use

Very low quality evidence from 1 RCTs (D'Amico 2012) showed a significant difference in lifetime alcohol use favouring the intervention at 6 months for students receiving a brief nurse consultation or voluntary after-school programme compared with no intervention (lifetime alcohol use 22.2% vs 29.0%, OR 0.70, 95% CI not reported; reported as significant).

School attendance**Absenteeism**

High quality evidence from one RCT (Colnes 2001, n=36) showed a significant difference in absence from school for students who had attended a residential peer-leaders programme compared to the control group (MD 1.5 95% CI 0.66 to 2.34).

Tardiness

High quality evidence from one RCT (Colnes 2001, n=36) showed a significant difference in tardiness for students who had attended a residential peer-leaders programme compared to the control group (MD 1.11 95% CI 0.41 to 1.81).

Alcohol-related risky behaviour**Risky drinking behaviour**

Very low quality evidence from one RCT (D'Amico 2002) showed no difference for risky drinking behaviour at 6 months for students receiving a brief personalised intervention for adolescent risk-taking behaviour (RSTP) or abbreviated DARE curriculum (DARE-A) compared with no intervention control (mean risky drinking behaviour [scale not reported]: RSTP vs DARE-A vs control; 1.90 v 1.06 vs 2.36; reported as not significant).

Negative consequences when drinking

Low quality evidence from 1 RCT (Werch 1996) showed no difference for negative consequences when drinking for students receiving a brief nurse intervention compared to no intervention (mean negative consequences [scale not reported]: 9.58 vs 9.05; reported as not significant).

Unprotected or regretted sex

No evidence identified for this outcome.

Mental health and wellbeing**Alcohol problems**

Low quality evidence was identified from 2 RCTs. One RCT (Werch 2003) showed an increase in alcohol problems for students receiving a universal nurse-led brief intervention compared to the control group who minimal intervention control e.g. leaflets/postcards (MD 0.5 95% CI 0.14 to 0.86). The remaining RCT showed a significant reduction in alcohol problems for students receiving a universal nurse-led brief intervention compared to the control group who minimal intervention control e.g. leaflets/postcards (MD -0.56 95% CI -1.04 to -0.06).

Adverse effects

No data reported

Universal interventions outside of the classroom (18-25 year olds with SEND)

No evidence was identified.

Universal school-based multicomponent interventions for alcohol

Review questions

RQ 1.3 What universal school-based multi-component alcohol interventions that include additional components such as family and community activities are effective and cost effective in children and young people aged 11 up to and including 18 years?

RQ 3.3 What universal school-based multi-component alcohol interventions that include additional components such as family and community activities are effective and cost effective among young people aged 18 up to and including 25 years with SEND?

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 table

The following tables contain a summary of the protocols.

Table 11: PICO inclusion criteria for universal school-based multicomponent interventions for 11 to 18 year olds

Population	Children and young people aged 11 up to and including 18 years in full time education.
Interventions	Universal school-based multi-component interventions These are school-based alcohol programmes delivered in conjunction with other components such as family, community or media based intervention components
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ unprotected or regretted sex ○ violence and other antisocial behaviour ○ criminal activity • Mental health and wellbeing • Adverse or unintended effects: <ul style="list-style-type: none"> ○ an increased interest in trying alcohol.

Table 12: PICO inclusion criteria for universal school-based multicomponent interventions for 18 to 25 year olds with SEND

Population	Children and young people aged 18 up to and including 25 years with an Education, health and care (EHC) plan.
Interventions	Universal school-based multi-component interventions These are school-based alcohol programmes delivered in conjunction with other components such as family, community or media based intervention components
Comparator	The intervention of interest against a control group
Outcomes	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ unprotected or regretted sex ○ violence and other antisocial behaviour ○ criminal activity • Mental health and wellbeing • Adverse or unintended effects: <ul style="list-style-type: none"> ○ an increased interest in trying alcohol.

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 reference 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 13: 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)

Stage of selection	Number of papers
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 1.3, a total of 43 articles incorporating 19 randomised-controlled trials (RCTs) were identified and included (see Table 14 for a summary of studies included in this review). A total of 15 interventions were evaluated in the studies (see Table 15 for more details on these interventions). The full evidence tables are in Appendix D: for full evidence tables. No studies were identified for review question 3.3

Table 14: Summary of public health studies included in evidence review 1.3

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Haug 2017 [Switzerland]	Vocational and upper secondary schools	1041 students aged 16-19 years	'MobileCoach Alcohol' Web and text-message based	Assessment only	<ul style="list-style-type: none"> • 30 day risky single occasion drinking • Consumption per week
Hausheer 2018 [USA]	High school	205 students (mean age 14.33)	eCHECKUP to GO plus parent campaign	Usual curriculum	<ul style="list-style-type: none"> • Drinking status
Hodder 2017 [Australia]	Secondary schools	3115 students aged 12-16 years	Universal 'whole of school' intervention	Usual curricula and policies	<ul style="list-style-type: none"> • Alcohol use ever • Alcohol use recent (past week) • Alcohol use risky
Komro 2006 [USA]	High schools	5812 students in 6th grade (11-12 years)	Project Northland (adapted)	Control (no details provided)	<ul style="list-style-type: none"> • Change from baseline alcohol use
Koning 2014 [Netherlands]	High schools	3245 students, mean age 12.66 years	Combined student and parent intervention	Usual activities	<ul style="list-style-type: none"> • Weekly consumption
Malmberg 2014 [Netherlands]	Secondary schools	3542 1st grade students (12-13 years)	Integral (e-learning, parenteral participation, regulation, and monitoring and counselling)	Usual teaching	<ul style="list-style-type: none"> • Lifetime prevalence • 28 day alcohol use • 28 day binge drinking
Patton 2006 [Australia]	Secondary schools	2678 students aged 13-14 years	Gatehouse Project	No treatment control	<ul style="list-style-type: none"> • Any drinking • Regular drinking • Binge drinking • Any risky behaviours (including unprotected sex)
Perry 1996 [USA]	School districts	3151 6th grade students (11-12 years)	Project Northland	Usual teaching	<ul style="list-style-type: none"> • Tendency to use alcohol
Perry 2003 [USA]	Schools	7261 7th grade students	DARE and DARE plus	Delayed program	<ul style="list-style-type: none"> • Change from baseline alcohol use (past month)

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
					<ul style="list-style-type: none"> • Change from baseline violent behaviour and intentions
Sanchez 2017[Brazil]	Public school	6658 eighth grade students (11-15 years)	Unplugged	Usual curriculum	<ul style="list-style-type: none"> • Past month alcohol use • Past month binge drinking
Skärstrand 2013 [Sweden]	Elementary schools	521 6th grade students (age 12)	Strengthening families program	Control (no details provided)	<ul style="list-style-type: none"> • Lifetime drunkenness • 3 day drunkenness
Spoth 2002 [USA]	Rural schools	1664 7th grade students (12-13 years)	Life skills training (LST) plus Strengthening families program	Minimal contact control	Amount and frequency of alcohol use
Sumnall 2017 [UK]	Secondary school	12,738 students in year 9 (13-13 years)	Steps towards alcohol misuse prevention programme (STAMPP)	Usual curriculum	<ul style="list-style-type: none"> • Heavy episodic drinking • Alcohol-related harms
Werch 1998 [USA]	Middle school	211 6th grade students (11-12 years)	STARS for Families	Control (no details provided)	<ul style="list-style-type: none"> • 30 day use • 30 day heavy use
Werch 2000a [USA]	Middle school (neighbourhood)	388 6th grade students (mean age 11.66 years)	STARS for Families	Minimal intervention control	<ul style="list-style-type: none"> • Ever tried alcohol • 30 day use • 30 day heavy use
Werch 2000b [USA]	Middle school (magnet [bused])	262 6th grade students (mean age 11.23 years)	STARS for Families	Minimal intervention control	<ul style="list-style-type: none"> • Ever tried alcohol • 30 day use • 30 day heavy use
Werch 2003 [USA]	Inner city middle school, suburban middle schools and rural junior high school	454 8th grade students, mean age 13.2 years	Sport Plus Parent (Sports consultation plus alcohol prevention plus parents)	Sports consultation	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day alcohol quantity • 30 day heavy use • Alcohol-related problems
Werch 2005b [USA]	One Inner-city middle school and one rural junior high school	448 8th grade students (13 – 14 years)	<ol style="list-style-type: none"> 1. STARS for Families 2. STARS Plus 	Postcards only	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day alcohol quantity • 30 day heavy use • Alcohol-related problems

Study [Country]	Setting	Population	Intervention	Comparator	Outcome(s)
Werch 2010 [USA]	Public high school	416 10 th and 11 th grade students (15-17 years)	Planned success	Usual curriculum	<ul style="list-style-type: none"> • 30 day alcohol use • 30 day alcohol quantity • 30 day heavy use • Alcohol-related problems

1

Table 15: Intervention components for review question 1.3

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
eCHECKUP TO GO	Hausheer 2018	Social norming theory and enhancement models to change perceptions of peer drinking norms, alcohol beliefs and alcohol expectancies.	Online assessment with information on alcohol consumption, drinking behaviour and consequences plus parent brochure.	Personalised normative feedback following online assessment; Prompted discussion between parents and adolescents	Computer	Individual	Not reported	Not reported
MobileCoach Alcohol	Haug 2017	Web-based part provided normative feedback based on the social norms approach. The text-messaging part were based of several socio-cognitive constructs from major psychological models such as social-cognitive theory	Combined individually-tailored web and text messaging components	Web feedback provided immediately after baseline assessment	None	Individual	3 months	1 web feedback session Text messages over 3 months
Universal 'whole of school' intervention	Hodder 2017	Build protective factors of students across the 3 domains of the Health Promoting Schools framework	16 broad strategy areas from which schools could choose to implement including an embedded psychology or education trained	Curriculum, ethos and environment and partnerships and services	School staff	Group	3 years	9 hours of lessons 9 hours of non-curriculum programme

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
			implementation support officer					
Project Northland	Perry 1996; Komro 2006	To change personal, social and environmental factors that support alcohol use among young adolescents. Used the theory of triadic influence and Perry's planning model for adolescent health.	Classroom curricula, peer leadership training parental involvement.	Home programs, family fun events, parent postcards and youth extra-curricular activities.	Teachers, peers and community-based adults	Not reported	3 years	6-10 sessions per year (classroom curricula)
Combined student and parent intervention	Koning 2014	Targets parental rules for children's alcohol use	Brief 20 minute presentation for parents and an information leaflet sent to the parents' home address with a summary of the meeting. Healthy school and drugs curriculum	Parents' meeting and lessons	Teachers	Group	3 years	4 lessons 1 parent meeting
Integral intervention	Malmberg 2014	Attitude-Social Influence-Self-Efficacy (ASE) model	e-learning, parental participation, regulation, and monitoring and counselling.	Lessons Plenary meeting Training for school personnel	None	Individual	2 years	4 e-learning lessons on alcohol (between April and July 2009)
Gatehouse Project	Patton 2006	Aims were to increase levels of emotional wellbeing and reduce rates of substance use, known to be related to emotional wellbeing	Curriculum focused on problem solving in common situations youth experience	Recruitment of staff to a co-ordinating team with a focus on school policies	None	Individual	2 years	20 lessons per year

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
			emotional difficulties Feedback from a student survey	Consultation and training regarding specific intervention strategies				
DARE plus	Perry 2003	Resistance skills, character building and citizenship skills	DARE curriculum plus parental involvement program.	Extracurricular activities and neighbourhood action teams	Police officers, teachers and trained peer leaders	Group	Not reported	10 sessions 10 postcards mailed to parents
Adapted strengthening families program (SFP 10-14)	Skärstrand 2013	Bio psychosocial vulnerability model, resiliency model and a family process model linking economic stress and adolescent adjustment	Youth skills-building curriculum	Separate group sessions for parents and youths followed by a joint session	Class teachers and assistance from a leader	Group	7 weeks	Once per week 4 booster sessions in second year
Life skills training (LST) plus Strengthening families program (SFP 10-14)	Spoth 2002	Based on social learning theory and problem behaviour theory	LST: a)cognitive component, b)self-improvement component, c)decision-making, d) coping with anxiety and e) social skills training SFP 10-14 (see above)	LST: Lessons and booster sessions SFP 10-14 (see above)	Teachers	Group	LST: One lesson per week for 15 weeks or 5 sessions per week for 3 weeks SFP 10-14 (see above)	LST: 40-45 minutes classroom session (x15) Booster session in second year SFP 10-14: 7 group sessions delivered once a week for 7 consecutive weeks in the second semester of grade 7.

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
STARS for Families	Werch 1998; Werch 2000a; Werch 2000b; Werch 2005	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory	Brief interventions plus parent postcards and family take-home lessons	One to one nurse consultations Follow up consultation	Nurse	Individual	Not reported	20 minute brief consultation 2 prevention postcard per week (up to 10) mailed to parents 9 family-based sessions
Sport Plus Parent	Werch 2003	Based on Social Cognitive theory, Health Belief Model, Behavioural Self-Control theory, Theory of planned behaviour, social bonding theory and Multi-component motivational stages (McMOS) prevention model.	A list of messages addressing 5 risk/protective factors. 5 parental SPORT cards Student contract	One to one nurse consultation Parental material mailed to parents	Nurses	Individual	Not reported	5 cards mailed once per week
Steps towards alcohol misuse prevention programme (STAMPP)	Sumnall 2017	Combines a harm reduction philosophy with skills training, education and activities designed to encourage positive behavioural change	Classroom curriculum component was adapted from the School Health and Alcohol Harm Reduction Project (SHAHRP) Parent component included a presentation on the Chief Medical Officer's (CMO) 2009 guidelines on drinking in	Classroom curriculum students plus a brief intervention for parents of students. The brief intervention was followed by a discussion on setting family rules on alcohol.	Trained teachers	Group	Not reported	Phase 1: 6 lessons (16 activities) in year 9; Phase 2 4 lessons (10 activities) in year 10

Brief Name	Studies	Rationale, goal or theory	Materials used	Procedures used	Provider	Delivery method	Duration	Intensity
			childhood, alcohol prevalence in young and it highlighted the importance of setting strict family rules around alcohol. Follow up leaflet mailed to parents.					
Unplugged	Sanchez 2017	Based on the European Drug Addiction Prevention Trial (EU-DAP)	Student and teacher manuals	Class curriculum in combination with parent workshops	Teacher	Group	Not reported	12 x 1 hour classes
Planned success	Werch 2010	Behaviour-Image model	Printed text and scripted messages	Tailored in-person communication and a follow-up series of parent/guardian print materials.	Nurses and certified health education specialists	Individual	Not reported	20 minute session

Excluded studies

A total of 202 articles were identified for consideration but were excluded from this review. See Appendix G: for a full list of excluded studies and the reasons for exclusion.

Evidence statements

Universal multi-component interventions (11 to 18 year olds)

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. All 7 of these RCTs (Werch 2000a, Werch 2000b, Spoth 2002, Malmberg 2014, Hodder 2017, Werch 1998 and Sanchez 2017) showed no difference in alcohol use for students receiving a school-based universal multicomponent intervention (usually brief or classroom-based with parental and/or community components) compared to the control group who received usual teaching or minimal intervention control.

Low quality evidence from 1 RCT (Patton 2006) showed no significant difference for regular drinking at 1 year for students receiving a school-based universal multicomponent intervention (curriculum and whole school approach) compared to the control group (aOR 1.09 95% CI 0.77 to 1.57).

Low quality evidence from 1 RCT (Perry 2003) reported no significant difference in 30-day alcohol use at 12 months for boys or girls receiving the DARE plus curriculum versus control (boys: mean change in 30-day alcohol use [measured with 7 undefined response categories] 0.08 vs 0.14; girls: mean change 0.08 vs 0.12; both reported as not significant).

Very low quality evidence from 1 RCT (Komro 2006) reported no significant difference in alcohol use for students receiving a culturally-adapted alcohol prevention programme combined with home and community compared to control (mean change 0.02 vs 0.05; reported as not significant).

Evidence from 1 RCT (Hausheer 2018) reported no significant difference in alcohol drinking status at 3 months for students receiving a universal web-based intervention in combination with a parent campaign compared to control. (Point estimate and 95% CI not reported).

Lifetime alcohol use

Very low quality evidence was identified from 4 RCTs. Three of these RCTs (Werch 2000a, Werch 2000b and Hodder 2017) showed no significant difference in lifetime alcohol use for

students receiving a school-based universal multicomponent intervention (brief or classroom-based with parental and/or community components) compared to the control group who received usual teaching. The remaining RCT (Malmberg 2014) showed a significant increase in lifetime alcohol use for students receiving a computer-based programme compared to control (aRR 1.2 95% CI 1.0 to 1.3).

Heavy/binge drinking

Very low quality evidence was identified from 8 RCTs. Six of these (Werch 1998, Werch 2000a, Werch 2000b, Malmberg 2014, Sanchez 2017 and Hodder 2017) showed no significant difference in heavy/binge drinking for students receiving a school-based universal multicomponent intervention (usually brief or classroom-based with parental and/or community components) compared to the control group who received usual teaching or minimal intervention control. The remaining two RCTs showed a significant reduction in binge drinking for students receiving a universal multi-component intervention compared to control (aOR 0.62 95% CI 0.44 to 0.87 [Haug 2017]; aOR 0.596 95% CI 0.49 to 0.725 [Sumnall 2017])

Low quality evidence from 1 RCT (Patton 2006) showed no significant difference for binge drinking at 1 year for students receiving a school-based universal multicomponent intervention (curriculum and whole school approach) compared to the control group (aOR 0.95 95% CI 0.69 to 1.32).

Alcohol frequency

Very low quality evidence was identified from 3 RCTs (Werch 2003, Werch 20005b and Werch 2010). All 3 RCTs showed no significant difference in alcohol frequency for students receiving a school-based universal multicomponent intervention (usually brief consultation with parental components) compared to the control group who received usual teaching or minimal intervention control (results were not pooled).

Alcohol quantity

Very low quality evidence was identified from 4 RCTs (Werch 2003, Werch 2005b, Werch 2010 and Koning 2014). All 4 RCTs showed no significant difference in alcohol quantity at 3-12 months for students receiving a school-based universal multicomponent intervention (usually brief or classroom-based with parental components) compared to the control group who received usual teaching or minimal intervention control (results were not pooled).

Alcohol heavy use

Very low quality evidence was identified from 3 RCTs (Werch 2003, Werch 20005b and Werch 2010). All 3 RCTs showed no significant difference in alcohol heavy use for students receiving a school-based universal multicomponent intervention (usually brief consultation with parental components) compared to the control group who received usual teaching or minimal intervention control (results were not pooled).

Tendency to use alcohol

Very low quality evidence from 1 RCT (Perry 1996) showed that students receiving a combined intervention involving classroom, family and community components significantly increased the tendency to use alcohol compared to control. Relative effect and 95% confidence interval not reported.

Lifetime drunkenness

Low quality evidence from 1 RCT (Skärstrand 2013) showed that there was no significant difference for lifetime drunkenness between students receiving a combined intervention involving classroom and parent components and those in the control group (OR 1.39, 95% CI 0.65 to 2.96). Subgroup analysis by gender showed non-significant results for both boys and girls.

Drunkenness in the last 30 days

Low quality evidence from 1 RCT (Skärstrand 2013) showed that there was no significant difference for drunkenness in the last 30 days between students receiving a combined intervention involving classroom and parent components and those in the control group. Subgroup analysis by gender showed non-significant results for both boys and girls.

School attendance

No data reported.

Alcohol related risky behaviours***Violent behaviour and intentions***

Low quality evidence from a subgroup analysis in 1 RCT (Perry 2003) showed that there was a significant difference in reducing violent behaviour and intentions for boys receiving a universal multi-component intervention compared to the control group. There was no significant difference for girls (boys: mean change 0.35 vs 0.54; girls: mean change 0.30 vs 0.26). The study did not report whole sample results.

Any risky behaviours (including unprotected sex)

Very low quality evidence from 1 RCT (Patton 2006) showed no significant difference for any risky behaviours at 1 year for students receiving a school-based universal multicomponent intervention (curriculum and whole school approach) compared to the control group.

Mental health and wellbeing***Alcohol use problems***

Very low quality evidence was identified from 3 RCTs Two of these RCTs (Werch 20005b and Werch 2010) showed no significant difference in alcohol use problems for students receiving a school-based universal multicomponent intervention (usually brief consultation with parental components) compared to the control group who received usual teaching or minimal intervention control. The remaining RCT (Werch 2003) showed a significant increase in alcohol use problems for students receiving a school-based universal multicomponent intervention compared to the control group (MD 0.31 95% CI 0.06 to 0.56).

Adverse or unintended effects

None of the included studies reported any data on this outcome

Universal multi-component interventions (18-25 year olds with SEND)

No evidence was identified.

Economic evidence

See separate [Cost-effectiveness review](#)

Resource impact

Table 16: 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

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

The committee acknowledged that the evidence base was very uncertain. Only two of the quantitative studies included was from the UK and the committee queried the generalisability of this evidence. In particular, the committee queried the specific components of the interventions evaluated in the evidence and their applicability to UK schools. It was noted that there is a culture of delivering classroom-based interventions as programmes in the USA which might not be valid in the UK setting. The deliverability of the interventions is also a key consideration for the committee. Two studies set in non-OECD countries (Brazil and Malta) were included in the review which were not part of the inclusion criteria in the protocol. However, the committee discussed that the context of the setting were no less generalisable than studies set in the USA and decided to include them. No other OECD countries were identified an excluded.

Some of the interventions evaluated were delivered over a large number of sessions the committee considered would be unfeasible for a UK school to implement. It is important to ensure that an intervention can be implemented alongside other school curricula.

Some of the interventions delivered outside of the classroom varied from a short residential retreat, after-school voluntary sessions, one off group sessions or brief one on one interventions with a school nurse. The committee discussed that one-off group sessions are commonly used to deliver alcohol education but noted that residential provision of alcohol-specific education would be very rare in a UK setting so would be an unfeasible approach. They also discussed that after-school sessions for alcohol education would be voluntary to attend so there potentially would be difficulty recruiting students so this approach is also unlikely to be used. It was also noted that not all schools have access to a school nurse who is skilled and has the time and capacity to deliver one-to-one interventions. It is important to

ensure that an intervention can be implemented properly with the necessary resources and that it reaches all children and young people equally.

It was also noted that many of these interventions were not solely focused on alcohol but also covered prevention of smoking and other drug use as well as building life skills and resilience. However, this reflects how most alcohol prevention interventions are delivered in schools in the UK.

The committee were also concerned about differences in drinking prevalence in these studies compared to the UK, however, assessing baseline drinking prevalence in the studies against the most recent [Smoking, Drinking and Drug Use Among Young People in England 2016](#) report showed that the majority of the evidence was comparable to UK statistics for lifetime alcohol use where 15% to 38% of 12-13 year olds have ever drunk alcohol.

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.

Family-based theory driven studies potentially need longer-term follow up for a benefit to be seen. Most of the included studies had short term follow up and this may discriminate against studies with a family component in the intervention. Studies also varied in terms of time points at which outcomes were reported.

Much of the evidence came from cluster randomised controlled trials (cRCTs). In a cluster design, participant data cannot be assumed to be independent of one another and should be accounted for in the analysis of the cRCT. Failure to do so leads to a unit of analysis error and over-estimation in the results. Whilst this is a known concern about analysing data in cRCTs, all the included studies adjusted their analyses for clustering through statistical methods and calculated the intraclass correlation coefficient (ICC). The majority of the cRCTs were moderate to large in size based on the committee agreeing that a large cRCT had at least 15 or 16 clusters.

Some studies randomised individuals within schools rather than using a cluster design. This type of study design can introduce bias due to the increased risk of intervention contamination as students from both the intervention and control groups are in the same school and could potentially mix. Individuals in the control group may inadvertently be exposed to the intervention, minimising the difference in outcomes measured between the two groups.

To consider what approaches were acceptable for providing alcohol education, 7 qualitative studies exploring the views and experiences of children and young people were included. Of these, 6 also included views and experiences of the people who deliver the interventions, and 1 included the views of parents. Overall, the confidence in evidence for themes reported in these studies was moderate to high. Of the 7 studies, 6 were based in the UK so were all considered to be applicable in terms of context.

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 universal interventions that they would expect to see after this intervention has been implemented. In terms of positive unintended consequences, implementing universal 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 including increased drinking where gaining knowledge about alcohol may inadvertently lead to wanting to experiment.

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.

Universal classroom interventions

The evidence generally shows that universal classroom-based interventions are no better than usual education at reducing alcohol initiation or the amount and frequency of alcohol use. However, some studies showed a reduction in truancy and some alcohol harms (ranging from drinking until feeling sick to regretted sex and being in trouble with the police) and psychological distress among children and young people predominantly aged between 11 and 15 years.

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

Universal intervention based outside the classroom

The evidence suggests that universal interventions based outside of the classroom may reduce the outcome of lifetime alcohol use among children and young people predominantly aged between 11 and 13 years. By delaying the onset of alcohol use, age at first intoxication is potentially delayed and consequently the associated risks are prevented or reduced.

For other alcohol outcomes, the evidence generally shows no difference for preventing or reducing alcohol use, frequency of use, heavy use, and quantity consumed. This was the same for school attendance, risky behaviours and alcohol problems.

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

Universal multi-component interventions

The evidence generally shows that universal multi-component interventions are no better than usual education at reducing alcohol initiation or the amount and frequency of alcohol use. For other alcohol outcomes, the evidence generally shows no difference for reducing alcohol use, risky behaviour or mental health and wellbeing.

No evidence was found for age at first drink, age at first experience of drunkenness or school attendance. No evidence was reported for adverse effects but limited evidence suggests a universal multi-component intervention may increase the tendency to use alcohol.

Qualitative evidence

The qualitative evidence suggests that it is important for the content of alcohol education to be age appropriate. It was consistent across both teachers and young people that scare tactics and negative alcohol messages are not effective and that skills training and application to real-life situations was preferred. Although it is preferred by teachers that to ensure that the speaker was of good quality. Children and young people value an environment where they feel comfortable to speak freely and in confidence but generally do not find this is the case when an external speaker is used. There was limited evidence on the parents' views of alcohol interventions. One study evaluated a family component of a school-based alcohol intervention and suggested that the intervention improved behavioural management had brought benefits to family relationships.

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

Universal intervention by definition is a whole population approach so people receive the intervention regardless of their risk. This means that participants recruited to the studies were likely to have mixed drinking profiles. The data in the studies was not always presented by baseline drinking status so we cannot be certain of the reach of the interventions across different risk groups. However, this generally reflects current practice in schools. The included studies tended to identify current drinkers through a survey but this is something not routinely carried out in all UK schools.

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. They thought that this trend will help to frame alcohol education in a positive way by normalising non-drinking behaviours. However, they also noted that although the drinking rates are decreasing, those who drink are more likely to

drink in a risky way. The committee noted that this is something that they would have liked to have sought children and young people's views on.

The committee acknowledged that OFSTED have stated that schools are better at delivering drugs misuse prevention compared to alcohol misuse prevention so there is potentially a gap in practice. The most recent OFSTED report (see [Not yet good enough: personal, social, health and economic education in schools](#)) found that "although pupils understood the dangers of to health of tobacco and illegal drugs, they were far less aware of the physical and social damage associated with alcohol misuse." The committee were also mindful that from 2020 relationships education, relationships and sex education (RSE) and health education will be compulsory in all schools. Alcohol education will be included in these subjects.

The interventions varied in terms of components, providers and methods of delivery. 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 but considered this when making draft recommendations.

The qualitative evidence supported the views of the committee that it is possible that teachers might be reluctant to deliver these interventions. The reluctance could be due to overload with curriculum, lack of capacity or confidence in capability. Schools and teachers are not always aware of the best materials to use. Schools may have alternative internal staff that could potentially deliver the interventions such as school nurses, school counsellors or learning mentors which may help resolve this issue. Choosing an appropriate person to deliver the intervention may also be dependent on the type of intervention being delivered and the time and experience required. In addition, training for and delivery of these interventions may be a route to gaining CPD credits.

External providers are an option for delivering the interventions in schools. This would potentially remove the burden from internal members of staff where an "off the shelf" programme could be delivered to the students. However, there could potentially be cost-implications of bringing in external providers with the possibility that young people may not readily engage with such providers. The topic experts noted that using external providers such as ex-users and police officers and knowledge-only approaches or scare tactics have been shown to have a negative outcome. This was supported by the views of children and young people in the qualitative evidence where they suggest that these approaches lead to resistance. The committee discussed that it was the responsibility of the school to ensure that any external providers or support materials meet standards that allow pupils to learn safely and effectively. They were also mindful of a [Public Health England 2016 review](#) which noted that the delivery of education messages by the alcohol industry has no public health effects.

Expert testimony suggested that it was important that alcohol education is age appropriate and tailored to the current knowledge and perceptions the child or young person has about alcohol. This was further supported by the qualitative evidence. To ensure that this happens, the committee noted that it was best practice to teach alcohol education using a 'spiral curriculum' where the education is taught in increasing complexity, relative to the age and knowledge of the child. This support children and young people by reinforcing what they have been previously taught and would help to minimise the risk of unintended negative consequences the committee considered as a potential harm from alcohol education.

Parents and carers have a big influence their child's health behaviour, so it is important that communication with parents/carers takes place to keep them informed with what is being

implemented regarding alcohol education. Some parents/carers may have concerns about their child taking part in alcohol education for specific reasons such as cultural or religious beliefs. Whilst the child will not be excluded from the lessons it is important that the school engage with parents and carers to keep them informed and their views taken into consideration. The committee considered that one of the best ways to involve parents in alcohol education was through the 'whole-school approach'. In the event that the young person is also a parent or is in care, then the local authority acts as the corporate parent.

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 on 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.

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 alcohol education is accessible to those with SEND.

The committee discussed that alcohol education can potentially touch on personal experiences or issues that could be sensitive or confidential in nature. These may also involve a safeguarding issue. Therefore, they considered that usual safeguarding processes and school policies, that are appropriate to the situation, should be referred to. This will ensure that any potential harm from confidential disclosures is minimised.

Appendices

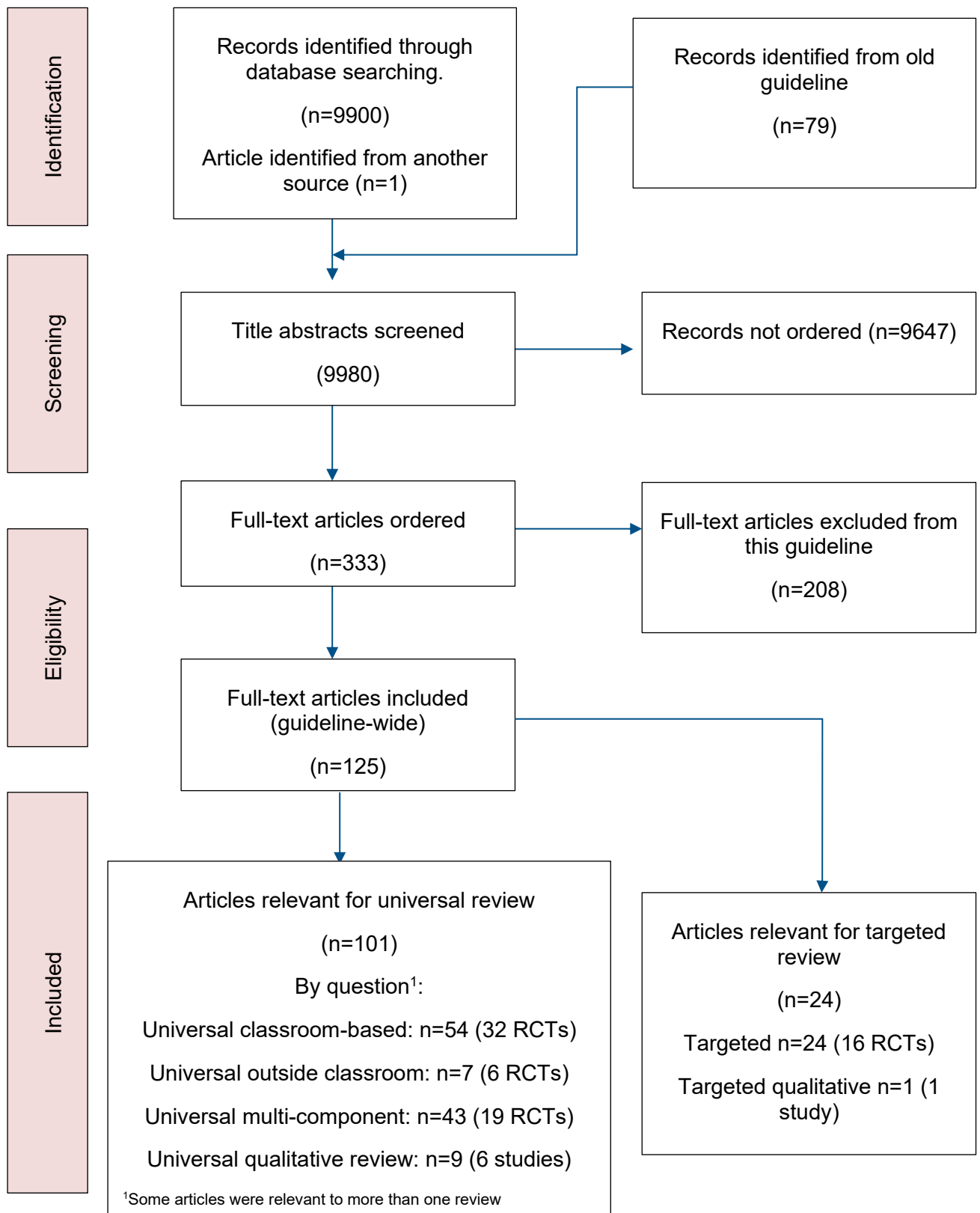
Appendix A: Review protocols

See [Qualitative review](#) document

Appendix B: Literature search strategies

See [Search strategies](#) document on the guideline consultation page.

Appendix C: Public health evidence study selection



Appendix D: Public health evidence tables

D.1.1 Bannink 2014

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143				
Registration	NTR3596				
Study type	Randomised controlled trial (cluster)				
Study dates	September 2012 to May 2013				
Aim	To evaluate the effect of E-health4Uth and E-health4Uth and consultation on well-being and health behaviours				
Country/geographical location	The Netherlands				
Setting/School type	12 secondary schools providing 78 classes				
Participant characteristics	Description	1256 adolescents in the third and fourth years of secondary school			
			E-health4Uth (n=392) N (clusters) = 27	E-health4Uth+consult (n= 430) N (clusters) = 26	Control (n=434) N (clusters) = 25
	Age	Mean (SD)	15.84 (0.70)	15.95 (0.70)	15.79 (0.66)
	Gender	Male, n (%)	223 (56.9%)	241 (56.0%)	223 (51.4%)
		Female, n (%)	169 (43.1%)	189 (44.0%)	211 (48.6%)
	Socioeconomic status	Education level, n (%)			
		Vocational training	191 (48.7%)	231 (53.7%)	212 (48.8%)
		Preuniversity	201 (51.3%)	199 (46.3%)	222 (51.2%)
	Ethnicity	Not reported			
	SEND	Not reported			
Baseline drinking behaviour	Alcohol consumption (5 or more drinks on 1 occasion in the past 4 weeks), n (%)				
	0 times	255 (65.1%)	272 (63.4)	292 (67.6%)	

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143				
		1 time	962 (15.8%)	69 (16.1%)	62 (14.4%)
		2 times	36 (9.2%)	36 (8.4%)	34 (7.9%)
		3-4 times	22 (5.6%)	35 (8.2%)	29 (6.7%)
		5 or more times	17 (4.3%)	17 (4.0%)	15 (3.5%)
		Been drunk or tipsy in the past 4 weeks, n (%)			
		0 times	290 (74.0)%	318 (74.1%)	333 (77.1%)
		1 time	54 (13.8%)	60 (14.0%)	53 (12.3%)
		2 times	21 (5.4%)	22 (5.1%)	24 (5.6%)
		3 or more times	27 (6.9%)	29 (6.8%)	22 (5.1%)
Inclusion criteria	Active parental consent				
Exclusion criteria	None				
Number of Participants	1256				
Intervention	TIDieR Checklist criteria	Paper/ Location	Details		
	Brief Name	P3	E-health4Uth		
	Rationale/theory/Goal	P3	To assess health-risk behaviour and well-being with respect to alcohol consumption, drug use, smoking, sexual behaviour, bullying, mental health status, suicidal thoughts, suicide attempts and unpleasant sexual experiences.		
	Materials used	P3	Internet		
	Procedures used	P3	Online self-report questionnaire. After completing the questionnaire participants were presented with a tailored web-based message based on the answers given to the questionnaire. The score computed for each topic was then compared to Dutch health norms for adolescents and presented to the participant showing their current behaviour in comparison to the Dutch health norm. The adolescent was offered advice to change unhealthy behaviour and/or talk to a person of trust. The programme provided links to websites for further information on topics. There was also an invitation to follow the Facebook page. Adolescents could also self-refer to a nurse through the programme.		

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143		
			An email was sent with a reminder of the tailored messages after one month.
	Provider	P3	Online/computer
	Method of delivery	P3	Individual
	Location	P3	Classroom
	Duration	P3	45 minutes
	Intensity	P3	One session
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P4	The messages were colour-coded depending on whether they were unhealthy behaviours (red) to behaviours representing the Dutch norm (green).
Intervention 2	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P4	E-health4Uth and consultation intervention
	Rationale/theory/Goal	P4	Targeted those at risk
	Materials used	P4	E-health4Uth plus a nurse consultation
	Procedures used	P4	Adolescents were classified as at risk of mental health problems when their score on the total problem scale of the Strengths and Difficulties (SDQ) was higher than 16 and/or their SDQ for emotional problems score was higher than 5 and/or they reported having suicidal thoughts and/or reported a suicide attempt in the past year (or declined to answer these questions).

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143		
			Nurses received the results of the questionnaire before the consultation and focused on specific risk areas and on mental health in particular. Nurses could refer adolescents to other professionals as necessary.
	Provider	P4	Computer plus school nurse
	Method of delivery	P4	Individual
	Location	P4	Classroom plus school-based nurse
	Duration	-	As E-health4Uth plus further consultations as necessary.
	Intensity	-	As E-health4Uth
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable
	Planned treatment fidelity	P4	Nurses were trained to apply motivational interviewing with adolescents at age 15-16 years.
	Actual treatment fidelity	-	Not reported
	Other details	-	School nurses were already working at the schools and had already provided consultations to adolescents aged approximately aged 13 years.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P4	Questionnaire without feedback
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143		
	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	Computer-generated list of random numbers. Block randomisation (blocks of 3)	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Descriptive statistics Multilevel logistic, ordinal and linear regression analyses. Adjusted for clusters. Intention to treat (ITT) analysis.	
	Unit of allocation	Classes	

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143			
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: Not reported. Author states high response rate.	Reasons for not completing the study: Not reported.	
Outcomes measures and effect size.	Outcome	E-health4Uth (n=390) N (clusters) = 27	E-health4Uth+consult (n=430) N (clusters) = 26	Control (n=433) N (clusters) = 25
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported		
	Age at first experience of drunkenness where reported	Not reported		
	Amount and frequency of alcohol use, 4 months			
	Alcohol consumption (5 or more drinks on 1 occasion in the past 4 weeks), n (%)			
	0 times	230 (59%)	280 (65.9%)	276 (63.7%)
	1 time	62 (15.9%)	44 (10.4%)	58 (13.4%)
	2 times	43 (11.0%)	32 (7.5%)	37 (8.5%)
	3-4 times	28 (7.2%)	46 (10.8%)	34 (7.9%)
	5 or more times	27 (6.9%)	23 (5.4%)	28 (6.5%)
	Binge drinking in past 4 weeks (calculated by reviewer)	160/390	150/430	157/433
	OR 95% CI, E-health4Uth vs control (as reported)	0.90 (0.61, 1.34)		
	Been drunk or tipsy in the past 4 weeks, n (%)			
	0 times	275 (70.5%)	317 (74.6%)	321 (74.1%)
	1 time	57 (14.6%)	52 (12.2%)	57 (13.2%)
2 times	18 (4.6%)	20 (4.7%)	20 (4.6%)	

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143			
	3 or more times	40 (10.3%)	36 (8.5%)	35 (8.1%)
	Drunk in the past 4 weeks (calculated by reviewer)	115/390	108/430	112/433
	OR 95% CI, E-health4Uth vs control (as reported)	0.90 (0.61, 1.34)		
	Boys (subgroup) ^a	OR 0.68, 95% CI 0.40 to 1.15		
	Girls (subgroup)	OR 1.35, 95% CI 0.76 to 2.38		
	School attendance	Not reported		
	Alcohol related risky behaviour such as Unprotected or regretted sex, 4 months			
	Always use a condom during intercourse, [for those reporting as sexually active, n=376), n/N ^b (%)	62/119 (52.1%)	66/151 (43.7%)	43/106 (40.6%)
	E-health4Uth vs control	OR 2.09 95% CI 1.04 to 4.22		
	Never use a condom during intercourse, [for those reporting as sexually active, n=376), n/N ^c (%)	15/119 (12.6%)	15/151 (9.9%)	21/106 (19.8%)
	Mental health and wellbeing, 4 months			
	Strengths and difficulties questionnaire (SDQ) [25 items describing positive and negative attributes of adolescents allocated to 5 subscales of 5 items (emotional problems, conduct problems, hyperactivity-inattention, peer problems and prosocial behaviour; each item scored as 0 = not true, 1 = somewhat true, 2 = certainly true. Total core range 0-40, mean (SD)]	8.92 (5.26)	8.42 (5.05)	9.07 (5.38)

a Arm data not reported for subgroups

b N calculated by reviewer

c N calculated by reviewer

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143			
	Youth self-report (YSR) [119 items addressing emotional and behavioural problems, 3 point scale of 0 = not, 1 = sometimes, 2 = often. A total score range 0-210]	33.89 (23.02)	31.58 (22.58)	34.75 (25.26)
	Health-related quality of life [4 items of the Child health Questionnaire-child form; one item scored on a 5 point scale of 1 = excellent, 2 = very good, 3 = good, 4 = moderate, 5 = bad; 3 items scored on a 5 point scale of 1 = true, 2 = usually true, 3 = do not know, 4 = usually not true, 5 = not true. Total score range 0-100], mean (SD)	75.34 (16.56)	74.00 (18.49)	73.73 (18.17)
	Adverse or unintended effects	Not reported		
Other outcomes measured	Drug use, smoking			
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
	Amount and frequency of alcohol use	Some concerns		Method of allocation concealment not described but uses subjective measures. ITT done but no information on attrition.
	School attendance	Not applicable		Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Some concerns		Method of allocation concealment not described but uses subjective measures. ITT done but no information on attrition.

Bibliographic reference	Bannink R, Broeren S, Joosten-van Zwanenburg E et al (2014) Effectiveness of a web-based tailored intervention (E-health4Uth) and consultation to promote adolescent' health: Randomized controlled trial . Journal of medical internet research 16(5) e143		
	Mental health and wellbeing	Some concerns	Method of allocation concealment not described but uses subjective measures. ITT done but no information on attrition.
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Netherlands Organisation for Health Research and Development		
Comments	Limitations by author: Self-reported measures Limitations by reviewer: None		

D.1.2 Botvin 1990

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. Journal of consulting and clinical psychology 58(4) 437-446			
Registration	None			
Study type	Randomised controlled trial (cluster)			
Study dates	1985-1988			
Aim	To report data on the cumulative effects of life skills training			
Country/geographical location	USA			
Setting/School type	Schools			
1.90P0.03 participant characteristics	Description	5954 seventh grade students		
			Intervention 1 (n= not reported) N(cluster) = 18	Intervention 2 (n=not reported) N(cluster) = 16
	Age	Mean (SD)	Not reported	
	Gender	Male, n (%)	52%	
Female, n (%)		48%		
			Control (n= not reported) N(cluster) =22	

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. <i>Journal of consulting and clinical psychology</i> 58(4) 437-446				
	Socioeconomic status	Not reported			
	Ethnicity	White	91%		
		Black	2%		
		Hispanic	2%		
		Native American	1%		
	SEND	Not reported			
	Baseline drinking behaviour	Drinking frequency [9-point scale: 1 = never, 2 = tried but do not drink, 3 = less than once a month to 9 = more than once a day] mean, (SE)	1.86 (0.04)	1.90 (0.04)	1.90 (0.03)
		Drinking quantity per occasion [6 point scale: 1 = don't drink to 6 = more than 6 drinks], mean (SE)	1.30 (0.02)	1.35 (0.02)	1.33 (0.02)
		Drunkenness frequency [9 point scale: 1 – don't drink to 9 = more than once a day], mead (SE)	1.37 (0.02)	1.42 (0.02)	1.40 (0.02)
Inclusion criteria	Not reported				
Exclusion criteria	Not reported				
Number of Participants	5954 at baseline; 3684 in analysis				
Intervention 1	TIDieR Checklist criteria	Paper/ Location	Details		
	Brief Name	P439	Life Skills Training (LST) with teacher workshop plus feedback		
	Rationale/theory/Goal	P439	To facilitate the development of personal and social skills with particular emphasis on skills for coping with social influence for substance use.		
	Materials used	P439	Teacher's manual and student guide and a 15 minute relaxation audiotape		

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. Journal of consulting and clinical psychology 58(4) 437-446		
	Procedures used	P439	Demonstrations, behavioural rehearsal, feedback and reinforcement and behavioural homework assignments.
	Provider	P439	Teacher
	Method of delivery	P439	Group
	Location	P439	Classroom
	Duration	P439	3 years
	Intensity	P439	12 curriculum units taught in 15 class periods with booster sessions in the 2nd and 3rd years.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	p440	Programme implementation was monitored by project staff and quantitative assessments were made to the extent the intervention was implemented and the fidelity to the intervention protocol.
	Actual treatment fidelity	P441	The prevention programme was not uniformly implemented. Material covered ranged from 27% to 97% with a mean of 68%. 75% of students were exposed to 60% or more of the prevention programme.
	Other details	P439-440	Teachers attended a 1-day training workshop conducted by project staff and were provided with the teacher's manual and other curriculum materials. Teachers met with project staff to receive feedback and reinforcement.
Intervention 2	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P439	Life Skills Training (LST) with teacher training via videotape with no feedback
	Rationale/theory/Goal	P439	To facilitate the development of personal and social skills with particular emphasis on skills for coping with social influence for substance use.
	Materials used	P439	Teacher's manual and student guide and a 15 minute relaxation audiotape
	Procedures used	P439	Demonstrations, behavioural rehearsal, feedback and reinforcement and behavioural homework assignments.

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. Journal of consulting and clinical psychology 58(4) 437-446		
	Provider	P439	Teacher
	Method of delivery	P439	Group
	Location	P439	Classroom
	Duration	P439	3 years
	Intensity	P439	12 curriculum units taught in 15 class periods with booster sessions in the 2nd and 3rd years.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	p440	Programme implementation was monitored by project staff and quantitative assessments were made to the extent the intervention was implemented and the fidelity to the intervention protocol.
	Actual treatment fidelity	P441	The prevention programme was not uniformly implemented. Material covered ranged from 27% to 97% with a mean of 68%. 75% of students were exposed to 60% or more of the prevention programme.
	Other details	P440	Teachers were provided with a 2 hour training videotape. No feedback or reinforcement was provided.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P439	Control
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. <i>Journal of consulting and clinical psychology</i> 58(4) 437-446		
	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	3 year (post-randomisation) cumulative follow- up		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	MANCOVA with pre-test scores as covariates. Unclear if adjusted for clustering	
	Unit of allocation	Schools	
	Unit of analysis	Schools	
	Attrition	Number of participants completing the study: 3684/5954 (41%)	Reasons for not completing the study: Schools that did not meet the 60% implementation score were excluded from the analysis.

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. <i>Journal of consulting and clinical psychology</i> 58(4) 437-446			
Outcomes measures and effect size.	Outcome	Intervention 1 (n=not reported) N (cluster) = 14	Intervention 2 (n=not reported) N (cluster) = 14	Control (n=not reported) N (cluster) = 22
	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, post-intervention (3 year cumulative) ^d			
	Drinking frequency [9-point scale: 1 = never, 2 = tried but do not drink, 3 = less than once a month to 9 = more than once a day] mean, (SE)	3.17 (0.05)	3.10 (0.05)	3.15 (0.05)
	Drinking quantity per occasion [6 point scale: 1 = don't drink to 6 = more than 6 drinks], mean (SE)	2.65 (0.05)	2.55 (0.05)	2.65 (0.04)
	Drunkenness frequency [9 point scale: 1 – don't drink to 9 = more than once a day], mean (SE)	2.31 (0.04)	2.19 (0.04)	2.32 (0.04)
	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
	Other outcomes measured	Smoking, marijuana use, knowledge, attitudes, normative expectations, skills and personality measures.		

d Unable to calculate SDs for each arm as n is not reported

Bibliographic reference	Botvin GJ, Baker E, Dusenbury L et al (1990) Preventing adolescent drug abuse through a multimodal cognitive behavioural approach: Results of a 3-year study. Journal of consulting and clinical psychology 58(4) 437-446		
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
	Amount and frequency of alcohol use	High	Methods of allocation concealment were not described and all outcomes were self-measured. Very high attrition. Data was only analysed from schools who implemented a minimum of 60% of the intervention.
	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 Heart, Lung and Blood Institute and New York State Division of Substance Abuse Services.		
Comments	<p>Limitations by author: Interventions were implemented with varying degrees of completeness. The population consisted of mostly White middle-class students so may not be generalizable. High attrition.</p> <p>Limitations by reviewer: Incomplete reporting</p>		
Additional reference	Botvin GJ, Baker E, Dusenbury L et al (1995) Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. JAMA 273(14) 1106-1111		

D.1.3 Botvin 2001

Bibliographic reference	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. <i>Prevention science</i> 2(1) , 1-13		
Registration	None		
Study type	Randomised controlled trial (cluster)		
Study dates	Not reported		
Aim	To test a school-based drug abuse preventive intervention in a sample of predominantly minority students.		
Country/geographical location	USA		
Setting/School type	29 New York City schools		
Participant characteristics ^e	Description	3621 7th grade students	
		Intervention (n=2144) N (cluster) = 16	Control (n=1477) N (cluster) = 13
	Age	Mean (SD), whole population	12.9 years (SD not reported)
	Gender	Male, n (%)	1533/3621 (47%)
		Female, n (%)	1728/3261 (53%)
	Socioeconomic status	Received a free school lunch, n (%)	1159/3261 (62%)
	Ethnicity	African American	1989/3261 (61%)
		Hispanic	717/3261 (22%)
		Asian	196 (6%)
		White	196 (6%)
Mixed/other		163 (5%)	
SEND	Not reported		
Baseline drinking behaviour	Drinking frequency, mean (SE)	1.54 (1.07) SD 1.28 ^f	1.52 (1.03) SD 3.71

^e n for each characteristic calculated by review from percentages reported.

^f SD imputed by reviewer

Bibliographic reference	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. <i>Prevention science</i> 2(1) , 1-13			
		Drunkenness frequency, mean (SE)	1.07 (0.50)	1.37 (0.81)
		Drinking quantity, mean (SE)	1.35 (0.79)	1.37 (0.81)
Inclusion criteria	None			
Exclusion criteria	None			
Number of Participants	5222; 3621 in analyses			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	Griffin 2003 p2	Life Skills Training (LST)	
	Rationale/theory/Goal	P3	To provide adolescents with the knowledge and skills for resisting social influences to use cigarettes, alcohol and drugs as well as to reduce motivations to use these substances.	
	Materials used	P3	Classroom curriculum; teacher's manual with detailed lesson plans, student handouts and video material.	
	Procedures used	P3	Group discussion, demonstration, modelling, behavioural rehearsal, feedback, reinforcement and behavioural homework.	
	Provider	P4	Regular classroom teachers who had attended a one-day teacher-training workshop.	
	Method of delivery	P3	Group	
	Location	P3	Classroom	
	Duration	-	Not reported	
	Intensity	-	Not reported	
	Tailoring/adaptation	-	Not reported	
	Modifications	-	Not reported	

Bibliographic reference	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. <i>Prevention science</i> 2(1) , 1-13		
	Planned treatment fidelity	P5	Project staff in randomly selected classrooms monitored program implementation. 5 trained staff observed teachers and recorded how much of the material allocated for each session was actually covered.
	Actual treatment fidelity	P5	82 teachers were observed 167 times for an average of 2 observations per teacher. The mean number of programme points covered was 48.2% (SD 21.4)
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	Botvin 2001b p 361	Usual curriculum
	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	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. <i>Prevention science</i> 2(1) , 1-13		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Follow up	Post-test, 3 months, 12 months		
Study Methods	Method of randomisation	Stratified randomisation by smoking prevalence.	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Adjusted for clustering (intracluster correlation coefficients, ICC) ANCOVA	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 4190/5222	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=not reported) N (cluster) = 16	Control (n=not reported) N (cluster) = 13
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported

Bibliographic reference	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. <i>Prevention science</i> 2(1) , 1-13		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use, 12 months		
	Drinking frequency [9 point scale ranging from 1 = never to 9 = more than once a day] , mean (SE) ^g	1.77 (0.03) SD 0.12 ^h	1.99 (0.04) SD 0.14
	Drunkenness frequency [9 point scale ranging from 1 = never to 9 = more than once a day], mean (SE)	1.17 (0.02)	1.26 (0.3)
	Drinking quantity[6 point scale ranging from 1 = I don't drink to 6 = more than 6 drinks], mean (SE)	1.51 (0.02)	1.68 (0.03)
	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	Smoking, marijuana, polydrug use, knowledge and intentions		
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
	Amount and frequency of alcohol use	Some concerns	Methods of allocation concealment were not described. The outcomes were all

g MD not reported. Reported as significant favouring intervention.

h SDs imputed by reviewer

Bibliographic reference	Botvin GJ, Griffin KW, Diaz T et al (2001a) Drug abuse prevention among minority adolescents: Posttest and one year follow-up of a school-based preventive intervention. Prevention science 2(1) , 1-13		
			self-reported and could be influenced by knowledge of intervention allocation.
	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 for Drug Abuse		
Comments	<p>Limitations by author: Self-reported outcomes. Require caution when interpreting results with respect to other minority populations.</p> <p>Limitations by reviewer: None</p>		
Additional reference	Botvin GJ, Griffin KW, Diaz T et al (2001b) Preventing binge drinking during early adolescence: One and two-year follow-up of a school based preventive intervention. Psychology of addictive behaviours 15(4) 360-365		
Additional reference	Griffin KW, Botvin GJ, Nichols TR et al (2003) Effectiveness of a universal drug abuse prevention approach for youth at high risk for substance use initiation. Preventive medicine 36 1-7		

D.1.4 Champion 2016

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73
Registration	Australian and New Zealand clinical trials registry ACTRN12612000026820
Study type	Randomised controlled trial (cluster)
Study dates	February 2012 to December 2012
Aim	To cross-validate the Climate Schools: Alcohol and Cannabis course in a new cohort of Australian students

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
Country/geographical location	Australia		
Setting/School type	Secondary schools		
Participant characteristics	Description	1103 year 8 students in school	
		Intervention (n=576) N (cluster) = 6	Control (n=527) N (cluster) = 7
	Age	Whole population, Mean (SD)	13.3 years (0.47)
	Gender ⁱ	Male, n (%)	385 (35%)
		Female, n (%)	718 (65%)
	Socioeconomic status	Not reported	
	Ethnicity	Not reported	
	SEND	Not reported	
Baseline drinking behaviour	Any alcohol (even a sip or taste) in past 6 months n ^j (%)	216 (37.53%)	184 (34.92%)
	Frequency of binge drinking [Proportion of students reporting binge drinking in past 6 months] n ^k (%)	23 (4.02%)	18 (3.40%)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	1103; intervention n=576; control n=527		

ⁱ Data calculated from female percentage reported

^j Calculated by reviewer

^k Calculated by reviewer

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P65	Climate Schools: Alcohol and Cannabis
	Rationale/theory/Goal	P65	Harm minimisation approach for alcohol and cannabis. Challenges perceptions of peer drug use and builds resistance skills.
	Materials used	P65	Internet-based interactive online cartoons
	Procedures used	P66	Pre-planned activities including discussions, role-plays and worksheets delivered during Personal Development, Health and Physical Education (PDHPE) classes.
	Provider	P66	Computer Teachers
	Method of delivery	P66	Group
	Location	P66	Classroom
	Duration	P66	One year
	Intensity	P66	6 x lessons (alcohol module) in term 1 and 6 x lessons (alcohol and cannabis module) 6 months later Online cartoon component was 20 mins long
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable
	Planned treatment fidelity	P66-67	Teachers were required to complete a logbook indicating which lessons/activities they completing and factors that may have disrupted teaching. All programme content was available to teachers online they also received hard copies.
	Actual treatment fidelity	P70	23 teachers from 7 schools completed the fidelity logbooks Completion rates for each lesson ranged from 87% to 100% for the alcohol module Completion rates for each lesson ranged from 69% to 92% for the alcohol and cannabis module
	Other details	P70	Student and teachers were required to complete an evaluation questionnaire about the programme.

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
			14 teachers provided evaluation data. 85% reported that it was better than other programmes 92% would recommend it to others 195 students gave feedback on the course Over 90% indicated it was an enjoyable way to learn PDHPE
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P66	Usual PDHPE lessons
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Teachers
	Method of delivery	-	Not reported
	Location	-	Not reported
	Duration	-	Over the year
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P67	Teachers were asked to provide details about the amount and format of any drug education they delivered to year 8 students.

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
	Actual treatment fidelity	P70	All control schools implemented some form of universal alcohol and other drug education. Number of lessons varied (range 2-10) with an average length of 62 minutes 57% teacher reported using computers to teach the modules.
	Other details	-	None
Follow up	Post-intervention (6 months after baseline)		
Study Methods	Method of randomisation	Blocked randomisation using the online programme Research randomiser (www.randomiser.org)	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intraclass correlation coefficients (ICCs) calculate to adjust for clustering Intention to treat analysis Logistic regression and ANCOVA All analyses were adjusted for baseline characteristics.	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 88/1103 (80%) completely post-intervention surveys Intervention 435/576 (76%) Control 445/527 (84%)	Reasons for not completing the study: Absence from school, changing schools or moving away, failing to remember username and password or use of the incorrect code to complete the survey.
Outcomes measures and effect size.			
	Outcome	Intervention (n=576) N (cluster) = 6	Control (n=527) N (cluster) = 7

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
	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, 6 months		
	Any alcohol (even a sip or taste) in past 6 months, n ^l (%)	212 (36.82%)	216 (41.04%)
	OR 95% CI (as reported)	0.69 (0.50, 0.96)	
	Frequency of binge drinking [Proportion of students reporting binge drinking in past 6 months], n ^m (%)	45 (7.84%)	32 (6.12%)
	OR 95% CI (as reported)	1.13 (0.41, 3.15)	
	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	Cannabis outcomes		
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

l Calculated by reviewer

m Calculated by reviewer

Bibliographic reference	Champion KE, Newton NC, Stapinski L et al (2016) A cross-validation trial of an Internet-based prevention program for alcohol and cannabis: Preliminary results from a cluster randomised controlled trial Australian & New Zealand Journal of Psychiatry 5(1) 64-73		
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	Some concerns	There was no information available on allocation concealment of interventions where the outcomes were self-reported.
	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	The National Health and Medical Research Council		
Comments	Limitations by author: It was indicated that the children that were not followed up were most likely to be high risk students Survey data was self-reported. Limitations by reviewer: None		

D.1.5 Colnes 2001

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)
Registration	None
Study type	Randomised controlled trial (individual)
Study dates	Not reported
Aim	To evaluate the effectiveness of the Super-Leaders peer-leadership training programme.
Country/geographical location	USA

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)			
Setting/School type	High school			
Participant characteristics	Description	76 high school students in grades 9 -11		
		Intervention (n=38)	Control (n=38)	
	Age	Grade 9	10/76 (13.2%)	
		Grade 10	31/76 (40.8%)	
		Grade 11	35/76 (46.1%)	
	Gender	Male	31/76 (40.8%)	
		Female	45/76 (58.2%)	
	Socioeconomic status	Not reported		
	Ethnicity	African American	41/76 (54%)	
		White	34/76 (45%)	
		Asian	1 (1%)	
	SEND	Not reported		
Baseline drinking behaviour	Frequency of alcohol use [scale 1 = never to 9 = more than once a day] (mean, SD)	1.16 (0.37)	1.24 (0.43)	
	Frequency of getting drunk, [scale 1 = never to 9 = more than once a day] (mean, SD)	1.00 (0.00)	1.00 (0.00)	
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			
Number of Participants	86 students from 2 schools (50 from school 1 and 36 from school 2)			

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P9	Super Leader Peer Leadership Training
	Rationale/theory/Goal	P9	To provide comprehensive peer-leadership training that incorporates state-of-the art strategies to reduce substance use. Aims to support young people to reach their goals, train youth to be peer-counsellors and co-ordinate with schools, private organisations and public agencies.
	Materials used	-	Not reported
	Procedures used	P9	Training-retreats, after-school leadership programme, program-wide activities and support services.
	Provider	P10	Trained professionals
	Method of delivery	P23	Group
	Location	P23	Residential training retreat (Camp Round Meadow, Thurmont) Regular Super Leaders Meetings during lunch periods and after school hours
	Duration	P23	4 days
	Intensity	P11	4 days including the weekend (afterschool Thursday to Sunday)
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)		
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P17	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
	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		

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)		
Study Methods	Method of randomisation	Names drawn from a brown paper bag	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Descriptive statistics and general linear models of analysis of variance. No intention to treat analysis	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 76/86 (88%) Second school was only considered after the 10 student dropped out of the first school	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=38)	Control (n=38)
	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, 4 months		
	Frequency of alcohol use [scale 1 = never to 9 = more than once a day] (mean. SD)	1.03 (0.16)	1.13 (0.34)

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)		
	Frequency of getting drunk, [scale 1 = never to 9 = more than once a day] (mean, SD)	1.0 (0.00)	1.16 (0.55)
		Intervention (n=18)	Control (n=18)
	School attendance, 4 months ⁿ		
	Tardiness (days recorded on school transcript)	0.55 (0.85)	1.66 (1.18)
	MD 95% CI (calculated by reviewer)	1.11 (0.41, 1.81)	
	Absenteeism (days recorded on school transcript)	1.0 (1.08)	2.5 (1.38)
	MD 95% CI (calculated by reviewer)	1.5 (0.66, 2.34)	
	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	Social and personal competence, psychosocial factors, cognitive expectancies, smoking and marijuana outcomes, school bonding and grade point average		
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	Outcomes were subjective and there is a strong possibility of participants being aware of intervention allocation.

n Data collected for second school only

Bibliographic reference	RM Colnes (2001) The effectiveness of a school-based substance use prevention program. Dissertation Abstracts International: Section B: The Sciences and Engineering 61 (8-B)		
	School attendance	Low	Outcomes measures from a school transcript so were objective and less likely to be affected by possible knowledge of intervention allocation.
	Alcohol related risky behaviour such as unprotected or regretted sex	N/A	N/A
	Mental health and wellbeing	N/A	N/A
	Adverse or unintended effects	N/A	N/A
Source of funding	Not reported		
Comments	<p>Limitations by author: It was intended that all students were eligible for inclusion so that a mix of students with different personal, academic and social qualities would be included. However, due to poor communication it is possible that schools selected students for inclusion that were more likely the “better-rounded” students.</p> <p>Limitations by reviewer: No information about how the peer leader role was implemented in the school. Suggests that the purpose of the training programme is to enable peers to spread messages against substance use amongst peers. This potentially could have impacted the control group results.</p>		

D.1.6 D’Amico 2002

Bibliographic reference	D’Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. Addiction 97, 563-574	
Registration	Not reported	
Study type	Randomised controlled trial (individual)	
Study dates	Not reported	
Aim	To compare an abbreviated version of Drug Abuse and Resistance Education (DARE-A) to Risk Skills Training Program (RSTP)	
Country/geographical location	USA	
Setting/School type	High school (suburban)	
	Description	300 adolescents

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574				
Participant characteristics			RSTP	DARE-A	Control
	Age	Years, mean (range)	16 (14-19)		
	Gender ^o	Male	123/300 (41%)		
		Female	174/300 (58%)		
		Missing data	3/300 (1%)		
	Socioeconomic status	Annual family income			
		Under \$20,000	6/300 (2%)		
		\$20,000 to \$30,000	45/300 (15%)		
		\$30,000 to 40,000	51/300 (17%)		
		\$40,000 to \$50,000	63/300 (21%)		
		\$50,000 to \$60,000	54/300 (18%)		
		Above \$60,000	72/300 (24%)		
		Missing data	9/300 (3%)		
	Ethnicity	Caucasian	189/300 (63%)		
		Hispanic	51/300 (17%)		
		African American	30/300 (10%)		
		Asian	6/300 (2%)		
		Other	24/300 (8%)		
	SEND	Not reported			
	Baseline drinking behaviour [Drinking Habits Questionnaire (DHQ)]	Heavy drinker	24/300 (8%)		
		Moderate drinker	24/300 (8%)		
Light drinker		48/300 (16%)			
Infrequent drinker		66/300 (22%)			
Abstinent		138 (46%)			

^o Imputed by reviewer from percentages reported

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574		
		Missing data	3 (1%)
Inclusion criteria	Sophomore, junior and senior high-school students with parental consent		
Exclusion criteria	Freshmen		
Number of Participants	300 at baseline		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P565	Risk Skills Training Program (RSTP)
	Rationale/theory/Goal	P565	To target multiple risk behaviours and adolescents' personal beliefs and consequences experienced from these behaviours.
	Materials used	-	Not reported
	Procedures used	P565	Interactive group sessions, motivational techniques. Adolescents were provided within personalised written and graphic feedback which they could discuss with peers if they chose to.
	Provider	P565	Group leader (not reported as internal or external)
	Method of delivery	P565	Group
	Location	-	Not reported
	Duration	-	Single session
	Intensity	P565	1 x 50 minute session
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P566	An independent rater considered an expert in the prevention and intervention field rated audio tapes of the sessions (3 RSTP) for adherence to the protocol (0 = no adherence to 6 = substantial adherence), student participation and amount of lecture during the session (1 = none to 5 = a lot), and overall quality of the presentation (0 = poor to 6 = excellent).

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574		
	Actual treatment fidelity	P567	M adherence = 5.3 (SD 0.25) M student participation and interaction = 4.3 (SD 0.58) Lecture M = 3.0 (SD 0) Overall M = 5.3 (SD 0.58)
	Other details	P566	RSTP differs from other programmes in that participants have the opportunity to listen to whatever information their peers may choose to share about their personal experience and related feedback. Intervention was carried out at lunch time or after school
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P566	Drug Abuse Resistance Education – Abbreviated (DARE-A)
	Rationale/theory/Goal	P566	Focused on increasing knowledge and understanding of the deleterious effects of substance use.
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	P566	Police officer (Certified DARE instructor)
	Method of delivery	P566	Group
	Location	-	Not reported
	Duration	P566	Single session
	Intensity	P566	1 x 50 minutes
	Tailoring/adaptation	-	Not reported
	Modifications	P566	This was a shortened version of DARE and topics were chosen based on their relative importance and significance

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574		
	Planned treatment fidelity	P566	An independent rater considered an expert in the prevention and intervention field rated audio tapes of the sessions (3 DARE-A) for adherence to the protocol (0 = no adherence to 6 = substantial adherence), student participation and amount of lecture during the session (1 = none to 5 = a lot), and overall quality of the presentation (0 = poor to 6 = excellent).
	Actual treatment fidelity	P567	M adherence = 4.7 (SD 0.29) M student participation and interaction = 2.0 (SD 0) Lecture M = 5.0 (SD 0) Overall M = 2.0 (SD 0)
	Other details	-	Intervention was carried out at lunch time or after school
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P563	No intervention 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
	Tailoring/adaptation	-	Not reported
Modifications	-	Not reported	

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574			
	Planned treatment fidelity	-	Not reported	
	Actual treatment fidelity	-	Not reported	
	Other details	-	Not reported	
Follow up	2 and 6 months			
Study Methods	Method of randomisation	Not reported		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Mixed models were used to measure differences between the intervention and control groups No intention to treat analysis carried out		
	Unit of allocation	Individual		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: Not reported No differences between the groups for drop-outs at follow up.	Reasons for not completing the study: Not reported	
	Outcome	RSTP (n= not reported)	DARE-A (n= not reported)	Control (n not reported)

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574			
Outcomes measures and effect size.	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, 6 months			
	Weekly drinking, [Daily Drinking Questionnaire, DDQ; measures total frequency in a week x total quantity in a week] mean (SD)	2.76 (4.05)	1.78 (3.23)	3.44 (4.74)
	School attendance	Not reported	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported	Not reported
	Risky drinking [CARE heavy drinking scale], mean (SD)	1.90 (3.68)	1.06 (2.76)	2.36 (4.70)
	Mental health and wellbeing	Not reported	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported	Not reported
Other outcomes measured	Alcohol observed expectancies, drug use, DUI and RDD, perceptions of peer substance use.			
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 reported		Not reported
	Age at first experience of drunkenness where reported	Not reported		Not reported
	Amount and frequency of alcohol use	High		Randomisation methods not very clear. It's possible the control group were not randomised although there were no baseline differences reported. There is no information on allocation concealment with

Bibliographic reference	D'Amico EJ and Fromme (2002) Brief prevention for adolescent risk-taking behaviour. <i>Addiction</i> 97, 563-574		
			outcomes reported subjectively. Attrition numbers were not reported and an ITT was not done.
	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
Source of funding	National Institute on Alcohol Abuse and Alcoholism (NIAAA) FIRST Award, NIAAA training grant and a Hogg Foundation grant.		
Comments	<p>Limitations by author: Study used self-report measures which may not be reliable. The need for parental permission may have prevented some students from taking part. The intervention and questionnaires were completed outside of school hours.</p> <p>Limitations by reviewer: 270/300 (90%) of the participants had previously taken part in DARE prevention intervention.</p> <p>Other comments: All participants were compensated with a gift certificate for a local music store or two movie passes for completing baseline assessment, a \$20 gift certificate at follow up. All participants in the intervention group were further compensated with an additional \$10.</p>		

D.1.7 D'Amico 2012

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. <i>Prevention Science: the official journal of the Society for Prevention Research</i> 13(4) 415-25
Registration	None
Study type	Randomised controlled trial (cluster)
Study dates	October 2008 to June 2009
Aim	To evaluate a voluntary after-school program for younger adolescents
Country/geographical location	USA
Setting/School type	16 middle schools

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. <i>Prevention Science: the official journal of the Society for Prevention Research</i> 13(4) 415-25			
Participant characteristics	Description	8,932 students in the 6th to 8th grade		
			Intervention (n=4,243) N (cluster) = 8	Control (n=4,689) N (cluster) = 8
	Age	6th Grade, n (%)	1443 (34%)	1454 (31%)
		7th Grade, n (%)	1443 (34%)	1500 (32%)
		8th Grade, n (%)	1357 (32%)	1735 (37%)
	Gender	Male, n (%)	2079 (49%)	2345 (50%)
		Female, n (%)	2164 (51%)	2345 (50%)
	Socioeconomic status	Not reported		
	Ethnicity	Non-Hispanic White, n (%)	721 (17%)	(14%)
		Non-Hispanic African American, n (%)	170 (4%)	(3%)
		Hispanic, n (%)	2206 (52%)	(56%)
		Asian, n (%)	721 (17%)	(16%)
		Other, n (%)	424 (10%)	(11%)
	SEND	Not reported		
			N = 9,528 ^p	
Baseline drinking behaviour	Lifetime alcohol use, n (%)	16.7%	19.1%	
	Past month alcohol use, n (%)	6.8%	12.9%	
	Heavy drinking in past month, [5 or more drinks on one occasion] n (%)	3.9%	3.3%	
Inclusion criteria	Parental consent			

^p Number included all participants

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. Prevention Science: the official journal of the Society for Prevention Research 13(4) 415-25		
Exclusion criteria	Not reported		
Number of Participants	8932		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P417	CHOICE
	Rationale/theory/Goal	P417	Social Learning Theory, Decision-Making Theory and Self-Efficacy Theory. Focused on normative feedback.
	Materials used	-	Not reported
	Procedures used	P416	Group discussion, role-plays
	Provider	P418	8 Bachelor- or Masters-educated project staff
	Method of delivery	P416	Group
	Location	P417	After school
	Duration	P417	5 sessions over school year
	Intensity	P417	1 x 30 minute session per week (total 5 sessions)
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P418	Facilitators were supervised weekly and trained observers watched each facilitator provide two different sessions over the year and coded them on adherence to motivational interviewing and fidelity to the protocol. The Motivational Interviewing Treatment Integrity (MITI) scale was used to measure motivational interviewing adherence.

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. Prevention Science: the official journal of the Society for Prevention Research 13(4) 415-25		
	Actual treatment fidelity	P419	Mean rating on MITI across all facilitators was 4 (competent). Mean MI adherence was 93%. Adherence to protocol content was 90%
	Other details	P418	Attendance was voluntary for students. Students who com
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P417	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference			
D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. Prevention Science: the official journal of the Society for Prevention Research 13(4) 415-25			
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	6 months		
Study Methods	Method of randomisation	Computer randomisation (MS Excel random number generator)	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intention to treat analysis Missing data imputed using regression models Adjusted for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Not reported	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	N = 9,528		
	Outcome	Intervention (n = not reported) N (cluster) = 8	Control (n=not reported) N (cluster) = 8
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. <i>Prevention Science: the official journal of the Society for Prevention Research</i> 13(4) 415-25		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use		
	Lifetime alcohol use, n (%)	22.2%	29.0%
	Lifetime alcohol use OR (95% CI)	0.70 (not reported)	
	Past month alcohol use, n (%)	9.7%	12.9%
	Past month alcohol use OR (95% CI)	0.73 (not reported)	
	Heavy drinking in past month [5 or more drinks on one occasion], n (%)	4.5%	6.1%
	Heavy drinking OR (95% CI)	0.78 (not reported)	
	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	Perceived alcohol use, alcohol intentions, resistance self-efficacy (alcohol)		
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	High	Unclear whether participants were aware of intervention allocation. With self-reported measures this could potentially lead to bias. Attrition was not reported. Although an ITT

Bibliographic reference	D'Amico EJ, tucker JS, Miles JNV et al (2012) Preventing alcohol use with a voluntary after-school program for middle school students: Results from a cluster randomized controlled trial of CHOICE. Prevention Science: the official journal of the Society for Prevention Research 13(4) 415-25		
			analysis was carried out, it is not clear how many people dropped out. Discussion implies that the study was not powered to detect statistically significant differences.
	School attendance	N/A	N/A
	Alcohol related risky behaviour such as unprotected or regretted sex	N/A	N/A
	Mental health and wellbeing	N/A	N/A
	Adverse or unintended effects	N/A	N/A
Source of funding	National Institute of Alcohol Abuse and Alcoholism		
Comments	Limitations by author: Use of self-reported outcomes. A larger sample of attendees would have allowed detection of statistically significant effects among individual participants. Limitations by reviewer:		

D.1.8 Dumas 2014

Bibliographic reference	Dumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. Addictive Behaviors 39. 231-238		
Registration	Not reported		
Study type	Randomised controlled trial (cluster)		
Study dates	Not reported		
Aim	To test the efficacy of a brief, web-based intervention program on reducing risk factors for drinking, alcohol use and alcohol-related consequences.		
Country/geographical location	USA		

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238			
Setting/School type	Junior high schools			
Participant characteristics	Description	513 ninth grade students		
			Intervention (n= not reported) N (cluster) = 1	Control (n=not reported) N (cluster) = 1
	Age	Mean (SD), whole population	14.21 years (0.47)	
	Gender ^q	Male, n (%), whole population	246/513 (48%)	
		Female, n (%), whole population	267/513 (52%)	
	Socioeconomic status	Not reported		
	Ethnicity	Caucasian, n (%), whole population	382/513 (74.5%)	
		Hispanic, n (%), whole population	51/513 (9.9%)	
		Asian, n (%), whole population	28/513 (5.5%)	
		African-American, n (%), whole population	22/513 (4.2%)	
		American Indian/Alaskan Native, n (%), whole population	18/513 (3.6%)	
Hawaiian/Other Pacific Islander, n (%), whole population		8/513 (1.5%)		
Other, n (%), whole population		4/513 (0.8%)		
SEND	Not reported			
Baseline drinking behaviour	Frequency of drinking [quantity/frequency questionnaire; 8 point scale; 0 (do not drink at all) to 7 (drink every day)], mean (SD)	0.98 (1.39)	0.87 (1.37)	

^q n calculated by reviewer from percentages reported

Bibliographic reference			
Doumas DM, Esp, S, Turrissi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238			
		Alcohol-related consequences [Rutgers Alcohol Problem Index (RAPI); How many times the scenarios (23 items) have happened in the past 30 day; sum of 5 point scale ranging from never to more than 10 times.], mean (SD)	2.24 (5.34)
		Weekly drinking quantity [Daily drinking questionnaire (DDQ) measured by number of drinks a day in a typical week; a drink defined as a 12oz can/bottle of beer, 4oz glass of wine or a shot of distilled spirits], mean (SD)	0.60 (2.00)
Inclusion criteria	Parental consent (passive)		
Exclusion criteria	None		
Number of Participants	513		
Intervention	TIDieR Checklist criteria	Paper/L ocation	Details
	Brief Name	P233	eCHECKUP to GO
	Rationale/the ory/Goal	P233	Social norming theory and enhancement models aimed to change perceptions or peer drinking norms, alcohol beliefs and alcohol expectancies.
	Materials used	P233	Online assessment with information on alcohol consumption, drinking behaviour and consequences.

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238		
	Procedures used	P233	Personalised normative feedback following online assessment. Students received a graphical comparison of one's own drinking to US norms, estimated risk-status for negative drinking consequences and risk-status for problematic drinking based on AUDIT score.
	Provider	P233	Computer
	Method of delivery	P233	Individual
	Location	-	Not specified
	Duration	-	30 minutes
	Intensity	-	Not reported
	Tailoring/adaptation	P233	The programme was customised for the participating school (normative data for the school, referrals to the local community, and website tailored to the school logo/colours).
	Modifications	P233	The program was not modified.
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P233-234	During feedback, students were asked to respond whether or not they would be willing to engage in potential strategies (provided in a list) to reduce drinking. Students could re-take the assessment and compare across time.
Comparison	TiDieR Checklist criteria	Paper/Location	Details
	Brief Name	P234	Usual alcohol and drug education
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238		
	Procedures used	-	Not reported
	Provider	P234	School counsellor
	Method of delivery	P234	Group
	Location	P234	Classroom
	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	-	None
Follow up	3 and 6 months		
Study Methods	Method of randomisation	Coin toss	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	General linear model repeated measures analyses. Adjustments for clustering not reported.	

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238		
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 6 months: 358/513 (69%)	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=not reported) N (cluster) = 1	Control (n=not reported) N (cluster) = 1
	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, 6 months		
	Frequency of drinking [quantity/frequency questionnaire; 8 point scale; 0 (do not drink at all) to 7 (drink every day)], mean (SD)	1.17 (1.60)	1.06 (1.71)
	Weekly drinking quantity, 3 months [Daily drinking questionnaire (DDQ) measured by number of drinks a day in a typical week; a drink defined as a 12oz can/bottle of beer, 4oz glass of wine or a shot of distilled spirits], mean (SD)	0.90 (3.47)	0.82 (3.06)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing, 6 months		

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. <i>Addictive Behaviors</i> 39. 231-238		
	Alcohol-related consequences [Rutgers Alcohol Problem Index (RAPI); How many times the scenarios (23 items) have happened in the past 30 day; sum of 5 point scale ranging from never to more than 10 times.], mean (SD)	2.32 (6.52)	3.39 (8.78)
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Positive alcohol expectancies, positive alcohol beliefs, perceptions of peer drinking frequency and quantity (3 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
	Amount and frequency of alcohol use	Some concerns	There was no information available on allocation concealment of interventions where the outcomes were self-reported. Attrition was 31% but no information was reported on attrition by arm.
	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	There was no information available on allocation concealment of interventions where the outcomes were self-reported. Attrition was 31% but no information was reported on attrition by arm.
	Adverse or unintended effects	Not applicable	Not applicable

Bibliographic reference	Doumas DM, Esp, S, Turrisi R et al (2014) A test of the efficacy of a brief, web-based personalized feedback intervention to reduce drinking among 9th grade students. Addictive Behaviors 39. 231-238
Source of funding	SAMHSA Grant
Comments	Limitations by author: Self-reported outcomes and limited generalisability. Limitations by reviewer: Did not report all specified outcomes at 6 months.
Additional reference	Doumas DM, Hausheer R, Esp S (2014) Reducing alcohol use among 9th grade students: 6 month outcomes of a brief, web-based intervention. Journal of substance abuse treatment 47, 102-105
Additional reference	Doumas DM, Hausheer R, Esp S et al (2016) Age of drinking initiation as a moderator of the efficacy of a brief web-based personalized feedback alcohol intervention. Journal of Child and Adolescent Substance Use. 25 (6) 591-597

D.1.9 Doumas 2017

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. Journal of studies on alcohol and drugs 78, 706-715			
Registration	Not reported			
Study type	Randomised controlled trial (cluster)			
Study dates	Not reported			
Aim	Examine the efficacy of a brief, web-based personalised feedback intervention on alcohol use and related consequences in high school seniors			
Country/geographical location	USA			
Setting/School type	High school			
Participant characteristics ^r	Description	221 high school seniors		
			Intervention (n=116)	Control (n=105) N (cluster) = 4

^r n calculated by reviewer from percentages reported

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. <i>Journal of studies on alcohol and drugs</i> 78, 706-715			
			N (cluster) = 4	
Age	Mean (SD)		17.16 (0.42)	17.16 (0.48)
Gender	Male, n (%)		47 (40.4%)	53 (50.5%)
	Female, n (%)		69 (59.6%)	52 (49.5%)
Socioeconomic status	Not reported			
Ethnicity	White, n (%)		97 (83.2%)	83 (79.0%)
	Hispanic, n (%)		5 (4.4%)	9 (8.6%)
	Asian, n (%)		4 (3.5%)	6 (5.7%)
	African American, n (%)		4 (3.5%)	0 (0.0%)
	American Indian/Alaska Native, n (%)		2 (1.8%)	1 (1.0%)
	Other, n (%)		4 (3.5%)	6 (5.7%)
SEND	Not reported			
Baseline drinking behaviour	Never tried alcohol, n (%)		24 (20.7%)	25 (23.8%)
	Use in past 30 days		45 (38.8%)	43 (41.3%)
	>One heavy episodic drinking episode, past 2 weeks		29 (25.0%)	27 (25.7%)
	Weekly drinking quantity [Number of drinks per day in a typical week combined for 7 days; one drink = 12oz can or bottle of beer, 4oz glass of wine, or shot of distilled spirits], mean (SD)		2.37 (4.11)	2.33 (4.66)
	Peak drinking quantity [most number of drinks consumed on any given night in the past month], mean (SD)		2.65 (4.05)	2.41 (4.04)
	Frequency of drinking to intoxication [how many times drunk in past 30 days], mean (SD)		0.66 (0.92)	0.67 (0.99)
	Alcohol-related consequences [Rutgers Alcohol Problem Index (RAPI); How many times the scenarios (23 items) have		2.00 (3.94)	1.86 (3.15)

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. Journal of studies on alcohol and drugs 78, 706-715		
			happened in the past 30 day; sum of 5 point scale ranging from never to more than 10 times.], mean (SD)
Inclusion criteria	Active parental consent		
Exclusion criteria	None		
Number of Participants	221 high school seniors; intervention n=116, control n= 105		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P709	eCHECKUP TO GO
	Rationale/theory/Goal	P709	Personalised feedback
	Materials used	P709	Online assessment with information on alcohol consumption, drinking behaviour and consequences.
	Procedures used	P709	Personalised normative feedback following online assessment. Students received feedback via graphs, text and video recordings embedded in the programme.
	Provider	P709	Computer School counsellor Member of research team
	Method of delivery	P709	Individual
	Location	P709	Classroom
	Duration	P709	30 minutes
	Intensity	P709	Not reported
	Tailoring/adaptation	P709	The programme was customised for the participating school (normative data for the school, referrals to the local community, and website tailored to the school logo/colours).
	Modifications	-	Not reported

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. <i>Journal of studies on alcohol and drugs</i> 78, 706-715		
	Planned treatment fidelity	P709	To ensure standardised delivery the school counsellor and member of the research team were given an instruction script to read to participants. They were present throughout the intervention to assist participants and act as monitors ensuring the programme was completed and that the participants did not talk among each other.
	Actual treatment fidelity	-	Not reported
	Other details	P709	The programme provides resources for services in the local community
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P707	Assessment only
	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		Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. Journal of studies on alcohol and drugs 78, 706-715	
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	6 weeks		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Adjusted for clustering Linear mixed model Descriptive statistics Intention to treat (ITT) analysis	
	Unit of allocation	Classes	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Intervention 80/116 (69%) ^s Control 70/105 (60%) ^t	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=116) N (cluster) = 4	Control (n=105) N (cluster) = 4
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported

^s Reported as 70% in paper

^t Reported as 66.7% in paper

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. <i>Journal of studies on alcohol and drugs</i> 78, 706-715	
Age at first experience of drunkenness where reported	Not reported	Not reported
Amount and frequency of alcohol use, 6 weeks [Daily drinking questionnaire]		
Weekly drinking quantity [Number of drinks per day in a typical week combined for 7 days; one drink = 12oz can or bottle of beer, 4oz glass of wine, or shot of distilled spirits], mean (SD)	1.71 (3.35)	3.13 (6.26)
Effective sample sizes calculated using ICC 0.1 ^u	32	29
MD 95% CI (calculated by reviewer)	-1.71 (-2.72, 1.16)	
Peak drinking quantity [most number of drinks consumed on any given night in the past month], mean (SD)	1.69 (2.68)	2.49 (4.70)
Frequency of drinking to intoxication [how many times drunk in past 30 days], mean (SD)	0.44 (0.67)	0.53 (0.94)
Dichotomised data ^v - no drinking to intoxication in past 30 days	30/116 (25.9%)	30/105 (28.6%)
Dichotomised data ^w - drank to intoxication at least once in past 30 days	86/116 (74%)	75/105 (71.4%)
Effective sample sizes calculated using ICC 0.42 ^x	7/10	6/9
RR 95% CI calculated by reviewer	1.1 (0.6, 1.9)	
School attendance	Not reported	Not reported

u ICC taken from Newton 2009

v Imputed by reviewer

w Imputed by reviewer

x ICC as reported in paper

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. <i>Journal of studies on alcohol and drugs</i> 78, 706-715		
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing, 6 weeks		
	Alcohol-related consequences [Rutgers Alcohol Problem Index (RAPI); How many times the scenarios (23 items) have happened in the past 30 day; sum of 5 point scale ranging from never to more than 10 times.], mean (SD)	1.27 (3.04)	1.33 (3.09)
	Effective sample sizes calculated using ICC 0.1 ^y	32	29
	MD 95% CI (calculated by reviewer)	-0.06 (-1.63, 1.51)	
	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	Not applicable	Not applicable
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	Some concerns	There was no information available on allocation concealment of interventions where the outcomes were self-reported. High levels of attrition and no reasons reported.
	School attendance	Not applicable	Not applicable

^y ICC taken from Newton 2009

Bibliographic reference	Doumas DM, Esp S, Flay B et al (2017) A randomized controlled trial testing the efficacy of a brief online alcohol intervention for high school seniors. Journal of studies on alcohol and drugs 78, 706-715		
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable
	Mental health and wellbeing	Some concerns	There was no information available on allocation concealment of interventions where the outcomes were self-reported. High levels of attrition and no reasons reported.
	Adverse or unintended effects		
Source of funding	Grant provided in part from National Institute of General Medical Services		
Comments	<p>Limitations by author: Used a single high school so generalisability is limited. Required active consent so the population may not be representative. High attrition. Short follow up.</p> <p>Limitations by reviewer: None</p>		

D.1.10 Eisen 2002

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest "Skills for Adolescence" drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632
Registration	None
Study type	Randomised controlled trial (cluster)
Study dates	1998-1999
Aim	To compare effectiveness of the intervention against standard drug education
Country/geographical location	USA
Setting/School type	34 middle schools

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632			
Participant characteristics	Description	7426 sixth grade students		
			Intervention (n=Not reported) N (clusters) = not reported	
			Control (n=Not reported) N(clusters) not reported	
	Age	Younger than 11 years, n/N (%)	38/7426 (0.5%)	
		11 years, n/N (%)	3790/7426 (51.1%)	
		12 years, n/N (%)	3346/7426 (45%)	
		13 years, n/N (%)	218/7426 (2.9%)	
		14 years, n/N (%)	12/7426 (0.2%)	
		Missing, n/N (%)	22/7426 (0.3%)	
	Gender	Male, n/N (%)	3836/7426 (51.7%)	
		Female, n/N (%)	3586 (48.3%)	
		Missing, n/N (%)	4 (0.1%)	
	Socioeconomic status	Not reported		
	Ethnicity	Asian American	526/7426 (7.1%)	
		American Indian	104/7426 (1.4%)	
		African American	1310/7426 (17.6%)	
		Hispanic American	2519/7426 (33.9%)	
		White	1909/7426 (25.7%)	
		Combination (of above groups)	514/7426 (6.9%)	
		Other	468/7426 (6.3%)	
Missing		76/7426 (1.0%)		
SEND	Not reported			
Baseline drinking behaviour	Used alcohol in the last 30 days			
	Yes	703/7426 (9.5%)		
	No	6687/7426 (90.1%)		

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632		
		Missing	36/7426 (0.5%)
Inclusion criteria	Schools: Contained Grades 6 to 8 or 7 to 9 Had an enrolment of 200 students by the end of the eighth or ninth grade Were not already using Skills for Adolescence		
Exclusion criteria	None		
Number of Participants	7426		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P619	Skills for Adolescence (SFA)
	Rationale/theory/Goal	P624	Utilises social influence and social cognitive approaches to teach cognitive-behavioural skills for building self-esteem and personal responsibility, communicating effectively, making better decisions, resisting social influences and asserting rights, and increasing knowledge and consequences of drug use.
	Materials used	P624	Teacher manuals and student workbooks
	Procedures used	P624	Curriculum was taught in sessions
	Provider	P624	Teacher
	Method of delivery	P624	Group
	Location	P624	Classroom
	Duration	P623	1 year
	Intensity	P624	40 x 35-45 minute sessions
	Tailoring/adaptation	P624	Programme was taught in either English or Spanish
Modifications	-	Not reported	

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632		
	Planned treatment fidelity	P624	Teachers were required to schedule 8 of the 40 sessions which were deemed “key” and would be observed by project staff.
	Actual treatment fidelity	-	Not reported
	Other details	P624	Teachers attended a 3-day workshop conducted by Quest-International certified trainers. The training provided teachers with detailed explanations and practice sessions, the opportunity to learn and practice specific skill-building exercises, reinforcement on the importance of maintaining fidelity and an overview of the process evaluation approach.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P621	Usual drug education
	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	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632			
	Planned treatment fidelity	-	Not reported	
	Actual treatment fidelity	-	Not reported	
	Other details	-	Not reported	
Follow up	Post-intervention and 1 year			
Study Methods	Method of randomisation	Not reported		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Mixed-model regression procedures Nested-cohort design Adjusted for clustering		
	Unit of allocation	Schools		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 5694 (77%)	Reasons for not completing the study: Not reported	
Outcomes measures and effect size.	Outcome	Intervention (n=not reported) N (cluster) = not reported	Control (n=not reported) N (cluster) = not reported	% difference
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported	Not reported

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use, 1 year post-intervention		
	Lifetime alcohol use	66.97 %	66.33%
	30-day alcohol use	22.85%	23.18%
	30- day binge drinking (3+)	12.67%	13.11%
	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			
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
	Amount and frequency of alcohol use	Some concerns	Allocation concealment methods not described so unclear if participants were aware of intervention allocation. All outcomes were self-measured. 23% 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

Bibliographic reference	Eisen M, Zellman GL, Massett HA et al (2002) Evaluating the Lions-Quest “Skills for Adolescence” drug education program: First year behaviour outcomes. Addictive behaviours 27 619-632		
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Institute on Drug Abuse		
Comments	Limitations by author: Required active consent from parents Limitations by reviewer: No descriptive data for number of students in each arm or number of clusters.		
Additional reference	Eisen M, Zellman GL and Murray DM (2003) Evaluating the Lions Quest – “Skills for Adolescence” drug education program. Second-year behaviour outcomes. Addictive Behaviors 28, 883-897		

D.1.11 Gabrhelik 2012

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. Drug and Alcohol Dependence 124 (1-2):79-87		
Registration	Not reported		
Study type	Randomised controlled trial		
Study dates	2007-2008 school year		
Aim	To examine the impact of a school-based RCT among primary school students in the Czech Republic		
Country/geographical location	Czech Republic		
Setting/School type	Primary school setting		
Participant characteristics	Description	1753 students 6th graders	
		Intervention (n=1022) N (cluster) = 40	Control (n=852) N (cluster) = 34
	Age	Whole sample, Mean (SD) 11.38 (0.56)	
	Gender	Male, n (%) 944 (50.4)	
Female, n (%) 927 (49.5)			

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. <i>Drug and Alcohol Dependence</i> 124 (1-2):79-87		
	Socioeconomic status	Family Income Level (no further definition given for this) Low n (%) 118 (6.3) Moderate n (%) 1298 (69.3) High n (%) 425 (22.7)	
	Ethnicity	Not reported	
	SEND	Not reported	
	Baseline drinking behaviour	At least one episode of drunkenness over the last 30 days	
		Yes, n (%)	279 (14.9)
Inclusion criteria	Students must be in 6th grade at the start of the study		
Exclusion criteria	None		
Number of Participants	1753 participants		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P3	“Unplugged”
	Rationale/theory/Goal	P3	Designed to delay drug initiation and suspend progression from early stage to heavier drug use. Focuses on knowledge and attitudes (4 units), interpersonal skills (4 units), and intrapersonal skills (4 units)
	Materials used	P3	Teacher’s handbook includes brief description of each unit, objectives, a list of materials needed for each activity and tips that may help with the lesson. The student’s workbook is a personal workbook for the student.
	Procedures used	-	Not reported
	Provider	P3	Trained teachers
	Method of delivery	P3	Group
	Location	P3	Classroom
	Duration	P3	1 school year

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. <i>Drug and Alcohol Dependence</i> 124 (1-2):79-87		
	Intensity	P3	12x 45 minute lessons
	Tailoring/adaptation	-	None
	Modifications	-	None
	Planned treatment fidelity	P4	Training manual provided for teachers. Teachers assigned to one of the four of the Regional Coordinators with whom they had monthly meetings to monitor the intervention fidelity. Progress on the delivery of the intervention was continuously tracked via internet-based questionnaires that were submitted by teachers after the completion of each lesson.
	Actual treatment fidelity	-	
	Other details	-	
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P4	‘Minimal Prevention Program’
	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

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. <i>Drug and Alcohol Dependence</i> 124 (1-2):79-87		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not applicable
	Planned treatment fidelity	P4	Teachers from the control arm received 2.5 h of technical issues information regarding the study collaboration.
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Follow up	2 Years post randomisation (1 year post intervention)		
Study Methods	Method of randomisation	Stratified random sampling was used to obtain a representative sample (no further information given on randomisation)	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Chi-square and t-tests	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Intervention 1794 (95.7%)	Reasons for not completing the study: Disappointed at not being selected to the intervention group
Outcomes measures and effect size.			
	Outcome	Intervention (n=914) N (cluster) = 40	Control (n=839) N (cluster) = 34
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. Drug and Alcohol Dependence 124 (1-2):79-87		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use, 12 months		
	Any drunkenness in past 30 days, n	291/905	285/827
	OR 99.2% CI (as reported)	0.94 (0.75, 1.17)	
	Absolute risk reduction (ARR)	2.3	
	Number needed to treat (NNT)	43	
	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	Smoking Cannabis use		
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
	Amount and frequency of alcohol use	Some concerns	Method of allocation concealment was not described and outcomes were subjective
	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

Bibliographic reference	Gabrhelik R, Duncan A, Miovsky M et al (2012) “Unplugged”: A school-based randomized control trial to prevent and reduce adolescent substance use in the Czech Republic. Drug and Alcohol Dependence 124 (1-2):79-87
Source of funding	Grant Agency of the Czech Republic (GACR) grant no. 406/09/0119, the Ministry of Education of the Czech Republic and the Central Bohemia Region Authority; Hubert H. Humphrey Fellowship Program.
Comments	<p>Limitations by author:</p> <p>Outcome variables of interest are based on self-reported measures that may affect the validity of the data.</p> <p>Reports that schools that dropped out may have done so because they were disappointed that they were not allocated the intervention</p> <p>In the Czech Republic, only one school prevention worker is assigned to each school. In this trial, there was one teacher who was trained to deliver the intervention on one class only in the entire school- a feasibility trial has been designed to determine if 1 teacher is capable of delivering the intervention to all 6th graders at their school during one school year.</p> <p>Limitations by reviewer: None to add</p>

D.1.12 Griffin 2009

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816			
Registration	None			
Study type	Randomised controlled trial			
Study dates	Not reported			
Aim	To examine the effectiveness of a career-oriented intervention for preventing use of alcohol, tobacco and other drugs (ATOD), violence and promoting resilient behaviour.			
Country/geographical location	USA			
Setting/School type	Middle school (from a public school system in a working-poor to middle-class neighbourhood)			
Participant characteristics	Description	178 8th grade students		
		Intervention (n=92)	Control (n= 86)	
	Age	Mean (SD)	Not reported	Not reported
	Gender ^z	Male, n (%)	53 (57.6%)	59 (68.6%)
		Female, n (%)	39 (42.4%)	27 (31.4%)
	Socioeconomic status	Education level (mother)		
		<High school	24 (25.6%)	19 (22.4%)
		High school	31 (33.3%)	31 (36.5%)
		>High school	38 (41.1%)	35 (41.2%)
Education level (father)				
<High school	24 (25.6%)	27 (31.3%)		

^z n calculated by reviewer from percentages reported.

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
	High school	46 (50.0%)	28 (32.5%)
	>High school	22 (24.4%)	31 (36.3%)
Ethnicity	School was 99% African American		
SEND	Not reported		
Baseline drinking behaviour	Alcohol drinking n (%)	23 (25.0%)	18 (21.1%)
	Drunk from alcohol [Occasions drunk/very high from alcohol in past 30 days], n (%)	11 (11.5%)	14 (16.7%)
		Intervention (n=39)	Control (n=27)
	Alcohol drinking (male subgroup)	8 (21.4%)	6 (21.1%)
	Drunk from alcohol (male subgroup)	9 (23.1%)	5 (16.7%)
		Intervention (n=53)	Control (n=59)
	Alcohol frequency (female subgroup)	12 (23.1%)	11 (18.8%)
	Drunk from alcohol (female subgroup)	0 (0.0%)	4 (13.3%)
	Inclusion criteria	Grade 8 students in the school's geographical service area Written parental consent	
Exclusion criteria	Students who posed a physical threat to themselves or others		
Number of Participants	199 randomised; 178 in the analysis		

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P801	The BRAVE
	Rationale/theory/Goal	P801	Based on social learning theory Aim to address economic disadvantages while working to prevent used of ATOD
	Materials used	P801	Curriculum-based classroom exercises (Life Skills Curriculum, Violence Prevention Curriculum, and violence prevention videotapes, manhood development training curriculum for African Americans focusing on behavioural maturity, success norms and responsible gender expectations).
	Procedures used	P801	Skill-building through reinforced practice (role-plays) and opportunities to practice skills across social contexts Ancillary components for developing and monitoring of career goals, mentoring, peer-to-peer goal monitoring and reinforcement, vocational field trips, vocational speakers' bureau and case referral.
	Provider	P804	The BRAVE Program staff. The BRAVE Program training staff functioned as part time positions as part of the research team. They were young adults aged 18-25 years. They were enrolled on a graduate-level social or behavioural sciences program or had completed a Masters in one of these areas.
	Method of delivery	P804	Group
	Location	P804	Classroom
	Duration	P804	7-8 months
	Intensity	P804	2-3 x 90minute per week classes over 9 weeks
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
	Planned treatment fidelity	P804	The principal investigator used weekly lesson-planning sessions as periods for trainers to review and practice using the training material. The trainers were required to prepare a service delivery schedule to document the delivery of lesson plan objectives to encourage adherence and maintain fidelity.
	Actual treatment fidelity	P804	Not reported
	Other details	-	The students also developed career plans that incorporated short and long term goals. Pairs of students used a buddy system under the supervision of the BRAVE Program trainer.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P804	Standard curriculum
	Rationale/theory/Goal	-	Not reported
	Materials used	P804	Consisted of Language Arts, Mathematics, Foreign Language, Music, Social Studies, Science, Visual Arts and Health and Physical Education
	Procedures used	-	Not reported
	Provider	P804	Classroom teachers
	Method of delivery	P804	Group
	Location	P804	Classroom
	Duration	-	Not reported
	Intensity	-	Not reported

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	12 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported. Students in the intervention group could choose to take part in the standard curriculum instead implying that they had knowledge of the intervention.	
	Statistical method(s) used to analyse data	Covariance models between intervention and comparison groups. Change mean score (Follow up – baseline) Adjustment for clustering not reported.	
	Unit of allocation	Classes	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 178/199 (89%) ^{aa}	Reasons for not completing the study: Incomplete data or students moved away.

^{aa} Percentage calculated by reviewer

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
Outcomes measures and effect size.	Outcome	Intervention (n=92)	Control (n=86)
	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, 12 months ^{bb}		
	Alcohol drinking, n (%)	7 (7.1%)	32 (37.5%)
	RR 95% CI (calculated by reviewer)	0.2 (0.1, 0.4)	
	Drunk from alcohol [Occasions drunk/very high from alcohol in past 30 days], n (%)	3 (3.3%)	7(8.7%)
	RR 95% CI (calculated by reviewer)	0.4 (0.1, 1.5)	
		Intervention (n=39)	Control (n=27)
	Alcohol drinking (male subgroup)	0 (0.0%)	16 (60.0%)
	Drunk from alcohol (male subgroup)	3 (6.7%)	0 (0.0%)
		Intervention (n=53)	Control (n=59)
	Alcohol frequency (female subgroup)	7 (13.3%)	9 (31.6%)
	Drunk from alcohol (female subgroup)	0 (0.0%)	7 (11.1%)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex, 12 months		

^{bb} n calculated by reviewer

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
	Victimhood [Sum of responses to questions; 'How often has someone injured you with a weapon?', '...threatened you with a weapon?'; '...injured you on purpose without a weapon?', '...gotten into a fight because someone insulted you?', in the last 12 months], mean change score, (SEM) ^{cc}	1.52 (0.03)	1.53 (0.03)
	Perpetration [Sum of responses to questions; 'Got into a serious fight?', 'Taken part in a fight where a group of friends were against another group?', 'Got into a fight because you insulted someone?', Hurt someone badly enough they needed bandages/doctor?', in the past 12 months], mean (SEM)	1.60 (0.03)	1.55 (0.41)
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Tobacco and marihuana outcomes.		
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
	Amount and frequency of alcohol use	High	Participants were aware of intervention allocation which may influence the

cc Unclear if this is change Pre and post intervention or post intervention and 12 months.

Bibliographic reference	Griffin JP, Holliday RC, Frazier E et al (2009) The BRAVE (Building Resiliency and Vocational Excellence) Program: Evaluation Findings for a Career-Oriented Substance abuse and violence preventive intervention. Journal of Health Care for the Poor and Underserved 20, 798-816		
			reporting of self-measured outcomes. Contamination was also possible as the clusters were all within one school.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	High	Participants were aware of intervention allocation which may influence the reporting of self-measured outcomes. Contamination was also possible as the clusters were all within one school.
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Not reported		
Comments	Limitations by author: Single school was used. Limitations by reviewer: Inconsistent reporting for gender. Baselines characteristics n for male and female have been swapped for results reporting. No source of funding reported.		

D.1.13 Hanewinkel 2017

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. Deutsches Ärzteblatt International 114 280-7
Registration	None
Study type	Randomised controlled trial (cluster)
Study dates	January to March 2016
Aim	To assess if the intervention influenced the intensity and frequency of binge drinking.

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. <i>Deutsches Ärzteblatt International</i> 114 280-7			
Country/geographical location	Germany			
Setting/School type	63 standard curriculum schools			
Participant characteristics	Description	4163 students		
		Intervention (n=2124) N (clusters) = 30	Control (n=2039) N (clusters) = 33	
	Age	Mean (SD)	15.62 (0.73)	15.60 (0.73)
	Gender ^{dd}	Male, n (%)	1022 (48.1%)	975 (47.8%)
		Female, n (%)	1102 (51.9%)	1064 (52.2%)
	Socioeconomic status	Parents' level of education, n (%)		
		Secondary school certification allowing entrance to university (both parents)	274 (12.9%)	416 (20.4%)
		Secondary school certification allowing entrance to university (one parent)	480 (22.6%)	477 (23.4%)
		Secondary school certification allowing entrance to university (neither parent)	1372 (64.6%)	1146 (56.2%)
	Ethnicity	Not reported		
SEND	Not reported			
Baseline drinking behaviour ^{ee}	Ever drunk alcohol, n (%)			
	No	229 (10.8%)	210 (10.3%)	

^{dd} Gender n calculated by reviewer from percentages reported

^{ee} n calculated by reviewer from percentages reported

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. <i>Deutsches Ärzteblatt International</i> 114 280-7			
	Only a few sips		344 (16.2%)	332 (16.3%)
	Yes		1553 (73.1%)	1495 (73.3%)
	Usual quantity drunk (no. of drinks), mean (SD)		4.32 (2.78)	4.41 (2.75)
	Ever engaged in binge drinking, n (%)			
	Yes		1238 (58.3%)	1182 (58.0%)
	No		886 (41.7%)	856 (42.0%)
	Frequency of binge drinking, n (%)			
	Never		837 (39.4%)	812 (39.8%)
	Less than once per month		652 (30.7%)	612 (30.0%)
	Once per month		489 (23.0%)	442 (21.7%)
	Once per week		140 (6.6%)	167 (8.2%)
	Daily or almost daily		6 (0.3%)	6 (0.3%)
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			
Number of Participants	4163 at baseline; 3802 analysed at follow up			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	P282	Klar bleiben ("Stay clear headed")	
	Rationale/theory/Goal	P282	Aims to reduce binge drinking and to develop a responsible attitude to alcohol aimed at grade 10 (age 15-16)	
	Materials used	PSI	Class contract to refrain from binge drinking	

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. <i>Deutsches Ärzteblatt International</i> 114 280-7		
			Poster to document feedback Teacher's brochure with instructions Cards for postal feedback Class activities Materials for the Kenn dein Limit (know your limit) initiative, DVD and order list for more materials Parents' information leaflet
Procedures used	P282		Students agreed to refrain from binge drinking for 9 weeks which was put in writing by all students signing the class contract. Drinking behaviour was recorded in class every two weeks. Classes that remain "binge-free" entered a raffle to win prizes. Included class activities on alcohol.
Provider	P282		Teachers
Method of delivery	P282		Groups
Location	P282		Classroom
Duration	P282		9 weeks
Intensity	-		Not reported
Tailoring/adaptation	-		Not reported
Modifications	-		Not reported
Planned treatment fidelity	-		Not reported

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. <i>Deutsches Ärzteblatt International</i> 114 280-7		
	Actual treatment fidelity	P286	Unpublished subgroup analyses indicate that the effects of the intervention were greater when it was implemented successfully and comprehensively compared to classes where the intervention was not implemented well or at all.
	Other details	P282	The students' parents were informed of the study in writing and could refuse consent.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P282	Normal school curriculum
	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	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. Deutsches Ärzteblatt International 114 280-7		
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	6 months		
Study Methods	Method of randomisation	Computer randomisation using Randomisation in Treatment Arms (RITA) Stratified by state, school type and school size.	
	Method of allocation	Not reported.	
	Statistical method(s) used to analyse data	Adjusted for clustering. Intraclass correlation coefficient (ICC) Multilevel logistic and linear regression at the class and individual levels.	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 3802/4136 (91.9%)	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=1927) N (cluster) = 28	Control (n=1875) N (cluster) = 32
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported, 6 months		
	Lifetime prevalence (no-drinkers at baseline), n (%)	OR 0.94 95% CI 0.61 to 1.44	

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. <i>Deutsches Ärzteblatt International</i> 114 280-7		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use, 6 months		
	Frequency of binge drinking [at least monthly consumption of 4 or more (girls) or 5 or more (boys) drinks of alcohol on one occasion], n (%)	603 (31.3%)	641 (34.2%)
	OR 95% CI (as reported)	1.30 (0.97, 1.72)	
	Mean number of drinks per occasion, mean (SD)	4.67 (not reported)	4.81 (not reported)
	Current frequency of consumption [range 0 to 6]	1.81 (1.38)	1.90 (1.43)
	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	Cigarette use, cannabis use. Social norm, self-efficacy alcohol, expected effects, social motives, enhancement motives, coping motives, social pressure and conformity motives.		
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	Some concerns	Method of allocation concealment not reported. All outcomes were subjective.
	Age at first experience of drunkenness where reported	Not applicable	Not applicable

Bibliographic reference	Hanewinkel R, Tomczyk S, Goecke M et al (2017) Preventing binge drinking in adolescents. Results from a school-based cluster-randomised study. Deutsches Ärzteblatt International 114 280-7		
	Amount and frequency of alcohol use	Some concerns	Method of allocation concealment not reported. All outcomes were subjective. Only reports frequency of binge drinking at least monthly.
	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	Germany's Federal Centre for Health Education (BZgA, Bundeszentrale für gesundheitliche Aufklärung)		
Comments	<p>Limitations by author:</p> <p>Some baseline differences between the group which were taken account of.</p> <p>Subjective outcomes.</p> <p>Concerns over extrapolation to other settings as the study was conducted in two federal states in the West of Germany.</p> <p>Limited follow up.</p> <p>Limitations by reviewer:</p> <p>Main results reported graphically and not complete.</p>		

D.1.14 Haug 2017

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159
Registration	ISRCTN 59944705
Study type	Randomised controlled trial (cluster)
Study dates	March 2015 to September 2015

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159			
Aim	To test the efficacy of a combined web- and text messaging-based intervention to reduce problem drinking in young people.			
Country/geographical location	Switzerland			
Setting/School type	Vocational and upper secondary schools primarily covering ages 16-19 years			
Participant characteristics	Description	1041 students		
		Intervention (n=547)	Control (n= 494)	
	Age	Mean (SD)	16.9 (1.6)	16.8 (1.4)
	Gender	Male, n (%)	264 (48.3%)	229 (46.4%)
		Female, n (%)	265 (53.6%)	548 (52.6%)
	Socioeconomic status	Education		
		Secondary school, n (%)	489 (89.4%)	445 (90.1%)
		Vocational school, n (%)	19 (3.5%)	22 (4.5%)
		Technical/high school or university, n (%)	39 (7.1%)	27 (5.5%)
	Ethnicity	Not reported		
SEND	Not reported			
Baseline drinking behaviour	No RSOD ^{ff} in preceding 30 days, n (%)	289 (52.8%)	283 (57.3%)	
	RSOD in preceding 30 days, n (%)	258 (47.2%)	211 (42.7%)	
	RSOD frequency in preceding 30 days, M (SD)	0.7 (1.2)	0.7 (1.1)	
	Number of standard drinks consumed in a typical week in the	5.5 (8.4)	4.8 (6.9)	

ff RSOD - risky single occasion drinking (defined as drinking at least 5 standard drinks on a single occasion in men and 4 in women)

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159		
		preceding 30 days [assessed by a 7-day drinking calendar], mean (SD)	
Inclusion criteria	Students were required to own a mobile phone		
Exclusion criteria	Not reported		
Number of Participants	1041; Intervention n= 547 (43 classes), control n = 494 (37 classes)		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P150	MobileCoach Alcohol
	Rationale/theory/Goal	P150	Web-based part provided normative feedback based on the social norms approach. The text-messaging part were based of several socio-cognitive constructs from major psychological models such as social-cognitive theory
	Materials used	P150	The feedback included individually tailored graphical and textual information concerning a) number of drinks consumed per week in relation to age and gender, b) financial costs of drinking, c) calories consumed with alcoholic drinks and d) number of RSOD occasions in relation to age and gender.
	Procedures used	P150	A combined, individually-tailored intervention with web and text messaging components. The web-based feedback was a single session provided immediately after baseline assessment.
	Provider	P150	N/A Web and mobile-based intervention
	Method of delivery	P150	Individual
	Location	-	Not reported
Duration	P150	3 months	

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. <i>Journal of consulting and Clinical psychology</i> 85(2), 147-159		
	Intensity	P150	Single web session with text messages over 3 months
	Tailoring/adaptation	P150	Text messages provided over the 3 month intervention period were tailored to baseline drinking in terms of content and number of messages. This was done through assigning participants to risk-groups at baseline (low risk: No RSOD occasions; medium risk: 1 or 2 RSOD occasions; high risk: 2 or more RSOD occasions). Content was also tailored according to individual values for baseline variables.
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P150	In addition, there were 3 text message assessments performed during the intervention period: a) a quiz on alcohol metabolism with immediate feedback; b) A competition to create a text message to motivate other participants to drink within low-risk limits; c) an assessment of RSOD within the preceding week with immediate feedback
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P151	Baseline assessment only
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159		
	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	6 months		
Study Methods	Method of randomisation	Stratified randomisation by type of school using block randomisation with computer-generated, randomly permuted blocks of four school classes.	
	Method of allocation	Research assistants supervising baseline assessment and follow-up assessment were blinded to group allocation. Methods not reported. Group allocation was revealed to participants only after informed consent, username, mobile number and baseline data was provided.	
	Statistical method(s) used to analyse data	Intraclass correlation coefficients (ICC) were calculated to adjust for clustering.	

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. <i>Journal of consulting and Clinical psychology</i> 85(2), 147-159		
	Intention to treat analysis (ITT) and complete-case analysis carried out. For ITT imputation of continuous missing follow up data was based on expectation maximization and for imputation of missing dichotomous data was based on predictive mean matching.		
	Unit of allocation	School class	
	Unit of analysis	Individual	
	Attrition ^{gg}	Number of participants completing the study: Intervention 511/547 (93%) Control 455/494 (92%)	Reasons for not completing the study: Intervention: Lost contact (n=36) Control: Declined (n=4), no contact (n=35)
Outcomes measures and effect size.	Outcome	Intervention (n=547) N (cluster) = 43	Control (n=494) N (cluster) = 37
	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		
	RSOD, preceding 30 days, n (%)	226 (41.3%)	224 (45.3%)
	OR 95% CI (as reported)	0.62 (0.44, 0.87)	
	RSOD frequency, preceding 30 days, mean (SD)	0.69 (0.99)	0.73 (1.05)
	Number of standard drinks in a typical week, mean (SD)	4.53 (6.21)	4.41 (5.87)
	School attendance	Not reported	Not reported

^{gg} Percentages calculated by reviewer from numbers reported

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159		
	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	Estimated peak blood alcohol concentration. Complete-case analyses		
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
	Amount and frequency of alcohol use	High risk	Participants were outcome assessors due to self-reported outcomes and were informed of allocation
	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	Not reported		
Comments	Limitations by author: The reliance on self-report and the associated possibility that results may have been influenced by social desirability. Stratification was not done by drinking status.		

Bibliographic reference	Haug S, Paz Castro R, Kowatsch T et al (2017) Efficacy of a web- and text messaging-based intervention to reduce problem drinking in adolescents: Results of a cluster-randomized controlled trial. Journal of consulting and Clinical psychology 85(2), 147-159
	Not possible to attribute effects of the intervention to either the web or text message component or combined components. Short follow up. Limitations by reviewer: None

D.1.15 Hausheer 2018

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. Journal of Addictions and Offender Counseling 39; 15-30			
Registration	Not reported			
Study type	Cluster randomised controlled trial			
Study dates	Not reported			
Aim	To evaluate the efficacy of a web-based program alone and in combination with a parent campaign among 9th grade students			
Country/geographical location	USA			
Setting/School type	Junior high school			
Participant characteristics	Description	205 high school students		
			Individual (n=77) N(cluster) = 1	Combined (n= 68) N(cluster) = 1
	Age	Mean, (SD)	14.33 (0.50)	
	Gender	Male, n (%)	102 (49.8%)	
		Female, n (%)	99 (48.3%)	
Socioeconomic status	Not reported			

Bibliographic reference			
Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. Journal of Addictions and Offender Counseling 39; 15-30			
	Ethnicity	Caucasian	146 (71.1%)
		Hispanic	10 (4.9%)
		American Indian/Alaskan Native	9 (4.4%)
		Asian	1 (0.5%)
		Native Hawaiian/ Other Pacific Islander	11 (5.4%)
	SEND	Not reported	
	Baseline drinking behaviour	Not reported	
Inclusion criteria	Student consent Parent consent		
Exclusion criteria	None		
Number of Participants	205		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P 20	e-CHECKUP TO GO
	Rationale/theory/Goal	P 20	Based on social norming theory and motivation enhancement models
	Materials used	P 20	Web-based. Used online assessment that consists of basic demographic information and information on alcohol consumption, drinking behaviour, alcohol-related consequences, and beliefs about alcohol. Informational feedback including summary of a student's quantity and frequency of drinking, a personal blood alcohol chart and the number of cheeseburgers equivalent to alcohol calories consumed.

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. <i>Journal of Addictions and Offender Counseling</i> 39; 15-30		
	Procedures used	P 20	Online assessment was completed followed by personalised feedback.
	Provider	P 20	Computer
	Method of delivery	P 20	Individual
	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	P 20	The program also provides resources for services distinct to participants' needs and the community in which they live
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P 20	e-CHECKUP TO GO plus parent campaign
	Rationale/theory/Goal	P 20	Based on social norming theory and motivation enhancement models

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. <i>Journal of Addictions and Offender Counseling</i> 39; 15-30		
Materials used	P 20		<p>Web-based. Used online assessment that consists of basic demographic information and information on alcohol consumption, drinking behaviour, alcohol-related consequences, and beliefs about alcohol. Informational feedback including summary of a student's quantity and frequency of drinking, a personal blood alcohol chart and the number of cheeseburgers equivalent to alcohol calories consumed.</p> <p>Parent's received a trifold brochure that was developed using information from the "Talk, They Hear You" campaign. The brochure provides information about the problems of underage drinking, alcohol-related consequences, decision-making and health/. It also described warning signs as to why a child may start drinking.</p>
Procedures used	P 20		Online assessment was completed followed by personalised feedback. Parents received the brochure along with instructions to discuss the information with their child.
Provider	P 20		Computer
Method of delivery	P 20		Individual
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

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. <i>Journal of Addictions and Offender Counseling</i> 39; 15-30		
	Other details	P 20	The program also provides resources for services distinct to participants' needs and the community in which they live
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P 20	Traditional alcohol education
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	P 20	Lecture-style lesson
	Provider	P 20	School counselor
	Method of delivery	P 20	Group
	Location	P 20	Classroom
	Duration	-	Not reported
	Intensity	P 20	45 minutes
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. <i>Journal of Addictions and Offender Counseling</i> 39; 15-30		
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	3 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	ANOVA Cluster adjustment not reported	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 175 (85%)	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Individual vs control	Combined vs 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

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. <i>Journal of Addictions and Offender Counseling</i> 39; 15-30		
	Amount and frequency of alcohol use,		
	Drinking status, 3 months [0 = do not drink to 7 = drink every day)	Reported as not significant	Reported as not significant
	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 expectancies		
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
	Amount and frequency of alcohol use	High	Significant baseline imbalances for the main outcome measure. Unclear randomisation methods and no information on allocation concealment. Unclear if participants were aware of intervention allocation where outcomes were self-reported.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable

Bibliographic reference	Hausheer R, Doumas DM and Esp S (2018) Evaluation of a web-based alcohol program alone and in combination with a parent campaign for ninth-grade students. Journal of Addictions and Offender Counseling 39; 15-30		
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Substance Abuse and Mental Health Services Administration grant		
Comments	Limitations by author: Limited generalisability due to the majority of participants being Caucasian and sample not being representative of the ninth-grade population. Cluster-randomisation led to non-equivalence across groups for sex and drinking status. Limitations by reviewer: Nothing additional		

D.1.16 Hecht 2003

Bibliographic reference	Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum Prevention science 4(4) 233-248		
Registration	None		
Study type	Randomised controlled trial (cluster)		
Study dates	1998-2000		
Aim	To evaluate a culturally grounded prevention intervention targeting substance use among urban middle-school students.		
Country/geographical location	USA		
Setting/School type	35 public schools		
Participant characteristics	Description	6035 middle school students	
			Intervention (n=not reported) N (cluster) = not reported
			Control (n=not reported) N (cluster) = not reported
	Age	Mean (SD)	12.53 years
	Gender	Male n/N %	3169/6035 (52.5%)

Bibliographic reference			
Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum Prevention science 4(4) 233-248			
		Female n/N %	2866/6035 (47.5%)
Socioeconomic status		Qualified for free lunch, n/N %	4466/6035 (74%)
		Qualified for reduced price lunch, n/N %	483/6035 (8%)
		Did not qualify for free/reduced price lunch, n/N %	1086/6035 (18%)
		Qualified for free lunch, n/N %	4466/6035 (74%)
Ethnicity		Mexican or Mexican American, n/N %	3318/6035 (55.0%)
		Latino or multi-ethnic Latino, n/N %	1141/6035 (18.9%)
		Non-Hispanic White, n/N %	1049/6035 (17.4%)
		African American, n/N %	527/6035 (8.7%)
SEND	Not reported		
Baseline drinking behaviour	Not reported		
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	35 clusters; Mexican/American version n=8, Black/white version n=9, Multicultural version n=8 and control n=10.		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P234	Keepin' it R.E.A.L curriculum (3 parallel versions: Mexican American, Black/White and Multicultural)
	Rationale/theory/Goal	P234	A culturally grounded intervention using a cultural resiliency model that incorporates traditional ethnic values and practices that promote protection against drug use.

Bibliographic reference	Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum <i>Prevention science</i> 4(4) 233-248		
	Materials used	-	Not reported
	Procedures used	P236	In class lessons with public service advertisements and billboard campaigns.
	Provider	P236	Teachers
	Method of delivery	P236	Group
	Location	P234	Classroom
	Duration	P237	2 years
	Intensity	P234	10 sessions plus booster session in second year
	Tailoring/adaptation	P234-235	<p>Mexican American version responds to the needs of an under-researched community and incorporates Mexican American culture including Mexican cuisines, Spanish-inspired architectural designs and Spanish language infused into everyday life and media.</p> <p>The Black/White version oriented itself to both European American and African American cultures. The curriculum was constructed from cultural narratives.</p>
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	P237	<p>Estimated participation in the programme was 91% of students receiving the curriculum having seen at least one of the keepin' it REAL videos with over 30% seeing all 5 videos.</p> <p>Independent in-person observations of 37 of 49 participating teachers rated their average appropriateness in delivering the intervention as 5.8 on a scale of 1 (inappropriately) to 7 (appropriately).</p>
	Other details	P237	Classroom teachers attended a 1 day training session and a half-day follow-up session during implementation.
Comparison	TIDieR Checklist criteria	Paper/Location	Details

Bibliographic reference	Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum Prevention science 4(4) 233-248		
	Brief Name	P236	Control
	Rationale/theory/Goal	-	Not reported
	Materials used	P236	Public service advertisements and billboard campaigns were seen by the control groups too.
	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	2 months, 8 months and 14 months		
Study Methods	Method of randomisation	Not reported	

Bibliographic reference		Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum Prevention science 4(4) 233-248	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Missing data imputed Linear contrasts Adjusted for clustering	
	Unit of allocation	Schools	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Study sample decreased by 16% at 14 months ^{hh}	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=not reported) N (cluster) = not reported	Control (n= not reported) N (cluster) = not reported
	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, 14 months		
	30-day alcohol use [average of number of drinks (1=none to 9= more than 30) and frequency in days (1=none to 6=16-30)], mean difference (SE)	-0.232 (0.064) Reported as significant	
	School attendance	Not reported	Not reported

^{hh} Unclear if this in 16% of randomised sample or 16% of 8 month follow-up sample.

Bibliographic reference	Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum <i>Prevention science</i> 4(4) 233-248		
	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	Smoking and marijuana outcomes, resistance strategies, self-efficacy, intent to accept, positive experiences and norms.		
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
	Amount and frequency of alcohol use	Some concerns	Method of allocation concealment not reported. All outcomes were subjective. Attrition not clear.
	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: Generalisability of findings is limited due to the study focusing on one urban school area. Problems with attrition led to limitations in the findings. Limitations by reviewer:		

Bibliographic reference	Hecht ML, Marsiglia FF, Wagstaff DA et al (2003) Culturally grounded substance use prevention: An Evaluation of the keepin' it R.E.A.L. curriculum Prevention science 4(4) 233-248
	Incomplete reporting.
Additional reference	Kulis S (2005) Mexican/Mexican American Adolescents and keepin' it REAL: An evidence-based substance use prevention program. Children & Schools 27(3) 133-145
Additional reference	Kulis S, Yabiku ST, Marsiglia FF et al (2007) Differences by gender, ethnicity and acculturation in the efficacy of the keepin' it REAL model prevention program. Journal of Drug Education 37(2) 123-144
Additional reference	Warren JR, Hecht ML, Wagstaff DA et al (2006) Communicating prevention: the effects of the keepin' REAL classroom videotapes and televised PSAs on middle-school students' substance use. Journal of applied communication research 34(2) 209-227

D.1.17 Hodder 2017

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060			
Registration	ACTRN12611000606987			
Study type	Randomised controlled trial (cluster)			
Study dates	Baseline: August-November 2011. Follow up: July-November 2014.			
Aim	Investigate the effectiveness of a pragmatic school-based universal 'resilience' intervention in reducing the prevalence of tobacco, alcohol and illicit substance use, and increasing the individual and environmental protective factors of students.			
Country/geographical location	New South Wales, Australia			
Setting/School type	Secondary schools n=32; 28 government and 4 Catholic schools. 21 were medium (400-800) and 11 were large-sized schools (>800).			
Participant characteristics	Description	Cohort of grade 7 students followed up in grade 10 (2014; age 15-16years)		
		Intervention (n=1909) N(cluster)= 20	Control (n=1206) N(cluster)= 12	
	Age	Years, Mean (SD)	12.6(0.53)	12.6(0.53)
	Gender	Male n(%)	950 (49.8%)	607 (50.3%)

Bibliographic reference			
Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060			
	Female ⁱⁱ n(%)	959 (50.2%)	599 (49.7%)
Socioeconomic status ^{jj}	Low (<990)	1062(55.6%)	718(59.5%)
	High (≥990)	847(44.4%)	488(40.5%)
Ethnicity	Aboriginal and/or Torres Strait Islander	245(12.8%)	151(12.6%)
	Other ethnic, cultural or national origin	235(12.3%)	95(7.9%)
SEND	Not reported		
Baseline drinking behaviour	Alcohol use-ever n(%)	615(32.5%)	316(26.7%)
	Alcohol use-recent (at least once per week) n(%)	121(6.4%)	53(4.5%)
	Alcohol use-‘risky’ ^{kk} n(%)	111(5.9%)	50(4.2%)
Inclusion criteria	Schools were eligible if they: were a Government or Catholic secondary school located within a socioeconomically disadvantaged local government area, had enrolments in grades 7-10 (aged 12-16 years), had more than 400 total student enrolments.		
Exclusion criteria	Schools were ineligible if they were: single gender, independent (private), special needs, selective, central (for students aged 5-18years) or boarding schools.		
Number of Participants	N=3115: Intervention n= 1909, control n=1206		
Intervention	TIDieR Checklist criteria	Paper/Location	Details

ii Absolute numbers and percentages for female calculated by reviewer from male figures reported.

jj SES figures not explained in the paper

kk Definition of ‘risky’ alcohol use not reported

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. <i>BMJ Open</i> 7:e016060		
Brief Name	P3	Universal 'whole of school' intervention	
Rationale/theory/Goal	P3	Build protective factors of students across the 3 domains of the Health Promoting Schools framework	
Materials used	P3	Schools were provided with a comprehensive range of existing resources and programmes addressing 16 broad strategy areas from which they could choose to implement including an embedded psychology or education trained implementation support officer. Delivered to all students in grades 8-10. Intervention was based on 16 broad strategies; each of these strategies addressed one or more individual or environmental protective factors to facilitate implementation of interventions. 1 web-based survey at baseline and at follow up.	
Procedures used	P3	Whole school approach including curriculum, ethos and environment and partnerships and services. The broad strategies covered: Engagement with school community, embedded staff support, school intervention team, structured planning process, Intervention implementation guide, staff mental health training, \$A2000 per year, feedback reports and an Aboriginal Cultural Steering Group.	
Provider	P3	School staff	
Method of delivery	P3	Group	
Location	-	Not reported	
Duration	P3	3 years	
Intensity	P4	Lessons (9 hours) and non- curriculum programmes (9 hours)	
Tailoring/adaptation	-	Not reported	
Modifications	-	Not reported.	
Planned treatment fidelity	P3	Research staff reviewed school documents and recorded delivery of intervention strategies monthly. In addition, at follow up, telephone-based structured interviews were conducted with staff from both groups by interviewers regarding school implementation of intervention strategies and engagement with the	

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060		
			intervention during the final year of intervention. School staff from intervention schools were asked their level of engagement with the intervention in the final year
	Actual treatment fidelity	P7	232/256 (91%) of school staff completed the telephone survey regarding intervention implementation in the final year of the intervention. More intervention schools than control schools were likely to have incorporated 9 hours of protective factor instruction (88% vs 36%). Between 73% and 84% of intervention school staff reported being moderately or very engaged in the final year of intervention.
	Other details	-	None
Comparison	TiDieR Checklist criteria	Paper/Location	Details
	Brief Name	P3	Usual school curricula and policies
	Rationale/theory/Goal	P3	May have included protective factor strategies and resources similar to, or the same as, those systematically provided to the intervention schools
	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

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060		
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P3	These schools were not provided with programme resources or support.
Follow up	3 years		
Study Methods	Method of randomisation	Randomly allocated to intervention or control in a 20:12 block design ratio by an independent statistician using a random number function in Microsoft Excel.	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Intention-to-treat including multiple imputation to account for missing data, however data appears to be per-protocol. Intraclass correlation coefficients (ICC) accounts for cluster RCT	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Follow up data completed for 2149 of the 3115 (69%) who completed the baseline survey; intervention 67.3%, control 71.6%. Intervention group: Participants analysed 1261/1909 (66%)	Reasons for not completing the study: students no longer attending school (n=652; 65.5%), absent from school on follow-up survey days (n=207; 20.8%) or unknown reason for currently enrolled students (n= 137; 13.8%)

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060		
	Control group: Participants analysed 844/1206 (70%)		
Outcomes measures and effect size.	Outcome	Intervention (n=1261) Cluster n=20	Control (n=844) Cluster n=12
	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-ever n (%)	770(61.8%)	494(58.7%)
	OR 95% CI (as reported)	1.11 (0.83, 1.48)	
	Alcohol use-recent n (%)	261(20.9%)	156(18.6%)
	OR 95% CI (as reported)	1.10 (0.77, 1.56)	
	Alcohol use- 'risky' n (%)	293(23.6%)	196(23.4%)
	OR 95% CI (as reported)	1.03 (0.74, 1.43)	
	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	Tobacco use, marijuana use and other illicit substance use.	

Bibliographic reference	Hodder RK, Freund M, Bowman J et al (2017) Effectiveness of a pragmatic school-based universal resilience intervention in reducing tobacco, alcohol and illicit substance use in population of adolescents: cluster-randomised controlled trial. BMJ Open 7:e016060		
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
	Amount and frequency of alcohol use	Some concerns	No information on whether the participants were aware of their intervention allocation.
	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	The work was supported by funding from the National Health and Medical Research Council, nib Foundation and Hunter New England Population Health, and infrastructure support from the Hunter Medical Research Institute		
Comments	Limitations: Concerns regarding attrition and analyses- analyses not reported in the paper. The use of a pragmatic intervention approach allowing school staff to select the type, manner and order of implementation of curriculum resources and programmes may have contributed to the null study findings and the potential exists for a loss of intervention efficacy, integrity and fidelity to occur through local selection and adaptation of programmes. Contamination between intervention and control groups was not specifically assessed.		
Additional reference	Hodder RK, Freund M, Bowman J et al (2018) Differential intervention effectiveness of a universal school-based intervention in reducing adolescent substance use with student subgroups: exploratory assessment within a cluster-randomised controlled trial. BMJ Open 8:e021047.		

D.1.18 Jander 2016

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. Journal of Medical internet research 18(2) e29			
Registration	Dutch trial register NTR4048			
Study type	Randomised controlled trial (cluster)			
Study dates	January 2014 to June 2014			
Aim	To assess whether a Web-based computer-tailored intervention is effective in reducing binge drinking in Dutch adolescents aged 15 to 19 years			
Country/geographical location	Netherlands			
Setting/School type	34 schools			
Participant characteristics	Description	2649 students		
			Intervention (n= 1622) N (cluster) = 19	
			Control (n= 1027) N (cluster) = 15	
	Age	Mean (SD), range 15-19 years	16.0 (1.2)	16.7 (1.2)16.0
	Gender	Male, n (%)	766 (47.23%)	629 (61.25%)
		Female, n (%)	847 (52.22%)	396 (38.56%)
	Socioeconomic status	Educational level, n (%)		
		High	1056 (65.10%)	490 (47.71%)
Low		557 (34.34%)	535 (52.09%)	
Ethnicity	Dutch, n (%)	1434 (88.41%)	892 (86.85%)	
	Non-dutch, n (%)	188 (11.59%)	135 (13.15%)	

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. Journal of Medical internet research 18(2) e29			
	SEND	Not reported		
	Baseline drinking behaviour	Alcohol use, n (%)		
		Never	491 (30.27%)	219 (21.32%)
		Binge drinking [How often drank 4 (girls)/5 (boys) or more glasses of alcohol on one occasion in past 30 days; dichotomised to 0 = none, 1 = reported binge drinking]	758 (46.73%)	585 (56.96%)
		Excessive drinking [at least one occasion of 10 or more glasses of alcohol in the past week]	116 (7.15%)	129 (12.56%)
		Weekly consumption [Total number of glasses of alcohol drank in last week], mean (SD)	3.4 (8.9%)	5.1 (9.9%)
Inclusion criteria	Individual access to a computer with an internet connection			
Exclusion criteria	None			
Number of Participants	2649; intervention n=1622; control n = 1027			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	P3	Alcohol Alert	
	Rationale/theory/Goal	P3	Based on the I-Change model [theories such as the Attitude-Social Influence-Self-Efficacy Model, the Theory of Reasoned Action, Theory of Planned behaviour, Social Cognitive Theory, Health Believe Model, Precaution Adoption Model and the Transtheoretical Model]	

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. <i>Journal of Medical internet research</i> 18(2) e29		
			It attempts to explain motivational and behavioural change.
Materials used	P3		Computer game
Procedures used	P3; Protocol p7		Online baseline questionnaire followed by 3 session the game “What happened?” Scenario of the game: The adolescent wakes up after a night of partying and does not remember what happened the night before. The goal is to find out what happened. There was also an optional parental component where the adolescent could choose to invite their parents to take part.
Provider	P3		Computer
Method of delivery	P3		Individual
Location	P3		Classroom
Duration	P7		4 months
Intensity	P3		3 sessions to complete
Tailoring/adaptation	P3		The sequence of the 3 game sessions was tailored and dependent on how many glasses of alcohol the adolescent indicated to typically drink in each of these situations. The adolescent started with the drinking situation in which he or she indicated drinking the most alcohol. (drinking at home, bar or party)
Modifications	P3		The game was shortened and rewritten to make them more appealing to the target group following feedback from a student focus group after the pilot. They also requested that all game sessions should occur in the school setting.
Planned treatment fidelity	-		Not reported
Actual treatment fidelity	-		Not reported

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. <i>Journal of Medical internet research</i> 18(2) e29		
	Other details	Protocol	<p>Process Evaluation: Participants were asked after every game scenario if they thought the feedback and the game were useful, realistic and personally relevant. Rated on a 4 point Likert scale (1 = very unrealistic; 4 = very realistic).</p> <p>In addition they rated advice and the game with a school grade (1 = very bad, 10 = excellent).</p> <p>Results of the evaluation not reported.</p>
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P3	Baseline questionnaire only
	Rationale/theory/Goal	-	Not applicable
	Materials used	-	Not applicable
	Procedures used	-	Not applicable
	Provider	-	Not applicable
	Method of delivery	-	Not applicable
	Location	-	Not applicable
	Duration	-	Not applicable
	Intensity	-	Not applicable
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. Journal of Medical internet research 18(2) e29		
	Planned treatment fidelity	-	Not applicable
	Actual treatment fidelity	-	Not applicable
	Other details	-	Not applicable
Follow up	4 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Schools were not blinded	
	Statistical method(s) used to analyse data	Descriptive statistics Repeated measurements, nested within adolescents, nested within schools Adjusted for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Intervention n = 456/1622 (28%) Control 368/1027 (36%)	Reasons for not completing the study: Schools withdrew due to not being able to find a date for follow-up because of exams or students were not keen to continue the intervention.
	Outcome	Intervention (n=456)	Control (n=368)

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. <i>Journal of Medical internet research</i> 18(2) e29		
Outcomes measures and effect size.		N (cluster) = 13	N (cluster) = 14
	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, 4 months		
	Binge drinking [How often drank 4 (girls)/5 (boys) or more glasses of alcohol on one occasion in past 30 days; dichotomised to 0 = none, 1 = reported binge drinking], n (%)	194 (42.6%)	184 (50%)
	OR 95% CI (as reported)	0.40 (0.18, 0.83)	
	Binge drinking (15-18 year olds, excluding 19 year olds), [intervention n = 421; control n = 315] n (%)	173/421 (41%)	164/315 (52%)
	Binge drinking (15 year olds), [intervention n = 180; control n = 105] n (%)	51/180 (28.3%)	35/105 (32.7%)
	Binge drinking (16-18 year olds), [intervention n = 241; control n = 230] n (%)	122/241 (50.6%)	129/230 (56.1%)
	Excessive drinking [at least one occasion of 10 or more glasses of alcohol in the past week], n (%)	28 (6.1%)	37 (10.2%)
	Weekly consumption [Total number of glasses of alcohol drank in last week], mean (SD),	3.3 (7.7)	4.6 (8.9)
	Effective sample sizes calculated with ICC 0.1 ^{II}	137	111

II ICC reported in Newton 2009

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. <i>Journal of Medical internet research</i> 18(2) e29		
	MD 95% CI calculated by reviewer	0.05 (-0.79, 0.88)	
	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	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	Not applicable	Not applicable
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	High	Schools were aware of intervention allocation which may influence the reporting of self-measured outcomes. Very high attrition beyond expected.
	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	ZON-MW, The Netherlands Organization for Health Research and Development		
Comments	Limitations by author:		

Bibliographic reference	Jander A, Crutzen, Mercken L et al (2016) Effects of a web-based computer tailored game to reduce binge drinking among dutch adolescents: a cluster randomised controlled trial. Journal of Medical internet research 18(2) e29
	Adherence rates generally were low with a clear drop in participation between the baseline assessment and the first game session and another significant drop between the first and second game sessions. Higher than expected attrition. Self-reported outcomes Limitations by reviewer:
Additional reference	Jander A, Crutzen R, Mercken L et al (2017) A Web-based computer-tailored game to reduce binge drinking among 16 to 18 year old Dutch adolescents: development and study protocol. BMC public health 14:1054

D.1.19 Komro 2006

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154			
Registration	None			
Study type	Randomised controlled trial (cluster)			
Study dates	2002-2005			
Aim	To test the effectiveness of a culturally-adapted alcohol use preventive intervention			
Country/geographical location	USA			
Setting/School type	61 public schools in Chicago			
Participant characteristics	Description	5812 students enrolled in sixth grade		
		Intervention (n= 1775) N(clusters) = 29	Control (n=2285) N(clusters)=31	
	Age	Years, mean (SD)	11.83 (not reported)	11.86 (not reported)
		Male n (%)	879 (49.5%)	1145 (50.1%)

Bibliographic reference			
Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154			
	Gender ^{mm}	Female n (%)	897 (50.5%)
	Socioeconomic status	Free or reduced lunch	1166 (65.7%)
	Ethnicity	Black	831 (46.8%)
		Hispanic	181 (21.8%)
		White	247 (13.9%)
		Mixed/other	311 (17.5%)
	SEND	Not reported	
		Intervention (n= 2501-2538) N(clusters) = 29	Control (n=3079-3147) N(clusters)=31
	Baseline drinking behaviour	Alcohol use scale, mean (SE)	5.22 (0.08)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	5812, 60 clusters		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P4 [Komro 2008]	Project Northland (adapted)
	Rationale/theory/Goal	P4 [Komro 2008]	To change personal, social and environmental factors that support alcohol use among young adolescents. Used the theory of triadic influence and Perry’s planning model for adolescent health.

mm Female data calculated by reviewer from male percentages reported

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154		
Materials used	-		Not reported
Procedures used	P4 [Komro 2008]		Consisted of peer led classroom curricula, parental involvement and home programs, other educational and school community involvement activities, peer leadership and youth-planned community service projects, community organising and environmental neighbourhood change.
Provider	P4 [Komro 2008]		Teachers, peers and community-based adults
Method of delivery	-		Not reported
Location	P4 [Komro 2008]		Classroom plus home and community
Duration	P4 [Komro 2008]		3 years
Intensity	P4 [Komro 2008]		Peer-led classroom curricula: 6-10 sessions per year
Tailoring/adaptation	-		Not reported
Modifications	P4 [Komro 2008]		Surface changes on curricula, expanded home programs, peer led community service projects rather than social activities and more emphasis on community organising with organisers more focused on neighbourhoods rather than schools
Planned treatment fidelity	P4-5 [Komro 2008]		Assessment of the implementation of the classroom programs included direct classroom observations by research staff in 2 to 4 sessions per class per year. Assessment of peer leader status was measured by attendance at the peer leader trainings. Assessment of family programs included participation records by parents and returned to school. Assessment of service projects and community organising included regular and systemic documentation by the organisers on standardised web-based forms.

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154		
	Actual treatment fidelity	P4-5 [Komro 2008]	<p>The 3 years of curricula were implemented at high levels of completeness (overall mean of 82-87% completeness) and relative high scores on an engagement index (mean of 11-12 on a 3 item scale [5 non student/teacher engagement to 15 very high level of engagement])</p> <p>22% of the cohort were trained as classroom peer leaders.</p> <p>73% families completed the program in the first year with 53% and 51% completing the programs in the second and third years respectively.</p> <p>The productivity and effectiveness of the community organising intervention varied by community area with 22% rated as highly productive/effective, 28% moderately productive/effective and 50% with low levels of productivity/effectiveness.</p>
	Other details	P4 [Komro 2008]	Teachers were trained by University-based project staff to implement classroom curricula.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P3 [Komro 2008]	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

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154		
	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	3 years		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Intention to treat analyses Growth curve analyses Adjusted for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition ⁿⁿ	Number of participants completing the study: 61% were followed up from baseline to third follow up	Reasons for not completing the study: Two schools closed

nn Percentages calculated by reviewer from numbers reported

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154		
			Students left the school
Outcomes measures and effect size.	Outcome	Intervention (n= 2501-2538) N(clusters) = 29	Control (n=3079-3147) N(clusters)=31
	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, 3 years		
	Change from baseline alcohol use scale ^{oo} , mean (SE) ^{pp}	0.02 (0.01) SD 0.05	0.05 (0.004) SD 0.02
	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	Drug use scales. Alcohol intentions, intermediate outcomes	
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

^{oo} Composite score of 12 month use, 30 day use, 7 day use, 5 or more drinks in a row in the last 2 weeks and ever been drunk (scores range between 5-33)

^{pp} Standard deviations calculated by reviewer from standard errors reported

Bibliographic reference	Komro KA, Perry CL, Veblen-Mortenson et al (2006) Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The “Slick Tracy Home Team Program” The journal of primary prevention 27(2) 135-154		
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	High	Randomisation methods and allocation concealment methods not reported, Potential confounding baseline imbalances and 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 Alcohol Abuse and Alcoholism		
Comments	Limitations by author: None Limitations by reviewer: High levels of attrition		
Additional reference	Komro KA, Perry CL, Veblen-Mortenson (2008) Outcomes from a Randomized controlled trial of a multi-component alcohol use preventive intervention for urban youth: Project Northland Chicago. Addiction 103(4) 606-618		

D.1.20 Koning 2014

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
Registration	NTR649		

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527					
Study type	Randomised controlled trial (cluster)					
Study dates	Not reported					
Aim	To examine the effects of an effective alcohol prevention program (PAS) targeting early adolescents and/or their parents among baseline drinkers and non-drinkers.					
Country/geographical location	Netherlands					
Setting/School type	19 Dutch high schools					
Participant characteristics	Description	3245 adolescents				
	Age	Mean, years (SD)	12.66 (0.49)			
	Gender	Male, n %	1655/3245 (51%)			
		Female, n %	1590 (49%)			
	Socioeconomic status	Lower secondary education	1298/3245 (40%)			
	Ethnicity	Not reported				
	SEND	Not reported				
			Intervention (parent) N (clusters) = 5 N (participants) = 735	Intervention (student) N (clusters) = 5 N (participants) = 874	Intervention (combined) N (clusters) = 5 N (participants) = 753	Control N (clusters) = 4 N (participants) = 883
Baseline drinking behaviour	Glasses of alcohol consumption per week, mean (SD) ^{qq}	1.04 (2.02)	1.18 (2.48)	1.24 (2.61)	1.39 (2.78)	

qq Means and standard deviations from baseline drinkers and non-drinkers pooled by reviewer to give overall mean and standard deviation for each arm

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
Inclusion criteria	Schools had at least 100 first year students <25% of students in the school were from migrant populations Parental consent		
Exclusion criteria	Schools offering special education		
Number of Participants	N = 3245 N (clusters) 19		
Intervention 1	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P523	Parent intervention
	Rationale/theory/Goal	P523	Targets parental rules for children's alcohol use
	Materials used	P523	Consisted of a brief presentation (20mins), consensus building among a shared set of rules among parents of children in the same class and an information leaflet sent to the parents' home address with a summary of the meeting.
	Procedures used	P523	Parent's meeting
	Provider	-	Not reported
	Method of delivery	P523	Group
	Location	-	Not reported
	Duration	P523	3 years
	Intensity		One meeting at the beginning of each school year

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. <i>Journal of substance abuse treatment</i> 46, 522-527		
	Tailoring/adaptation	-	Not reported
	Modifications	P523	Modelled after the Swedish intervention Örebro Prevention Program.
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Intervention 2	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P524	Student intervention Alcohol module of the Dutch prevention program “The Healthy School and Drugs” (HSD)
	Rationale/theory/Goal	P524	Targets student’s abilities to develop a healthy attitude towards alcohol use and to train their refusal skills
	Materials used	P524	Each lesson was comprised of an introduction movie followed by questions, knowledge assessment, questions/exercises to reflect upon attitude/behaviour and a closing assignment. A hard-copy booster session was provided 1 year later
	Procedures used	-	Not reported
	Provider	P524	Teachers
	Method of delivery	P524	Group

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	P524	4 lessons in all first year classes
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P524	Teachers conducted the intervention after receiving training.
Intervention 3	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P524	Combined student and parent intervention
	Rationale/theory/Goal	-	See student and parent interventions
	Materials used	-	See student and parent interventions
	Procedures used	P524	School carried out both the student and parent interventions
	Provider	-	See student and parent interventions

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
	Method of delivery	-	See student and parent interventions
	Location	-	See student and parent interventions
	Duration	-	See student and parent interventions
	Intensity	-	See student and parent interventions
	Tailoring/adaptation	-	See student and parent interventions
	Modifications	-	See student and parent interventions
	Planned treatment fidelity	-	See student and parent interventions
	Actual treatment fidelity	-	See student and parent interventions
	Other details	-	See student and parent interventions
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P524	Business as usual
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
	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	P524	Control schools were contracted not to start any alcohol-related interventions throughout the study period but could continue with standard curriculum.
Follow up	4 annual waves		
Study Methods	Method of randomisation	Central randomisation using a blocked scheme (block size 5) stratified by level of education	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Missing data appears to be imputed but methods not clear. Descriptive data was obtained	

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527				
	Unit of allocation	Schools			
	Unit of analysis	Individual			
	Attrition ^{rr}	Number of participants completing the study: Year 1 (T1): 2673/3245 (82.4%) Year 2 (T2): 2533/3245 (78.1%) Year 3 (T3): 2301/3245 (70.9%)		Reasons for not completing the study: Not reported	
Outcomes measures and effect size.	Outcome	Intervention (parent) N (clusters) = 5 N (participants) = 735	Intervention (student) N (clusters) = 5 N (participants) = 874	Intervention (combined) N (clusters) = 5 N (participants) = 753	Control N (clusters) = 4 N (participants) = 883
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported			
	Age at first experience of drunkenness where reported	Not reported	Not reported	Not reported	Not reported
	Amount and frequency of alcohol use				
	Mean glasses of alcohol consumption per week, mean (SD), year 1 ^{ss}	1.00 (2.45)	1.40 (4.21)	0.93 (3.03)	2.02 (4.77)
	Effective sample sizes calculated using ICC 0.1 ^{tt}			39	46

rr Percentages calculated by reviewer from numbers reported

ss Means and standard deviations pooled for drinker/non-drinker at baseline subgroups.

tt ICC reported in Newton 2009

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527				
	Combined intervention vs control MD 95% CI calculated by reviewer	-1.09 (-2.85, 0.67)			
	School attendance	Not reported	Not reported	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported	Not reported	Not reported
	Mental health and wellbeing	Not reported	Not reported	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported	Not reported	Not reported
Other outcomes measured	Alcohol consumption for year 2, 3 and 4. Growth models				
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
	amount and frequency of alcohol use	Some concerns			Not enough information to suggest whether or not participants were aware of intervention allocation. Risk of contamination minimised by unit of randomisation being schools but outcome is subjective so there are still some concerns.
	school attendance	Not applicable			Not applicable
	alcohol related risky behaviour such as unprotected or regretted sex	Not applicable			Not applicable

Bibliographic reference	Koning IM, Lugtig, P and Vollebergh (2014) Differential effects of baseline drinking status: Effects of an alcohol prevention program targeting students and/or parents (PAS) among weekly drinkers. Journal of substance abuse treatment 46, 522-527		
	mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	ZON-MW, The Netherlands Organization for Health Research and Development		
Comments	<p>Limitations by author: Outcomes were self-reported which may result in reporting biases. Generalising findings to other countries should be done with caution due to different drinking cultures.</p> <p>Limitations by reviewer: Did not stratify by baseline drinking status although reported subgroup data.</p>		
Additional reference	Koning IM, Eijnden, Verdurmen, J et al (2011) Long-term effects of a parent and student intervention on alcohol use in adolescents. A cluster randomized controlled trial. American Journal of Preventative Medicine 40(5), 541-547		
Additional reference	Koning IM, van den Eijnden RJJM, Verdurmen, JEE et al (2013) A cluster randomised trial on the effects of a parent and student intervention on alcohol use in adolescents four years after baseline; no evidence of catching up behaviour. Addictive behaviors 38, 2032-2039.		
Additional reference	Koning IM, Maric M, MacKinnon D et al (2015) Effects of a combined parent-student alcohol prevention program on intermediate factors and adolescent's drinking behavior: a sequential mediation model. Journal of consulting and clinical psychology 83(4) 719-727		
Additional reference	Koning IM and Vollebergh WAM (2016) Secondary Effects of an Alcohol Prevention Program Targeting Students and/or Parents. Journal of Substance Abuse Treatment. 67, 55-60		
Additional reference	Koning IM, Volleburgh WAM, Smit F et al (2009) Preventing heavy alcohol use in adolescents (PAS): cluster randomized trial of apparent and student intervention offered separately and simultaneously. Addiction 104, 1669-1678.		
Additional reference	Verdurmen JEE, Koning IM, Vollebergh WAM et al (2013) Risk moderation of a parent and student preventive alcohol intervention by adolescent and family factors: A cluster randomized trial. Preventive medicine 60 88-94		

D.1.21 Lynch 2015

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research			
Registration	ISRCTN71372913			
Study type	Randomised controlled trial (cluster)			
Study dates	2013 to 2014			
Aim	To evaluate the process and impact of implementing the intervention in schools.			
Country/geographical location	UK			
Setting/School type	55 secondary schools			
Participant characteristics	Description	3060 year 7 pupils		
			Intervention (n=586) N (clusters) = 11	
			Control (n=814) N (clusters) = 15	
	Age	Mean (SD) ^{uu}	(n = 811) 147.8529 months 12.32 years	
			(n = 586) 147.8046 months 12.32 years	
	Gender	Male, mean ^{vv}	0.4859	0.4813
		Female, n (%)	Not reported	Not reported
	Socioeconomic status	Not reported		
	Ethnicity ^{ww}	Non-white, mean	0.1104	0.2112
		Unknown, mean	0.0414	0.0355
SEND	Not reported			
	Ever been drunk, mean	0.0816	0.0774	

^{uu} Reported in months. Converted to years by reviewer. SDs not reported

^{vv} As reported. Unclear if these are percentages.

^{ww} As reported. Unclear if these are percentages

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research			
	Baseline drinking behaviour	Age when first drunk alcoholic drink, mean (years)	12.7441	12.9299
Inclusion criteria	None			
Exclusion criteria	Schools registered with ICE Creates (programme developers)			
Number of Participants	3060 at baseline; 1400 in analyses			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name		In:tuition	
	Rationale/theory/Goal	P2	Delay the age of first alcohol drink. Focus on alcohol and self-awareness, attitudes and behaviour, advertising, branding and the media, personal choices, emotions, communication skills and assertive behaviour, peer influence and goal setting.	
	Materials used	P10	Computer/paper-based materials	
	Procedures used	-	Not reported	
	Provider	P10	Computer Teachers	
	Method of delivery	P10	Group	
	Location	P10	Classroom (Through Personal, Social and Health Education (PSHE)and Citizenship)	
	Duration	-	Not reported	
	Intensity	P2	12 x 40 minutes sessions	
	Tailoring/adaptation	-	Not reported	

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research		
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	P43	4 schools completed all or most lessons 6 schools completed 6 or fewer lessons 18 schools completed no lessons (withdrew) 4 schools registered on website but number of lessons completed is unknown
	Other details	P37	Schools were required to register on the website. Process evaluation – Teachers felt that they would achieve the same perceived impacts of the existing interventions with current provision. They were happy with the content but adapted the programme to account for time available, needs/context of the school, content covered in other classes and pupils of different abilities in the class. Suggested improvements include: reducing duration and content of programme, providing more formats to deliver the interventions, greater differentiation of content and more pupil-led activities.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P37	Usual education (PSHE/alcohol education)
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research		
	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	12 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Schools were aware they would be randomised into one group or the other and were then told of group allocation.	
	Statistical method(s) used to analyse data	Intention to treat analysis (on people who completed baseline and follow up surveys only) On-treatment analysis for programme fidelity	
	Unit of allocation	School	

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research		
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 1400/3060 (45.8%)	Reasons for not completing the study: 5 schools formally withdrew Students did not have a full complement of data from relevant variables
Outcomes measures and effect size.	Outcome	Intervention (n=586) N (cluster) = 11	Control (n=814) N (cluster) = 15
	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, 12 months		
	Frequency of drinking regularly at follow-up [drank once a month or more]	64 (11%)	73 (9%)
	OR 95% CI (as reported)	0.87 (0.51, 1.47)	
	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	Knowledge of the health effects of alcohol, resistance skills, decision making skills, social norms	
	Outcome	Overall RoB	Comments

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research		
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	High	Schools were aware of group allocation and all outcomes were self-reported. Very high attrition with several schools withdrawing. Fidelity was particularly low with several schools not delivering the intervention.
	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		
Source of funding	Alcohol research UK [Charity] Drinkaware		
Comments	<p>Limitations by author: High levels of attrition Limited data for treatment fidelity Involvement of research staff to remind schools to register for the intervention which would not happen in the real world Schools completing process evaluation feedback are those most likely to be engaged.</p> <p>Limitations by reviewer: Unclear reporting and very vague descriptions of the intervention itself. Several references to appendices which are not available.</p>		

Bibliographic reference	Lynch S, Styles B, Poet H et al (2015) Randomised trial evaluation of the In:tuition programme National Foundation for Educational Research
Additional reference	Lynch S and Styles B (2018) The In:tuition life skills and alcohol education programme: results from two cluster-randomised trials. International journal of health promotion and education. 56(3) 125-142

D.1.22 Malmberg 2014

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. Addiction 109, 1031-1040				
Study type	Randomised controlled trial (cluster)				
Study dates	Not reported				
Aim	To assess the effectiveness of the Healthy School and Drugs (HSD) program for secondary schools				
Country/geographical location	Netherlands				
Setting/School type	23 Dutch secondary schools				
Participant characteristics	Description	3542 first grade students			
			E-learning (n=1330) N(cluster)=7	Integral (n=1195) N(cluster)=9	Control (n=1259) N(cluster)=7
	Age	Mean (SD)	13.04 (0.50)	13.08 (0.53)	12.92 (0.44)
	Gender	Male n (%)	596 (48.7%)	541 (48.0%)	613 (51.5%)
		Female n (%)	629 (48.5%)	629 (51.3%)	578 (48.5%)
	Socioeconomic status	Education n (%)			
		Lower vocational	337 (27.5%)	329 (29.2%)	139 (11.7%)
Lower general		374 (30.5%)	317 (28.2%)	164 (13.8%)	
	Higher general	186 (15.2%)	141 (12.5%)	341 (28.6%)	

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040			
	Combination higher general and pre-university	9 (0.7%)	156 (13.9%)	178 (14.9%)
	Pre-university	319 (26.0%)	183 (16.3%)	369 (31.0%)
Ethnicity	Dutch	1180 (96.7%)	1070 (95.0%)	1152 (96.7%)
	Non-Dutch	45 (3.7%)	56 (5.0%)	39 (3.3%)
SEND	Not reported			
Baseline drinking behaviour	Lifetime alcohol use (ever consumed alcohol in their life) n (%)			
	Yes ^{xx}	378 (28.4%)	385 (32.2%)	320 (25.4%)
	No ^{yy}	952 (71.6%)	810 (67.8%)	939 (74.6%)
	Overall alcohol use n (%)			
	1. "I have no alcohol experience"	952 (71.6%)	810 (67.8%)	939 (74.6%)
	2. "I drank alcohol, but not in the past month"	241 (18.1%)	22 (18.0%)	195 (15.5%)
	3. "I drank alcohol once or twice in the past month"	100 (7.5%)	116 (9.7%)	89 (7.1%)
	4. "I drank alcohol once or twice per week in the past month"	27 (2.0%)	39 (3.3%)	23 (1.8%)
	5. "I drank alcohol more than twice per week in the past month"	11 (0.8%)	16 (1.3%)	14 (1.1%)
	Binge drinking n (%)			
	Never	1238 (93.1%)	1081 (90.5%)	1185 (94.1%)
Once	41 (3.1%)	43 (3.6%)	25 (2.0%)	

xx Absolute numbers calculated by reviewer from percentages reported

yy Calculated by reviewer

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040				
		Twice	25 (1.9%)	35 (2.9%)	18 (1.4%)
		3 times or more	25 (1.9%)	36 (3.0%)	31 (2.5%)
Inclusion criteria	First grade students in secondary schools				
Exclusion criteria	Not reported				
Number of Participants	3748				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P1034	Healthy-School and Drugs: E-learning		
	Rationale/theory/Goal	P1034	To prevent or postpone the onset of use of alcohol, tobacco and marijuana. The lessons were based on the Attitude-Social Influence-Self-Efficacy (ASE) model. The ASE components are embedded in the modules that the lessons are focused on. They aim to increase knowledge about substances, aim to tutor adolescents about risks concerning substance use, and preparing adolescents for coping with group pressure by training their refusal skills.		
	Materials used	P1034	Computer-based		
	Procedures used	P1034	The lessons consist of small films, animations and several types of interactive tasks. Students had access to chatrooms and forums.		
	Provider	P1034	Computer		
	Method of delivery	P1034	Individual		
	Location	P1034	Classroom		
	Duration	P1034	Alcohol module delivered between April and July 2009, tobacco module delivered between April and July 2010, marijuana module delivered between April and July 2010.		

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040		
	Intensity	P1034	4 lessons (alcohol), 3 lessons (tobacco) and 3 lessons (marijuana)
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Intervention	TiDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1034	Healthy-School and Drugs: E-learning
	Rationale/theory/Goal	P1034	To prevent or postpone the onset of use of alcohol, tobacco and marijuana. The lessons were based on the Attitude-Social Influence-Self-Efficacy (ASE) model. The ASE components are embedded in the modules that the lessons are focused on. They aim to increase knowledge about substances, aim to tutor adolescents about risks concerning substance use, and preparing adolescents for coping with group pressure by training their refusal skills.
	Materials used	P1034	Not reported
	Procedures used	P1034	Multi-component intervention including a) E-learning, b) parental participation, c) regulation, d) monitoring and counselling. See E-learning for details on this component. The parental component included a plenary meeting planned in the first year of the program at school in collaboration with the regional institutions for the treatment and care of drug addiction (ITCD) or the

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040		
			<p>Municipal Health Services (MHS). These meetings provided information of the HSD program and substance use, opinions on substance use, and education in the home setting.</p> <p>The regulation component concerned the school standards and subsequent rules regarding substance use behaviours of students and school personnel. This was carried out in the second year of the program.</p> <p>The monitoring and counselling component consisted of a training session for school personnel on signalling and guiding problematic substance use among individual adolescents. It provided practical information on how to recognise problematic use in adolescents. This was also carried out in the second year.</p>
Provider	P1034		Computer, school personnel
Method of delivery	P1034		Individual and group
Location	P1034		School
Duration	P1034		2 years
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	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040		
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1034	Usual teaching
	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	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040			
Follow up	8 months, 20 months and 32 months			
Study Methods	Method of randomisation	Blocked randomisation (block size 6) and stratified by the level of education, performed by an independent statistician.		
	Method of allocation	Not reported		
	Statistical method(s) used to analyse data	Clustering was adjusted for using the TYPE=COMPLEX procedure in Mplus. Data analysed using the intention to treat principle.		
	Unit of allocation	Schools		
	Unit of analysis	Individuals		
	Attrition ^{zz}	Number of participants completing the study: 8 months E-learning: 1114/1330 (83.8%) Integral: 992/1195 (83.0%) Control: 1109/1259 (88.0%)	Reasons for not completing the study: Changed schools or not present at follow-up.	
Outcomes measures and effect size.	Outcome	E-learning (n=1330) N(cluster)=7	Integral (n=1195) N(cluster)=9	Control (n=1259) N(cluster)=7
	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, 8 months			
	Lifetime drinking n (%)			

zz Percentages calculated by reviewer from numbers reported

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040			
Yes	773 (58.1%)	690 (57.7%)	624 (49.6%)	
No	557 (41.9%)	505 (42.3%)	635 (50.4%)	
Effective sample sizes calculated using ICC 0.01 ^{aaa} E-learning vs control; Lifetime use	272/468	N/A	220/443	
RR 95% CI E-learning vs control (calculated by reviewer); Lifetime use	1.2 (1.0, 1.3)			
Effective sample sizes calculated using ICC 0.0152 ^{bbb} Integral vs control; Lifetime use	N/A	208/360	188/380	
RR 95% CI Integral vs control (calculated by reviewer); Lifetime use	1.2 (1.0, 1.3)			
Overall use n (%)				
1. "I have no alcohol experience"	557 (41.9%)	505 (42.3%)	635 (50.4%)	
2. "I drank alcohol, but not in the past month"	356 (26.8%)	327 (27.4%)	302 (24.0%)	
3. "I drank alcohol once or twice in the past month"	270 (20.3%)	216 (18.1%)	227 (18.0%)	
4. "I drank alcohol once or twice per week in the past month"	97 (7.3%)	97 (8.1%)	69 (5.5%)	
5. "I drank alcohol more than twice per week in the past month"	51 (3.8%)	49 (4.1%)	26 (2.1%)	
Drank alcohol in the last month ^{ccc}	418 (31.4%)	362 (30.3%)	322 (25.6%)	
Effective sample sizes calculated using ICC 0.01 ^{ddd} E-learning vs control	147/468	N/A	113/443	

aaa ICC taken from Champion 2016

bbb ICC taken from Hodder 2017

ccc Imputed by reviewer

ddd ICC taken from Champion 2016

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040		
E-learning vs control RR 95% CI calculated by reviewer	1.2 (1.0, 1.5)		
Effective sample sizes calculated using ICC 0.078733 ^{eee} Integral vs control	N/A	109/360	97/380
Integral vs control RR 95% CI calculated by reviewer	1.2 (0.9, 1.5)		
Binge drinking in past 4 weeks n (%)			
Never	987 (74.2%)	881 (73.7%)	1008 (80.1%)
Once	133 (10.0%)	141 (11.8%)	126 (10.0%)
Twice	81 (6.1%)	72 (6.0%)	40 (3.2%)
3 times or more	128 (9.6%)	102 (8.5%)	86 (6.8%)
Binge drank in last 4 weeks ^{fff}	342 (25.7%)	315 (26.4%)	252 (20.0%)
Effective sample sizes using ICC 0.00 ^{ggg}	342/1330	N/A	252/1259
E-learning vs control RR 95% CI (calculated by reviewer)	1.3 (1.1, 1.5)		
Effective sample sizes using ICC 0.0152 ^{hhh}	N/A	24/92	19/97
Integral vs control RR 95% CI (calculated by reviewer)	1.3 (0.8, 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

^{eee} Mean ICC from studies reported in this outcome

^{fff} Imputed by reviewer

^{ggg} ICC taken from Champion 2016

^{hhh} ICC taken from Hodder 2017

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040		
Other outcomes measured	Tobacco and marijuana lifetime use; tobacco overall use. All outcomes at 20 and 32 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
	Amount and frequency of alcohol use	Some concerns	Not enough information to suggest whether or not participants were aware of intervention allocation. Risk of contamination minimised by unit of randomisation being schools but outcome is subjective so there are still some concerns. Significant imbalance between groups at baseline for level of education despite being stratified for this.
	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	Supported by a grant from the Dutch Ministry of Health, Welfare and Support (HWS) [Government].		
Comments	Limitations by author:		

Bibliographic reference	Malmberg M, Kleinjan M, Overbeek G (2014) Effectiveness of the 'Healthy School and Drugs' prevention programme on adolescents' substance use: a randomized clustered trial. <i>Addiction</i> 109, 1031-1040
	The authors note that the majority of secondary schools (60%) considered had already used HSD in the previous 2 years and because only schools without HSD experience were eligible, a selection effect may have occurred. Limitations by reviewer: There was an imbalance of educational level between groups but the randomisation was stratified by education level.
Additional reference	Malmberg M, Kleinjan M, Overbeek G et al (2015) Substance use outcomes in the Healthy Schools and Drugs program: Results from a latent growth curve approach. <i>Addictive behaviours</i> 42, 194-202

D.1.23 Midford 2014

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings from an Australian 2-year trial of integrated harm minimization school drug education. <i>Abuse research and prevention</i> 44 (3-4), 71-94		
Registration	Australia and New Zealand Clinical Trials Register ACTRN12612000079842		
Study type	Randomised controlled trial (cluster)		
Study dates	March/April 2010 to November/December 2011		
Aim	To evaluate the effectiveness of a comprehensive harm minimisation focused drug intervention for alcohol harm prevention.		
Country/geographical location	Australia		
Setting/School type	Secondary schools		
Participant characteristics	Description	1746 year 8 students	
		Intervention (n=1161) N (cluster) = 14 schools	Control (n=585) N (cluster) = 7 schools
	Age	Mean (SD), whole population	13 years (not reported)
	Gender	Male, n (%)	587/1161 (50.6%)
Female, n (%)		574/1161 (49.4%)	374/585 (64.0%)

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. <i>Abuse research and prevention</i> 44 (3-4), 71-94			
	Socioeconomic status	Low	257/1161 (22.1%)	81/585 (13.8%)
		Medium	682/1161 (58.7%)	262/585 (44.8%)
		High	222/1161 (19.1%)	242/585 (41.4%)
	Ethnicity	Not reported		
SEND	Not reported			
Baseline drinking behaviour	Drank a full standard drink in past 12 months, n (%)	267 (23%)	133 (22.7%)	
	Drank in a risky manner [5 or more standard drinks, 10g of alcohol, on the occasions they drank], n (%)	218 (18.8%)	110 (18.8%)	
	Alcohol consumption [how many standard drinks were consumed per occasion multiplied by how often], mean (SD)	30.5 (98.4)	21.1 (55.0)	
	Alcohol harms [Sum of harms from 10 items that measured different harms over last 12 months, ranging from feeling sick/hungover to regretted sex and getting in trouble with police, parents or school], mean (SD)	4.0 (7.6)	3.9 (7.2)	
Inclusion criteria	Active parental consent			
Exclusion criteria	Unreliable baseline surveys			
Number of Participants	1746, Intervention n = 1161; control n = 585			

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. <i>Abuse research and prevention</i> 44 (3-4), 71-94		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P73	The Drug Education in Victorian Schools (DEVS) programme
	Rationale/theory/Goal	P73	Social learning theory, post-structuralist subjectivity theory and cognitive dissonance theory. Focused on alcohol, tobacco, cannabis and illicit drug use (predominantly alcohol in first year).
	Materials used	P75	Student workbooks, trigger videos and teacher manuals.
	Procedures used	-	Not reported
	Provider	P75	Teachers
	Method of delivery	P75	Groups
	Location	P75	Classroom
	Duration	P73	2 years
	Intensity	P73 P75	18 lessons 10 lesson in year 8 and 8 lessons in year 10
	Tailoring/adaptation	-	Not applicable
	Modifications	-	Not applicable
	Planned treatment fidelity	P75	Teachers delivering the classroom program participated in intensive 2-day professional training. This incorporated a summary of the evidence base informing the programme and active sampling of each lesson activity.
	Actual treatment fidelity	P75	Participatory strategies such as role-play and small group work which were key to the programme were used infrequently. Over half of the teachers used role-play only a few times per year.

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. Abuse research and prevention 44 (3-4), 71-94		
	Other details	P75	The programme was developed from materials trialled in a pilot programme. Some work was designed to be done with parents.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P75	Drug education as usual
	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	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. Abuse research and prevention 44 (3-4), 71-94		
	Actual treatment fidelity	-	Not reported
	Other details	P75	Usual drug education varied from school to school as no standard curriculum was specified.
Follow up	9 months (interim) and 21 months (final)		
Study Methods	Method of randomisation	Stratified by socioeconomic status and location	
	Method of allocation	Not reported.	
	Statistical method(s) used to analyse data	Random intercept was used to account for clustering. Logistic regression models	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 21 months Intervention 709/1161 (61%) Control 425/585 (72.6%) One intervention school withdrew in second year	Reasons for not completing the study: the school that withdrew did not have the resources to implement the programme.
Outcomes measures and effect size.	Outcome	Intervention (n=709) N (cluster) = 13	Control (n=425) N (cluster) = 7
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. Abuse research and prevention 44 (3-4), 71-94		
	Age at first experience of drunkenness where reported	Not reported	Not reported
	Amount and frequency of alcohol use, 21 months		
	Drank a full standard drink in past 12 months, n (%)	267 (37.6%)	181 (42.6%)
	OR 95% CI (as reported)	0.93 (0.56, 1.56)	
	Drank in a risky manner [5 or more standard drinks, 10g of alcohol, on the occasions they drank], n (%)	186 (26.3%)	162 (38.1%)
	OR 95% CI (as reported)	0.58 (0.31, 1.08)	
	Alcohol consumption [how many standard drinks were consumed per occasion multiplied by how often over last 12 months], mean (SD)	63.2 (193.4)	103.4 (260.6)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex, 21 months		
	Alcohol harms [Sum of harms from 10 items that measured different harms over last 12 months, ranging from feeling sick/hungover to regretted sex and getting in trouble with police, parents or school], mean (SD)	3.8 (6.3)	5.7 (8.9)
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Knowledge index, attitude scale, talked to parents, number of lessons at school recalled.		
	Outcome	Overall RoB	Comments

Bibliographic reference	Midford R, Ramsden R, Lester L et al (2014) Alcohol prevention and school students: Findings form an Australian 2-year trial of integrated harm minimization school drug education. <i>Abuse research and prevention</i> 44 (3-4), 71-94		
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	There was no information available on allocation concealment of interventions where the outcomes were self-reported. High levels of attrition.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Some concerns	There was no information available on allocation concealment of interventions where the outcomes were self-reported. High levels of attrition.
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Australian Research Council Victorian Department of Education and Early Childhood Development		
Comments	Limitations by author: High attrition Limitations by reviewer: None		
Additional reference	Midford R, Mitchell J, Lester L et al (2014) Preventing alcohol harm: Early results from a cluster randomised controlled trial in Victoria, Australia of comprehensive harm minimisation school drug education. <i>International Journal of Drug Policy</i> 25, 142-150		
Additional reference	Midford R, Cahill H, Lester L et al (2018) Alcohol prevention for school students: Results from a 1-year follow up of a cluster-randomised controlled trial of harm minimisation school drug education, <i>Drugs: Education, Prevention and Policy</i> , 25:1, 88-96		

D.1.24 Morgenstern 2009

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412			
Registration	Not reported			
Study type	Randomised controlled trial (cluster)			
Study dates	February 2006 to May/June 2006			
Aim	To examine the effects of a school-based alcohol education intervention			
Country/geographical location	Germany			
Setting/School type	Schools			
Participant characteristics	Description	1875 seventh grade students		
		Intervention (n= 911) N(clusters) = 16	Control (n= 964) N(clusters) = 14	
	Age	Mean (SD)	12.97 (0.76)	13.01 (0.74)
	Gender	Male, n (%)	443 (52.8%)	431 (50.9%)
		Female, n (%)	396 (47.2%)	416 (49.1%)
	Socioeconomic status	Hauptschule (low SES), n (%)	242 (28.8%)	232 (27.4%)
		Realschule (middle class), n (%)	253 (30.2%)	260 (30.7%)
		Gymnasium (middle and upper class), n (%)	259 (30.9%)	276 (32.6%)
		Gesamtschule (mixed SES), n (%)	85 (1.1%)	79 (9.3%)
	Ethnicity	Not reported		
SEND	Not reported			

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412			
	Baseline drinking behaviour	Past-month alcohol use [range 0-6 days, 0=never to 6 =on 6 or more days]], mean (SD)	0.62 (1.34)	0.63 (1.35)
		Lifetime alcohol use without parental knowledge, n (%)	Yes 289 (34.5%) No 550 (65.5%)	Yes 303 (35.8%) No 544 (64.2%)
		Lifetime drunkenness, n (%)	Yes 155 (18.5%) No 684 (81.5%)	Yes 155 (18.3%) No 692 (64.2%) ⁱⁱⁱ
		Lifetime binge drinking, n (%)	Yes 101 (12.0%) No 738 (88.0%)	Yes 383 (45.2%) No 736 (86.9%)
Inclusion criteria	Seventh grade Parental consent			
Exclusion criteria	None			
Number of Participants	1875 randomised; 1686 analysed			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	-	Not reported	
	Rationale/theory/Goal	P403	Based on theories that address social influences and enhance motivation to avoid substance use.	
	Materials used	P403	Class units, student booklets and booklets for parents	
	Procedures used	-	Not reported	
	Provider	P403	Teachers	
	Method of delivery	P403	Groups	

ⁱⁱⁱ As reported in paper. Possible typing error

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412		
	Location	P403	Classroom
	Duration	P403	3 months
	Intensity	P403	4 class units
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P403	Teachers attended a 3 hour workshop which introduced the concepts and materials for the intervention.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P403	Usual curriculum
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412		
	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	1yesr		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intention to treat analyses Adjusted for clustering Missing data imputed	
	Unit of allocation	Schools	
	Unit of analysis	Individual	

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412		
	Attrition	Number of participants completing the study: 1686 (90%)	Reasons for not completing the study: Absence or changed school
Outcomes measures and effect size.	Outcome	Intervention (n=1161) N (cluster) = 14 schools	Control (n=585) N (cluster) = 7 schools
	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, 12 months		
	Alcohol use past month (0-6), mean (SD)	0.89 (0.075)	0.98 (0.081)
	Lifetime alcohol use	OR 0.90 95% CI 0.67 to 1.21	
	Lifetime drunkenness	OR 0.77 95% CI 0.52 to 1.12	
	Lifetime binge drinking	OR 0.74 95% CI 0.57 to 0.97	
	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		
	Outcome	Overall RoB	Comments

Bibliographic reference	Morgenstern M, Wiborg G, Isensee B et al (2009) School-based alcohol education: results of a cluster-randomized controlled trial. <i>Addiction</i> 104 402-412		
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
	Amount and frequency of alcohol use	Some concerns	Methods of allocation concealment not reported. All outcomes were self-measured.
	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	Deutsche Angestellten-Krankenkasse (DAK) [Health Insurance Company]		
Comments	Limitations by author: Some baseline differences between groups. Limited data collected on treatment fidelity. Limitations by reviewer: None		

D.1.25 Newton 2009

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. <i>Preventive Medicine</i> 48, 579-584
Registration	Australian clinical trial registry ACTRN 012607000312448
Study type	Randomised controlled trial (cluster)
Study dates	2007-2008
Aim	To establish the efficacy of an internet based prevention programme to reduce alcohol and cannabis in adolescents.

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584		
Country/geographical location	Australia		
Setting/School type	10 Independent (private) high schools		
Participant characteristics	Description	944 year 8 students, mean age 13.08 years	
		Intervention (n=513) N (cluster) = 5	Control (n=431) N (cluster) = 5
	Age	Mean (SD), whole population	13.08 years
	Gender	Male, n (%), whole population	566/944 (60%)
		Female, n (%), whole population	378/944 (40%)
	Socioeconomic status	Not reported ^{jjj}	
	Ethnicity	Not reported	
	SEND	Not reported	
Baseline drinking behaviour	Average weekly alcohol consumption [Adapted from SHAHRP 'Patterns of Alcohol' index measuring frequency in standard drinks], mean (SD)	3.55 (15.69)	0.84 (5.39)
	Frequency drinking to excess on a single occasion [Defined as females drinking >4, males drinking >6 standard drinks on a single occasion], mean (SD)	0.62 (2.96)	0.23 (1.90)
	Alcohol harms [12 items from SHAHRP instrument], mean (SD)	6.86 (26.72)	2.87 (12.15)

^{jjj} Students who enrol in independent schools come predominantly from high socioeconomic backgrounds

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584		
Inclusion criteria	Informed parental consent.		
Exclusion criteria	None		
Number of Participants	944 year 8 students; intervention n=513, control n=431		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P580	CLIMATE Schools: Alcohol and cannabis
	Rationale/theory/Goal	P580	A harm minimisation course aimed at decreasing alcohol misuse and cannabis use.
	Materials used	P580	Internet-based interactive online cartoons
	Procedures used	P580	Pre-planned activities
	Provider	P580	Computer Teachers
	Method of delivery	P580	Group
	Location	P580	Classroom
	Duration	P580	One year
	Intensity	P580	6 x 40 min lessons (alcohol module) in term 1 and 6 x lessons (alcohol and cannabis module) 6 months later Online cartoon component was 15-20 mins long
	Tailoring/adaptation	-	Not applicable
Modifications	-	Not applicable	

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P583	<p>Student and teachers were required to complete an evaluation questionnaire about the programme. 12 teachers provided evaluation data.</p> <p>91% reported the course the outcomes of the syllabus well</p> <p>92% indicated that students liked the programmed</p> <p>72% endorsed the programme as better than other programmes.</p> <p>75% said they would use the course in the future and recommend it.</p> <p>98 students gave feedback on the course</p> <p>93% found the cartoon delivery appropriate and enjoyable</p> <p>85% said they would use the information in their lives.</p>
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P580	Usual health classes
	Rationale/theory/Goal	P580	Social influence programmes based on harm minimisation strategies.
	Materials used	-	Not reported.
	Procedures used	-	Not reported.
	Provider	-	Not reported.

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584		
	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	P580	All schools except one received syllabus based alcohol, cannabis and drug education during the year. No schools reported delivering these programs via computers or the internet.
Follow up	Post-intervention, 6 months and 12 months		
Study Methods	Method of randomisation	Online randomisation using www.randomizer.org	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	ANCOVA Hierarchical modelling (HLM) to account for intracluster correlations between schools.	
	Unit of allocation	Schools	

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. <i>Preventive Medicine</i> 48, 579-584		
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 12 months [Newton 2010], N=people who completed baseline surveys Intervention: 331/397 = 83% Control 275/367 = 75%	Reasons for not completing the study: Absence Failure to use unique identifying code Answering fewer than 80% of the items
Outcomes measures and effect size.	Outcome	Intervention (n=331) N (cluster) = 5	Control (n=275) N (cluster) = 5
	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, 12 months [Newton 2010]		
	Average weekly alcohol consumption [Adapted from SHAHRP 'Patterns of Alcohol' index measuring frequency in standard drinks], mean change (SD)	-0.63 (1.14)	5.30 (1.50)
	Effective sample sizes calculated with ICC 0.1 ^{kkk}	48	40
	MD 95% CI calculated by reviewer	-5.93 (-6.49, -5.37)	
	Frequency drinking to excess on a single occasion [Defined as females drinking >4, males drinking >6 standard drinks on a single occasion], mean change (SD)	0.05 (0.16)	0.85 (0.30)

kkk ICC as reported in paper

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584		
	School attendance, 12 months [Newton 2014]		
	Truancy [days off in the last year without parent's permission on a 5 point Likert scale; 1 (0 days), 2 (1-2 days), 3 (3-5 days) 4 (6-10 days), 5 (10+ days)], mean (SD)	1.21 (0.70)	1.42 (1.03)
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing, 12 months [Newton 2010]		
	Alcohol harms [12 items from SHAHRP instrument], mean change (SD)	3.06 (2.12)	9.17 (2.23)
	Effective sample sizes calculated using ICC 0.1 ^{III}	48	40
	MD 95% CI calculated by reviewer	-5.27 (-6.53, -4.01)	
	Psychological distress [K6, 6-item screening scale of non-specific psychological distress. How often felt a specific kind of distress in the past 5 weeks on a Likert scale; 0 (none) to 4 (all of the time)], mean (SD)	3.90 (3.46)	5.32 (4.89)
	Effective sample sizes calculated using ICC 0.1 ^{mmm}	48	40
	MD 95% CI calculated by reviewer	1.42 (0.35, 3.19)	
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Alcohol knowledge, positive alcohol-related expectancies, cannabis outcomes.		
	Outcome	Overall RoB	Comments

III ICC as reported in the paper

mmm ICC as reported in the paper

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. <i>Preventive Medicine</i> 48, 579-584		
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	There was no information available on allocation concealment of interventions where the outcomes were self-reported. There were significant baseline differences for substance use.
	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	There was no information available on allocation concealment of interventions where the outcomes were self-reported.
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Australian Government Department of Health Alcohol Education and Rehabilitation Foundation Australian Research Council (Laura Vogl) National Health and Medical Research Council (Maree Teesson)		
Comments	Limitations by author: Self-reported outcomes Limitations by reviewer: The baseline drinking characteristics were significantly higher in the intervention group compared to the control group. All schools were independent (private) schools which may have implications on generalisability.		

Bibliographic reference	Delivering prevention for alcohol and cannabis using the internet: A cluster randomised controlled trial (2009) Newton NC, Andrews G, Teesson M et al. Preventive Medicine 48, 579-584
Additional reference	Newton NC, Vogl, LE, and Teesson M et al (2009) CLIMATE Schools: alcohol module: cross validation of a school-based prevention programme for alcohol misuse. Australian and New Zealand Journal of Psychiatry 43. 201-207
Additional reference	Newton NC, Teesson M, Vogl LE et al (2010) Internet-based prevention for alcohol and cannabis use: final results of the Climate Schools course. Addiction 105, 749-759
Additional reference	Newton NC, Andrews G, Champion K et al (2014) Universal Internet-based prevention for alcohol and cannabis use reduces truancy, psychological distress and moral disengagement: A cluster randomised controlled trial. Preventive Medicine 65, 109-115

D.1.26 Patton 2006

Bibliographic reference	Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. Research and Practice 96:9			
Study type	Randomised controlled trial (cluster)			
Study dates	1997-2001			
Aim	Promote social inclusion and commitment to education , in reducing among students health risk behaviours and improving emotional well-being			
Country/geographical location	Melbourne, Victoria, Australia			
Setting/School type	Secondary schools			
Participant characteristics	Description	8th grade students (age 13-14 years). 2678 participants		
		Intervention (n=1335)	Control (n=1343)	
	Age			
	Gender	Male	629 (47.1%)	623 (46.4%)
		Female	706 (52.9%)	720 (53.6%)
	Socioeconomic status	Not reported		
	Ethnicity	Not reported		
SEND	Not reported			

Bibliographic reference		Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. <i>Research and Practice</i> 96:9		
Baseline drinking behaviour	Drinker ⁿⁿⁿ		397(29.7%)	432(32.2%)
	Regular drinker ^{ooo}		62(4.6%)	75(5.6%)
	Binged ^{ppp}		167(12.5%)	174(13%)
Inclusion criteria	Inclusion of government, independent and Catholic secondary schools. No other inclusion criteria stated.			
Exclusion criteria	Not reported			
Number of Participants	26 schools(12 intervention, 14 control), 2678 participants (control n=1343, intervention n=1335)			
Intervention	TIDieR Checklist criteria	Paper/Location	Details	
	Brief Name	P997 [Bond 2004]	Gatehouse Project	
	Rationale/theory/Goal	P997 [Bond 2004]	Primary prevention programme, including institutional and individual focused components to promote the social and behavioural wellbeing of young people in secondary schools. Aims were to increase levels of emotional wellbeing and reduce rates of substance use, known to be related to emotional wellbeing	
	Materials used	P1582 [Patton 2006]	The process had 4 elements (1) feedback from a student survey about security, communication with teachers, and broader participation in school life (2) within each school, recruitment of staff involved in administration, student welfare, curriculum, or all 3 to a co-ordinating action team with a focus on school policies and professional practice of teachers (3) consultation and training regarding specific intervention strategies (4) a curriculum element that focused on problem solving in situations in which young people commonly experience emotional difficulties- this was taught in 8th grade (mean age 14 years old), during a 10 week period in English, health, or personal development classes.	

nnn Reported drinking in the past month

ooo Drinking on 3 or more days in the previous week

ppp Drinking 5 or more drinks in a row

Bibliographic reference	Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. <i>Research and Practice</i> 96:9		
Procedures used	P997 [Bond 2004]		Students completed questionnaire on laptop 4 times (twice in 1997, 1998, 1999). Questionnaire used a standard set of questions developed by the Centre of Adolescent Health.
Provider	P997 [Bond 2004]		None (supervised by research team)
Method of delivery	P997 [Bond 2004]		Individual
Location	-		Not reported
Duration	P997 [Bond 2004]		3 years
Intensity	P1000 [Bond 2004]		The median number of lessons using the Gatehouse curriculum in the first year was 20 (approximately 15 hours of instruction).
Tailoring/adaptation	-		Not reported
Modifications	-		Not reported
Planned treatment fidelity	-		Not reported
Actual treatment fidelity	-		Not reported
Other details	P1000 [Bond 2004]		A retrospective 7 day diary was completed for those who had smoked tobacco in the past month or drunk alcohol in the past 2 weeks

Bibliographic reference			
Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. Research and Practice 96:9			
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1000 [Bond 2004]	No intervention 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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported

Bibliographic reference	Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. <i>Research and Practice</i> 96:9		
	Other details	-	Not reported
Follow up	Four waves of student data were collected. Baseline data at the beginning of year 8 and subsequent surveys were undertaken at the end of years 8, 9 and 10.		
Study Methods	Method of randomisation	Stratified by school administration so that 6 government and 6 independent/ Catholic schools could be selected from each using simple random sampling.	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	ITT Intervention was categorised dichotomously	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 1999: Intervention(n=1158), control (n=1428) 2001: Intervention (n=966), control (n=1497)	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=1335)	Control (n=1343)
	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		
		Results for 1997 (End of Year 8)	
	Any drinking, 1 year	Adjustedqqq OR 0.93 (0.71 to 1.21)	

qqq Adjusted for measure at baseline and gender, family structure, Australian born, parental smoking

Bibliographic reference	Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. <i>Research and Practice</i> 96:9		
	Regular drinking, 1 year	Adjusted OR 1.09 (0.77 to 1.57)	
	Binge drinking, 1 year	Adjusted OR 0.95 (0.69 to 1.32)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported
	Early initiation of sexual intercourse, 2 years	Adjusted OR 0.84(0.59 to 1.2)	
	Any risky behavioursrrr, 2 years (substance use, antisocial behaviour or early initiation of sexual intercourse)	Adjusted OR 0.89(0.68 to 1.17)	
	Marked risky behaviourssss, 2 years (heavy substance use, multiple antisocial behaviours or early initiation of sexual intercourse)	Adjusted OR 0.89(0.61 to 1.3)	
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Substance use, tobacco use, marijuana use and antisocial behaviour.		
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

rrr Defined on 3 levels as either none, 1 behaviour (any substance use, any antisocial behaviour or early initiation of sexual intercourse), or 2 or more behaviours at this level

sss Defined as either none, 1 behaviour at the highest level (heavy substance use, report of multiple antisocial behaviours, or early initiation of sexual intercourse), or 2 or more behaviours at this level

Bibliographic reference	Patton GC, Bond L, Carlin JB et al (2006) Promoting Social Inclusion in Schools: A Group-Randomized Trial of Effects on Student Health Risk Behavior and Well-being. Research and Practice 96:9		
	Amount and frequency of alcohol use	Some concerns	Methods of allocation not reported. Not clear if participants were aware of intervention allocation which may lead to bias in reporting of 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	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Not reported		
Comments	Limitations: comparatively small number of schools may have limited the effectiveness of the randomisation process. Fundamental complexity of implementing a multi level intervention with a focus on changing social processes.		
Additional reference	Bond L, Patton G, Sara Glover et al (2004) The Gatehouse Project: can a multilevel school intervention affect emotional wellbeing and health risk behaviours. Journal of Epidemiology and Community Health 58(997-1003)		

D.1.27 Perry 1996

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. American Journal of Public Health 86(7), 956-65.
Study type	Randomised controlled trial (cluster)
Study dates	Phase 1 1991-1994; Interim Phase 1994-1996; Phase 2 1996-1998
Aim	To assess the effectiveness of Project Northland in preventing or reducing alcohol use among young adolescents using a multi-level community-wide approach.

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.			
Country/geographical location	USA			
Setting/School type	24 school districts in northeast Minnesota			
Participant characteristics ^{ttt}	Description	Sixth graders followed through to graduation in 1998.		
		Intervention (n= 1148) N(cluster) = 10	Control (n=1047) N(cluster) = 10	
	Age	Mean, years (SD)	11.9 (not reported)	11.8 (not reported)
	Gender	Male n (%)	588 (51.2%)	551 (52.6%)
		Female n (%)	560 (48.8%)	496 (47.4%)
	Socioeconomic status	Not reported		
	Ethnicity	White n (%)	1077 (93.8%)	1011 (96.6%)
		Native American n (%)	59 (5.1%)	30 (2.9%)
		Other n (%)	13 (1.1%)	6 (0.6%)
	SEND	Not reported		
	Baseline drinking behaviour	Tendency to use alcohol scale ^{uuu} [8 = low tendency, 48 = high tendency], mean (SD)		
			Intervention (n= 1401) N(cluster) = 10	Control (n=1549) N(cluster) = 10
		Phase 1 baseline (1991-1994)	10.24 (0.26)	11.01 (0.26)
Interim phase baseline (1994-1996)		18.40 (0.55)	16.92 (0.56)	
Phase 2 (1996-1998)		22.01 (0.60)	22.94 (0.65)	
Past month alcohol use, mean (SD)				
Phase 1 baseline (1991-1994)	0.99 (0.02)	1.07 (0.02)		

^{ttt} Number of people (n) with each characteristic calculated by reviewer from percentages reported.

^{uuu} Combines items about intentions to use alcohol and actual use

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.			
		Interim phase baseline (1994-1996)	1.55 (0.04)	1.41 (0.04)
		Phase 2 (1996-1998)	1.83 (0.07)	1.96 (0.07)
		Past week alcohol use, mean (SD)		
		Phase 1 baseline (1991-1994)	1.00 (0.01)	1.03 (0.01)
		Interim phase baseline (1994-1996)	1.23 (0.03)	1.19 (0.03)
		Phase 2 (1996-1998)	1.33 (0.03)	1.39 (0.04)
		Binge drinking [5 or more drinks in a row in the past 3 weeks], mean (SD)		
		Phase 1 baseline (1991-1994)	1.01 (0.01)	1.31 (0.05)
		Interim phase baseline (1994-1996)	1.31 (0.05)	1.22 (0.05)
		Phase 2 (1996-1998)	1.45 (0.05)	1.60 (0.06)
Inclusion criteria	Sixth graders in the class of 1998			
Exclusion criteria	Not reported			
Number of Participants	3151 (students who completed at least one survey)			
Intervention	TIDieR Checklist criteria	Paper/Location	Details	
	Brief Name	P957	Project Northland Phase 1: Slick Tracey (6th grade), Amazing Alternatives! (7th grade) and PowerLines (8th grade) Interim Phase : Shifting Gears (9th Grade)Phase 2: 5-component intervention	
	Rationale/theory /Goal	P956	A community-wide research program to prevent young adolescent alcohol use. Targets parental rules for children's alcohol use	
	Materials used	P957	See Procedures used	
	Procedures used	P957	Phase 1: Slick Tracey	

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.	
		<p>Involved a home team approach consisting of 4 sessions of activity-story books introduced during school classes and completed as homework with parents over 4 consecutive weeks. Parents were provided with issues of Northland Notes for Parents with each activity book.</p> <p>Phase 1: Amazing Alternatives</p> <p>Consisted of a kick-off meeting with parents, an 8-week teacher- and peer-led classroom curriculum over 8 weeks, a peer participation program to create alternative alcohol-free activities, For Amazing Alternative! Home program booklets mailed to parents and 3 issues of Northland Notes for Parents.</p> <p>The classroom program used audiotape, vignettes, group discussions, class games, problem solving, and role plays.</p> <p>The peer participation program involved a one-day leadership training session for 73 student representatives from 12 schools. This training provided information on how to plan a budget for an activity and how to publicise an activity.</p> <p>The Home program booklets provided parents with information on how to plan activities with their 7th graders.</p> <p>Phase 1: PowerLines</p> <p>Consisted of an 8-session classroom curriculum, a theatre production "It's not my party" performed by 8th-grade actors for classmates, parents and community members, 3 issues of Northland Notes for Parents and a continuation of the peer participation program. Training for the live theatre production was provided by actor-educators in a half-day workshop and the play was performed on the same day.</p> <p>3 editions of newsletter TEENSpeak written by adolescents in the Project Northland cohort was produced and sent to peers and parents.</p> <p>Interim phase: Shifting gears</p> <p>Focussed on pressures to drink and drive or ride with a drink driver and ways to deal with these influences.</p> <p>Phase 2</p> <p>A 6 session classroom curriculum entitled Class Action implemented in 11th grade emphasising the social and legal consequences of alcohol use. Carried out using a mock trial format.</p>

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.		
			Postcards with behavioural tips on communicating with teens were sent to parents. Print media campaigns were implemented, peer action teams were created and community teams were formed
	Provider	P957	Teachers, peers and community-based adults
	Method of delivery	P957	Group
	Location	P957	Classroom and home
	Duration	P957	Phase 1 (3 years); Interim phase (1 year); Phase 2 (2 years)
	Intensity	P957	4-8 week sessions
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P957	Usual teaching
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.		
	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	P958	A survey of the reference communities showed that more than 90% of students had taken part in Project DARE and 21% had taken part in Project Quest.
Follow up	Annually until the end of the intervention		
Study Methods	Method of randomisation	Block randomisation (blocked by size; small, medium and large)	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Mixed model analyses Per protocol analyses (each time point analysis was measured using the number of respondents to each survey; varied throughout). Intraclass correlation coefficients (ICC) were calculated	
	Unit of allocation	School district	
	Unit of analysis	School district	

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.		
	Attrition ^{vvv}	Number of participants completing the study: End of Grade 6: 2191 (93%) End of Grade 7: 2060 (88%) End of Grade 8: 1901 (81%)	Reasons for not completing the study: 62% moved out of the area 19% were parent or student refusals 9% moved across treatment conditions 7% absent 3% were deleted because of inconsistent reporting
Outcomes measures and effect size.	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 ^{wwwxxx}		
		Intervention (n = 1096) N(cluster) = 10	Control (n=1096) N(cluster) = 10
	Tendency to use alcohol, mean (95% CI), End of Grade 6 (Phase 1) ^{yyy}	11.7 (11.2 to 12.2) SD 0.70	11.0 (9.4 to 9.5) SD 0.08
		Intervention (n = 1030) N(cluster) = 10	Control (n=1030) N(cluster) = 10
	Tendency to use alcohol, mean (95% CI), End of Grade 7 (Phase 1)	14.5 (13.3 to 15.70) SD 1.94	14.9 (13.7 to 16.1) SD 1.93

^{vvv} Percentages calculated by reviewer from numbers reported

^{www} Number of participants not reported by intervention arm. Numbers imputed by reviewer using average cluster size calculated from total number of respondents at each time point.

^{xxx} SDs imputed by reviewer from 95% CI reported

^{yyy} Intervention vs control reported as not significant

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.		
		Intervention (n = 951) N(cluster) = 10	Control (n=951) N(cluster) = 10
	Tendency to use alcohol, mean (95% CI), End of Grade 8 (Phase 1)	16.0 (15.1 to 16.8) SD 1.37	17.5 (16.7 to 18.5) SD (1.45)
		Intervention (n= 1401) N(cluster) = 10	Control (n=1549) N(cluster) = 10
	Tendency to use alcohol Phase 1 (grade 7 to 9), mean change (SD)	1.82 (0.12)	2.44 (0.12)
	Tendency to use alcohol Phase 1 (grade 9 to 10), mean change (SD)	3.40 (0.26)	2.37 (0.24)
	Tendency to use alcohol Phase 1 (grade 10 to 11), mean change (SD)	1.44 (0.24)	2.11 (0.21)
	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	Dichotomous outcomes for past month alcohol use, past week alcohol use.zzz Cigarette use, smokeless tobacco use, marijuana use. Peer influence scale score, self-efficacy scale score and perceived access scale score.		
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		

zzz Not reported here as number of participants in each arm not known.

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. <i>American Journal of Public Health</i> 86(7), 956-65.		
	Amount and frequency of alcohol use	High	<p>Not enough information to suggest whether or not participants were aware of intervention allocation. Risk of contamination minimised by unit of randomisation being schools but outcome is subjective so there are still some concerns.</p> <p>Multiple publications with variations in how the results were reported such as different time points, composites and varying sample sizes for outcomes leading to different data for the same outcomes over different publications.</p>
	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 Alcohol Abuse and Alcoholism [Government]		
Comments			
	<p>Limitations by author: None</p> <p>Limitations by reviewer: More intervention students reported alcohol use at baseline.</p>		
Additional reference	Williams CL, Perry, CL, Dudovitz et al (1995) A home-based prevention program for sixth-grade alcohol use: results from Project Northland. <i>The Journal of Primary Prevention</i> . 16(2), 125-147		
Additional reference	Komro KA, Perry CL, Veblen-Mortenson et al (1999) Peer leadership in school and community alcohol use prevention activities. <i>Journal of Health Education</i> 30(4) 202-208		

Bibliographic reference	Perry CL, Williams CL, Veblen-Mortenson S et al. (1996) Project Northland: outcomes of a community wide alcohol use prevention program during early adolescence. American Journal of Public Health 86(7), 956-65.
Additional reference	Perry CL, Williams CL, Komro KA, et al. (2002) Project Northland: Long-term outcomes of community action to reduce adolescent alcohol use. Health Education Research. 17(1),117-32.
Additional reference	Toomey TL, Williams CL, Perry CL (1996) An alcohol primary prevention program for parents of 7th graders: The amazing alternatives! Home program. Journal of Child & Adolescent Substance Abuse 5(4) 35-53
Additional reference	Komro KA, Perry CL, Williams CL, Stigler MH et al (2001) How did Project Northland reduce alcohol use among young adolescents? Analysis of mediating variables. Health Education Research 16(1), 59-70.

D.1.28 Perry 2003

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs				
Study type	Randomised controlled trial (cluster)				
Study dates	1999-2001				
Aim	To evaluate the effect of the middle and junior high school DARE and DARE plus programs				
Country/geographical location	USA				
Setting/School type	24 schools (primarily in Minneapolis – St Paul.				
Participant characteristics	Description	7261seventh grade students in the academic year 1999-2000			
		DARE (n=2226) N (clusters) = 8	DARE plus (n=2221) N (clusters) = 8	Control (n=1790) N (clusters) = 8	
	Age	Not reported			
	Gender ^{aaaa}	Male n (%)	1269/2518 (50.4%)	1381/2635 (52.4%)	1093/2108 (51.9%)
		Female n (%)	1249/2518 (49.6%)	1254/2635 (47.6%)	1015/2108 (48.1%)
Socioeconomic status	Not reported				

aaaa Percentages calculated by reviewer from numbers reported

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs				
	Ethnicity ^{bbbb}	White	4887/7261 (67.3%)		
		African American	545/7261 (7.5%)		
		Asian American	922/7261 (12.7%)		
		Hispanic	261/7261 (3.6%)		
		American Indian	290/7261 (4.0%)		
		Mixed/other	356/7261 (4.9%)		
	SEND	Not reported			
	Baseline drinking behaviour ^{cccc}	Alcohol behaviour and intentions, mean (SE)			
		Boys	11.16 (0.19) SD 6.77	11.03 (0.19) SD 7.06	11.17 (0.20) SD 6.61
		Girls	10.82 (0.21) SD 7.42	10.67 (0.22) SD 7.79	10.66 (0.22) SD 7.01
		Pooled, mean (SD)	10.99 (7.09)	10.86 (7.41)	10.9 (6.80)
		Alcohol use past year, mean (SE) [Occasions, 7 response categories]			
		Boys	1.31 (0.03) SD 1.07	1.29 (0.03) SD 1.11	1.31 (0.04) SD 1.32
		Girls	1.27 (0.03) SD 1.06	1.25 (0.03) 1.06	1.23 (0.03) SD 0.96
		Pooled, mean (SD)	1.29 (1.07)	1.27 (1.09)	1.27 (1.15)
		Alcohol use past month, mean (SE) [Occasions, 7 response categories]			
		Boys	1.10 (0.02) SD 0.71	1.09 (0.02) SD 0.74	1.11 (0.02) SD 0.66
Girls	1.08 (0.02) SD 0.71	1.08 (0.02) SD 0.71	1.07 (0.02) SD 0.64		
Pooled, mean (SD)	1.09 (0.71)	1.09 (0.73)	1.09 (0.65)		
Ever drunk, mean (SE)					

bbbb Data not reported by arm

cccc Standard deviations (SD) and pooled data imputed by reviewer

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs			
	[Occasions, 6 response categories]			
	Boys	1.10 (0.02) SD 0.71	1.07 (0.02) SD 0.74	1.09 (0.02) SD 0.66
	Girls	1.07 (0.02) SD 0.71	1.07 (0.02) SD 0.71	1.07 (0.02) SD 0.66
	Pooled, mean (SD)	1.09 (0.71)	1.07 (0.76)	1.08 (0.66)
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			
Number of Participants	7261 (in analyses); 24 clusters			
Intervention	TIDieR Checklist criteria	Paper/Location	Details	
	Brief Name	P179	DARE curriculum	
	Rationale/theory/Goal	P179	To provide resistance skills, character building and citizenship skills	
	Materials used	-	Not reported	
	Procedures used	-	Not reported	
	Provider	P179	Police officers	
	Method of delivery	P179	Group	
	Location	P179	Classroom	
	Duration	-	Not reported	
	Intensity	P179	10 session curriculum	

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P179	The police officers who taught DARE had already taught at least 2 semesters of the curriculum, received training in the elementary and middle and junior high curriculum according to the DARE protocol.
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P179	DARE plus
	Rationale/theory/Goal	P179	To provide resistance skills, character building and citizenship skills
	Materials used	-	Not reported
	Procedures used	P179	DARE plus consisted of 3 components 1) a classroom-based, peer-led, parental involvement program (“On the Verge”) with 10 additional postcards mailed to parents every 6-8 weeks, 2) extra-curricular activities for students with community organisers, 3) neighbourhood action teams to address neighbourhood and school-wide issues related to substance use.
	Provider	P179	Police officers, teachers and trained peer leaders
	Method of delivery	P179	Group

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs		
	Location	P179	Classroom
	Duration	P179	Not reported
	Intensity	P179	"On the verge" – 4 session, once a week for 4 weeks
	Tailoring/adaptation	-	Not reported
	Modifications	P179	Police officers in the DARE plus condition received an extra 2 hour training by the research team on interactive teaching methods.
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P179	Delayed intervention
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs		
	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	P179	Controls had the opportunity to receive DARE Plus program after the final follow up
Follow up	1 year		
Study Methods	Method of randomisation	Not reported	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	3-level linear, random co-efficient model allowing for appropriate modelling for data arising from cluster sampling ITT analyses not done	
	Unit of allocation	School	
	Unit of analysis	Individual	

Bibliographic reference		Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs						
	Attrition ^{dddd}	Number of participants completing the study: 7261 (analysed sample)	Reasons for not completing the study: Student relocation (10.8%) Absenteeism (1.4%) Parental refusal or non-deliverable consent form (2.3%) Student refusal (1.0%) Home schooling, limited English or special education (0.5%)					
Outcomes measures and effect size.	Outcome		DARE (n=2518) N (clusters) = 8	DARE plus (n=2635) N (clusters) = 8	Control (n=2108) N (clusters) = 8			
	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 ^{eeee}					DARE vs control	DARE plus vs control	
	Change from baseline alcohol behaviour and intentions, mean (SE)	Boys		1.35 (0.18) SD 6.41	1.19 (0.17) SD 6.69	1.64 (0.18) SD 5.95	Not significant	Significant
		Girls		1.61 (0.23) SD 8.43	1.32 (0.23) SD 8.14	1.49 (0.24) SD 7.65	Not significant	Not significant
		Pooled, mean (SD)		1.34 (7.41)	1.34 (7.38)	1.57 (6.77)	Not imputed	Not imputed
	Boys		0.21 (0.03) SD 1.07	0.19 (0.03) SD 1.11	0.26 (0.03) SD 0.99	Not significant	Significant	

dddd Percentages calculated by reviewer from numbers reported

eeee Pooled means imputed by reviewer

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs						
Change from baseline alcohol use past year, mean (SE)	Girls	0.27 (0.04) SD 1.41	0.23 (0.04) SD 1.42	0.25 (0.04) SD 1.27	Not significant	Not significant	
	Pooled, mean (SD)	0.24 (1.24)	0.21 (1.26)	0.26 (1.12)	Not imputed	Not imputed	
Change from baseline alcohol use past month, mean (SE)	Boys	0.11 (0.02) SD 0.71	0.08 (0.02) SD 0.74	0.14 (0.02) SD 0.66	Not significant	Significant	
	Girls	0.13 (0.02) SD 0.71	0.08 (0.03) SD 1.06	0.12 (0.03) SD 0.96	Not significant	Not significant	
	Pooled, mean (SD)	0.12 (0.71)	0.08 (1.06)	0.13 (0.80)	Not imputed	Not imputed	
Change from baseline ever drunk, mean (SE)	Boys	0.11 (0.02) SD 0.71	0.11 (0.02) SD 0.74	0.15 (0.02) SD 0.66	Not significant	Not significant	
	Girls	0.13 (0.02) SD 0.71	0.07 (0.02) SD 0.71	0.12 (0.02) SD 0.64	Not significant	Not significant	
	Pooled, mean (SD)	0.12 (0.71)	0.09 (0.89)	0.14 (0.65)	Not imputed	Not imputed	
School attendance		Not reported	Not reported	Not reported			
Alcohol related risky behaviour such as unprotected or regretted sex							
Change from baseline violent behaviour and intentions, mean (SE)	Boys	0.57 (0.09) SD 3.21	0.35 (0.08) SD 2.97	0.54 (0.09) SD 2.98	Not significant	Significant	
	Girls	0.23 (0.07) SD 2.48	0.30 (0.07) SD 2.48	0.26 (0.07) SD 2.87	Not significant	Not significant	
	Pooled, mean (SD)	0.40 (2.85)	0.33 (2.74)	0.41 (2.93)	Not imputed	Not imputed	
Mental health and wellbeing		Not reported	Not reported	Not reported			

Bibliographic reference	Perry CL, Komro K, Veblen-Mortensen et al (2003) A randomized controlled trial of the middle and junior high school D.A.R.E and D.A.R.E. plus programs			
	Adverse or unintended effects	Not reported	Not reported	Not reported
Other outcomes measured	Tobacco and marijuana outcomes. Psychosocial factors for boys only.			
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
	Amount and frequency of alcohol use	Some concerns		No information on blinding/allocation concealment. 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	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: Analyses were conducted for all students but after substantial interactions with gender were noted, the analyses were conducted separately. Combined analyses not reported in paper.			

D.1.29 Portelli 2018

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. International Journal of Emotional Education 10(1) 112-132
Registration	None

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. International Journal of Emotional Education 10(1) 112-132			
Study type	Cluster randomised controlled trial			
Study dates	Not reported			
Aim	To evaluate the effectiveness of a brief Alcohol Expectancy Challenge with the aim of reducing the prevalence of alcohol consumption amongst Maltese teenagers.			
Country/geographical location	Malta			
Setting/School type	School			
Participant characteristics	Description	119 students		
			Intervention (n=53) N(cluster) = not reported	
			Control (n=66) N(cluster) = not reported	
	Age	Mean (SD)	14.32 (0.471)	
	Gender	Male, n (%)	29 (54.7%)	42 (63.6%)
		Female, n (%)	24 (45.3%)	24 (36.4%)
	Socioeconomic status	Not reported		
	Ethnicity	Maltese	53 (100%)	65 (98.5%)
		Other white background	0 (0%)	1 (1.5%)
SEND	Not reported			
Baseline drinking behaviour	Not reported			
Inclusion criteria	Aged between 14-16 Parental and informed consent Proficiency in English language			

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. <i>International Journal of Emotional Education</i> 10(1) 112-132		
Exclusion criteria	Insufficient mental capacity to understand and provide informed consent		
Number of Participants	119		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P112	Alcohol Expectancy Challenge
	Rationale/theory/Goal	P115	The Health Belief Model
	Materials used	-	Not reported
	Procedures used		Participants were asked to generate lists of the 'good' and 'not-so-good' about drinking alcohol. Group discussion on the role of expectancies in drinking behaviour followed. A presentation with information about health hazards of teenage drinking was shown. Assertiveness tip were provided and healthier ways of spending time in Malta were discussed.
	Provider	P119	Health psychology doctorate student with 2 years of experience in the field of addiction.
	Method of delivery	P118	Groups of 8 to 28 pupils
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	P118	3 x 45 minute sessions
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. <i>International Journal of Emotional Education</i> 10(1) 112-132		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P119	Information only
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	P119	Received information only on the hazards of alcohol abuse.
	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	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. International Journal of Emotional Education 10(1) 112-132		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	1, 2 and 4 months		
Study Methods	Method of randomisation	Drawing lots	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Adjustment for clustering not reported	
	Unit of allocation	Classes	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Loss to follow up 16%.	Reasons for not completing the study: Not reported
Outcomes measures and effect size.			
	Outcome	Intervention (n=) N (cluster) =	Control (n=) N (cluster) =

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. <i>International Journal of Emotional Education</i> 10(1) 112-132		
	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 consumption, 4 months [number of drinks consumed in the past 30 days]	Reported as not significant	
	School attendance		
	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 expectancies		
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
	Amount and frequency of alcohol use	Some concerns	No information on allocation concealment or whether participants were aware of their allocation. Appears to be in a single school so there is a potential risk of contamination.

Bibliographic reference	Portelli P (2018) A clustered randomized controlled trial for the prevention of alcohol misuse among Maltese teenagers. International Journal of Emotional Education 10(1) 112-132		
	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	Malta Government Scholarship Scheme		
Comments	Limitations by author: The intervention and control groups varied in size. Larger groups generated more discussion than the smaller ones which may have affected effectiveness. There were concerns over honesty in the self-reported questionnaires. Limitations by reviewer: None		

D.1.30 Ringwalt 2009

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32		
Registration	NCT00650585		
Study type	Randomised controlled trial (cluster)		
Study dates	2004-2008		
Aim	To evaluate the effects of Project ALERT on adolescents' lifetime and 30-day use of alcohol.		
Country/geographical location	USA		
Setting/School type	Public schools		
Participant characteristics	Description	5883 sixth grade students	
		Intervention (n=2765) N(cluster) = 17	Control (n=2805) N(cluster) = 17
	Age	Mean (SD)	Not reported

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32			
	Gender	Male, n (%)	Data unreliable ^{fff}	
		Female, n (%)	Data unreliable	
	Socioeconomic status	Not reported		
	Ethnicity	Data unreliable		
	SEND	Not reported		
	Baseline drinking behaviour	Lifetime alcohol use, unadjusted % (SD)	39.6 (48.9)	34.6 (47.6)
		30-day alcohol use, , unadjusted % (SD)	7.1 (25.6)	5.2 (22.2)
Inclusion criteria	Schools teaching grades 6 to 8. Did not currently use an evidence-based programme.			
Exclusion criteria	None			
Number of Participants	Cohort 1 1483; Cohort 2 6855; 5883 analysed ^{gggg}			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	P627	Project ALERT	
	Rationale/theory/Goal	P627	Programme seeks to motivate students not to use substances and to provide the skills to resist inducements from peers to use substances and to support attitudes and beliefs that mitigate substance use.	
	Materials used	-	Not reported	
	Procedures used	P627	Guided class discussions, small group activities, role-playing exercises and videos.	
	Provider	P627	Class teachers (or other school staff)	

^{fff} Reported numbers are unclear (see Ringwalt 2010)

^{gggg} Final analyses numbers unclear

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32		
	Method of delivery	P627	Group
	Location	P627	Classroom
	Duration	P627	2 years
	Intensity	P627	11 x 45 minute lessons in year 1 and 3 booster sessions in year 2
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P627	The first lessons were recorded using video recorders provided by research staff. Instructors completed and returned attendance logs that tracked student attendance to lessons.
	Actual treatment fidelity	P627	633 of 641 (98.8%) of lessons that were recorded were taught. 82 of 84 instructors (98%) provided attendance logs. In total 2074 of 2129 lessons (97.4%) were taught.
	Other details	P626-7	Schools and teachers received compensation from the funding organisation. Schools could choose between an incentive of \$1000 for the school or \$200 per sixth grade class payable on receiving 90% of the parental consent forms (regardless of whether consent was given or not). In addition, schools were promised \$500 for each year it participated in the study. Control schools were give \$1000, training and curriculum material to be used for students after the study cohorts. Teachers implementing the programme were given \$60 to videotape each lesson with a bonus of \$100 if they taped all 11 core lessons and \$30 if they recorded all 3 booster lessons. Training was provided for instructors.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32		
	Brief Name	P626	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	30 days post-intervention, 1 year post-intervention		
Study Methods	Method of randomisation	Block randomisation	

Bibliographic reference		Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intention to treat approach Missing data was imputed Adjusted for clustering	
	Unit of allocation	Schools	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Unclear	Reasons for not completing the study: Logical inconsistencies in survey responses, students moved or were absent.
Outcomes measures and effect size.	Outcome	Intervention (n=Not reported) N (cluster) = Not reported	Control (n=Not reported) N (cluster) = Not reported
	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, 12 months		
	Lifetime alcohol use, unadjusted % (SD) Intervention vs control: not significant	63.5 (48.1)	59.9 (49.0)
	30 day alcohol use, unadjusted %, (SD) Intervention vs control: not significant	22.1 (41.5)	19.7 (39.8)

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32		
	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	Substance use data for cigarettes, marijuana and inhalants.		
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
	Amount and frequency of alcohol use	Some concerns	Method of allocation concealment not reported. All outcomes were subjective. Unclear reporting throughout.
	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	Office of Juvenile Justice and Delinquent Prevention, Office of Justice Programs, US Department of Justice. [Government]		
Comments	Limitations by author: The programme was originally developed for seventh graders and this trial delivered to sixth graders so may be developmentally inappropriate.		

Bibliographic reference	Ringwalt CL, Clark HK, Hanley S et al (2009) Project ALERT. A cluster randomized trial. Archives of paediatrics and adolescent medicine 163(7) 625-32
	External validity may be limited Limitations by reviewer: Unclear reporting of data
Additional reference	Ringwalt CL, Clark HK, Hanley S et al (2010) The effects of Project ALERT one year past curriculum completion. Prevention Science 11 172-184
Additional reference	Clark HK, Ringwalt CL, Shamblen SR et al (2011) Are substance use prevention programs more effective in schools making adequate yearly progress? A study of Project Alert. Journal of Drug Education 41(3) 271-288

D.1.31 Rohrbach 2010

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. Preventive Medicine 51(3-4) 313-319				
Registration	None				
Study type	Randomised controlled trial (cluster)				
Study dates	2004-2008				
Aim	Examine the effectiveness of Project Towards no Drug Abuse (TND) at one year follow up when implemented on a large scale				
Country/geographical location	USA				
Setting/School type	High schools (regular and continuation)				
Participant characteristics	Description	3346 high school students			
			Intervention 1 (n= 1085) N (clusters) = 22	Intervention 2 (n=772) N (clusters) = 21	Control (n=681) N (clusters) = 22
	Age	Mean (SD)	14.8 (0.2)	15.0 (0.2)	14.8 (0.2)
	Gender	Male, n (%)	457 (42.1%)	394 (51.0%)	300 (44.1%)

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319				
	Female, n (%)	628 (57.9%)	378 (49.0%)	381 (55.9%)	
	Socioeconomic status	Not reported			
	Ethnicity	White	213(44.6%)	218 (28.3%)	185 (27.1%)
		Latino/Hispanic	457 (42.1%)	249 (32.2%)	175 (25.7%)
		African American	155 (14.3%)	118 (15.3%)	112 (16.5%)
		Asian	27 (2.5%)	30 (3.9%)	18 (2.7%)
		Mixed	727 (6.7%)	59 (7.6%)	48 (7.1%)
		Other	37 (3.4%)	32 (4.2%)	25 (3.7%)
	SEND	Not reported			
	Baseline drinking behaviour	30 day alcohol use	347 (32%)	229 (29.6%)	218 (32.0%)
Inclusion criteria	Student assent Parental consent				
Exclusion criteria	None				
Number of Participants	3346 randomised; 2583 analysed				
Intervention 1	TIDieR Checklist criteria	Paper/ Location	Details		
	Brief Name	P3	Project TND – Implementation support		
	Rationale/theory/Goal	P3	Targets substance use and violence-related behaviours through the use of motivation, skills and decision-making.		
	Materials used	-	Not reported		

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319		
	Procedures used	-	Interactive teaching techniques and instruction to students
	Provider	P3	Teachers
	Method of delivery	P3	Group
	Location	P3	Classroom
	Duration	P3	4 weeks
	Intensity	P3	12 sessions lasting 45 mins each
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P3	Training was provided for teachers by certified Project TND trainers in a one-day workshop. The training provided an overview of the theoretical and evidence base for the curriculum. In addition for the implantation support arm, there were two on-site sessions of coaching from the TND trainer, web-based supports and additional technical assistance.
Intervention 2	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P3	Project TND – Regular training

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319		
Rationale/theory/Goal	P3		Targets substance use and violence-related behaviours through the use of motivation, skills and decision-making.
Materials used	-		Not reported
Procedures used	-		Interactive teaching techniques and instruction to students
Provider	P3		Teachers
Method of delivery	P3		Group
Location	P3		Classroom
Duration	P3		4 weeks
Intensity	P3		12 sessions lasting 45 mins each
Tailoring/adaptation	-		Not reported
Modifications	-		Not reported
Planned treatment fidelity	-		Not reported
Actual treatment fidelity	-		Not reported
Other details	P3		Training was provided for teachers by certified Project TND trainers in a one-day workshop. The training provided an overview of the theoretical and evidence base for the curriculum.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319		
	Brief Name	P3	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	1 year		
Study Methods	Method of randomisation	Blocked randomisation	

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319			
Method of allocation concealment	Participants were not blinded to allocation			
Statistical method(s) used to analyse data	Intention to treat approach Adjusted for clustering Two-level random coefficients modelling			
Unit of allocation	School district			
Unit of analysis	Individuals			
Attrition	Number of participants completing the study: 2583 (77%)	Reasons for not completing the study: Participants not reachable Participants decline to participate Excluded from analysis for inconsistent responses.		
Outcomes measures and effect size.	Outcome	TND – Implementation support (n=681) N (cluster) = 22	TND – Regular training (n=1085) N (cluster) =21	Control (n=772) N (cluster) = 22
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported		
	Age at first experience of drunkenness where reported	No reported		
	Amount and frequency of alcohol use, 1 year			
	30 day alcohol use	Any TND vs control OR 1.01 95 % CI 0.80 to 1.26		

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. <i>Preventive Medicine</i> 51(3-4) 313-319		
	School attendance	No reported	
	Alcohol related risky behaviour such as Unprotected or regretted sex	No reported	
	Mental health and wellbeing	No reported	
	Adverse or unintended effects	No reported	
Other outcomes measured	Cigarette, marijuana and hard drug use.		
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
	Amount and frequency of alcohol use	High	Participants were aware of intervention allocation and outcomes were measured with a self-reported approach. 77% follow up
	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 of Drug Abuse		
Comments	Limitations by author: Teachers may have implemented the intervention better than they would have normally due to being monitored. All outcomes were self-reported. It is not clear what other interventions were taught in the control group.		

Bibliographic reference	Rohrbach LA, Sun P and Sussman S (2010) One-year follow-up evaluation of the Project Towards No Drug Abuse (TND) dissemination trial. Preventive Medicine 51(3-4) 313-319
	Limitations by reviewer: No descriptive data reported
Additional references	None

D.1.32 Sanchez 2017

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojuntto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. Prevention Science 18;772-782			
Study type	Randomised controlled trial (cluster)			
Study dates	2014			
Aim	To evaluate the effects of an adapted European school-based drug prevention program Unplugged called #Tamojuntto in Brazil			
Country/geographical location	Brazil			
Setting/School type	Public school			
Participant characteristics	Description	6658 eighth grade students		
		Intervention (n= 2030) Cluster N = 38	Control (n=2183) Cluster N = 34	
	Age	11-12 years, n(%)	1154 (56.8%)	1304 (59.7%)
		13-15 years, n(%)	876 (43.2%)	879 (40.3%)
	Gender	Male n (%)	1014 (50%)	1035 (47.5%)
Female (%)		1014 (50%)	1146 (52.5%)	
Socioeconomic status	Not reported			

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojunto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782		
	Ethnicity	Not reported	
	SEND	Not reported	
	Baseline drinking behaviour	Past month alcohol use, n(%)	298/2013 (14.8%)
		Past month binge drinking, n(%)	229/1983 (11.5%)
			272/2169 (12.5%)
			196/2137 (9.2%)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	8247 randomised		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P774	#Tamojunto
	Rationale/theory/Goal	P774	Based on the European Drug Addiction Prevention Trial (EU-DAP)
	Materials used	P774	Student and teacher manuals
	Procedures used	P774	4 x classes on each of the following: Attitudes toward and knowledge of drugs Social and interpersonal skills Personal skills 3 parent workshops
	Provider	P774	Teacher
	Method of delivery	P774	Group
	Location	P774	Classroom

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojunto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782		
	Duration	-	Not reported
	Intensity	P774	12 x 1 hour classes
	Tailoring/adaptation	P774	The material was translated to Portuguese but maintained the original structure
	Modifications	P774	Activities were adapted
	Planned treatment fidelity	P774	Teachers had to complete a fidelity questionnaire to monitor the dose of the program delivered.
	Actual treatment fidelity	P774	89% of the classes completed the 12 program lessons. The other 11% terminated the program between lessons 4 and 11 because some teachers went on medical leave and others did not feel comfortable implementing the program.
	Other details	P774	Teachers attended a 2 day training facilitated by coaches who had been trained by the EU-DAP developers
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P774	Usual curriculum
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	-	Not reported
	Method of delivery	-	Not reported

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojunto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782		
	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	9 months		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intention to treat and per protocol analysis Descriptive statistics Adjusted for clustering	
	Unit of allocation	Schools	
	Unit of analysis	Individual	

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojunto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782		
	Attrition	Number of participants completing the study: 4213 (51%)	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	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, 9 months		
	Past month alcohol use, n (%)	374/2013 (18.6%)	382/3169 (17.6%)
	OR 95% CI (as reported)	0.8 (0.6, 1.1)	
	Past month binge drinking, n (%)	272/1983 (13.7%)	261/2137 (12.2%)
	OR 95% CI (as reported)	0.8 (0.6, 1.2)	
	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	Other drugs	
	Outcome	Overall RoB	Comments

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojunto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782		
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	Not clear if participants were aware of intervention allocation. 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	This study was funded by the Brazilian Ministry of Health through the TED 89-2014 (PI: Dr Sanchez)		
Comments	<p>Limitations by author:</p> <p>Cultural adaptation of the Unplugged program as these modifications may have also be responsible for the negative effects of the program regarding alcohol use</p> <p>Brazilian social context may mean the results obtained in Brazil could greatly differ from this obtained in Europe</p> <p>Low quality of Brazilian schools including poor literacy and inadequately trained teachers may have jeopardized the understanding of the activities</p> <p>Program used interactive techniques that were unfamiliar to Brazilian teachers</p> <p>Only 57% of the classes were completed and teachers excluded activities due to difficulties finding the time needed to implement them</p> <p>Training conducted over 2 days, rather than the 3 days as suggested</p> <p>Limitations by reviewer: None</p>		

Bibliographic reference	Sanchez ZM, Valente JY, Sanudo A et al (2017) The #Tamojuntto Drug Prevention Program in Brazilian Schools: a Randomized Controlled Trial. <i>Prevention Science</i> 18;772-782
Additional reference	Sanchez ZM, Valente JY, Sanudo A (2018) Effectiveness evaluation of the school-based drug prevention program #Tamojuntto in Brazil: 21-month follow-up of a randomized controlled trial. <i>International Journal of Drug Policy</i> 60 10-17
Additional reference	Valente JY and Cogo-Moreira (2018) A latent transition analysis of a cluster randomized controlled trial for drug use prevention. <i>Journal of consulting and clinical psychology</i> 86 (8) 657-665

D.1.33 Shope 1992a – Pretest 5th grade students

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121			
Registration	None			
Study type	Randomised controlled trial (cluster)			
Study dates	Fall 1984 to spring 1987			
Aim	To design, implement and evaluate an elementary school-based alcohol misuse prevention programme.			
Country/geographical location	USA			
Setting/School type	49 schools			
Participant characteristics	Description	5356 5th and 6th grade students; 1332 pretest 5th grade students		
			Intervention (n Not reported) N (clusters) not reported	Intervention plus booster (n not reported) N (clusters) not reported
	Age	Mean (SD)	Not reported	
	Gender	Male, n (%)	Not reported	
		Female, n (%)	Not reported	
Socioeconomic status	Not reported			

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121				
	Ethnicity	Not reported			
	SEND	Not reported			
			Intervention (n =252) N (clusters) not reported	Intervention plus booster (n=210) N (clusters) not reported	Control (n = 235) N (clusters) not reported
	Baseline drinking behaviour	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.15 (0.58)	0.13 (0.55)	0.22 (0.69)
			Intervention (n =266) N (clusters) not reported	Intervention plus booster (n=215) N (clusters) not reported	Control (n = 237) N (clusters) not reported
		Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.32 (0.78)	0.34 (0.86)	0.46 (1.07)
Inclusion criteria	Parental consent				
Exclusion criteria	None				
Number of Participants	1332				
Intervention	TIDieR Checklist criteria	Paper/ Location	Details		
	Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum		

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.	
Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.	
Procedures used	P108	Discussion, class activities and role-playing.	
Provider	P108	Trained project staff teachers (in pairs)	
Method of delivery	P108	Group	
Location	P108	Classroom	
Duration	P108	4 weeks	
Intensity	P108	4 sessions 1 week apart; 45 minutes lessons	
Tailoring/adaptation	-	Not reported	
Modifications	-	Not reported	
Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.	
Actual treatment fidelity	-	Not reported	
Other details	-	None	

Bibliographic reference		Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121	
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum plus booster sessions
	Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.
	Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.
	Procedures used	P108	Discussion, class activities and role-playing.
	Provider	P108	Trained project staff teachers (in pairs)
	Method of delivery	P108	Group
	Location	P108	Classroom
	Duration	P108	45 minutes lessons
	Intensity	P108	4 sessions 1 week apart in year 1. There were 3 additional booster sessions in year 2.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P109	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies on alcohol 53(2) 106-121			
	Actual treatment fidelity	-	Not reported	
	Other details	-	Not reported	
Follow up	3 months, 12 months, 15 months, 2 years			
Study Methods	Method of randomisation	Not reported		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Repeated measures analyses of variance Adjusted for clustering		
	Unit of allocation	Schools		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 1105/1332 (83%)		Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome			
	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

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121			
	Amount and frequency of alcohol use, 12 months			
		Intervention (n =252) N (clusters) not reported	Intervention plus booster (n=210) N (clusters) not reported	Control (n = 235) N (clusters) not reported
	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.29 (0.72)	0.23 (0.63)	0.39 (0.81)
	Pooled intervention mean (SD) ^{hhhh}	0.26 (0.46)		0.39 (0.81)
	Effective sample sizes calculated using ICC 0.1 ⁱⁱⁱⁱ	199		101
	MD 95% CI calculated by reviewer	-0.13 (-0.27, 0.01)		
		Intervention (n =266) N (clusters) not reported	Intervention plus booster (n=215) N (clusters) not reported	Control (n = 237) N (clusters) not reported
	Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.39 (0.99)	0.37 (0.91)	0.43 (0.99)
	Pooled intervention mean (SD) ^{jjjj}	0.38 (0.91)		0.43 (0.99)
	Effective sample sizes calculated using ICC 0.1 ^{kkkk}	203		100
	MD 95% CI calculated by reviewer	0.05 (-0.28, 0.18)		
	School attendance	Not reported	Not reported	Not reported

hhhh Imputed by reviewer

iiii ICC taken from Newton 2009

jjjj Imputed by reviewer

kkkk ICC taken from Newton 2009

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121			
	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
Other outcomes measured	Susceptibility, internal health locus of control. Curriculum index. Knowledge of resistance skills, knowledge of pressure, knowledge of effects			
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
	Amount and frequency of alcohol use	Some concerns		Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of 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	Not applicable		Not applicable
	Adverse or unintended effects	Not applicable		Not applicable
Source of funding	National Institute on alcohol Abuse and Alcoholism			
Comments	Limitations by author: None Limitations by reviewer: Randomisation methods not very clear			

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies on alcohol 53(2) 106-121
Additional references	None

D.1.34 Shope 1992b – No pretest 5th grade students

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies on alcohol 53(2) 106-121			
Registration	None			
Study type	Randomised controlled trial (cluster)			
Study dates	Fall 1984 to spring 1987			
Aim	To design, implement and evaluate an elementary school-based alcohol misuse prevention programme.			
Country/geographical location	USA			
Setting/School type	49 schools			
Participant characteristics	Description	5356 5th and 6th grade students; 1354 no pretest 5th grade students		
			Intervention (n Not reported) N (clusters) not reported	Intervention plus booster (n not reported) N (clusters) not reported
	Age	Mean (SD)	Not reported	
	Gender	Male, n (%)	Not reported	
		Female, n (%)	Not reported	
	Socioeconomic status	Not reported		
Ethnicity	Not reported			

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	SEND	Not reported	
	Baseline drinking behaviour	Not reported	
Inclusion criteria	Parental consent		
Exclusion criteria	None		
Number of Participants	1354		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum
	Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.
	Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.
	Procedures used	P108	Discussion, class activities and role-playing.
	Provider	P108	Trained project staff teachers (in pairs)
	Method of delivery	P108	Group
	Location	P108	Classroom
	Duration	P108	4 weeks
	Intensity	P108	4 sessions 1 week apart; 45 minutes lessons
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum plus booster sessions
	Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.
	Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.
	Procedures used	P108	Discussion, class activities and role-playing.
	Provider	P108	Trained project staff teachers (in pairs)
	Method of delivery	P108	Group
	Location	P108	Classroom
	Duration	P108	45 minutes lessons
	Intensity	P108	4 sessions 1 week apart in year 1. There were 3 additional booster sessions in year 2.

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.
	Actual treatment fidelity	-	Not reported
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P109	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

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies son alcohol</i> 53(2) 106-121		
	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	3 months, 12 months, 15 months, 2 years		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Repeated measures analyses of variance Adjusted for clustering	
	Unit of allocation	Schools	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 1039/1354 (77%)	Reasons for not completing the study: Not reported

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121			
Outcomes measures and effect size.	Outcome			
	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, 12 months			
		Intervention (n =289) N (clusters) not reported	Intervention plus booster (n=196) N (clusters) not reported	Control (n = 223) N (clusters) not reported
	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.30 (0.73)	0.41 (0.98)	0.24 (0.49)
	Pooled intervention mean (SD) ^{lll}	0.34 (0.70)		0.24 (0.49)
	Effective sample sizes calculated using ICC 0.1 ^{mmmm}	207		95
	MD 95% CI calculated by reviewer	0.1 (-0.06, 0.26)		
		Intervention (n =298) N (clusters) not reported	Intervention plus booster (n=201) N (clusters) not reported	Control (n = 225) N (clusters) not reported
Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.54 (1.28)	0.45 (0.98)	0.42 (1.03)	

^{lll} Imputed by reviewer

^{mmmm} ICC taken from Newton 2009

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Pooled mean (SD) ⁿⁿⁿⁿ	0.50 (1.37)	0.42 (1.03)
	Effective sample sizes calculated using ICC 0.1 ^{oooo}	210	95
	MD 95% CI calculated by reviewer	0.08 (-0.23, 0.39)	
	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	Susceptibility, internal health locus of control. Curriculum index. Knowledge of resistance skills, knowledge of pressure, knowledge of effects		
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
	Amount and frequency of alcohol use	High	Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of allocation. Subjective outcomes. High attrition.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable

nnnn Imputed by reviewer

oooo ICC taken from Newton 2009

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Institute on alcohol Abuse and Alcoholism		
Comments	Limitations by author: None Limitations by reviewer: Randomisation methods not very clear		

D.1.35 Shope 1992c – Pretest 6th grade students

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
Registration	None		
Study type	Randomised controlled trial (cluster)		
Study dates	Fall 1984 to spring 1987		
Aim	To design, implement and evaluate an elementary school-based alcohol misuse prevention programme.		
Country/geographical location	USA		
Setting/School type	49 schools		
Participant characteristics	Description	5356 5th and 6th grade students; 1257 pretest 6th grade students	
		Intervention (n Not reported) N (clusters) not reported	Control (n not reported) N (clusters) not reported
	Age	Mean (SD)	Not reported
	Gender	Male, n (%)	Not reported

Bibliographic reference		Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121	
	Female, n (%)	Not reported	
	Socioeconomic status	Not reported	
	Ethnicity	Not reported	
	SEND	Not reported	
		Intervention (n =437) N (clusters) not reported	Control (n 185) N (clusters) not reported
	Baseline drinking behaviour	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.20 (0.56)
		Intervention (n =464) N (clusters) not reported	Control (n = 203) N (clusters) not reported
		Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.36 (0.93)
			0.21 (0.63)
			0.40 (0.90)
Inclusion criteria	Parental consent		
Exclusion criteria	None		
Number of Participants	1332		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.	
Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.	
Procedures used	P108	Discussion, class activities and role-playing.	
Provider	P108	Trained project staff teachers (in pairs)	
Method of delivery	P108	Group	
Location	P108	Classroom	
Duration	P108	4 weeks	
Intensity	P108	4 sessions 1 week apart; 45 minutes lessons	
Tailoring/adaptation	-	Not reported	
Modifications	-	Not reported	
Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.	
Actual treatment fidelity	-	Not reported	
Other details	-	None	

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies son alcohol</i> 53(2) 106-121		
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P109	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121			
Follow up	3 months, 12 months, 15 months, 2 years			
Study Methods	Method of randomisation	Not reported		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Repeated measures analyses of variance Adjusted for clustering		
	Unit of allocation	Schools		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 1026/1257 (82%)	Reasons for not completing the study: Not reported	
Outcomes measures and effect size.	Outcome			
	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, 12 months			
		Intervention (n =437) N (clusters) not reported	Control (n = 185) N (clusters) not reported	

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.54 (0.98)	0.66 (1.31)
	Effective sample sizes calculated using ICC 0.1 ^{pppp}	201	85
	MD 95% CI calculated by reviewer	-0.12 (-0.40, 0.16)	
		Intervention (n =464) N (clusters) not reported	Control (n = 203) N (clusters) not reported
	Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.66 (1.24)	0.69 (1.22)
	Effective sample sizes calculated using ICC 0.1 ^{qqqq}	205	90
	MD 95% CI calculated by reviewer	-0.03 (-0.34, 0.28)	
	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	Susceptibility, internal health locus of control. Curriculum index. Knowledge of resistance skills, knowledge of pressure, knowledge of effects		
	Outcome	Overall RoB	Comments

pppp ICC taken from Newton 2009

qqqq ICC taken from Newton 2009

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
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 randomisation and allocation concealment not reported so unable to tell if participants were aware of 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	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Institute on alcohol Abuse and Alcoholism		
Comments	Limitations by author: None Limitations by reviewer: Randomisation methods not very clear		

D.1.36 Shope 1992d – No pretest 6th grade students

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
Registration	None		
Study type	Randomised controlled trial (cluster)		
Study dates	Fall 1984 to spring 1987		

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
Aim	To design, implement and evaluate an elementary school-based alcohol misuse prevention programme.		
Country/geographical location	USA		
Setting/School type	49 schools		
Participant characteristics	Description	5356 5th and 6th grade students; 1413 pretest 6th grade students	
		Intervention (n Not reported) N (clusters) not reported	Control (n not reported) N (clusters) not reported
	Age	Mean (SD)	Not reported
	Gender	Male, n (%)	Not reported
		Female, n (%)	Not reported
	Socioeconomic status	Not reported	
	Ethnicity	Not reported	
	SEND	Not reported	
Baseline drinking behaviour	Not reported		
Inclusion criteria	Parental consent		
Exclusion criteria	None		
Number of Participants	1332		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
Brief Name	P107	Alcohol Misuse Prevention Study (AMPS) curriculum	
Rationale/theory/Goal	P107	Based on social learning theory aimed to teach students about alcohol use and misuse in their social context.	
Materials used	P108	Film, worksheets, fact sheets, crosswords, posters, slides and class pamphlets.	
Procedures used	P108	Discussion, class activities and role-playing.	
Provider	P108	Trained project staff teachers (in pairs)	
Method of delivery	P108	Group	
Location	P108	Classroom	
Duration	P108	4 weeks	
Intensity	P108	4 sessions 1 week apart; 45 minutes lessons	
Tailoring/adaptation	-	Not reported	
Modifications	-	Not reported	
Planned treatment fidelity	P109	After initial training, a senior research staff member observed each project teacher teaching each session in the classroom and gave feedback. Teachers were assigned in pairs but with a different partner in each classroom enabling teachers to monitor each other. Weekly teaching staff meetings were held to discuss any difficulties and to reinforce a standardised approach.	
Actual treatment fidelity	-	Not reported	
Other details	-	None	

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies son alcohol</i> 53(2) 106-121		
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P109	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121			
Follow up	3 months, 12 months, 15 months, 2 years			
Study Methods	Method of randomisation	Not reported		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Repeated measures analyses of variance Adjusted for clustering		
	Unit of allocation	Schools		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 1050/1413 (77%)	Reasons for not completing the study: Not reported	
Outcomes measures and effect size.	Outcome			
	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, 12 months			
		Intervention (n =485) N (clusters) not reported	Control (n = 236) N (clusters) not reported	

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation <i>Journal of studies on alcohol</i> 53(2) 106-121		
	Alcohol use, [quantity x frequency, 7 point scale 0 = no drinking to 6 = 10 or more drinks per week], mean (SD)	0.57 (0.99)	0.67 (1.19)
	Effective sample sizes calculated using ICC 0.1 ^{rrrr}	205	100
	MD 95% CI calculated by reviewer	0.1 (-0.35, 0.15)	
		Intervention (n =510) N (clusters) not reported	Control (n = 246) N (clusters) not reported
	Alcohol misuse [10 items measuring overindulgence, trouble with peers and adults; 0 = none, 1 = at least once summed to create an overall index], mean (SD)	0.82 (1.45)	0.92 (1.59)
	Effective sample sizes calculated using ICC 0.1 ^{ssss}	209	101
	MD 95% CI calculated by reviewer	-0.1 (-0.46, 0.26)	
	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	Susceptibility, internal health locus of control. Curriculum index. Knowledge of resistance skills, knowledge of pressure, knowledge of effects		
	Outcome	Overall RoB	Comments

rrrr ICC taken from Newton 2009

ssss ICC taken from Newton 2009

Bibliographic reference	Shope JT, Dielman TE, Butchart AT et al (1992) An elementary school-based alcohol misuse prevention program: A follow-up evaluation Journal of studies son alcohol 53(2) 106-121		
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	High	Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of allocation. 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 alcohol Abuse and Alcoholism		
Comments	Limitations by author: None Limitations by reviewer: Randomisation methods not very clear		

D.1.37 Shope 1994

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. The journal of school health 64(4) 160-166		
Registration	None		
Study type	Randomised controlled trial (cluster)		

Bibliographic reference		Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. The journal of school health 64(4) 160-166			
Study dates	1989-1992				
Aim	To describe the development, implementation and evaluation of the enhanced AMPS curriculum.				
Country/geographical location	USA				
Setting/School type	Elementary/middle schools				
Participant characteristics	Description	3989 eligible grade 6 students			
			Intervention (n not reported) N (clusters) not reported	Control (n not reported) N (clusters) not reported	
	Age	Mean (SD)	Not reported		
	Gender	Male, n (%)	1852/3704 (50%) ^{ttt}		
		Female, n (%)	1852/3704 (50%)		
	Socioeconomic status	Not reported			
	Ethnicity	Not reported			
	SEND	Not reported			
	Baseline drinking behaviour			Intervention (n =691) N (clusters) not reported	Control (n=745) N (clusters) not reported
		Alcohol use [Quantity x frequency to create an index of drinks per week on a 7 point scale], mean (SD)			
		Abstainer (intervention n = 512; control n=547)	0.06 (0.25)	0.05 (0.22)	
		Supervised drinker (intervention n = 123; control n=145)	1.00 (0.22)	1.02 (0.25)	
	Unsupervised drinker (intervention n = 56; control n=53)	1.30 (1.06)	1.04 (0.28)		

^{ttt} Calculated by reviewer from female percentage reported

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. <i>The journal of school health</i> 64(4) 160-166		
	Alcohol misuse [overindulgence, trouble with peers, trouble with adults from alcohol use], mean (SD)		
	Abstainer (intervention n = 511; control n=552)	0.00 (0.06)	0.02 (0.20)
	Supervised drinker (intervention n = 134; control n=154)	0.35 (0.68)	0.35 (0.68)
	Unsupervised drinker (intervention n = 63; control n=58)	1.71 (1.83)	1.16 (1.24)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	3989; 1436 and 1472 in analyses		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P160	Alcohol misuse prevention study (AMPS) curriculum (enhanced)
	Rationale/theory/Goal	P160	Based on social learning theory Teaches students about alcohol use and misuse in their social contexts and to develop students' skills in identifying and resisting social pressure to use and misuse alcohol.
	Materials used	P161	Audio-visual materials, student activity sheets and handouts
	Procedures used	-	Not reported
	Provider	P161	Project teachers
	Method of delivery	P161	Group
	Location	P161	Classroom

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. <i>The journal of school health</i> 64(4) 160-166		
	Duration	P161	45 minutes sessions
	Intensity	P161	8 sessions in 6th grade, 5 sessions in 7th grade and 4 sessions in 8th grade
	Tailoring/adaptation	-	Not reported
	Modifications	P160	Curriculum was expanded and enhanced by adding more sessions, role-playing refutation of common expectations for alcohol use, norm-setting and by having students use the knowledge and experience to guide problem-solving and decision-making.
	Planned treatment fidelity	P161	Weekly meetings and training (6th grade 38 hours, 7th grade 28.5 hours and 8th grade 21.5 hours). Teachers self-rated performance in each session. Research staff rated every teacher on performance objectives. Each classroom was evaluated for students' responsiveness, cooperation and involvement. Regular classroom teachers rated project teachers' effectiveness.
	Actual treatment fidelity		Teacher self-rating averaged 4.5 on a scale of 1 (not very well) to 5 (very well). Research staff ratings of teachers' performance averaged 4.4 on a scale of 1 (not at all) to 5 (always). Classrooms were rated on average 4.3 on a scale of 1 (not at all) to 5 (always). Project teachers' effectiveness was rated on average as 2.9 on a scale of 1 (not at all effective) to 3 (very effective).
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P161	Control
	Rationale/theory/Goal	-	Not reported
	Materials used	-	Not reported

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. <i>The journal of school health</i> 64(4) 160-166		
	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	Each year (spring of 6th, 7th and 8th grade). Intervention implemented each winter.		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. <i>The journal of school health</i> 64(4) 160-166		
	Statistical method(s) used to analyse data	Two-way repeated measures analysis of variance Adjusted for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 1436/3989 (36%)	Reasons for not completing the study: Absence, relocation, student or parent refusal. Data from 76 students was removed as they attended less than half of the sessions. 148 control and 133 treatment students were removed as the standard curriculum received was too similar to AMPS.
Outcomes measures and effect size.	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, grade 8 post-test (around 3 months post-intervention), mean (SD)		
	Alcohol use by baseline drinking [Quantity x frequency to create an index of drinks per week on a 7 point scale], mean (SD)		
	Abstainer (intervention n = 512; control n=547)	0.65 (1.08)	0.62 (1.04)
	Supervised drinker (intervention n = 123; control n=145)	1.07 (1.14)	1.04 (1.14)
	Unsupervised drinker (intervention n = 56; control n=53)	1.39 (1.57)	1.43 (1.45)

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. The journal of school health 64(4) 160-166		
	Pooled mean (SD) ^{uuuu}	0.78 (1.50)	0.76 (1.31)
	Effective sample sizes calculated using ICC 0.1 ^{vvv}	138	149
	MD 95% CI calculated by reviewer	0.02 (-0.31, 0.35)	
	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
	Alcohol misuse [overindulgence, trouble with peers, trouble with adults from alcohol use], (around 3 months post-intervention), mean (SD)		
	Abstainer (intervention n = 511; control n=552)	0.58 (1.31)	0.59 (1.41)
	Supervised drinker (intervention n = 134; control n=154)	0.89 (1.59)	0.91 (1.50)
	Unsupervised drinker (intervention n = 63; control n=58)	1.86 (2.27)	2.03 (2.26)
	Pooled mean (SD) ^{www}	0.75 (3.85)	0.82 (4.18)
	Effective sample sizes calculated using ICC 0.1 ^{xxx}	139	150
	MD 95% CI calculated by reviewer	-0.07 (-1.00, 0.86)	
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Curriculum knowledge		
	Outcome	Overall RoB	Comments

uuuu Imputed by reviewer

vvv ICC taken from Newton 2009

www Imputed by reviewer

xxx ICC taken from Newton 2009

Bibliographic reference	Shope JT, Kloska DD, Dielman TE et al (1994) Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six-eight. <i>The journal of school health</i> 64(4) 160-166		
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	High	Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of allocation. Subjective outcomes. Very 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	High	Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of allocation. Subjective outcomes. Very high attrition
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	The National Institute on Alcohol Abuse and Alcoholism		
Comments	Limitations by author: Loss to follow up was high and there were small numbers of baseline drinkers making it harder to detect differences. Limitations by reviewer: Very high attrition and discrepancy in sample sizes reported in each outcome.		

D.1.38 Skärstrand 2013

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. European Journal of Public Health 24(4) 578-584			
Study type	Randomised controlled trial (cluster)			
Study dates	2003-2006			
Aim	To evaluate the effects of the Swedish version of the Strengthening Families programme on substance use.			
Country/geographical location	Sweden			
Setting/School type	Elementary schools			
Participant characteristics	Description	Sixth-grade students (aged 12) and their parents		
		Intervention (n = 371) N (cluster)=10	Control (n = 216) N (cluster)=9	
	Age	Reported as age 12		
	Gender	Male	189 (50.9%)	103 (47.7%)
		Female	182 (49.1%)	113 (52.3%)
	Socioeconomic status ^{yyyy}	High social load	74 (19.9%)	33 (15.3%)
		Low social load	297 (80.1%)	183 (84.7%)
	Ethnicity	Not reported		
	SEND	Not reported		
	Intervention (n = 328) N (cluster)=10	Control (n = 193) N (cluster)=9		
	Lifetime drunkenness, %			

yyyy Index derived from different key factors on social load used in Stockholm where the mean load is 100. Low <100, high > 100.

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. European Journal of Public Health 24(4) 578-584			
Baseline drinking behaviour ^{zzzz}	Whole sample ^{aaaaa}		25 (7.5%)	14 (7.1%)
	Boys ^{bbbb}		8.8%	5.9%
	Girls		6.0%	8.2%
	Drunkenness past 30 days, mean (SD) (recorded as any or no drunkenness)			
	Whole sample		0.02 (0.1)	0.05 (0.3)
	Boys		0.01 (0.1)	0.04 (0.2)
	Girls		0.02 (0.1)	0.06 (0.4)
Inclusion criteria	Schools were required to have grades 6-9 in the same school			
Exclusion criteria	Schools could not have age-integrated classes			
Number of Participants	521 participants gave consent at baseline			
Intervention	TIDieR Checklist criteria	Paper/Locaton	Details	
	Brief Name	P579	Strengthening families program (SFP 10-14)	
	Rationale/theory/Goal	P578	Bio psychosocial vulnerability model, resiliency model and a family process model linking economic stress and adolescent adjustment	
	Materials used	P579	The youth sessions included role-playing, peer resistance training and practical skills training. The parent sessions were based on video films. The joint sessions included family projects and festivities.	
	Procedures used	P579	Part 1: 1hr of separate parent and youth skills-building curriculum followed by a 1 hr joint session. Part 2: Booster sessions	

zzzz Number of people in this sample were those who gave consent

aaaaa Whole sample n calculate from percentage reported

bbbb Number of people who gave consent not reported by gender.

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. European Journal of Public Health 24(4) 578-584		
			Part 1: 6 separate sessions for parents and youth and 1 combined session over 7 consecutive weeks in grade 6 Part 2: 4 separate sessions for parents and youth and 1 combined session over 5 consecutive weeks in grade 7
	Provider	P579	Class teachers with the assistance of a leader
	Method of delivery	P579	Groups
	Location	-	Not reported
	Duration	P579	7 weeks
	Intensity	P579	Once per week 4 booster sessions in second year
	Tailoring/adaptation	P579	Swedish cultural adaptation of the SFP 10-14 programme
	Modifications	P579	There were some modifications to the programme's format which were discussed and agreed with the programme's first author.
	Planned treatment fidelity	P579	To ensure programme fidelity the group leaders completed checklists after each session where they answered questions about the activities.
	Actual treatment fidelity	-	Not reported
	Other details	P579	All youth received the training but the participation of the parents was voluntary. Fourteen leaders and 20 teachers were recruited for the study and were trained by two SFP 10-14 trainers.
Comparison	TiDieR Checklist criteria	Paper/Location	Details
	Brief Name	P579	Control

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. <i>European Journal of Public Health</i> 24(4) 578-584		
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	P579 P583		A questionnaire was sent to all principals in the control schools to check for other concomitant alcohol, tobacco and other drugs (ATOD) prevention activities All of the control schools carried out some sort of ATOD-activity, such as an invited lecturer, as a theme in ordinary curricula or a lesson by the school nurse, but none had a structured manual-based programme.
Follow up	1 year, 2 years and 3 years		

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. <i>European Journal of Public Health</i> 24(4) 578-584			
Study Methods	Method of randomisation	Method not reported. Stratified by socioeconomic status		
	Method of allocation	Not reported		
	Statistical method(s) used to analyse data	For effectiveness, odds ratios and 95% confidence intervals were estimated as a measure of association between experimental conditions. Intention to treat analysis Missing data imputed with the Monte Carlo method Clusters were accounted for		
	Unit of allocation	School		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study (12 months): Intervention 320/328 (98%) Control 188/193 (97%)	Reasons for not completing the study: moved abroad or declined further participation	
	Outcomes measures and effect size.			
Outcome		Intervention (n=320) N (clusters) = 10	Control (n = 188) N (clusters) = 9	Adjusted OR (95% CI)
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

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. <i>European Journal of Public Health</i> 24(4) 578-584		
	Amount and frequency of alcohol, 12 months		
	Lifetime drunkenness		
	Whole sample, n (%)	53 (16.7%)	64 (13.2%) OR 1.39 (0.65 to 2.96)
	Boys, (%)	16.9%	13.6% OR 1.48 (0.48 to 4.53)
	Girls, (%)	16.6%	12.8% OR 1.61 (0.56 to 4.64)
	Drunkenness past 30 days, mean (SD)		
	Whole sample	0.09 (0.6)	0.06 (0.3) OR 0.93 (0.24 to 3.56)
	Boys	0.06 (0.3)	0.05 (0.3) OR 2.80 (0.13 to 60.05)
	Girls	0.12 (0.7)	0.06 (0.2) OR 0.47 (0.08 to 2.77)
	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	Smokers, illicit drug use, norm-breaking behaviours lifetime.		
Risk of bias by outcome	Outcome	Overall RoB	
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not applicable	
	Age at first experience of drunkenness where reported	Not applicable	
	Amount and frequency of alcohol use	Some concerns	
	No information on if participants were aware of their allocation. The outcomes were self-measured to there is a potential		

Bibliographic reference	Skärstrand E, Sundell K and Andréasson S (2013) Evaluation of a Swedish version of the Strengthening Families Programme. European Journal of Public Health 24(4) 578-584		
			for bias to be introduced if they were aware.
	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	Research grant from the Swedish Council for Working Life and Social Research (FAS).		
Comments	The authors had concerns over missing data and potential reporting bias from self-reported measures. There is also the possibility of selection bias as school has to apply to be part of the study.		

D.1.39 Sloboda 2009

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. Drug and alcohol dependence 102 1-10		
Registration	None		
Study type	Randomised controlled trial (cluster)		
Study dates	2001-2003		
Aim	To determine whether students exposed to the intervention had better outcomes of substance use at 11th grade than students in the control group		
Country/geographical location	USA		
Setting/School type	83 high schools and their feeder middle schools		
Participant characteristics	Description	17,320 seventh grade students	
		Intervention (n=10,028)	Control (n=7292)

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. Drug and alcohol dependence 102 1-10			
			N (cluster) = 41	N (cluster) = 42
	Age	Mean (SD)	12.4 (0.66)	12.5 (0.68)
	Gender	Male, n (%)	4462 (44.5%)	3187 (43.7%)
		Female, n (%) ^{ccccc}	5566 (55.5%)	4105 (56.3%)
	Socioeconomic status	Not reported		
	Ethnicity	White	3289 (32.8%)	2873 (39.4%)
		Black	1264 (12.6%)	1123 (15.4%)
		Latino/Hispanic	2788 (27.8%)	1305 (17.9%)
		Asian	421 (4.2%)	343 (4.7%)
		American Indian	832 (8.3%)	605 (8.3%)
		Other	1183 (11.8%)	941 (12.9%)
	SEND	Not reported		
	Baseline drinking behaviour	Past 30 day use of alcohol, n (%)	1384 (13.8%)	860 (11.8%)
Inclusion criteria	Parental consent and student assent			
Exclusion criteria	None			
Number of Participants	17,320. Intervention n=10028; control n=7292			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	P2	Take Charge of Your Life (TCYL)	
	Rationale/theory/Goal	P2	Designed to target students during their most at-risk years between 7th and 9th grade to prevent the use of alcohol, tobacco and other drugs.	

ccccc Calculated by reviewer from male data reported.

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10		
			TCYL demonstrates the personal, social and legal risks and consequences of the use of these substances.
Materials used	P2		Curriculum
Procedures used	P2		Active or constructivist learning through problem-solving and role-playing
Provider	P2		Police officers (trained Drug Abuse Resistance Education – DARE officers)
Method of delivery	P2		Group
Location	P2		Classroom
Duration			1 year in 7th grade and 1 year in 9th grade
Intensity			10 lessons in 7th grade and 7 booster lessons in 9th grade
Tailoring/adaptation	-		Not reported
Modifications	P2		TCYL has a different philosophy to DARE curricula so post-training measures were made to measure the intervention intent and comfort level of teaching TCYL. Over 90% of the officers agreed to statements reflecting their perceptions of TCYL and believed the programme would be effective in reducing substance use.
Planned treatment fidelity	P2		Independent raters observed the officers to determine the extent to which they covered the curricula content and used appropriate instructional strategies.
Actual treatment fidelity	P2; [Sloboda 2008] p398		86 out of 140 officers trained actually delivered the intervention. 58 taught the 7th grade and 61 taught the ninth grade. 33 officers taught both. The results of the observations showed that the lessons were taught and the curricula implemented with an average content coverage of 74%. The appropriate instructional strategy was used on average 55% of the time.

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10		
	Other details	P2	For the DARE officers, there were a total of six 3-day training sessions for the 7th grade curriculum and three 3-day training sessions for the 9h grade curriculum. Trainees were given a manual which described the purpose, rationale and developmental criteria of the curriculum.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P4	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
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10		
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	5 years post-randomisation (2 years post-intervention)		
Study Methods	Method of randomisation	Not reported	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Adjusted for the intra-cluster correlation of students nested within the school clusters. Descriptive statistics. Multiple imputation approach to address missing data that assumes values are missing at random.	
	Unit of allocation	School-district	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 80/83 school districts Intervention n = 5756 (50.8%) Control n = 4678 (56.9%)	Reasons for not completing the study: One high school voluntarily left the study 2 schools were destroyed by Hurricane Katrina Many students transferred to different schools due to the No Child Left Behind Act 2001
Outcomes measures and effect size.			
	Outcome	Intervention (n=10,028) N (cluster) = 81	Control (n=7292) N (cluster) = 82

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10	
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, 2 years post-intervention ^{dddd}		
Binge-drank, past 14 days [0 no use, 1 any use], n (%)	2818 (28.1%)	1801 (24.7%)
RR 95% CI (as reported)	1.14 (1.01, 1.27)	
Alcohol use, last 30 days, [0 no use, 1 any use], n (%)	4583 (45.7%)	3055 (41.9%)
RR 95% CI (as reported)	1.09 (1.01, 1.18)	
Got drunk, last 30 days, [0 no use, 1 any use], n (%)	3008 (30.0%)	1991 (27.3%)
RR 95% CI (as reported)	1.10 (0.98, 1.22)	
Alcohol use, last 12 months, [0 no use, 1 any use], n (%)	6127 (61.1%)	4280 (58.7%)
Got drunk, last 12 months [0 no use, 1 any use], n (%)	4342 (43.3%)	3004 (41.2%)
	Intervention (n=5594) N (cluster) = not reported	Control (n=4105) N (cluster) = not reported
Binge-drank, past 14 days (female), [0 no use, 1 any use], n (%)	1779 (31.8%)	1104 (26.9%)
Alcohol use, last 30 days (female), [0 no use, 1 any use], n (%)	2853 (51.0%)	1958 (47.7%)

^{dddd} Outcomes measure on a scale of 0 = no use to 6 = 40 or more times, then dichotomised to no use or use due to the skewed nature of the data.

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10		
	Got drunk, last 30 days (female), [0 no use, 1 any use], n (%)	1924 (34.4%)	1281 (31.2%)
	Alcohol use (female), last 12 months, [0 no use, 1 any use], n (%)	3776 (67.5%)	2701 (65.8%)
	Got drunk (female), last 12 months [0 no use, 1 any use], n (%)	2763 (49.4%)	1950 (47.5%)
		Intervention (n=4434) N (cluster) = not reported	Control (n=3187) N (cluster) = not reported
	Binge-drunk, past 14 days (male), [0 no use, 1 any use], n (%)	1649 (37.2%)	1064 (33.4%)
	Alcohol use, last 30 days (male), [0 no use, 1 any use], n (%)	2381 (53.7%)	1517 (47.6%)
	Got drunk, last 30 days (male), [0 no use, 1 any use], n (%)	1707 (38.5%)	1093 (34.3%)
	Alcohol use (male), last 12 months, [0 no use, 1 any use], n (%)	2935 (66.2%)	1970 (61.8%)
	Got drunk (male), last 12 months [0 no use, 1 any use], n (%)	2292 (51.7%)	1511 (47.4%)
	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	Cigarette and marijuana use.		

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. <i>Drug and alcohol dependence</i> 102 1-10		
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
	Amount and frequency of alcohol use	Some concerns	Methods of randomisation and allocation concealment not reported so unable to tell if participants were aware of allocation. Subjective outcomes. Very high attrition addressed somewhat with imputation.
	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		
Source of funding	Robert Wood Johnson Foundation		
Comments	Limitations by author: High attrition Only 73% of content was delivered in the lessons The use of active consent limited access to students. Limitations by reviewer: None		
Additional reference	Sloboda Z, Stephens P, Pyakuryal A et al (2009) Implementation fidelity: the experience of the Adolescent Substance Abuse Prevention Study. <i>Health Education research</i> 24 (3) 394-406		

Bibliographic reference	Sloboda Z, Stephens RC, Stephens PC (2009) The adolescent substance abuse prevention study: A randomized field trial of a universal substance abuse prevention program. Drug and alcohol dependence 102 1-10
Additional reference	Bavarian N. Duncan R, Lewis KM et al (2015) Adolescent substance use following participation in a universal drug prevention program: Examining relationships with program recall and baseline use status. Substance abuse 36(3) 359-367

D.1.40 Spoth 2002

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. Psychology of Addictive Behaviors 16(2) 129-134				
Study type	Randomised controlled trial (cluster)				
Study dates	Not reported				
Aim	To evaluate the substance use initiation effects of an intervention combining family and school-based competency-training intervention components.				
Country/geographical location	USA				
Setting/School type	36 rural schools in a Midwestern state				
Participant characteristics eeeeee	Description	Seventh-graders			
			LST + SPF (n=549) N (schools) = 12	LST (n=621) N (schools) = 12	
	Age	Not reported			
	Gender	Male n (%)	300 (54.7%)	332 (53.5%)	255 (51.7%)
		Female n (%)	249 (45.3%)	289 (46.5%)	239 (48.3%)
Socioeconomic status	Eligible for free or reduced-price lunch n (%)	149 (27.2%)	151 (24.3%)	101 (20.4%)	
Ethnicity	Caucasian n (%)	523 (95.3%)	599 (96.5%)	478 (96.8%)	

eeeeee Absolute numbers calculated by reviewer from percentages reported

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134			
	SEND	Not reported		
	Baseline drinking behaviour	Ever used alcohol n (%)	307 (55.9%)	357 (57.5%) 232 (46.9%)
Inclusion criteria	Schools: Eligible for the free and reduced cost lunch program (approx. 20% or more of households in the school districts within the 185% of the federal poverty level) School district enrolment under 1200 Grades 6-8 taught in one location			
Exclusion criteria	Not reported			
Number of Participants	1664. Baseline mean cluster sizes: Strengthening families program + Life skills training 45 students; Life skills training alone 40 students; Control 52 students 12 clusters per arm.			
Intervention	TIDieR Checklist criteria	Paper/Location	Details	
	Brief Name	P130	Life skills training (LST).	
	Rationale/theory/Goal	P130	Based on social learning theory and problem behaviour theory	
	Materials used	-	Not reported	
	Procedures used	P130	Interactive teaching techniques including coaching, facilitating, role modelling and feedback and reinforcement.	
	Provider	P130	Teacher	
	Method of delivery	P130	Group	
	Location	P130	Classroom	

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134		
	Duration	P130	3 -15 weeks (see intensity)
	Intensity	P130	40-45 minute classroom session. 15 sessions one a week for 15 weeks or 5 days per week for 3 weeks in grade 7 plus 5 booster session in grade 8.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P130	A member of the project staff observed each classroom teacher 2 or 3 times whilst LST was being taught. Teachers were also observed during the booster sessions.
	Actual treatment fidelity	Spoth 2005 P7	78 single LST teacher observations and 20 double LST teacher observations were completed. 78% of all the individual content was covered in the curriculum.
	Other details	P130	Consisted of 5 components: a) cognitive component b) self-improvement component c) decision-making d) coping with anxiety and e) social skills training. Teachers were trained by university facilitators.
Intervention	TIDieR Checklist criteria	Paper/Locaton	Details
	Brief Name	P130	Strengthening families program: for parents and youth (SFP 10-14) plus LST
	Rationale/theory/Goal	P130	Biopsychosocial model
	Materials used	P130	Sessions included discussions, skill-building activities, videotapes and games.
	Procedures used	P130	Intervention was delivered in the evening (outside of school hours)
	Provider	P130	University-trained facilitators (3 per session) for SFP 10-14 and teachers for LST

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134		
	Method of delivery	P130	Groups (average of 8 families per group)
	Location	P130	School
	Duration	P130	7 weeks
	Intensity	P130	7 sessions delivered once a week for 7 consecutive weeks in the second semester of grade 7.
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P130	Each team of facilitators were observed two to three times to assess their adherence to the protocol.
	Actual treatment fidelity	P130	Evaluations showed adherence was on average 98% for family sessions, 92% for parent sessions and 94% for youth sessions.
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Locaton	Details
	Brief Name	Spoth 2005 P3	Living with your Teenager (Minimal contact control)
	Rationale/theory/Goal	-	Not reported
	Materials used	Spoth 2005 P3	Leaflets
	Procedures used	-	Not reported

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134		
	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	1 year, 2.5 years		
Study Methods	Method of randomisation	Block design. 12 matched sets of 3 schools considering family SES, risk, school grade structure and distance of the community	
	Method of allocation	School officials were informed which experimental condition they received.	
	Statistical method(s) used to analyse data	Multi-level analysis of covariance	

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134			
	Unit of allocation	School		
	Unit of analysis	School		
	Attrition	Number of participants completing the study: 1 year follow up LST + SFP 10-14: 453/549 (83%) LST: 503/621 (81%) Control: 416/494 (84%)	Reasons for not completing the study: Left the study region.	
Outcomes measures and effect size.	Outcome	SFP 10-14 plus LST (n=453) N (schools) = 12	LST (n=503) N (schools) = 12	Control (n=416) N (schools) = 12
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported		
	New alcohol users % ^{ffff} , 1 year	35.2%	25.7%	36.7%
	Age at first experience of drunkenness where reported	Not reported		Not reported
		SFP 10-14 plus LST (n=399) N (schools) = 12	LST (n=430) N (schools) = 12	Control (n=369) N (schools) = 12
	Amount and frequency of alcohol use ^{ggggg}			
	Regular alcohol use, mean (SE), 2.5 years [1= one or more times per month; 0 = less frequent or no use]	0.229 (0.025) SD 0.50	0.198 (0.025) SD 0.51	0.240 (0.026) SD 0.50

^{ffff} School-level data for proportions of new users in each school since post-test (1 month after intervention delivery).

^{ggggg} SDs calculated by reviewer from SEs reported

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134			
Dichotomised data ^{hhhhh} - less frequent or no alcohol use	129/399 (32.3%)	151/430 (35.1%)	116/369 (31.5%)	
Dichotomised data ⁱⁱⁱⁱ - one or more times per month	270/399 (67.7%)	279/430 (64.9%)	253/369 (68.6%)	
Effective sample sizes calculated with ICC 0.01 ^{jjjj}	N/A	211/325	191/279	
RR 95% CI for LST vs control	0.9 (0.8, 1.1)			
Effective sample sizes calculated with ICC 0.0152 ^{kkkk}	117/271	N/A	99/251	
RR 95% CI for SPF 10-14 LST vs control	1.1 (0.9, 1.3)			
Weekly drunkenness, mean (SE), 2.5 years [1= one or more times per week; 0 = less than once per week]	0.038 (0.011) SD 0.21	0.034 (0.010) SD 0.21	0.056 (0.011) SD 0.21	
Dichotomised data ^{llll} - less than once per week	172/399 (43.1%)	187/430 (43.5%)	146/369 (39.6%)	
Dichotomised data ^{mmmm} - one or more times per week	227/399 (56.9%)	243/430 (56.5%)	223/369 (60.4%)	
Effective sample sizes calculated with ICC 0.42 ⁿⁿⁿⁿ	N/A	17/30	15/25	
RR 95% CI for LST vs control	0.9 (0.6, 1.5)			
School attendance	Not reported		Not reported	

hhhhh Imputed by reviewer

iiii Imputed by reviewer

jjjj ICC from Champion 2016

kkkk ICC from Hodder 2017

llll Imputed by reviewer

mmmm Imputed by reviewer

nnnn ICC from Dumas 2017

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134		
	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	Outcomes for other substances – tobacco and marijuana.		
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
	Amount and frequency of alcohol use	Some concerns	School officials were aware but there is no information that the participants who would be the outcome assessors for the self-report outcomes were aware or not.
	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	Supported by grants from the National Institute on Drug abuse and the National Institute of Mental Health		
Comments	Limitations by author: Study conducted in rural Midwestern communities among primarily Caucasian students. Limitations by reviewer:		

Bibliographic reference	Spoth L RL, Redmond, L, Trudeau L et al (2002) Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. <i>Psychology of Addictive Behaviors</i> 16(2) 129-134
	Follow-up times not clearly reported, weekly drunkenness measure may not be a particularly useful measure of drinking habits in this age group
Additional reference	Spoth R, Randall, K, Shin, C et al (2005) Randomized study of combined universal family and school preventative interventions: Patterns of long term effects on initiation, regular use and weekly drunkenness. <i>Psychology of addictive behaviours</i> 19(4), 372-381.
Additional reference	Spoth R, Trudeau, L, Redmond, C et al (2014) Replication RCT of early universal prevention effects on young adult substance misuse. <i>Journal of consulting clinical psychology</i> 82(6), 949-963
Additional reference	Spoth RL, Randall GK, Trudeau L et al (2008) Substance use outcomes 5 ½ years past baseline for partnership-based, family-school preventive interventions. <i>Drug and alcohol dependence</i> 96(1-2), 57-68
Additional reference	Spoth R, Trudeau L, Redmond C et al (2016) Replicating and extending model of effects of universal preventive intervention during early adolescence on young adult substance misuse. <i>Journal of consulting and clinical psychology</i> 84(10) 913-21

D.1.41 Sumnall 2017

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. <i>Public Health Research</i> 5(2)
Trial registration	ISRCTN47028486
Study type	Randomised controlled trial (cluster)
Study dates	November 2011 to February 2015
Aim	To assess the effectiveness of a combined classroom curriculum and parental intervention on self-reported alcohol use and alcohol-related harms.
Country/geographical location	Northern Ireland and Scotland

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. <i>Public Health Research</i> 5(2)			
Setting/School type	Post-primary schools			
Participant characteristics	Description	12,738 secondary school students in year 9 (Northern Ireland) or S2 (Scotland), aged 12-13 years		
			Intervention (n = 5749)	Control (n = 5567)
	Age	Mean, years	12.5	12.5
	Gender	Male n(%)	2834 (50%)	2787 (51.1%)
		Female n(%)	2829 (50%)	2670 (48.9%)
		Missing	86	110
	Socioeconomic status	Free school meal provision		
		No, n(%)	4436 (77.5%)	4289 (77.3%)
		Yes, n(%)	1290 (22.5%)	1258 (22.7%)
		Missing	23	20
	Ethnicity	White, n(%)	4495 (94.5%)	4492 (95.3%)
		Non-white, n(%)	293 (5.5%)	248 (4.7%)
		Missing	961	824
	SEND	Not reported		
	Baseline drinking behaviour	Heavy episodic drinking (self-reported consumption of ≥ 6 units for males and ≥ 4.5 units for females in a single episode in the previous 30 days)		
No, n(%)		5261 (92.4%)	5082 (92.2%)	
Yes, n(%)		293 (5.5%)	248 (4.7%)	
Missing		57	53	
Inclusion criteria	Male and female students attending mainstream secondary schools in NI and Glasgow/Inverclyde In year 8 or S1 at randomisation			

Bibliographic reference			
Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. Public Health Research 5(2)			
Exclusion criteria	Pupils not in the specified school year and age group, and pupils in non-mainstream and vocational education (e.g. pupil referral units, further education colleges)		
Number of Participants	12,738 randomised		
Intervention	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P3	Steps towards alcohol misuse prevention programme (STAMPP)
	Rationale/theory/Goal	P3	Combines a harm reduction philosophy with skills training, education and activities designed to encourage positive behavioural change
	Materials used	P8	Classroom curriculum component was adapted from the School Health and Alcohol Harm Reduction Project (SHAHRP) Parent component included a presentation on the Chief Medical Officer's (CMO) 2009 guidelines on drinking in childhood, alcohol prevalence in young people and corrected (under)estimates of youth drinking rates, and it highlighted the importance of setting strict family rules around alcohol, with the recognition that children often model their own alcohol use behaviour on that of their parent(s)/carer(s). Follow up leaflet mailed to parents.
	Procedures used	P8	Classroom curriculum students plus a brief intervention for parents of students. The brief intervention was followed by a discussion on setting family rules on alcohol.
	Provider	P7	Trained teachers (curriculum) Trained facilitators (brief intervention)
	Method of delivery	P7	Group
	Location	P8	Classroom
	Duration	-	Not reported
	Intensity	P7	Phase 1: 6 lessons (16 activities) in year 9; Phase 2 4 lessons (10 activities) in year 10

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. <i>Public Health Research</i> 5(2)		
Tailoring/adaptation	P8		The curriculum component was adapted from the original Australian SHAHRP curriculum The brief intervention component was based in part on the Dutch adaptation of the Swedish Örebo Prevention Programme.
Modifications	P8		The curriculum was modified to target 12-13 year old rather than 13+ year olds and was reduced in terms of number of lessons and activities. The brief intervention was modified to just one parent evening, delivered by independent facilitators rather than the research team and used UK data.
Planned treatment fidelity	P62		Intervention teachers were asked to complete two self-report surveys concerning fidelity and completeness of delivery of the two phases of SHAHRP. The extent to which each of the activities were delivered in each phase was measured from 0 = "not at all" to 2 = "fully" The degree to which the accompanying CD to support delivery was used was measured on a 10point Likert scale of 1 "never used it" to 10 "I used it at all times".
Actual treatment fidelity	P63		Phase 1 overall fidelity (sum of all activities/measures): mean (SD) 72.69 (17.98) Phase 2 overall fidelity (sum of all activities/measures): mean (SD) 68.76 (20.60)
Other details	P64		Process evaluation: The classroom component was delivered largely as intended with some variation in fidelity scores between schools for numbers of lessons required to deliver content. The curriculum was enjoyed by pupils, who reported that they found it interesting, informative and relevant to their own experiences or how they believed they might use alcohol in future. On the whole, the classroom materials were perceived as useful and were used as intended by the majority of teachers and pupils. Teachers and school management believed that it was possible to accommodate the programme in the curriculum, supporting resources were useful and content was both experientially and age-appropriate. There was very low uptake of the parental/carer component, and postal returns of the parent/carer survey, which were used as an indicator of implementation of mailed intervention materials, were also relatively low. It should therefore be concluded that this component of the intervention was not successfully delivered.

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. Public Health Research 5(2)		
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P9	Education as normal (EAN)
	Rationale/theory/Goal	-	None
	Materials used	P9	Standard personal, social and health education
	Procedures used	P9	Provision of alcohol use education as part of statutory education or usual school activities
	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	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. Public Health Research 5(2)		
Follow up	12, 24 and 33 months from baseline (T1,T2 and T3 respectively)		
	Method of randomisation	Stratified randomisation using an electronic card sort	
	Method of allocation concealment	None.	
	Statistical method(s) used to analyse data	Complete case analyses and intention to treat analyses Missing data imputed Adjustment for clusters using ICC	
	Unit of allocation	Schools	
	Unit of analysis	Individual	
	Attrition	10405/12738 (81.7%) completed the questionnaires at both baseline and T3 follow up	Reasons for dropout not reported
Outcomes measures and effect size.	Outcome	Intervention (n=6379) N=52	Control (n=6359) =53
	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		
	Heavy episodic drinking (self-reported consumption of ≥ 6 units for males and ≥ 4.5 units for females in a single episode in the previous 30 days), 33 months		

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. Public Health Research 5(2)		
	None	4281 (83.0%)	3773 (74.4%)
	One or more occasion	879 (17.0%)	1300 (25.6%)
	Missing	1219	1286
	OR 95% CI for heavy episodic drinking (as reported)	0.596 (0.49, 0.725)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex		
	Alcohol related harms [16 item scale measuring harms due to own drinking)		
	None	3408 (65.1%)	3126 (60.7%)
	1 to 16 reported harms	1826 (34.9%)	2020 (39.3%)
	Missing	1145	1213
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	0 (0%)	0 (0%)
Other outcomes measured	Logistic regression outcomes		
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
	Amount and frequency of alcohol use	High	Participants and trial personnel were not blinded to the intervention where outcomes were self-reported leading to

Bibliographic reference	Sumnall H, Agus A, Cole J et al (2017) Steps towards alcohol misuse prevention programme (STAMPP): a school- and community-based cluster randomised controlled trial. Public Health Research 5(2)		
			risk of potential over- or underestimation in reporting of results.
	School attendance	Not applicable	Not applicable
	Alcohol related risky behaviour such as unprotected or regretted sex	High	Participants and trial personnel were not blinded to the intervention where outcomes were self-reported leading to risk of potential over- or underestimation in reporting of results.
	Mental health and wellbeing	Not applicable	Not applicable
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Public Health Research programme of the National Institute for Health Research		
Comments	The authors noted that the items used to measure the alcohol-related harms may not have been age appropriate		
Additional reference	McKay M, Agus A, Cole J et al (2017) Steps Towards Alcohol Misuse Prevention Programme (STAMMP): a school-based and community-based cluster randomised controlled trial. BMJ Open 8:e019722		

D.1.42 Sun 2008

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442
Registration	None
Study type	Randomised controlled trial (cluster)
Study dates	Not reported
Aim	To describe the one year outcomes of the fourth experimental trial of Project Towards No Drug Abuse
Country/geographical location	USA

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442				
Setting/School type	High schools (regular and continuation)				
Participant characteristics	Description	2734 students aged 13 to 19 years			
			Intervention 1 (n=767)	Intervention 2 (n=688)	Control (n=609)
	Age	Mean (SD)	15.17 (1.25)	15.43 (1.24)	15.18 (1.03)
	Gender	Male, n (%)	407 (53%)	344 (50%)	298 (49%)
		Female, n (%) ^{oooo}	360 (47%)	344 (5%)	311 (51%)
	Socioeconomic status	Not reported			
	Ethnicity	White	169 (22.2%)	43 (6.3%)	141 (23.1%)
		Latino	364 (47.5%)	557 (81.0%)	383 (62.9%)
		Black	84(11%)	32 (4.7%)	29 (4.8%)
		Asian	112 (14.6%)	41 (6%)	31 (5.1%)
Other		36 (4.7%)	14 (2%)	25 (4.1%)	
SEND	Not reported				
Baseline drinking behaviour	Alcohol use in the last 30 days	297 (38.74%)	257 (37.41%)	235 (38.6%)	
Inclusion criteria	Student assent Parental consent				
Exclusion criteria	None				
Number of Participants	2734 students at baseline; 2064 in analyses				
Intervention	TIDieR Checklist criteria	Paper/ Location	Details		

ooooo Calculated from male percentages reported.

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442		
	Brief Name	P2	Project Towards No Drug Abuse (TND) – Cognitive only
	Rationale/theory/Goal	P2	Theory based – cognitive misperception correction. Aims to change youth's attitudes and beliefs towards drug use.
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	P3	Teacher
	Method of delivery	P3	Group
	Location	P3	Classroom
	Duration	P3	4 weeks
	Intensity	P3	Lesson delivered Tuesday to Thursday
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P3	Teachers and project health educators took part in a 1.5 day training session delivered by the program developers.

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442		
Intervention 2	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P2	Project Towards No Drug Abuse (TND) – Combined
	Rationale/theory/Goal	P2	Theory based – cognitive misperception correction and behavioural skills instruction. Aims to change youth’s attitudes and beliefs towards drug use and provide social skills and behavioural self-management.
	Materials used	-	Not reported
	Procedures used	-	Not reported
	Provider	P3	Teacher
	Method of delivery	P3	Group
	Location	P3	Classroom
	Duration	P3	4 weeks
	Intensity	P3	Lesson delivered Tuesday to Thursday
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442		
	Other details	P3	Teachers and project health educators took part in a 1.5 day training session delivered by the program developers.
Comparison	TIDieR Checklist criteria	Paper/ Location	Details
	Brief Name	P3	Usual curriculum
	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	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442			
	Actual treatment fidelity	-	Not reported	
	Other details	-	Not reported	
Follow up	1 year			
Study Methods	Method of randomisation	Blocked randomisation		
	Method of allocation concealment	Not reported		
	Statistical method(s) used to analyse data	Adjusted for clustering Generalised mixed-linear model		
	Unit of allocation	School district		
	Unit of analysis	Individual		
	Attrition	Number of participants completing the study: 2064 (75.5%)	Reasons for not completing the study: Not reported	
Outcomes measures and effect size.				
	Outcome	TND (cognitive only) (n=not reported) N (cluster) = not reported	TND (combined) (n=not reported) N (cluster) = not reported	Control (n=not reported) N (cluster) = not reported
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported	Not reported	Not reported	Not reported

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442			
	Age at first experience of drunkenness where reported	Not reported	Not reported	Not reported
	Amount and frequency of alcohol use, 1 year			
	30 day alcohol use	Cognitive vs control OR 0.98 95% CI 0.63 to 1.5	Combined vs control OR 1.03 95% CI 0.66 to 1.58	Pooled programme vs control OR 1.00 95% CI 0.71 to 1.55
	Alcohol frequency last 30 days	Cognitive vs control RR 0.92 95% CI 0.7 to 1.21	Combined vs control RR 0.84 95% CI 0.64 to 1.11	Pooled programme vs control RR 0.89 95% CI 0.7 to 1.12
	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
Other outcomes measured	Cigarette and marijuana use			
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
	Amount and frequency of alcohol use	Some concerns		Allocation concealment methods not described so unclear if participants were

Bibliographic reference	Sun P, Sussman S, Dent CW et al (2008) One-year follow-up Evaluation of Project Towards No Drug Abuse (TND-4) Preventive Medicine 47(4) 438-442		
			aware of intervention allocation. All outcomes were self-measured.
	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: Self-reported outcomes Limitations by reviewer: Descriptive data not reported		

D.1.43 Vogl 2009

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. Addiction 104, 564-575		
Registration	Australian and New Zealand clinical trials registry ACTRN012607000355471		
Study type	Randomised controlled trial (cluster)		
Study dates	Not reported		
Aim	To examine computerised harm minimisation interventions in reducing alcohol misuse and related harms in adolescents		
Country/geographical location	Australia		
Setting/School type	Catholic and independent high schools		
Participant characteristics	Description	1466 year 8 students	
		Intervention (n= 611) N (cluster) = 8	Control (n=835) N (cluster) = 8
	Age	Whole sample, Mean (SD) 13 years (0.40)	

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575			
	Gender ^{ppppp}	Male, n (%)	275 (45%)	576 (69%)
		Female, n (%)	336 (55%)	259 (31%)
	Socioeconomic status	Not reported		
	Ethnicity	Not reported		
	SEND	Not reported		
	Baseline drinking behaviour	Average weekly alcohol consumption over last 3 months [SHAHRP Patterns of Alcohol Questionnaire, 3 month quantity and frequency multiplied]		
		Males, mean (SD)	1.56 (6.94)	1.24 (6.45)
Females, mean (SD)		0.66 (3.16)	0.35 (1.37)	
Inclusion criteria	Students in year 8 who have provided parental consent			
Exclusion criteria	None			
Number of Participants	1466; 611 intervention, 835 control			
Intervention	TIDieR Checklist criteria	Paper/ Location	Details	
	Brief Name	P566	CLIMATE alcohol program	
	Rationale/theory/Goal	P566	A harm minimisation course aimed at decreasing alcohol misuse. Social influence approach.	
	Materials used	P566	Computer-based material of a cartoon-based teenage drama (CD-ROM)	
	Procedures used	P566	Role-plays, problem-solving activities and skill rehearsal	
	Provider	P566	Computer Teacher	

ppppp Number of males and female data calculated from male percentages reported.

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575		
	Method of delivery	P566	Group
	Location	P566	Classroom
	Duration	-	Not reported
	Intensity	P566	6x 40 minute lessons
	Tailoring/adaptation	-	None
	Modifications	-	None
	Planned treatment fidelity	P566-7	<p>Computer delivery ensures consistency.</p> <p>Training manual provided for teachers.</p> <p>Computer support was offered for teachers but was minimal as CD-ROMs loaded automatically.</p> <p>Students did not require computer support</p> <p>Teachers were asked to keep a record of the course they delivered.</p>
	Actual treatment fidelity	P572	<p>20 teachers implemented the CLIMATE alcohol program to 30 class groups.</p> <p>All teachers reported delivering the cartoon component and at least one classroom based activity per lesson.</p> <p>One teacher delivered only the cartoon component in one lesson.</p>
	Other details	P572	<p>Program evaluation. Students and teachers rated the program on a seven-point and 10 different 5 point Likert scales respectively.</p> <p>Teachers gave the program a mean score of 3.5 or higher (range 0-4) on all 10 scales</p> <p>Student ratings were also positive with females rating significantly higher than boys.</p>
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P566	Control school alcohol education

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575	
	Rationale/theory/Goal	P567 Harm minimisation approach
	Materials used	P567 Resources provided by the relevant state authority
	Procedures used	- Not reported
	Provider	P567 Usual classroom teacher
	Method of delivery	- Not reported
	Location	- Not reported
	Duration	- Not reported
	Intensity	P567 More than 6 lessons
	Tailoring/adaptation	- Not applicable
	Modifications	- Not applicable
	Planned treatment fidelity	P567 Teachers were asked to record the content, timing and use of existing published programs for the delivery of drug education as usual.
	Actual treatment fidelity	- Not reported
	Other details	- None
Follow up	Post-intervention, 6 months and 12 months	
Study Methods	Method of randomisation	Randomised by an independent researcher using a simple randomisation procedure

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575		
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Intention to treat (ITT) analyses ANCOVAs for individual student level outcomes Analyses adjusted for clustering	
	Unit of allocation	School	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 1039/1434 ^{qqqq} (70.9%) at 12 months Intervention 448/607 (73.8%) Control 568/827 (68.7%)	Reasons for not completing the study: Absence Failure to use unique identification code
Outcomes measures and effect size.	Outcome	Intervention (n=611) N (cluster) = 8	Control (n=835) N (cluster) = 8
	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		
	Average weekly alcohol consumption over last 3 months [SHAHRP Patterns of Alcohol Questionnaire, 3 month quantity and frequency multiplied]		
	Males, mean (SD)	3.86(14.54)	3.50 (13.12)
	Females, mean (SD)	0.99 (4.07)	2.25 (10.16)

qqqq Those who completed baseline assessments

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575		
	Frequency of drinking to excess on a single occasion [SHAHRP Patterns of Alcohol Questionnaire, 3 month drinking in excess of low-risk levels for adults]		
	Males, mean (SD)	1.07 (3.69)	1.16 (4.72)
	Females, mean (SD)	0.38 (1.16)	0.93 (3.45)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing		
	Alcohol-related harms [SHAHRP harm survey; experience of harm in last 12 months on a 6 point scale (0,1,2,3-4,5-11and 12+ times)]		
	Males, mean (SD)	11.67 (27.51)	10.79 (29.48)
	Females, mean (SD)	3.30 (9.69)	7.15 (22.93)
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Knowledge and positive alcohol-related expectancies		
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
	Amount and frequency of alcohol use	Some concerns	Method of allocation concealment was not described and outcomes were subjective. Data was only reported by gender subgroups.
	School attendance	Not applicable	Not applicable

Bibliographic reference	Vogl L, Teesson M, Andrews G et al (2009) A computerized harm minimization prevention program for alcohol misuse and related harms: randomised controlled trial. <i>Addiction</i> 104, 564-575		
	Alcohol related risky behaviour such as unprotected or regretted sex	Not applicable	Not applicable
	Mental health and wellbeing	Some concerns	Method of allocation concealment was not described and outcomes were subjective. Data was only reported by gender subgroups.
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Drug and Alcohol Research Centre Australian Government Department of Health Australian research council National Health and Medical research Council		
Comments	<p>Limitations by author:</p> <p>Attrition of high risk students may limit the external validity of the results</p> <p>The control teachers omitted the normative parts of the control programmes making it difficult to see if the computer element of CLIMATE was truly effective.</p> <p>Lack of objective measures for alcohol use.</p> <p>Limitations by reviewer:</p> <p>Only subgroup analyses by gender were reported</p>		

D.1.44 Werch 1996

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. <i>The Journal of School health</i> 6(9) 335-338
Registration	None
Study type	Randomised controlled trial (individual)

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. The Journal of School health 6(9) 335-338			
Study dates	1994 to 1995			
Aim	To examine the effects of brief nurse consultations in preventing alcohol use among inner-city youth.			
Country/geographical location	USA			
Setting/School type	Inner city public school			
Participant characteristics	Description	138 sixth to eighth-grade students		
			Intervention (n=68)	Control (n=70)
	Age	Years, mean (SD)	12.3 (1.24)	12.0 (1.04)
	Gender	Male, n (%)	30 (44%)	27 (39%)
		Female, n (%)	38 (56%)	43 (61%)
	Socioeconomic status	Free school lunch, n (%)	52 (76%)	64 (91%)
	Ethnicity	Black, n (%)	56 (82%)	60 (86%)
		White, n (%)	10 (15%)	8 (11%)
		Other, n (%)	2 (3%)	2 (3%)
	SEND	Not reported		
Baseline drinking behaviour	Lifetime alcohol use, n (%)	15 (22%)	20 (29%)	
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. <i>The Journal of School health</i> 6(9) 335-338		
Number of Participants	138		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P335	Start Taking Alcohol Risks Seriously (STARS)
	Rationale/theory/Goal	P336	Based on the Multi-Component Motivational Stages (McMOS) prevention model underpinned by the Health Belief Model, Social Learning Theory and Behavioural Self-Control theory
	Materials used	P336	Consultation protocols which included a stage definition, objective, instructions, introduction, prevention messages, a prescription recommendation and a contract agreement to avoid future alcohol use.
	Procedures used	P336	Brief consultations
	Provider	P336	School nurses
	Method of delivery	P336	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity		Brief initial health consultation and six-weekly follow up consultations
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. <i>The Journal of School health</i> 6(9) 335-338		
	Actual treatment fidelity	-	Not reported
	Other details	P336	Nurses received an intensive half-day training which included demonstrations, role-playing and feedback from the project staff on how to implement the STARS intervention components.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P336	No intervention
	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	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. <i>The Journal of School health</i> 6(9) 335-338		
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	3 months		
Study Methods	Method of randomisation	Computer randomisation	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Two-tailed tests	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
Attrition	Number of participants completing the study:124 (90%) Intervention 60/68 (88%) Control 64/70 (91%)	Reasons for not completing the study: Not reported	

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. <i>The Journal of School health</i> 6(9) 335-338		
Outcomes measures and effect size.	Outcome	Intervention (n= 60)	Control (n = 64)
	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		
	Amount and frequency of alcohol use, 3 months		
	30 day alcohol use, n (%)	3 (5%)	6 (10%)
	RR 95% CI (calculated by reviewer)	0.5 (0.1, 2.0)	
	7 day alcohol use, n (%)	2 (4%)	7 (12%)
	30 day heavy use [drinking 5 or more drinks in a row], n (%)	0 (0%)	3 (5%)
	30 day alcohol frequency, mean (SD)	0.16 (not reported)	0.39 (not reported)
	30 day alcohol quantity, mean (SD)	0.13 (not reported)	0.25 (not reported)
	2 week heavy use [drinking 5 or more drinks in a row], mean (SD)	0.00 (not reported)	0.10 (not reported)
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex, 3 months		
	Negative drinking consequences [9 items], mean (SD)	9.58 (not reported)	9.05 (not reported)
	Mental health and wellbeing	Not reported	Not reported
	Adverse or unintended effects	Not reported	Not reported

Bibliographic reference	Werch CE, Carlson JM, Pappas DM et al (1996) Brief nurse consultations for preventing alcohol use among urban school youth. The Journal of School health 6(9) 335-338		
Other outcomes measured	Alcohol stage, intentions		
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	Outcomes were subjective and there is a possibility of participants being aware of intervention allocation.
	School attendance	N/A	N/A
	Alcohol related risky behaviour such as unprotected or regretted sex	N/A	N/A
	Mental health and wellbeing	N/A	N/A
	Adverse or unintended effects	N/A	N/A
Source of funding	National Institute on Alcohol Abuse and Alcoholism		
Comments	Limitations by author: Only one school in the study so small population size and a risk of contamination. Also limited population means generalisability may not be possible. Limitations by reviewer: None		

D.1.45 Werch 1998

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. Substance use & misuse 33(11) 2303-2321			
Study type	Randomised controlled trial (individual)			
Study dates	1995			
Aim	To evaluate a brief pilot alcohol prevention intervention			
Country/geographical location	USA			
Setting/School type	Middle school in Jacksonville, Florida			
Participant characteristics	Description	211 6th grade students		
			Intervention (n=106)	Control (n=105)
	Age	Years, mean (SD)	12.2 (0.96)	12.0 (0.96)
	Gender	Male n (%)	56 (53%)	50 (48%)
		Female (%) ^{rrrr}	50 (47%)	55 (52%)
	Socioeconomic status	Free school lunch n (%)	82 (77%)	82 (78%)
	Ethnicity	Black n (%)	92 (87%)	88 (84%)
		White n (%)	12 (11%)	14 (13%)
		Other n (%)	1 (1%)	3 (2%)
SEND	Not reported	Not reported	Not reported	
Baseline drinking behaviour	Lifetime alcohol use n (%)	27 (26%)	28 (27%)	
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			
Number of Participants	211			

rrrr Data calculated by reviewer from male data reported

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. <i>Substance use & misuse</i> 33(11) 2303-2321		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P2307	STARS for Families
	Rationale/theory/Goal	P2307	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory
	Materials used	P2307	Brief interventions plus parent postcards and family take-home lessons
	Procedures used	P2307	One to one consultation and parental materials
	Provider	P2307	Trained nurses (6)
	Method of delivery	P2307	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	P2308	20 minute brief consultation 2 prevention postcard per week (up to 10) mailed to parents 9 family-based sessions
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. <i>Substance use & misuse</i> 33(11) 2303-2321		
	Actual treatment fidelity	-	Not reported
	Other details	P2308	Nurses received 1 day training that included demonstrations, role-playing and feedback from the project staff on how to implement the consultations. Health consultations were standardised using protocols that included directions for implementing the consultation. The protocols were in checklist format.
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P2307	Control
	Rationale/theory/Goal	-	Not reported
	Materials used	P2307	Education booklet
	Procedures used	P2307	Students were asked to read the control materials on their own
	Provider	P2307	None
	Method of delivery	P2307	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity		Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. <i>Substance use & misuse</i> 33(11) 2303-2321		
	Planned treatment fidelity		Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	1 year		
Study Methods	Method of randomisation	Computer randomisation	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	Descriptive data Per protocol analyses	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition ^{sssss}	Number of participants completing the study: Intervention 73/106 (68.9%) Control 70/105 (66.7%)	Reasons for not completing the study: Not reported
	Outcome	Intervention (n=73)	Control (n=70)

sssss Percentages calculated by reviewer from numbers reported

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. <i>Substance use & misuse</i> 33(11) 2303-2321		
Outcomes measures and effect size.	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 use n (%)	5 (7%)	3 (4%)
	RR 95% CI (calculated by reviewer)	1.6 (0.4, 6.4)	
	7-day use n (%)	6 (8%)	3 (4%)
	30-day heavy use n (%)	4 (5%)	1 (1%)
	RR 95% CI (calculated by reviewer)	3.8 (0.4, 33.5)	
	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 intention stage 2 week heavy use		
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

Bibliographic reference	Werch CE, Pappas DM, Carlson JM et al (1998) Short- and long-term effects of a pilot prevention program to reduce alcohol consumption. Substance use & misuse 33(11) 2303-2321		
	Amount and frequency of alcohol use	High	Per protocol analyses carried out (high attrition) with reasons for dropout not reported. Randomisation happened within school so contamination was possible. No information reported on blinding/allocation concealment.
	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 Alcohol abuse and alcoholism		
Comments	<p>Limitations by author: Potential for contamination within the school site especially in that previous pilot tests were carried out in the same school. Due to the study being a pilot study, the intervention was delivered in an artificially abbreviated time period. The dropouts from the study may have been students who were at higher risk than those who remained.</p> <p>Limitations by reviewer: Small study size and high attrition.</p>		

D.1.46 Werch 2000a – Neighborhood school

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.
Study type	Randomised controlled trial (individual)
Study dates	Fall 1996 to Spring 1998
Aim	To evaluate the effects of the STARS for Families program

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. <i>American Journal of health behaviour</i> 24(2) 120-131.		
Country/geographical location	USA		
Setting/School type	2 middle schools (one magnet and one neighbourhood) in the economically disadvantaged inner city of Jacksonville, Florida ^{tttt}		
Participant characteristics uuuuu	Description	650 sixth-grade students (262 Neighborhood school; 388 magnet school)	
			Neighborhood (n=262)
	Age	Years, mean (SD)	11.66 (0.81)
	Gender	Male n (%)	119 (45.4)
		Female n (%)	143 (54.6%)
	Socioeconomic status	Free school lunch n (%)	210 (80.5%)
	Ethnicity	Black n (%)	218 (83.2%)
		White n (%)	35 (13.4%)
		Other n (%)	9 (3.4%)
	SEND	Not reported	
Baseline drinking behaviour ^{vvvv}	Lifetime alcohol use n %	62 (23.6%)	
	Alcohol use last year n %	33 (12.6%)	
	Heavy alcohol use, mean (SD)	0.14 (0.89)	
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	650		

tttt Authors felt that the schools were too different to pool the data so each school has been reported separately (Werch 2000a and 2000b)

uuuu Baseline data reported by type of school only

vvvv Calculated by reviewer from percentages reported

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P122	STARS for Families
	Rationale/theory/Goal	P122	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory
	Materials used	P122	One to one consultation plus parent prevention materials Students received prevention messages addressing specific stage status and risk/protective factors based on the data collected from the pre-intervention survey.
	Procedures used	P122	One health consultation and up to 10 prevention postcards (2 per week) mailed to parents in first year A follow up health consultation and 4 family take-home lessons.
	Provider	P122	Trained nurses
	Method of delivery	P122	Individual
	Location	-	Not reported
	Duration	P122	2 year program
	Intensity		Nurse consultations took about 20mins
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
Actual treatment fidelity	-		Not reported
Other details	P122		<p>A “dip-stick” saliva pipeline screen was used to increase validity of self-reported measures. Health consultations were standardised using protocols that included directions for implementing the consultation. The protocols were in checklist format.</p> <p>Nurses received 1 day training that included demonstrations, role-playing and feedback from the project staff on how to implement the consultations.</p> <p>Family-based lessons were physician-endorsed and provided a set of activities for parents and children to complete together.</p>
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P123	Minimal intervention control
	Rationale/theory/Goal	-	Not reported
	Materials used	P124	Education booklet
	Procedures used	P124	Students were asked to read the control materials on their own
	Provider	-	None
	Method of delivery	P124	Individual
	Location	-	Not reported
	Duration	P124	10 minutes
	Intensity	-	Not reported

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Follow up	1 year		
Study Methods	Method of randomisation	Random assignment by computer	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Per protocol analyses of descriptive data Samples were analysed by school type due to differences between the schools	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition ^{wwwww}	Number of participants completing the study ^{xxxxx} : 507/650 (78%) Intervention dropouts: n=75 Control dropouts: n=68	Reasons for not completing the study: Not reported

wwwww Percentages calculated by reviewer from numbers reported

xxxxx Number of people at baseline not reported by intervention arm.

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. <i>American Journal of health behaviour</i> 24(2) 120-131.		
Outcomes measures and effect size.		Neighborhood	
	Outcome	Intervention (n=100)	Control (n=107)
	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, 1 year post-intervention (3 years from baseline)		
	Ever tried alcohol n (%)	38 (38%)	48 (44.9%)
	RR 95% CI (calculated by reviewer)	0.8 (0.6, 1.2)	
	7-day use n (%)	10 (10%)	12 (11.2%)
	30-day use n (%)	10 (10%)	14 (13.2%)
	RR 95% CI (calculated by reviewer)	0.8 (0.4, 1.6)	
	30-day heavy use n (%)	6 (6%)	10 (9.3%)
	RR 95% CI (calculated by reviewer)	0.6 (0.2, 1.7)	
	Do not drink n (%)	87 (87%)	89 (83.2%)
	≤30 days to 6 months drinking n (%)	9 (9%)	12 (11.2%)
	6 months or more drinking n (%)	4 (4%)	6 (5.6%)
	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	

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. <i>American Journal of health behaviour</i> 24(2) 120-131.		
Other outcomes measured	Alcohol initiation stage, alcohol intentions, mean alcohol frequency, mean alcohol quantity and mean heavy alcohol use.		
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
	Amount and frequency of alcohol use	High	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination. Saliva tests were used to increase validity but probably not useful. Per protocol analysis with 22% 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	Grant from the National Institute on Alcohol Abuse and Alcoholism		
Comments	Limitations by author: Only used two schools limiting the generalisability of the findings. Limitations by reviewer: Uncertainty on applicability to the UK. Unclear whether the intervention is truly school-based.		

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.
Additional references	Werch CE, Carlson JM, Owen D et al (2001) Effects of a stage-based alcohol preventative intervention for inner-city youth. Journal of drug education 31(2), 123-138.
Additional reference	Werch CE, Owen DM, Carlson CC et al (2003) One-year follow results of the STARS for Families alcohol prevention program. Health Education Research 18(1) 74-87.

D.1.47 Werch 2000b – Magnet schools

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
Study type	Randomised controlled trial (individual)		
Study dates	Fall 1996 to Spring 1998		
Aim	To evaluate the effects of the STARS for Families program		
Country/geographical location	USA		
Setting/School type	2 middle schools (one magnet and one neighbourhood) in the economically disadvantaged inner city of Jacksonville, Florida ^{yyyyy}		
Participant characteristics ^{zzzzz}	Description	650 sixth-grade students (262 Neighborhood school; 388 magnet school)	
		Magnet (n=388)	
	Age	Years, mean (SD)	11.23 (0.55)
	Gender	Male n (%)	230 (59.3%)
		Female n (%)	158 (40.7%)
	Socioeconomic status	Free school lunch n (%)	148 (38.4%)
Ethnicity	Black n (%)	157 (40.5%)	
	White n (%)	186 (47.9%)	

^{yyyyy} Authors felt that the schools were too different to pool the data so each school has been reported separately (Werch 2000a and 2000b)

^{zzzzz} Baseline data reported by type of school only

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
		Other n (%)	45 (11.6%)
	SEND	Not reported	
	Baseline drinking behaviouraaaaaa	Lifetime alcohol use n %	131 (33.72%)
		Alcohol use last year n %	54 (13.9%)
		Heavy alcohol use, mean (SD)	0.03 (0.33)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	650		
Intervention	TIDieR Checklist criteria	Paper/Locatio n	Details
	Brief Name	P122	STARS for Families
	Rationale/theory/ Goal	P122	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory
	Materials used	P122	One to one consultation plus parent prevention materials Students received prevention messages addressing specific stage status and risk/protective factors based on the data collected from the pre-intervention survey.
	Procedures used	P122	One health consultation and up to 10 prevention postcards (2 per week) mailed to parents in first year A follow up health consultation and 4 family take-home lessons.
	Provider	P122	Trained nurses
	Method of delivery	P122	Individual
	Location	-	Not reported
	Duration	P122	2 year program

aaaaaa

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
	Intensity		Nurse consultations took about 20mins
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P122	<p>A “dip-stick” saliva pipeline screen was used to increase validity of self-reported measures. Health consultations were standardised using protocols that included directions for implementing the consultation. The protocols were in checklist format.</p> <p>Nurses received 1 day training that included demonstrations, role-playing and feedback from the project staff on how to implement the consultations.</p> <p>Family-based lessons were physician-endorsed and provided a set of activities for parents and children to complete together.</p>
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P123	Minimal intervention control
	Rationale/theory/Goal	-	Not reported
	Materials used	P124	Education booklet
	Procedures used	P124	Students were asked to read the control materials on their own
	Provider	-	None
	Method of delivery	P124	Individual

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
	Location	-	Not reported
	Duration	P124	10 minutes
	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	1 year		
Study Methods	Method of randomisation	Random assignment by computer	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Per protocol analyses of descriptive data Samples were analysed by school type due to differences between the schools	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition ^{bbbbbb}	Number of participants completing the study ^{cccccc} : 507/650 (78%) Intervention dropouts: n=75	Reasons for not completing the study: Not reported

bbbbbb Percentages calculated by reviewer from numbers reported

cccccc Number of people at baseline not reported by intervention arm.

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.		
		Control dropouts: n=68	
Outcomes measures and effect size.		Magnet	
	Outcome	Intervention (n=150)	Control (n=150)
	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, 1 year post-intervention (3 years from baseline)		
	Ever tried alcohol n (%)	81 (54%)	92 (61.7%)
	RR 95% CI (calculated by reviewer)	0.9 (0.7, 1.1)	
	7-day use n (%)	16 (10.7%)	18 (27%)
	30-day use n (%)	17 (11.3%)	26 (17.4%)
	RR 95% CI (calculated by reviewer)	0.7 (0.4, 1.2)	
30-day heavy use n (%)	7 (4.7%)	13 (8.7%)	

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.			
	RR 95% CI (calculated by reviewer)	0.5 (0.2, 1.3)		
	Do not drink n (%)	133 (88.7%)	118 (78.7%)	
	≤30 days to 6 months drinking n (%)	5 (3.3%)	9 (6%)	
	6 months or more drinking n (%)	12 (8%)	23 (15.3%)	
	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 initiation stage, alcohol intentions, mean alcohol frequency, mean alcohol quantity and mean heavy alcohol use.			
Risk of bias by outcome	Outcome	Overall RoB		Comments
	Age at first whole drink of alcohol	Not applicable		Not applicable

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. <i>American Journal of health behaviour</i> 24(2) 120-131.		
	(for those who have never drunk alcohol) where reported		
	Age at first experience of drunkenness where reported	Not applicable	Not applicable
	Amount and frequency of alcohol use	High	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination. Saliva tests were used to increase validity but probably not useful. Per protocol analysis with 22% 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

Bibliographic reference	Werch CE, Pappas DM, Carlson, JM et al (2000) Evaluation of a brief alcohol prevention program for urban school youth. American Journal of health behaviour 24(2) 120-131.
Source of funding	Grant from the National Institute on Alcohol Abuse and Alcoholism
Comments	Limitations by author: Only used two schools limiting the generalisability of the findings. Limitations by reviewer: Uncertainty on applicability to the UK. Unclear whether the intervention is truly school-based. :
Additional reference	Werch CE, Carlson JM, Owen D et al (2001) Effects of a stage-based alcohol preventative intervention for inner-city youth. Journal of drug education 31(2), 123-138.
Additional reference	Werch CE, Owen DM, Carlson CC et al (2003) One-year follow results of the STARS for Families alcohol prevention program. Health Education Research 18(1) 74-87

D.1.48 Werch 2003

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
Study type	Randomised control trial (individual)			
Study dates	Autumn 2001 (baseline data) to spring 2002 (post-intervention). 3 months			
Aim	Addressing alcohol prevention within the context of a sport program			
Country/geographical location	Florida USA			
Setting/School type	Inner city middle school (n=110), suburban middle school (n=110), rural junior high school (n=161)			
Participant characteristics	Description		Control (Sport n=152)	Sport Plus(n=150)
				Sport Plus Parent (n=152)
	Socioeconomic status	Mean age 13.2 years (SD 0.5)		
	Gender	Female 282/454 (62.1%)		

Bibliographic reference		Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
		Male 172/454 37.9% ^{dddddd}			
	Socioeconomic status	29.2% enrolled in a free or reduced-cost lunch program			
	Ethnicity	Caucasian 50.7%			
		African American 36.3%			
		Other 12.9%			
	SEND	Not reported			
	Baseline drinking behaviour	30 day frequency (Mean,SE)	1.21(0.064)	1.29(0.064)	1.20(0.063)
		30 day quantity (Mean,SE)	1.22(0.070)	1.25(0.071)	1.28(0.070)
		30 day heavy use ^{eeeeeee} (Mean,SE)	1.05(0.043)	1.11(0.044)	1.13(0.043)
		Alcohol Problems ^{ffffff} (Mean,SE)	0.30(0.136)	0.87(0.137)	0.52(0.136)
Inclusion criteria	All students required to submit signed parenteral consents and youth assents prior to participation.				
Exclusion criteria	Problems reading and understanding the baseline data collection instrument (n=11, 2%)				
Number of Participants	454 8th graders				
Intervention 1	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P381	Sport Plus (Sport Consultation Plus Alcohol Preventive Consultation)		
	Rationale/theory/Goal	P382	Based on Social Cognitive theory, Health Belief Model, Behavioural Self-Control theory, Theory of planned behaviour, social bonding theory and Multi-component motivational stages (McMOS) prevention model.		
	Materials used	P382	Prevention messages and a student contract.		

dddddd Percentage and absolute numbers calculated from female percentage reported

eeeeee Consuming 5 or more drinks in a row during the last 30 days

ffffff 13 items measuring negative consequences experienced during drinking

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. <i>The Journal of School Health</i> 73(10)		
			A list of messages, addressing 5 risk/protective factors including influenceability, social norms, negative outcome expectancies, positive outcome expectancies, and self-efficacy and behavioural capability.
Procedures used		P382	A Health and Fitness screen followed by a consultation protocol. This was followed but an Alcohol Preventive Consultation which had directions for the nurse, a list of check-off messages addressing the risk/protective factor targeted.
Provider		P382	Nurses
Method of delivery		P382	Individual
Location		-	Not reported
Duration		-	Not reported
Intensity		P384	Approx 25 minutes
Tailoring/adaptation		P382	Adapted from a previous intervention (details not specified)
Modifications		-	Not reported
Planned treatment fidelity		P384	A random sample of audiotaped consultations (n=32) were assessed and scored on 7 measures including accuracy, completeness, nurse enthusiasm, student responsiveness, smoothness, use of reflective listening and altering tone of voice. Measure on a 4 point scale [1 = not at all to 4 = very].
Actual treatment fidelity		P384	Mean scores ranged from high 3.91 (SD 0.30) for accuracy in following the protocol and 3.88 (SD 0.42) for completeness in covering the consultation content to a low of 3.56 (SD 0.76) for student responsiveness and 3.59 (SD 0.61) for nurse enthusiasm. No differences were found between Sport Consultations and Sports Plus Consultations.
Other details			
Intervention 2	TIDieR Checklist criteria	Paper/Locati on	Details
	Brief Name	P382	Sport Plus Parent (Sport Consultation Plus Alcohol Consultation Plus Parent Print Material)

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. <i>The Journal of School Health</i> 73(10)		
Rationale/theory/Goal	P382		Based on Social Cognitive theory, Health Belief Model, Behavioural Self-Control theory, Theory of planned behaviour, social bonding theory and Multi-component motivational stages (McMOS) prevention model.
Materials used	P382		Prevention messages and a student contract. A list of messages, addressing 5 risk/protective factors including influenceability, social norms, negative outcome expectancies, positive outcome expectancies, and self-efficacy and behavioural capability. Parental SPORT cards (8.5" x 11" coloured cards) which have a broader fitness focus.
Procedures used	P382		A Health and Fitness screen followed by a consultation protocol. This was followed but an Alcohol Preventive Consultation which had directions for the nurse, a list of check-off messages addressing the risk/protective factor targeted. Five parental SPORT cards mailed one per week to parents
Provider	-		N/A
Method of delivery	-		N/A
Location	-		Not reported
Duration	-		Not reported
Intensity	-		Not reported
Tailoring/adaptation	P382		Adapted from a previous intervention (details not specified)
Modifications	-		Not reported
Planned treatment fidelity	P384		A random sample of audiotaped consultations (n=32) were assessed and scored on 7 measures including accuracy, completeness, nurse enthusiasm, student responsiveness, smoothness, use of reflective listening and altering tone of voice. Measure on a 4 point scale [1 = not at all to 4 = very]. Cards were signed by the Principal Investigator and a tear off bottom section of the card was used to collect parent feedback regarding the card.

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. <i>The Journal of School Health</i> 73(10)		
	Actual treatment fidelity	P384	<p>Mean scores ranged from high 3.91 (SD 0.30) for accuracy in following the protocol and 3.88 (SD 0.42) for completeness in covering the consultation content to a low of 3.56 (SD 0.76) for student responsiveness and 3.59 (SD 0.61) for nurse enthusiasm. No differences were found between Sport Consultations and Sports Plus Consultations.</p> <p>75% of parents returned one or more of the 5 SPORT card feedback sheets, 70% returned all sheets. Of these, 100% of parents talked to their son or daughter about the information on the card. In regard to the question of whether the information on the card helped parents talk with their son or daughter about preventing alcohol use scores for the cards ranged from 3.27 (SD 0.78) to 3.37 (SD 0.81) [4 point scale 1 = not at all to 4 = a lot]</p>
	Other details	-	None
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P381	Sport consultation
	Rationale/theory/Goal	P382	Based on Social Cognitive theory, Health Belief Model, Behavioural Self-Control theory, Theory of planned behaviour, social bonding theory and Multi-component motivational stages (McMOS) prevention model.
	Materials used	P382	Prevention messages and a student contract.
	Procedures used	P382	A Health and Fitness screen followed by a consultation protocol.
	Provider	P382	Nurses
	Method of delivery	P382	Individual
	Location	-	Not reported

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. <i>The Journal of School Health</i> 73(10)		
	Duration	-	Not reported
	Intensity	P384	Approx 9 minutes
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	P384	A random sample of audiotaped consultations (n=32) were assessed and scored on 7 measures including accuracy, completeness, nurse enthusiasm, student responsiveness, smoothness, use of reflective listening and altering tone of voice. Measure on a 4 point scale [1 = not at all to 4 = very].
	Actual treatment fidelity	P384	Mean scores ranged from high 3.91 (SD 0.30) for accuracy in following the protocol and 3.88 (SD 0.42) for completeness in covering the consultation content to a low of 3.56 (SD 0.76) for student responsiveness and 3.59 (SD 0.61) for nurse enthusiasm. No differences were found between Sport Consultations and Sports Plus Consultations.
	Other details	-	None
Follow up	3 months		
Study Methods	Method of randomisation	Computer generated numbers	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Baseline measures were compared across experimental group by chi-squared tests (categorical data) and ANOVAs (continuous data). Outcome analyses were conducted as repeated measures ANOVAs. Factorial repeated measures ANOVAs were conducted to examine the differential efficacy of the interventions for youth who were currently drinking (past 30 days) prior to intervention implementation, and those who were not currently drinking.	
	Unit of allocation	Individual	
	Unit of analysis	Individual	

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
	Attrition	Number of participants completing the study: Not reported	Reasons for not completing the study: Not reported	
Outcomes measures and effect size gggggghhhhhh	Outcome	Sport Plus(n=150)	Sport Plus Parent (n=152)	Control Brief Sport Consultation (n=152)
	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			
	30 day frequency (Mean,SE)	1.18(0.052) SD 0.64	1.17(0.051) SD 0.63	1.19(0.051) SD 0.63
	Sport plus + parent vs control (MD 95% CI)	-0.02 (-0.16. 0.12)		

ggggg Outcomes measured using The Youth Alcohol and Health Survey

hhhhh Standard deviations calculated by reviewer from standard errors reported.

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
	calculated by reviewer)			
	Sport plus vs control (MD 95% CI calculated by reviewer)	-0.01 (-0.15, 0.13)		
	30 day quantity (Mean,SE)	1.26(0.060) SD 0.73	1.18(0.059) SD 0.73	1.16(0.060) SD 0.74
	Sport plus + parent vs control (MD 95% CI calculated by reviewer)	0.02 (-0.15, 0.19)		
	Sport plus vs control (MD 95% CI calculated by reviewer)	0.1 (-0.07, 0.27)		
	30 day heavy use ⁱⁱⁱⁱⁱⁱ (Mean,SE)	1.04(0.027) SD 0.33	1.04(0.027) SD 0.33	1.06(0.027) SD 0.33
	Sport plus + parent vs control (MD 95% CI calculated by reviewer)	0.02 (-0.03, 0.05)		

iiiiii Consuming 5 or more drinks in a row during the last 30 days

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
	Sport plus vs control (MD 95% CI calculated by reviewer)	-0.02 (-0.09, 0.05)		
	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			
	Alcohol Problems ^{jjjjj} , mean (SE)	0.64(0.128) SD 1.57	0.45(0.127) SD 1.57	0.140(0.127) SD 1.57
	Sport plus + parent vs control (MD 95% CI calculated by reviewer)	0.31 (0.06, 0.56)		
	Sport plus vs control (MD 95% CI calculated by reviewer)	0.5 (0.14, 0.86)		

jjjjj 13 items measuring negative consequences experienced during drinking

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)			
	Adverse or unintended effects	Not reported	Not reported	Not reported
Other outcomes measured	Length of alcohol use, stage of alcohol initiation, vigorous physical activity and moderate physical activity.			
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
	Amount and frequency of alcohol use	High		Randomisation happened within school so contamination was possible. No information reported on blinding/allocation concealment. Attrition data not reported.
	School attendance	Not applicable		Not applicable
	Alcohol related risky behaviour such as	Not applicable		Not applicable

Bibliographic reference	Werch C, Moore M, DiClemente C et al (2003) A Sports-based Intervention for Preventing Alcohol Use and Promoting Physical Activity Among Adolescents. The Journal of School Health 73(10)		
	unprotected or regretted sex		
	Mental health and wellbeing	High	Randomisation happened within school so contamination was possible. No information reported on blinding/allocation concealment. Attrition data not reported.
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Not reported		
Comments	Limitations: Short follow up 3 months. The study lacked a true control group.		
Additional reference	Moore MJ and Werch C (2009) Efficacy of brief alcohol consumption reintervention for adolescents. Substance Use Misuse 44(7) 1009-1020		

D.1.49 Werch 2005a

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. Prevention Science 6(3) 213-226
Registration	None
Study type	Randomised controlled trial (individual)
Study dates	2002-2003
Aim	To test the efficacy of a brief, multi-health behaviour intervention integrating physical activity and alcohol use prevention messages for adolescents.

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226			
Country/geographical location	USA			
Setting/School type	High school			
Participant characteristics	Description	604 ninth and 11th grade high school students		
			Intervention (n = 302)	Control (n= 302)
	Age	Years, mean (SD)	15.22 (1.11)	15.25 (1.07)
	Gender	Male, ^{kkkkkk} n (%)	123 (40.5%)	143 (47.0%)
		Female, n (%)	179 (59.5%)	159 (53.0%)
	Socioeconomic status	Free/reduced lunch	44 (15.0%)	33 (11.1%)
	Ethnicity	Black, n (%)	70 (23.2%)	60 (19.9%)
		White, n (%)	148 (49%)	160 (53.0%)
		Other, n (%)	84 (27.8%)	82 (27.2%)
	SEND	Not reported		
		Intervention (n = 260)	Control (n= 254)	
Baseline drinking behaviour	30 day alcohol frequency [1 = 1-2 days, 2 = 3-5 days, 3 = 6-9 days, 4 = 10-19 days, 5 = 20-29 days, 6 = 30 days], mean (SE)	0.50 (0.07)	0.58 (0.07)	
	30 day alcohol quantity [1 = 1 drink, 2 = 2 drinks, 3 = 3 drinks, 4 = 4 drinks, 5= 5 or more drinks], mean (SE)	0.78 (0.10)	0.82 (0.10)	

kkkkkk Calculated from female data reported

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226			
		30 day alcohol heavy use, [1 = 1-2 times, 2 = 3-5 times, 3 = 6-9 times, 4 = 10 or more times], mean (SE)	0.23 (0.04)	0.25 (0.04)
		Alcohol problems [0-13, high score = high risk], mean (SE)	1.42 (0.16)	1.75 (0.16)
Inclusion criteria	Not reported			
Exclusion criteria	Not reported			
Number of Participants	604 335 ninth graders and 269 eleventh graders			
Intervention	TIDieR Checklist criteria	Paper/Location	Details	
	Brief Name	P215	Project SPORT	
	Rationale/theory/Goal	P215	Based on the Integrative Behavior-Image Model (BIM), Multicomponent Motivational Stages (McMOS) model, Social Cognitive Theory, Behavioral Self-Control Theory, Social Bonding Theory and Health Belief Model	
	Materials used	P216	Tailored and scripted communications and prevention messages that promote and active lifestyle and the conflict between this lifestyle and consuming alcohol A one-page flyer was mailed out to participants 1 week after the consultation	
	Procedures used	P216	Brief 7 item Health and Fitness screen followed by SPORT fitness consultation	
	Provider	P216	Trained fitness specialists (various including nurses and certified health education specialists)	
	Method of delivery	P216	Individual	
	Location	P216	Designated, private spaces	

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226		
	Duration	P218	Mean length was 12.65 mins
	Intensity	P216	One session
	Tailoring/adaptation	P216	All interventions were implemented in a single class period to minimise disruption
	Modifications	-	Not reported
	Planned treatment fidelity	P218	A random sample of consultations were audiotaped and scored on 7 measures for accuracy, completeness, interventionist enthusiasm, student responsiveness, smoothness, use of reflective listening and altering tone of voice. Measured on a scale of 1 = not at all to 4 = very
	Actual treatment fidelity		Completeness $m = 3.93$ (SD 0.26), altering tone of voice $m = 3.73$ (SD 0.51), accuracy $m = 3.40$ (SD 0.51) and student responsiveness $m = 3.40$ (SD 0.74)
	Other details	P216	Fitness specialists received a full 2-day training that included demonstrations, role playing and feedback from project staff on how to implement the screens, consultations and prescriptions and a take-home practice assignment)
Comparison	TIDieR Checklist criteria	Paper/Locaton	Details
	Brief Name	P216	Minimal intervention control
	Rationale/theory/Goal	-	Not reported
	Materials used	P216	Two commercially prepared generic alcohol prevention and health promotion print materials "What everyone should know about wellness" covered smoking, alcohol, exercise, nutrition and stress management
	Procedures used	P216	Print materials were delivered at the same time as the intervention
	Provider	P216	None

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226		
	Method of delivery	P216	Individual
	Location	P216	Designated, private spaces
	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	3 months and 12 months		
Study Methods	Method of randomisation	Computer randomisation	
	Method of allocation concealment	Not reported	
	Statistical method(s) used to analyse data	MANCOVA	

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226		
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: 514/604 = 85% Intervention 260/302= 86% Control 254/302 = 84%	Reasons for not completing the study: Not reported
Outcomes measures and effect size.	Outcome	Intervention (n=260)	Control (n=254)
	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 ^{IIIIII}		
	30 day alcohol frequency [1 = 1-2 days, 2 = 3-5 days, 3 = 6-9 days, 4 = 10-19 days, 5 = 20-29 days, 6 = 30 days], mean (SE)	0.55 (0.07) SD 1.13	0.66 (0.07) SD 1.12
	MD 95% CI (calculated by reviewer)	0.11 (-0.31, 0.09)	
	30 day alcohol quantity [1 = 1 drink, 2 = 2 drinks, 3 = 3 drinks, 4 = 4 drinks, 5= 5 or more drinks], mean (SE)	0.81 (0.10) SD 1.61	0.93 (0.10) SD 1.59

IIIIII Standard deviations and dichotomised data imputed by reviewer

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226		
	MD 95% CI (calculated by reviewer)	-0.12 (-0.40, 0.16)	
	30 day alcohol heavy use, [1 = 1-2 times, 2 = 3-5 times, 3 = 6-9 times, 4 = 10 or more times], mean (SE)	0.21 (0.05) SD 0.81	0.35 (0.05) SD 0.80
	MD 95% CI (calculated by reviewer)	-0.14 (-0.28, -0.00)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing,		
	Alcohol problems [0-13, high score = high risk], mean (SE)	1.46 (0.17) SD 2.74	2.01 (0.18) SD 2.87
	MD 95% CI (calculated by reviewer)	-0.56 (-1.04, -0.06)	
	Adverse or unintended effects	Not reported	Not reported
Other outcomes measured	Alcohol initiation, alcohol protective factor measures, alcohol risk factor measures, drug behaviours, drug initiation, exercise measures.		
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	Unclear if intervention allocation was concealed. Can lead to bias with subjective measures. Randomisation happened within

Bibliographic reference	Werch C, Moore MJ, DiClemente CC et al (2005) A multihealth behavior intervention integrating physical activity and substance use prevention for adolescents. <i>Prevention Science</i> 6(3) 213-226			
				one school increasing the risk of intervention contamination.
	School attendance	N/A		N/A
	Alcohol related risky behaviour such as unprotected or regretted sex	N/A		N/A
	Mental health and wellbeing	N/A		N/A
	Adverse or unintended effects	N/A		N/A
Source of funding	National Institute on Alcohol Abuse and Alcoholism			
Comments	Limitations by author: Concerns over generalisability and limited follow ups Limitations by reviewer: Risk of contamination as randomisation happened within one school			

D.1.50 Werch 2005b

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs. multiple drug prevention: Is more always better?: A pilot study. <i>Substance use and misuse</i> 40; 1085-1101				
Study type	Randomised controlled trial (individual)				
Study dates	2000 to 2001				
Aim	To evaluate the effects of a single drug intervention (alcohol) or multiple drug intervention				
Country/geographical location	USA				
Setting/School type	One Inner-city middle school and one rural junior high school				
Participant characteristics	Description	448 8th graders			
			STARS for Families (n=150)	STARS Plus (n=149)	Control (n=149)
	Age	Years, mean (SD)	13.47 (0.6)	13.52 (0.64)	13.48 (0.59)

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101				
	Gender	Male n (%) ^{mmmmmm}	72 (48%)	71 (47.3%)	72 (48.3%)
		Female n (%)	78 (52%)	78 (52.7%)	77 (51.7%)
	Socioeconomic status	Free/reduced lunch n (%)	47 (31.3%)	43 (28.9%)	43 (29.1%)
	Ethnicity	Black	42 (28%)	40 (26.8%)	42 (28.2%)
		White	91 (60.7%)	92 (61.7%)	83 (55.7%)
		Other	17 (11.3%)	17 (11.4%)	24 (16.1%)
	SEND	Not reported			
Baseline drinking behaviour	Not reported				
Inclusion criteria	Not reported				
Exclusion criteria	Not reported				
Number of Participants	448				
Intervention	TIDieR Checklist criteria	Paper/Location	Details		
	Brief Name	P1088	STARS for Families (Alcohol only)		
	Rationale/theory/Goal	P1088	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory		
	Materials used	P1088	Prevention postcards and tailored messages and student contract		
	Procedures used	P1088	One to one health consultation and parental materials (postcards). Students completed a questionnaire prior to the health consultation to assess their stage of initiation of alcohol so that the prevention messages sent in the postcards could be tailored.		
	Provider	P1088	Nurse		

mmmmmm Calculated by reviewer from female data reported

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101		
	Method of delivery	P1088	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	P1088	Abbreviated version of the STARS for Families program consisting of two components
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	P1090	Accuracy of following the protocol was on average “very accurate”, completeness in covering the material was “very complete” and the nurses’ enthusiasm “very enthusiastic”, students’ responsiveness was “very responsive” and smoothness or continuous flow of the less “very smooth”. The average length of the nurse consultation was 21.9 minutes.
	Other details	P1088	Nurses received 2-days training during which they were instructed on how to implement the intervention. This consisted of demonstrations, role playing and feedback from the project staff. Nurses followed standardised protocols.
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P1088	STARS Plus (Multiple Drug Intervention)
	Rationale/theory/Goal	P1088	Health Belief Model, Social Cognitive Theory, and Behavioral Self-Control Theory
	Materials used	P1088	Prevention postcards and tailored messages and student contract addressing alcohol, cigarettes, marijuana and other drugs.

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101		
	Procedures used	P1088	One to one health consultation and parental materials (postcards). Students completed a questionnaire prior to the health consultation to assess their stage of initiation of alcohol so that the prevention messages sent in the postcards could be tailored.
	Provider	P1088	Nurse
	Method of delivery	P1088	Individual
	Location	-	Not reported
	Duration	-	Not reported
	Intensity	-	Not reported
	Tailoring/adaptation	-	Not reported
	Modifications	P1088	Abbreviated version of the STARS for Families program consisting of two components
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	P1090	Accuracy of following the protocol was on average “very accurate”, completeness in covering the material was “very complete” and the nurses’ enthusiasm “very enthusiastic”, students’ responsiveness was “very responsive” and smoothness or continuous flow of the less “very smooth”. The average length of the nurse consultation was 21.9 minutes.
	Other details	P1088	Nurses received 2-days training during which they were instructed on how to implement the intervention. This consisted of demonstrations, role playing and feedback from the project staff. Nurses followed standardised protocols.
Comparison	TIDieR Checklist criteria	Paper/Locatio n	Details
	Brief Name	P1089	Postcard only control

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101	
	Rationale/theory/ Goal	- Not reported
	Materials used	- Not reported
	Procedures used	P1089 Parents/guardians of control students were mailed the exact set of postcards, at approximately the same time, as those assigned to the STARS Plus intervention
	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	3 months post-intervention	
Study Methods	Method of randomisation	Computer randomisation
	Method of allocation	Not reported

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101				
	Statistical method(s) used to analyse data	ANCOVA with baseline scores serving as covariates			
	Unit of allocation	Individual			
	Unit of analysis	Individual			
	Attrition ⁿⁿⁿⁿⁿ	Number of participants completing the study: Attrition was (3.3%) with 14 dropouts and 1 with inconsistent responses.	Reasons for not completing the study: Not reported		
Outcomes measures and effect size.	Outcome	STARS for Families (n= 150)	STARS Plus (n=149)	Control (n=149)	
	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, 3 months				
	30 day frequency of alcohol, mean (SE) [1=0 days, 2 = 1-2 days, 3 = 3-5 days, 4 = 6-9 days, 5 = 10-19 days, 6 = 20-29 days, 7 = 30 days]	1.18 (0.05) SD 0.61	1.36 (0.06) SD 0.73	1.32 (0.06) SD 0.73	
	Pooled interventions, mean (SD)	1.27 (0.67)			
	MD 95% CI (calculated by reviewer)	-0.05 (-0.17, 0.09)			
	30 day quantity of alcohol, mean (SE)	1.22 (0.06) SD 0.73	1.40 (0.06) SD 0.73	1.30 (0.06) SD 0.73	

nnnnn Percentages calculated by reviewer from numbers reported

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101			
	[1 = do not drink, 2 = 1 drink, 3 = 2 drinks, 4 = 3 drinks, 5 = 4 drinks, 6 = 5 or more drinks]			
	Pooled interventions, mean (SD)	1.31 (0.73)		
	MD 95% CI (calculated by reviewer)	0.01 (-0.13, 0.15)		
	30 day heavy alcohol use, mean (SE) [number of times drinking 5 or more drinks; 1 = none, 2 = 1-2 times, 3 = 3-5 times, 4 = 6-9 times, 5 = 10 or more times]	1.05 (0.02) SD 0.24	1.07 (0.02) SD 0.24	1.01 (0.02) SD 0.24
	Pooled interventions, mean (SD)	1.06 (0.24)		
	MD 95% CI (calculated by reviewer)	0.04 (-0.01, 0.09)		
	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, 3 months			
	Alcohol use related problems, mean (SE)	0.78 (0.12) SD 1.47	0.96 (0.13) SD 1.59	0.86 (0.12) SD 1.46
	Pooled interventions, Mean (SD)	0.87 (1.53)		
	MD 95% CI (calculated by reviewer)	0.01 (-0.29, 0.31)		
	Adverse or unintended effects	Not reported	Not reported	Not reported
Other outcomes measured	Cigarette and marijuana consumption outcomes. Risk/protective factors. Outcomes by prior drug use.			
	Outcome	Overall RoB	Comments	

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101		
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	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination. Saliva tests were used to increase validity
	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	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination. Saliva tests were used to increase validity
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	Grant from the National Institute on Alcohol Abuse and Alcoholism		
Comments	Limitations by author: Short follow up period. The study was not statistically powered to detect small intervention effects. Limitations by reviewer:		

Bibliographic reference	Werch CE, Moore MM, Diclemente CC (2005) Single vs, multiple drug prevention: Is more always better?: A pilot study. Substance use and misuse 40; 1085-1101
	Small sample size and only two schools were included.

D.1.51 Werch 2010

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. Psychology of Addictive Behaviors 24(1): 170-175			
Registration	Not reported			
Study type	Randomised controlled trial			
Study dates	Fall Semester 2007- spring semester 2008			
Aim	Evaluate the efficacy of a brief image-based prevention intervention			
Country/geographical location	Florida, USA			
Setting/School type	Large, diverse Public high school			
Participant characteristics	Description	416 students in 10th and 11th grade		
		Intervention (n=179)	Control (n= 181)	
	Age	Mean (SD)	15.80 (0.77)	
	Gender	Male, n (%)	152 (36.5)	
		Female, n (%)	264 (63.5)	
	Socioeconomic status	Education		
		Secondary school, n (%)	Not reported	
		Vocational school, n (%)	Not reported	
		Technical/high school or university, n (%)	Not reported	
Ethnicity	Asian n (%)	28 (6.9)		

Bibliographic reference			
Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. Psychology of Addictive Behaviors 24(1): 170-175			
		Black/ African American n (%)	92 (22.7)
		White n (%)	187 (46.1)
		Other n (%) Includes American Indian, Hispanics, Native Hawaiian, and multiracial	99 (24.4)
	SEND	Not reported	
	Baseline drinking behaviour	Last 30-day alcohol use (Yes), n (%)	102 (24.5)
		Any alcohol or drug problem, n (%)	127 (30.5)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	416; Intervention n= 179, control n = 18		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P3	Planned Success Intervention
	Rationale/theory/Goal	P3	Content and strategies based on the Behaviour-Image Model
	Materials used	P3	Printed text and scripted messages that were designed to elicit a social image of a successful young adult who sets life goals to increase positive behaviours while avoiding behaviours that interfere with being more successful. The brief intervention materials were designed to provide feedback on current health/personal development behaviours and help participants set concrete goals to improve targeted behaviours and achieve desired future self-images.

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. <i>Psychology of Addictive Behaviors</i> 24(1): 170-175		
	Procedures used	P3	Tailored in-person communication and a follow-up series of parent/guardian print materials. The in-person communication consisted of a screening survey, consultation, and goal plan. One week after the brief intervention, parents/guardians of participants were sent three weekly mailings of 5 parent-youth cards with messages that paralleled those in the consultation.
	Provider	P3	Trained personal success coaches using fully scripted protocols. Success coaches consisted of nurses and certified health education specialists
	Method of delivery	P3	Individual
	Location	P3	In a designated study space during regular school hours.
	Duration	P3	Not reported
	Intensity	P3	20 minutes (s.d =2.26)
	Tailoring/adaptation	P3	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P3	Usual care control

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. <i>Psychology of Addictive Behaviors</i> 24(1): 170-175	
Rationale/theory/Goal	-	Not reported
Materials used	-	Commercially available health promotion materials commonly used in schools.
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	3 months	
Study Methods	Method of randomisation	Stratified randomisation grade level and current drug use status and then individually randomly assigned to either the brief intervention or usual care control.

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. <i>Psychology of Addictive Behaviors</i> 24(1): 170-175		
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	MANOVAs and ANOVAs	
	Unit of allocation	Individual	
	Unit of analysis	Individual	
	Attrition	Number of participants completing the study: Completing post-intervention data collection: n=360 (87%) No differences were found in the proportion of attrition between the treatment groups	Reasons for not completing the study: Withdrew from school: n= 14 (45%) Truancy/absences: n= 13 (42%)
Outcomes measures and effect size.	Outcome	Intervention (n=179)	Control (n=181)
	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: 1= 0 days, 11=28-30 days, mean (SE)	1.35 (0.07) SD 0.94	1.39 (0.07) SD 0.94
	MD 95% CI (calculated by reviewer)	0.03 (-0.16, 0.22)	

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. <i>Psychology of Addictive Behaviors</i> 24(1): 170-175		
	30 day quantity: 1= 0 drinks per day, 12= 11 or more drinks per day, mean (SE)	1.89 (0.16) SD 2.14	1.83 (0.16) SD 2.15
	MD 95% CI (calculated by reviewer)	0.06 (-0.25, 0.37)	
	30 day heavy use: 1= 0 days, 11= 28-30 days mean (SE)	1.20 (0.05) SD 0.67	1.15 (0.05) SD 0.67
	MD 95% CI (calculated by reviewer)	0.05 (-0.09, 0.19)	
	School attendance	Not reported	Not reported
	Alcohol related risky behaviour such as Unprotected or regretted sex	Not reported	Not reported
	Mental health and wellbeing		
	30 day alcohol/drug problems [17 item scale], mean (SE)	1.11 (0.20) SD 2.68	1.11 (0.20) SD 2.69
	MD 95% CI (calculated by reviewer)	0.0 (-0.56, 0.56)	
	Adverse or unintended effects, mean (SE)	Not reported	Not reported
Other outcomes measured	Cigarettes Marijuana Goal setting		
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

Bibliographic reference	Werch CE, Bian H, Moore MJ et al (2010) A Brief Image-based Prevention Intervention for Adolescents. <i>Psychology of Addictive Behaviors</i> 24(1): 170-175		
	Amount and frequency of alcohol use	Some concerns	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination.
	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	Outcome assessors are participants and it is not clear if they were aware of allocation. Control and intervention groups were within the same schools so this increases the risk of contamination.
	Adverse or unintended effects	Not applicable	Not applicable
Source of funding	National Institute on Drug Abuse (Grant DA018872 and DA019172) and the National Institute on Alcohol Abuse and Alcoholism (Grant AA9283)		
Comments	<p>Limitations by author: Relatively small sample from a single high school Limited 3 month follow up Due to the intervention consisting of in-person communication and a parent/guardian print materials, it is not known which of these strategies individually or in combination resulted in positive change.</p> <p>Limitations by reviewer: None</p>		

D.1.52 Williams 2016

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. Journal of the Society for Social Work and Research 7(1) 177-199				
Study type	Randomised controlled trial (cluster)				
Study dates	Not reported				
Aim	To test whether a parenting intervention in combination with a youth intervention was effective at delaying the initiation of substance use				
Country/geographical location	USA				
Setting/School type	Middle school				
Participant characteristics	Description	Seventh grade students			
			KiR (n=136) N(cluster=3)	KiR +FPNG (n=118) N(cluster=3)	Control (n=139) N(cluster=3)
	Age	Mean (SD)	12.14 (0.43)	12.13 (0.43)	12.32 (0.54)
	Gender	Male n (%)	73 (55%)	65 (57%)	59 (44%)
		Female n (%) ^{oooooo}	63 (45%)	53 (43%)	80 (66%)
	Socioeconomic status	Free or reduced lunch, n(%)			
		Yes	122 (92%)	110 (96%)	127 (96%)
Ethnicity	Mexican heritage, n (%)	127 (95%)	102 (89%)	119(89%)	

oooooo Calculated by reviewer

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. Journal of the Society for Social Work and Research 7(1) 177-199		
	SEND	Not reported	
	Baseline drinking behaviour	Never tried alcohol, n(%)	221 (61.7%)
Inclusion criteria	Not reported		
Exclusion criteria	Not reported		
Number of Participants	358		
Intervention	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P182	Keepin it REAL (KiR)
	Rationale/theory/Goal	P182	Designed to increase youth skills related to drug resistance, promote antidrug norms and attitude and develop effective communication skills and decision-making skills
	Materials used	P182	Manualised curriculum
	Procedures used	-	Not reported
	Provider	P182	Teacher
	Method of delivery	P182	Group
	Location	P182	Classroom
	Duration	P182	10 weeks

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. <i>Journal of the Society for Social Work and Research</i> 7(1) 177-199		
	Intensity	P182	10 lessons
	Tailoring/adaptation	-	Not reported
	Modifications	P182	None
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	-	Not reported
Intervention	TiDieR Checklist criteria	Paper/Location	Details
	Brief Name	P182	KiR plus Familias Preparando la Nueva Generación (FPNG)
	Rationale/theory/Goal	P182	To empower parents to help their adolescent resist alcohol and drugs, create and strengthen family functioning, reduce antisocial behaviours and improve communication. FPNG is based on ecodevelopmental theory
	Materials used	P183	Manualised curriculum
	Procedures used	P183	Role-play, discussion, videos

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. Journal of the Society for Social Work and Research 7(1) 177-199		
	Provider	P188	Developers of FPNG
	Method of delivery	P183	Groups
	Location	P183	School
	Duration	P183	8 weeks
	Intensity	P183	8 lessons
	Tailoring/adaptation	-	Not reported
	Modifications	-	Not reported
	Planned treatment fidelity	-	Not reported
	Actual treatment fidelity	-	Not reported
	Other details	P188	All FPNG facilitators received a 2 day training in the curriculum
Comparison	TIDieR Checklist criteria	Paper/Location	Details
	Brief Name	P186	Usual curriculum

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. <i>Journal of the Society for Social Work and Research</i> 7(1) 177-199	
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	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. Journal of the Society for Social Work and Research 7(1) 177-199		
Follow up	6 and 18 months post baseline		
Study Methods	Method of randomisation	Computer randomisation	
	Method of allocation	Not reported	
	Statistical method(s) used to analyse data	Clusters were adjusted for Logistic regression models	
	Unit of allocation	Schools	
	Unit of analysis	Individuals	
	Attrition pppppp	Number of participants completing the study: Not reported. (only 7 lost but unclear where this is from)	Reasons for not completing the study: Missing data
Outcomes measures and effect size.	Outcome	KiR vs control	KiR plus FGNG vs control
	Age at first whole drink of alcohol (for those who have never drunk alcohol) where reported		
	Alcohol initiation, 12 months	OR 0.84 95% CI 0.42 to 1.66	Not reported
	Age at first experience of	Not reported	

pppppp Percentages calculated by reviewer from numbers reported

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. <i>Journal of the Society for Social Work and Research</i> 7(1) 177-199		
	drunkenness where reported		
	Amount and frequency of alcohol use,	Not reported	
	School attendance	Not reported	
	Alcohol related risky behaviour such as unprotected or regretted sex	Not reported	
	Mental health and wellbeing	Not reported	
	Adverse or unintended effects	Not reported	
Other outcomes measured	Tobacco and marijuana lifetime use; tobacco overall use. All outcomes at 20 and 32 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	Some concerns	No information on allocation concealment with subjective outcomes.
	Age at first experience of	Not applicable	Not applicable

Bibliographic reference	Williams LR, Ayers S Baldwin A et al (2016) Delaying youth substance-use initiation: a cluster randomized controlled trial of complementary youth and parenting interventions. <i>Journal of the Society for Social Work and Research</i> 7(1) 177-199		
	drunkenness where reported		
	Amount and frequency of alcohol use	Not applicable	Not applicable
	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 Institutes of Health/National Institute on Minority Health and Health Disparities		
Comments	Limitations by author: Parents were mostly monolingual Spanish speakers so results might not be generalisable. Short follow-up Limitations by reviewer: Did not compare combine group to control group		

Appendix E: Forest plots

No forest plots were created for this guideline.

FINAL

Universal school-based multicomponent interventions for alcohol

Appendix F: GRADE tables

F.1 GRADE tables 1: Classroom based alcohol intervention programmes for children ages 11 to 18 years old.

F.1.1 Age at first whole drink of alcohol

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Classroom-based interventions	Control	Relative (95% CI)	Absolute	
Alcohol initiation (follow-up 12 months; assessed with: Self-reported ^(a))											
Williams 2016	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(e)	none	N not reported	N not reported	aOR 0.84 (0.42, 1.66) ^(f)	-	LOW

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

(b) Study did not provide information on allocation concealment. Participants may have been aware of the intervention they were received and this could have affected the outcomes which were self-reported.

(c) Single study so inconsistency not applicable.

(d) Study meets criteria in protocol

(e) 95% confidence interval crosses the line of no effect.

(f) OR as reported in the paper. Adjusted for clustering.

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		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Alcohol use (follow-up 6-30 months ^(a) ; assessed with: Self-reported measures ^(c))											
Griffin 2009	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	serious ^(g)	none	7/92	32/86	RR 0.2 (0.1, 0.4) ⁽ⁱ⁾		VERY LOW
Spoth 2002	cRCT						211/325 ^(h)	191/279 ^(h)	aRR 0.9 (0.8, 1.1) ^(k)		
Sun 2008	cRCT						Not reported	Not reported	aOR 1.00 (0.71, 1.55)		
Rohrbach 2009	cRCT						Not reported	Not reported	aOR 1.01 (0.80, 1.26) ^(l)		
Sloboda 2009	cRCT						4583/10028	3055/7292	aRR 1.09 (1.01, 1.18) ^(l)		
Malmberg 214	cRCT						147/468 ^(h)	113/443 ^(h)	aRR 1.2 (1.0, 1.5) ^(k)		
Midford 2014	cRCT						267/709	181/425	aOR 0.93 (0.56, 1.56) ^(l)		
Lynch 2015	cRCT						64/586	73/814	aOR 0.87 (0.51, 1.47) ^(l)		
Champion 2016	cRCT	212/576	216/527	aOR 0.69 (0.50, 0.96) ^(l)							
Alcohol use past month – Subgroup ^(l) : Male (follow-up 12 months; measured with: Self-reported measures ^(c) ;)											
Perry 2003	cRCT	Serious ^(m)	N/A ⁽ⁿ⁾	no serious indirectness ^(f)	Serious ^(o)	none	N not reported	N not reported	Intervention Mean change 0.11 (SE 0.02) Control Mean change 0.14 (SE 0.02)	Not reported	LOW
Alcohol use past month – Subgroup: Female ^(l) (follow-up 12 months; measured with: Self-reported measures ^(c))											
Perry 2003	cRCT	Serious ^(m)	N/A ⁽ⁿ⁾	no serious	Serious ^(o)	none	N not reported	N not reported	Intervention Mean change 0.13 (SE 0.02)	Not reported	LOW

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
				indirectness ^(f)					Control Mean change 0.12 (SE 0.03)		
30 day alcohol use (follow-up 12 months; measured with: Self-reported measures ^(c))											
Eisen 2002	cRCT	Serious ^(m)	N/A ⁽ⁿ⁾	no serious indirectness ^(f)	Serious ^(o)	none	N not reported (22.85%)	N not reported (23.18%)	% difference -0.33	Not reported	LOW
30 day alcohol use (follow-up 12 months measured with: Self-reported measures ^(c))											
Ringwalt 2009	cRCT	very serious ^(p)	N/A ⁽ⁿ⁾	no serious indirectness ^(f)	Serious ^(o)	none	N not reported (22.1%)	N not reported (19.7%)	-	Not reported	VERY LOW
30 day alcohol use (follow-up 14 months; measured with: Self-reported measures ^(c))											
Hecht 2003	cRCT	Serious ^(m)	N/A ⁽ⁿ⁾	no serious indirectness ^(f)	Serious ^(o)	none	N not reported	N not reported	-	MD -0.232 95% CI not reported SE 0.064	LOW

(a) Outcome measures varied in follow-up (6-30 months) and how they were measured. Alcohol use was measured as use in the last month, last 6 months, last 12 months or once or twice a month.

(b) Interventions given in studies varied (e.g. in number of session or intensity)

- (c) Outcomes were self-reported by participants and were not objective.
- (d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes. Two studies judged at high risk of bias as participants were aware of intervention allocation. Higher risk of contamination as randomisation was within the same school on one study. Very high attrition in one study.
- (e) Studies were could not be pooled so unable to measure inconsistency.
- (f) Studies meet eligibility criteria in protocol.
- (g) The majority of 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) RR calculated by reviewer
- (j) OR/RR as reported in the paper
- (k) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC from published in another study in this outcome.
- (l) Study only reported data by subgroup (male or female)
- (m) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes
- (n) Single study so inconsistency not applicable.
- (o) Not enough data reported to measure imprecision.
- (p) Study judged to be of high risk of bias. Method of allocation concealment not reported. All outcomes were subjective. Unclear reporting throughout
- (q) Study judged to be of high risk of bias due to significant baseline and unclear randomisation methods. No information on allocation concealment. Unclear if participants were aware of intervention allocation where outcomes were self-reported.

F.1.3.2 Binge drinking

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Binge drinking (follow-up 4-24 months ^(a) ; assessed with: Self-reported measures ^(c))											

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Sloboda 2009	cRCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	2818/10028	1801/7292	aRR 1.14 (1.01, 1.27) ⁽ⁱ⁾		VERY LOW
Malmberg 2014	cRCT						342/1330 ^(h)	252/1259 ^(h)	aRR 1.3 (1.1, 1.5) ⁽ⁱ⁾		
Midford 2014	cRCT						186/709	162/425	aOR 0.58 (0.31, 1.08) ⁽ⁱ⁾		
Bannink 2014	cRCT						160/390	157/433	aOR 0.90 (0.61, 1.34) ⁽ⁱ⁾		
Jander 2016	cRCT						194/456	184/368	aOR 0.40 (0.18, 0.83) ⁽ⁱ⁾		
Champion 2016	cRCT						45/576	32/527	aOR 1.13 (0.41, 3.15) ⁽ⁱ⁾		
Hanewinkel 2017	cRCT						603/1927	614/1875	aOR 1.30 (0.97, 1.72) ⁽ⁱ⁾		
30-day binge drinking (follow-up 12 months)											
Eisen 2002	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	very serious ^(m)	none	N not reported (12.67%)	N not reported (13.11%)	% difference -0.44 95% CI not reported	-	VERY LOW

- (a) Outcome measures varied in follow-up (4-24 months) and how they were measured. Binge drinking was measured as use in the last month, last 6 months, last 12 months or at least a month.
- (b) Interventions given in studies varied (e.g. computer-based or traditional teaching)
- (c) Outcomes were self-reported by participants and were not objective.
- (d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes. One study was judged at high risk of bias as participants were aware of intervention allocation and high attrition.
- (e) Studies were could not be pooled so unable to measure inconsistency.
- (f) Studies meet eligibility criteria in protocol.
- (g) The majority of 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) OR/RR as reported in the paper
- (j) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC from published in another study in this outcome.

-
- (k) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.*
 - (l) Single study so inconsistency not applicable.*
 - (m) Not enough data reported to measure imprecision.*

F.1.3.3 Drunkenness

Quality assessment							No of patients		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Drunkenness (follow-up 1-30 months ^(a) ; assessed with: Self-reported measures ^(c))											
Griffin 2009	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	3/92	7/86	RR 0.4 (0.1, 1.5) ^(o)	Not reported	VERY LOW
Spoth 2002	cRCT						17/30 ^(h)	15/25 ^(h)	aRR 0.9 (0.6, 1.5) ⁽ⁱ⁾		
Sloboda 2009	cRCT						3008/10028	1991/7292	aRR 1.10 (0.98, 1.22) ⁽ⁱ⁾		
Gabrhelik 2012	cRCT						291/905	285/827	aOR 0.94 (99.2% CI 0.75, 1.17) ⁽ⁱ⁾		
Bannink 2014	cRCT						115/390	112/433	aOR 0.90 (0.61, 1.35) ⁽ⁱ⁾		
Doumas 2017	cRCT						7/10 ^(h)	6/9 ^(h)	aRR 1.1 (0.6, 1.9) ^(k)		
Mean drunkenness frequency (follow-up 12 months; measured with: Self-reported measures ^(c))											
Botvin 2001	cRCT	Serious ^(l)	N/A ^(m)	no serious indirectness ^(f)	Serious ⁽ⁿ⁾	none	16	13	Intervention Mean 1.17 (SE = 0.02) Control Mean 1.26 (SE = 0.3)	Not reported	LOW
Mean drunkenness frequency (follow-up 36 months; measured with: Self-reported measures ^(c))											
Botvin 1990	randomised trials	very serious ^(l)	N/A ^(m)	no serious indirectness ^(f)	Serious ⁽ⁿ⁾	none	N not reported	N not reported	Intervention Mean 2.31 (SE = 0.04) Control Mean 2.32 (SE 0.04)	Not reported	VERY LOW

(a) Outcome measures varied in follow-up (1-30 months) and how they were measured. Drunkenness was measured as occurrences in the last week, last month or last 12 months.

(b) Interventions given in studies varied (e.g. computer-based or traditional teaching)

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

- (d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.
- (e) Studies were could not be pooled so unable to measure inconsistency.
- (f) Studies meet eligibility criteria in protocol.
- (g) All of 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) OR/RR as reported in the paper
- (j) RR calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in this outcome.
- (k) RR calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC published in the paper.
- (l) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes
- (m) Single study so inconsistency not applicable.
- (n) Not enough data reported to measure imprecision.
- (o) RR calculated by reviewer

F.1.3.4 Mean weekly alcohol consumption

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Mean weekly alcohol consumption (follow-up 6-52 weeks ^(a) ; measured with: Self-reported measures ^(c))											
Newton 2009	cRCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	48 ^(h)	40 ^(h)	aMD -5.93 (-6.49, -5.37) ⁽ⁱ⁾		VERY LOW
Jander 2016	cRCT						137 ^(h)	111 ^(h)	aMD 0.05 (-0.79, 0.88) ⁽ⁱ⁾		
Doumas 2017	cRCT						32 ^(h)	29 ^(h)	aMD -1.71 (-2.72, 1.16) ⁽ⁱ⁾		
Mean drinking quantity per occasion (follow-up 12 months; measured with: Self-reported measures ^(c))											

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Botvin 2001	cRCT	Serious ^(m)	N/A ^(k)	no serious indirectness ^(f)	Serious ^(l)	none	16	13	Intervention Mean 1.51 (SE = 0.02) Control Mean 1.68 (SE = 0.03)	Not reported	LOW
Mean drinking quantity per occasion (follow-up 12 months; measured with: Self-reported measures; Better indicated by lower values)											
Hanewinkel 2017	cRCT	Serious ^(m)	N/A ^(k)	no serious indirectness ^(f)	Serious ^(l)	none	1927	1875	Intervention Mean 4.67 (SD not reported) Control Mean 4.81 (SD not reported)	Not reported	LOW
Mean drinking quantity per occasion (follow-up 36 months; measured with: Self-reported measures; Better indicated by lower values)											
Botvin 1990	cRCT	very serious ⁽ⁿ⁾	N/A ^(k)	no serious indirectness ^(f)	Serious ^(l)	none	N not reported	N not reported	Intervention Mean 2.65 (SE 0.05) Control Mean 2.65 (SE 0.04)	Not reported	VERY LOW
Weekly drinking quantity (follow-up 6 months; measured with: Self-reported measures)											
Doumas 2014	cRCT	Serious ^(m)	N/A ^(k)	no serious indirectness ^(f)	Serious ^(l)	none	N not reported	N not reported	Intervention mean 0.90 (SD 3.47) Control mean 0.82 (SD 3.06)		LOW

(a) Outcome measures varied in follow-up (4-12 months) but were measured in the same way (as number of drinks consumed per week).

(b) Interventions given in studies varied (e.g. internet-based feedback or computer module)

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

- (d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes. Once study judged at high risk of bias as participants were aware of intervention and there was very high attrition.*
- (e) Studies were could not be pooled so unable to measure inconsistency.*
- (f) Studies meet eligibility criteria in protocol.*
- (g) The majority of 95% confidence intervals cross the line of no effect.*
- (h) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.*
- (i) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in this outcome.*
- (j) No information on allocation concealment or whether participants were aware of their allocation. Appears to be in a single school so there is a potential risk of contamination.*
- (k) Single study so inconsistency not applicable.*
- (l) Not enough data reported to measure imprecision.*
- (m) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes*
- (n) Study judged to be of high risk of bias due to methods of allocation concealment not described and all outcomes were self-measured and very high attrition*

F.1.3.5 Quantity x frequency of alcohol

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom intervention	Control	Relative (95% CI)	Absolute	
Quantity x frequency of alcohol (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Shope 1992a	cRCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	199 ^(h)	101 ^(h)	aMD -0.13 (-0.27, 0.01) ⁽ⁱ⁾		VERY LOW
Shope 1992b	cRCT						207 ^(h)	95 ^(h)	aMD 0.1 (-0.06, 0.26) ⁽ⁱ⁾		
Shope 1992c	cRCT						201 ^(h)	85 ^(h)	aMD -0.12 (-0.40, 0.16) ⁽ⁱ⁾		
Shope 1992d	cRCT						205 ^(h)	100 ^(h)	aMD 0.1 (-0.35, 0.15) ⁽ⁱ⁾		
Shope 1994	cRCT						138 ^(h)	149 ^(h)	aMD 0.02 (-0.31, 0.35) ⁽ⁱ⁾		
Quantity x frequency of alcohol - Subgroup: female (follow-up 3 months; measured with: Self-reported measures; Better indicated by lower values)											
Vogl 2009 ^(j)	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported	N not reported	Intervention Mean 0.99 (SD = 4.07) Control Mean 2.25 SD = 10.16)	Not reported	LOW
Quantity x frequency of alcohol - Subgroup: male (follow-up 3 months; measured with: Self-reported measures; Better indicated by lower values)											
Vogl 2009 ^(j)	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported	N not reported	Intervention Mean 3.86 (SD = 14.54) Control Mean 3.50 (SD = 13.12)	Not reported	LOW
Quantity x frequency of alcohol (follow-up 6 months; measured with: Self-reported measures)											
Doumas 2014	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported	N not reported	Intervention mean 1.17 (SD 1.60) Control mean 1.06 (1.71)		LOW

- (a) Outcome measures varied in follow-up (3-12 months) but were measured in the same way (a 7 point quantity x frequency scale).
- (b) Interventions given in studies were the same but varied in terms of whether a pretest was given or not.
- (c) Outcomes were self-reported by participants and were not objective.
- (d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes. Two studies judged at high risk of bias as there was very high attrition in addition to lack of information on allocation concealment.
- (e) Studies were could not be pooled so unable to measure inconsistency.
- (f) Studies meet eligibility criteria in protocol.
- (g) All of 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome.
- (j) Study reported data by subgroup only (male or female)
- (k) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes Single study so inconsistency not applicable.
- (l) Single study so inconsistency not applicable.
- (m) Not enough data reported to measure imprecision

F.1.3.6 Mean alcohol frequency

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom interventions	Control	Relative (95% CI)	Absolute	
Mean alcohol frequency (follow-up 12 months; measured with: Self-reported measures ^(a))											
Botvin 2001	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(e)	none	N not reported	N not reported	Intervention Mean 1.77 (SE = 0.03) Control 1.99 (SE = 0.04)		LOW

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom interventions	Control	Relative (95% CI)	Absolute	
Mean drinking frequency (follow-up 36 months; measured with: Self-reported measures ^(a))											
Botvin 1990	cRCT	very serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(e)	none	N not reported	N not reported	Intervention Mean 3.17 (SE = 0.05) Control Mean 3.15 (SE = 0.05)		VERY LOW
Doumas 2014	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(e)	none	N not reported	N not reported	Intervention mean 0.90 (SD 3.47) Control mean 0.82 (3.06)		LOW

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

(b) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.

(c) Single study so inconsistency not applicable.

(d) Studies meet eligibility criteria in protocol.

(e) Not enough data reported to measure imprecision

(f) Study judged to be of high risk of bias due to methods of allocation concealment not described and all outcomes were self-measured and very high attrition

F.1.3.7 Lifetime prevalence

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom	Control	Relative (95% CI)	Absolute	
Lifetime prevalence (follow-up 6-12 months ^(a) ; assessed with: Self-reported measures ^(c))											
Malmberg 2014	cRCT	Serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	272/468 ^(h)	220/443 ^(h)	aRR 1.2 (1.0, 1.3) ⁽ⁱ⁾ aOR 0.90 (0.67, 1.21) ⁽ⁱ⁾ aOR 0.94 (0.61, 1.44) ⁽ⁱ⁾	-	LOW
Morgenstern 2009	cRCT						N not reported	N not reported			
Hanewinkel 2017	cRCT						N not reported	N not reported			
Lifetime alcohol use (follow-up 12 months)											
Eisen 2002	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported (66.97%)	N not reported (66.33%)		% difference 0.64 95% CI not reported	LOW
Lifetime alcohol use (follow-up 12 months)											
Ringwalt 2009	cRCT	very serious ⁽ⁿ⁾	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported (63.5%)	N not reported (59.9%)		% difference 3.6	VERY LOW

(a) Outcome measures varied in follow-up (6-12 months).

(b) Interventions given in studies varied (e.g. computer-based or traditional teaching)

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

(d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.

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

- (f) Studies meet eligibility criteria in protocol.
- (g) The majority of 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) OR/RR as reported in the paper
- (j) RR calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome.
- (k) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes
- (l) Single study so inconsistency not applicable.
- (m) Not enough data reported to measure imprecision.
- (n) Study judged to be of high risk of bias. Method of allocation concealment not reported. All outcomes were subjective. Unclear reporting throughout

F.1.4 School attendance

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom intervention	Control	Relative (95% CI)	Absolute	
Truancy (follow-up 12 months; measured with: Self-reported measures ^(a))											
Newton 2009	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(e)	none ^e	331	275	Intervention Mean 1.21 (SD = 0.7) Control Mean 1.42 (SD= 1.03)	Not reported	LOW

- (a) Outcomes were self-reported by participants and were not objective.
- (b) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.
- (c) Single study so inconsistency not applicable.
- (d) Studies meet eligibility criteria in protocol.
- (e) Not enough data reported to measure imprecision

F.1.5 Alcohol related risky behaviour

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom interventions	Control	Relative (95% CI)	Absolute	
Alcohol misuse (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Shope 1992a	cRCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	203 ^(h)	100 ^(h)	aMD 0.05 (-0.28, 0.18) ⁽ⁱ⁾		VERY LOW
Shope 1992b	cRCT						210 ^(h)	95 ^(h)	aMD 0.08 (-0.23, 0.39) ⁽ⁱ⁾		
Shope 1992c	cRCT						205 ^(h)	90 ^(h)	aMD -0.03 (-0.34, 0.28) ⁽ⁱ⁾		
Shope 1992d	cRCT						209 ^(h)	101 ^(h)	aMD -0.1 (-0.46, 0.26) ⁽ⁱ⁾		
Shope 1994	cRCT						139 ^(h)	150 ^(h)	aMD -0.07 (-1.00, 0.86) ⁽ⁱ⁾		
Alcohol harms - risky (follow-up 21 months; measured with: Self-reported measures ^(c))											
Midford 2014	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	709	425	Intervention Mean 3.8 (SD = 6.3) Control Mean 5.7 (SD = 8.9)	Not reported	LOW
Violent behaviour and intentions – Subgroup: males (follow-up 12 months; measured with: Self-reported measures ^(c) ;))											
Perry 2003 ^(l)	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported	N not reported	Intervention Mean change 0.57 (SE = 0.09) Control Mean change 0.54 (SE = 0.09)	Not reported	LOW
Violent behaviour and intentions – Subgroup: females (follow-up 12 months; measured with: Self-reported measures ^(c))											
Perry 2003 ^(l)	cRCT	Serious ^(k)	N/A ^(l)	no serious indirectness ^(f)	Serious ^(m)	none	N not reported	N not reported	Intervention Mean change 0.23 (SE = 0.07) Control Mean change 0.26 (SE = 0.07)	Not reported	LOW
Always use a condom during intercourse- Subgroup: those reporting as sexually active (follow-up, 4 months; measured with: Self-reported measures ^(c))											

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom interventions	Control	Relative (95% CI)	Absolute	
Bannink 2014	cRCT	Serious ^(k)	N/A(l)	no serious indirectness(f)	No serious imprecision ^(o)	None	62/119 (52.1%)	43/106 (40.6%)	OR 2.09 (1.04, 4.22) ⁽ⁿ⁾		MODERATE

(a) Outcome measures varied in follow-up (3-12 months) but were measured in the same way (a 10-tiem scale).

(b) Interventions given in studies were the same but varied in terms of whether a pretest was given or not.

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

(d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes. Two studies judged at high risk of bias as there was very high attrition in addition to lack of information on allocation concealment.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.

(i) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome.

(j) Study reported data by subgroup only (male or female)

(k) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes

(l) Single study so inconsistency not applicable.

(m) Not enough data reported to measure imprecision

(n) OR as reported in the paper.

(o) 95% confidence interval does not cross the line of no effect.

F.1.6 Mental health and wellbeing

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal classroom interventions	Control	Relative (95% CI)	Absolute	
Alcohol-related harms (follow-up 6-52 weeks ^(a) ; measured with: Self-reported measures ^(c))											
Newton 2009 Doumas 2017	cRCT cRCT	Serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	serious ^(g)	none	48 ^(h) 32 ^(h)	40 ^(h) 29 ^(h)	aMD -5.27 (-6.53, -4.01) ⁽ⁱ⁾ aMD -0.06 (-1.63, 1.51) ⁽ⁱ⁾		LOW
Psychological distress (follow-up 12 months; measured with: Self-reported measures; Better indicated by lower values)											
Newton 2009	cRCT	Serious ^(j)	N/A ^(k)	no serious indirectness ^(f)	No serious ^(l)	none	48 ^(h)	40 ^(h)	aMD -1.42 (-3.19, 0.35) ⁽ⁱ⁾		MODERATE

(a) Outcome measures varied in follow-up (6-52 weeks) and were measured on different scales.

(b) Interventions given in studies varied in type of content given (e.g. personalised feedback or computer-based modules).

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

(d) Studies did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.

(i) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome.

(j) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes

(k) *Single study so inconsistency not applicable.*

(l) 95% confidence intervals do not cross the line of no effect

F.1.7 Adverse or unintended effects

No data reported.

F.2 GRADE tables 2: School based alcohol intervention programmes outside the classroom for children ages 11 to 18 years old.

F.2.1 Age at first whole drink

No evidence identified

F.2.2 Age at first experience of drunkenness

No evidence identified

F.2.3 Amount and frequency of alcohol use

F.2.3.1 Mean 30 day alcohol frequency

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Outside classroom	Control	Relative (95% CI)	Absolute	
30 day alcohol frequency (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none ⁵	150	152	MD -0.01 (-0.15, 0.13) ^(h) MD -0.11 (-0.31, 0.09) ^(h)		VERY LOW
Werch 2005a	RCT						260	254			
30 day alcohol frequency (follow-up 3 months; measured with: Self-reported measures ^(c))											
Werch 1996	RCT	Serious ⁽ⁱ⁾	N/A ^(j)	no serious indirectness ^(f)	serious ^(k)	none	60	64	Intervention Mean 0.16 ^(l) Control Mean 0.39 ^(l)		LOW

(a) Outcome measures varied in follow-up (3-12 months) and were measured on different scales.

- (b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).*
- (c) Outcomes were self-reported by participants and were not objective.*
- (d) None of the studies provided clear information on whether participants were aware of intervention allocation. This can introduce bias with self-reported measures. All studies randomised within a single school increasing the risk of contamination. One study did not report attrition data.*
- (e) Studies were could not be pooled so unable to measure inconsistency.*
- (f) Studies meet eligibility criteria in protocol.*
- (g) All of 95% confidence intervals cross the line of no effect.*
- (h) MD calculated by reviewer.*
- (i) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes Attrition was not reported*
- (j) Single study so inconsistency not applicable*
- (k) Not enough data reported to measure imprecision.*
- (l) Standard deviations not reported.*

F.2.3.2 Mean 30 day alcohol quantity

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Outside classroom	Control	Relative (95% CI)	Absolute	
30 day alcohol quantity (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none ⁵	150	152	MD 0.1 (-0.07, 0.27) ^(h)		VERY LOW
Werch 2005a	RCT						260	254	MD -0.12 (-0.40, 0.16) ^(h)		
30 day alcohol frequency (follow-up 3 months; measured with: Self-reported measures ^(c))											
Werch 1996	RCT	Serious ⁽ⁱ⁾	N/A ^(j)	no serious indirectness ^(f)	serious ^(k)	none	60	64	Intervention Mean 0.13 ^(l) Control Mean 0.25 ^(l)		LOW

(a) Outcome measures varied in follow-up (3-12 months) and were measured on different scales.

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) None of the studies provided clear information on whether participants were aware of intervention allocation. This can introduce bias with self-reported measures. All studies randomised within a single school increasing the risk of contamination. One study did not report attrition data.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) MD calculated by reviewer.

(i) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes Attrition was not reported

(j) Single study so inconsistency not applicable

(k) Not enough data reported to measure imprecision.

(l) Standard deviations not reported.

F.2.3.3 Mean 30 day alcohol heavy use

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Outside classroom	Control by age	Relative (95% CI)	Absolute	
30 day heavy use (follow-up 3-12 months; measured with: Self-reported measures)											
Werch 2003	RCT	very serious (d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	150	152	MD -0.02 (-0.09, 0.05) ^(h)		VERY LOW
Werch 2005a	RCT						260	254	MD -0.14 (-0.28, -0.00) ^(h)		
30 day heavy use (follow-up 3 months; assessed with: Self-reported measures ^(c))											
Werch 1996	RCT	Very serious (i)	N/A ^(l)	no serious indirectness ^(f)	serious ^(k)	none	0/60	3/64	Unable to calculate		VERY LOW
30 day heavy use (follow-up 6 months; assessed with: Self-reported measures)											
D'Amico 2012	cRCT	Very serious (i)	N/A ^(l)	no serious indirectness ^(f)	serious ^(k)	none	N not reported 4.5%	N not reported 6.1%	OR 0.78 95% CI not reported ^(l)	-	VERY LOW

(a) Outcome measures varied in follow-up (3-12 months) and were measured on different scales.

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) None of the studies provided clear information on whether participants were aware of intervention allocation. This can introduce bias with self-reported measures. All studies randomised within a single school increasing the risk of contamination. One study did not report attrition data.

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

(f) Studies meet eligibility criteria in protocol.

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

- (h) MD calculated by reviewer.*
- (i) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes Attrition was not reported*
- (j) Single study so inconsistency not applicable*
- (k) Not enough data reported to measure imprecision.*
- (l) OR as reported in paper.*

F.2.3.4 30 day alcohol use

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			Relative (95% CI)	Absolute	
30 day alcohol use (follow-up 3 months; assessed with: Self-reported measures ^(g))											
Werch 1996	RCT	Very serious ^(a)	N/A	no serious indirectness ^(c)	serious ^(d)	none	3/60 (5%)	6/64 (9.4%)	RR 0.5 (0.1, 2.0)		VERY LOW
30 day alcohol use (follow-up 6 months; assessed with: Self-reported measures ^(g))											
D'Amico 2012	cRCT	very serious ^(a)	N/A	no serious indirectness ^(c)	serious ^(d)	none	N not reported 9.7%	N not reported 12.9%	OR 0.73 95% CI not reported	-	VERY LOW

- (a) Study did not report allocation concealment methods so participants were potentially aware of intervention allocation which can introduce bias with self-reported outcomes. Attrition was not reported
- (b) Single study so unable to measure imprecision
- (c) Study meets protocol inclusion criteria
- (d) 95% CI crosses the line of no effect.
- (e) RR calculated by reviewer.
- (f) Not enough data reported to measure imprecision.
- (g) Outcomes were self-reported by participants and were not objective

F.2.3.5 Lifetime alcohol use

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			Relative (95% CI)	Absolute	
Lifetime alcohol (follow-up 6 months; assessed with: Self-reported measures ^(e))											
D'Amico 2012	cRCT	very serious ^(a)	N/A ^(b)	no serious indirectness ^(c)	Serious ^(d)	none	N not reported 22.2%	N not reported 29.0%	OR 0.70 95% CI not reported	-	VERY LOW

(a) Study did not report allocation concealment methods so participants were potentially aware of intervention allocation which can introduce bias with self-reported outcomes. Attrition was not reported

(b) Single study so unable to measure imprecision

(c) Study meets protocol inclusion criteria

(d) Not enough data reported to measure imprecision.

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

F.2.4 School attendance

Quality assessment							No of participants		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intervention	Control	Relative (95% CI)	Absolute	
Absenteeism (follow-up 4 months; measured with: School transcript)											
Colnes 2001	RCT	no serious risk of bias ^(a)	N/A	no serious indirectness ^(c)	No serious imprecision ^(d)	none	18	18	MD 1.5 (0.66, 2.34) ^(e)		HIGH
Tardiness (follow-up 4 months; measured with: School transcript)											
Colnes 2001	RCT	no serious risk of bias ^(a)	N/A	no serious indirectness ^(c)	no serious imprecision ^(d)	none	18	18	MD 1.11 (0.41, 1.81) ^(e)		HIGH

(a) Concerns about limited data on allocation concealment noted but unlikely to affect objective measures

(b) Single study so unable to measure inconsistency

(c) Study meets protocol inclusion criteria

(d) 95% confidence intervals do not cross the line of no effect.

(e) MD calculated by reviewer.

F.2.5 Alcohol-related risky behaviour

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			Relative (95% CI)	Absolute	
Risky drinking (RSTP) (follow-up 6 months; measured with: Self-reported measures ^(a))											
D'Amico 2002	cRCT	very serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(f)	none	N not reported	N not reported	Intervention Mean 1.90 (SD 3.68) Control Mean 2.36 (SD 4.70)		VERY LOW
Risky drinking (DARE-A) (follow-up 6 months; measured with: Self-reported measures ^(s))											
D'Amico 2002]	cRCT	very serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(f)	none	N not reported	N not reported	Intervention Mean 1.06 (SD 2.76) Control Mean 2.36 (SD 4.70)		VERY LOW
Negative consequences (follow-up 3 months; measured with: Self-reported measures ^(a))											
Werch 1996	RCT	Serious ^(g)	N/A ^(c)	no serious indirectness ^(d)	Serious ^(f)	none	60	64	Intervention Mean 9.58 ^(h) Control Mean 9.05 ^(h)		LOW

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

(b) Randomisation methods not very clear. There is no information on allocation concealment with outcomes reported subjectively. Attrition numbers were not reported

(c) Single study so unable to measure imprecision

(d) Study meets protocol inclusion criteria

(e) Study did not report allocation concealment methods so participants were potentially aware of intervention allocation which can introduce bias with self-reported outcomes. Attrition was not reported

(f) Not enough data reported to measure imprecision.

(g) Study did not report allocation concealment methods so participants were potentially aware of intervention allocation which can introduce bias with self-reported outcomes. Attrition was not reported

(h) Standard deviations not reported.

F.2.6 Mental health and wellbeing

F.2.6.1 Alcohol problems

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			Relative (95% CI)	Absolute	
Alcohol problems (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	No serious imprecision ^(g)	none	150	152	MD 0.5 (0.14, 0.86) ^(h)		LOW
Werch 2005a	RCT						260	254	MD -0.56 (-1.04, -0.06) ^(h)		

(a) Outcome measures varied in follow-up (3-12 months) and were measured on different scales.

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) None of the studies provided clear information on whether participants were aware of intervention allocation. This can introduce bias with self-reported measures. All studies randomised within a single school increasing the risk of contamination. One study did not report attrition data.

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

(f) Studies meet eligibility criteria in protocol.

(g) Both 95% confidence intervals do not cross the line of no effect.

(h) MD calculated by reviewer.

F.2.7 Adverse effects

No evidence identified.

F.3 GRADE tables 3: School based alcohol multicomponent intervention programmes for children ages 11 to 18 years old.

F.3.1 Age at first use

No data reported

F.3.2 Age at first experience of drunkenness

No data reported

F.3.3 Amount and frequency of alcohol use

F.3.3.1 Alcohol use

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multicomponent interventions	Control	Relative (95% CI)	Absolute	

Alcohol use (follow-up 6-30 months^(a); assessed with: Self-reported measures^(c))

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Werch 1998	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	5/73	3/70	RR 1.6 (0.4, 6.4) ⁽ⁱ⁾		VERY LOW
Werch 2000a	RCT						10/100	14/107	RR 0.8 (0.4, 1.6) ⁽ⁱ⁾		
Werch 2000b	RCT						17/150	26/150	RR 0.7 (0.4, 1.2) ⁽ⁱ⁾		
Spoth 2002	cRCT						117/271 ^(h)	99/251 ^(h)	aRR 1.1 (0.9, 1.3) ^(k)		
Malmberg 2014	cRCT						109/360 ^(h)	97/380 ^(h)	aRR 1.2 (0.9, 1.5) ^(k)		
Hodder 2017	cRCT						293/1261	196/844	aOR 1.10 (0.77, 1.56) ^(l)		
Sanchez 2017	cRCT						374/2013	382/3169	aOR 0.8 (0.6, 1.1) ⁽ⁱ⁾		
Regular drinking (follow-up 12 months; assessed with: Self-reported measures ^(c))											
Patton 2006	cRCT	Serious ^(l)	N/A ^(m)	no serious indirectness ^(f)	Serious ^(g)	None	N not reported	N not reported	aOR 1.09 (0.77, 1.57) ⁽ⁱ⁾	-	LOW
Alcohol use past month – Subgroup ⁽ⁿ⁾ : Male (follow-up 12 months; measured with: Self-reported measures ^(c))											
Perry 2003	cRCT	Serious ^(o)	N/A ^(m)	no serious indirectness ^(f)	Serious ^(p)	none	N not reported	N not reported	Intervention Mean change 0.08 (SE 0.02) Control Mean change 0.14 (SE 0.02)	Not reported	LOW
Alcohol use past month – Subgroup ⁽ⁿ⁾ : Female (follow-up 12 months; measured with: Self-reported measures ^(c))											
Perry 2003	cRCT	Serious ^(m)	N/A ^(m)	no serious indirectness ^(f)	Serious ^(p)	none	N not reported	N not reported	Intervention Mean change 0.08 (SE 0.03)	Not reported	LOW

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
									Control Mean change 0.12 (SE 0.03)		
Change from baseline alcohol use (follow up 3 years; measured with: Self-reported measures ^(c))											
Komro 2006	cRCT	Very serious ^(q)	N/A ^(m)	no serious indirectness ^(f)	Serious ^(p)	none	N not reported	N not reported	Intervention Mean change 0.02 (SE 0.01) Control Mean change 0.05 (SE 0.004)		VERY LOW

- (a) Outcome measures varied in follow-up (6-30 months) and how they were measured. Alcohol use was measured as use in the last week or last 30 days.
- (b) Interventions given in studies varied (e.g. individual or group interventions, with parental components or other components.)
- (c) Outcomes were self-reported by participants and were not objective.
- (d) Two studies were judged to be of high risk of bias due to risk of contamination within clusters, high attrition and lack of information on allocation concealment with a subjective outcome
- (e) Studies were could not be pooled so unable to measure inconsistency.
- (f) Studies meet eligibility criteria in protocol.
- (g) All of the 95% confidence intervals cross the line of no effect.
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.
- (i) RR calculated by reviewer
- (j) OR/RR as reported in the paper
- (k) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC from published in another study in this outcome.
- (l) Study judged to have concerns due to lack of information on allocation concealment with subjective outcomes.
- (m) Single study so inconsistency not applicable.
- (n) Study reported subgroups only (males and females).

-
- (o) Study did not report allocation concealment methods so it was unclear if participants were aware of intervention allocation which may lead to bias in self-reported outcomes*
 - (p) Not enough data reported to measure imprecision.*
 - (q) Study did not report randomisation methods and allocation concealment methods. Potential confounding baseline imbalances. High attrition.*

F.3.3.2 Lifetime alcohol use

Quality assessment							No of people		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multicomponent interventions	Control	Relative (95% CI)	Absolute	
Lifetime alcohol use (follow-up 8-36 months ^(a) ; assessed with: Self-reported measures ^(c))											
Werch 2000a	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	serious ^(g)	none ⁵	38/100	48/107	RR 0.8 (0.6, 1.2) ⁽ⁱ⁾		VERY LOW
Werch 2000b	RCT	serious ^(d)		serious indirectness ^(f)			81/150	92/150	RR 0.9 (0.7, 1.1) ⁽ⁱ⁾		
Malmberg 2014	cRCT						208/360 ^(h)	188/380 ^(h)	aRR 1.2 (1.0, 1.3) ^(k)		
Hodder 2017	cRCT						770/1261	494/844	aOR 1.11 (0.83, 1.48) ^(j)		

(a) Outcome measures varied in follow-up (8-36 months).

(b) Interventions given in studies varied (e.g. individual or group interventions, with parental components or other components.)

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

(d) Two studies were judged to be of high risk of bias due to risk of contamination within clusters, High attrition and lack of information on allocation concealment with a subjective outcome.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.

(i) RR calculated by reviewer

(j) OR/RR as reported in the paper

(k) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC from published in another study in this outcome.

F.3.3.3 Heavy/binge drinking

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Heavy/binge drinking (follow-up 6-36 months ^(a) ; assessed with: Self-reported measures ^(c))											
Werch 1998	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	serious ^(g)	none	4/73	1/70	RR 3.8 (0.4, 33.5) ⁽ⁱ⁾		VERY LOW
Werch 2000b	RCT						7/150	13/150	RR 0.5 (0.2, 1.3) ⁽ⁱ⁾		
Werch 2000a	RCT						6/100	10/107	RR 0.6 (0.2, 1.7) ⁽ⁱ⁾		
Malmberg 2014	cRCT						24/92 ^(h)	19/97 ^(h)	aRR 1.3 (0.8, 2.3) ^(k)		
Haug 2017	cRCT						226/547	224/494	aOR 0.62 (0.44, 0.87) ^(j)		
Sanchez 2017	cRCT						272/1983	261/2137	aOR 0.8 (0.6, 1.2) ^(j)		
Sumnall 2017	cRCT						879/5160	1300/5073	aOR 0.596 (0.49, 0.725) ^(j)		
Hodder 2017	cRCT						293/1261	196/844	aOR 1.03 (0.74, 1.43) ^(j)		
Binge drinking (follow-up 12 months; assessed with: Self-reported measures ^(c))											
Patton 2006	cRCT	Serious ^(l)	N/A ^(m)	no serious indirectness ^(f)	Serious ^(g)	none	N not reported	N not reported	aOR 0.95 (0.69, 1.32) ⁽ⁱ⁾	-	LOW

(a) Outcome measures varied in follow-up (6-36 months).

(b) Interventions given in studies varied (e.g. individual or group interventions, with parental components or other components.)

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

(d) Two studies were judged to be of high risk of bias due to risk of contamination within clusters, high attrition and lack of information on allocation concealment with a subjective outcome.

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

(f) Studies meet eligibility criteria in protocol.

- (g) Most of the 95% confidence intervals cross the line of no effect.*
- (h) For cluster RCTs where an adjusted OR/RR is not reported in the paper effective sample sizes have been calculated by the reviewer.*
- (i) RR calculated by reviewer*
- (j) OR/RR as reported in the paper*
- (k) RR calculated by reviewer using effective samples sizes to adjust for clustering. Used ICC from published in another study in this outcome.*
- (l) Study judged to have concerns due to lack of information on allocation concealment with subjective outcomes.*
- (m) Single study so inconsistency not applicable.*

F.3.3.4 Alcohol frequency

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multicomponent interventions	Control	Relative (95% CI)	Absolute	
Alcohol frequency (follow-up 3-6 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	152	152	MD -0.02 (-0.16, 0.12) ^(h)		VERY LOW
Werch 2005b	RCT						299	149	MD -0.05 (-0.17, 0.09) ^(h)		
Werch 2010	RCT						179	181	MD 0.03 (-0.16, 0.22) ^(h)		

(a) Outcome measures varied in follow-up (3-6 months).

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) Studies judged to at high risk of bias due to potential contamination within clusters, lack of information on allocation concealment for a subjective outcome and no attrition data reported.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) MD calculated by reviewer.

F.3.3.5 Alcohol quantity

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Alcohol Quantity (follow-up 3-12 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	152	152	MD 0.02 (-0.15, 0.19) ⁽ⁱ⁾		VERY LOW
Werch 2005b	RCT						299	149	MD 0.01 (-0.13, 0.15) ⁽ⁱ⁾		
Werch 2010	RCT						179	181	MD 0.06 (-0.25, 0.37)		
Koning 2014	cRCT						39 ^(h)	46 ^(h)	aMD -1.09 (-2.85, 0.67) ⁽ⁱ⁾		

(a) Outcome measures varied in follow-up (3-12 months).

(b) Interventions given in studies varied across studies (e.g. brief intervention or classroom-based lessons).

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

(d) Studies judged to at high risk of bias due to potential contamination within clusters, lack of information on allocation concealment for a subjective outcome and no attrition data reported.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.

(i) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome

(j) MD calculated by reviewer.

FINAL

Universal school-based multicomponent interventions for alcohol

F.3.3.6 Alcohol heavy use

Quality assessment							No of participants		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multicomponent interventions	Control	Relative (95% CI)	Absolute	
Alcohol heavy use (follow-up 3-6 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	152	152	MD 0.02 (-0.03, 0.05) ^(h)		VERY LOW
Werch 2005b	RCT						299	149	MD 0.04 (-0.01, 0.09) ^(h)		
Werch 2010							179	181	MD 0.05 (-0.09, 0.19) ^(h)		

(a) Outcome measures varied in follow-up (3-6 months).

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) Studies judged to at high risk of bias due to potential contamination within clusters, lack of information on allocation concealment for a subjective outcome and no attrition data reported.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) MD calculated by reviewer.

F.3.3.7 Lifetime drunkenness

Quality assessment							No of people		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Lifetime drunkenness (follow-up 1 years; assessed with: Self-reported measures ^(a))											
Skärs trand 2013	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	serious ^(e)	none	53/320 (16.6%)	64/188 (34%)	OR 1.39 (0.65, 2.96) ^(f)		LOW
Lifetime drunkenness - Boys (follow-up 1 years; assessed with: Self-reported measures)											
Skärs trand 2013	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	serious ^(e)	none	N not reported 16.9%	N not reported 13.6%	OR 1.48 (0.48, 4.53) ^(f)	-	LOW
Lifetime drunkenness - Girls (follow-up 1 years; assessed with: Self-reported measures)											
Skärs trand 2013	cRCT	Serious ^(b)	N/A ^(c)	no serious indirectness ^(d)	serious ^(e)	none	N not reported 16.6%	N not reported 12.8%	OR 1.61 (0.56 to 4.64) ^(f)	-	LOW

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

(b) Study did not report randomisation methods or allocation concealment information. It is not possible to tell if participants were aware of their intervention allocation which could bias self-reported outcomes.

(c) Single study so inconsistency not applicable.

(d) Study meets eligibility criteria in protocol

(e) 95% confidence interval crosses line of no effect.

(f) OR as reported in the paper.

FINAL

Universal school-based multicomponent interventions for alcohol

F.3.3.8 Drunkenness past 30 days

Quality assessment							No of people		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Drunkenness past 30 days (follow-up 1 years; assessed with: Self-reported measures ^(a))											
Skärs trand 2013	cRCT	serious ^(b)	N/A ^(c)	no serious indirectness ^(f)	Serious ^(e)	none	N not reported	N not reported	OR 0.93 (0.24 to 3.56) ^(f)		LOW
Drunkenness past 30 days - Boys (follow-up 1 years; assessed with: Self-reported measures ^(a))											
Skärs trand 2013	cRCT	serious ^(b)	N/A ^(c)	no serious indirectness ^(f)	Serious ^(e)	none	N not reported	N not reported	OR 2.8 (0.13 to 60.05) ^(f)		LOW
Drunkenness past 30 days - Girls (follow-up 1 years; assessed with: Self-reported measures ^(a))											
Skärs trand 2013	cRCT	serious ^(b)	N/A ^(c)	no serious indirectness ^(f)	Serious ^(e)	none	N not reported	N not reported	OR 0.47 (0.08 to 2.77) ^(f)		LOW

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

(b) Study did not report randomisation methods or allocation concealment information. It is not possible to tell if participants were aware of their intervention allocation which could bias self-reported outcomes.

(c) Single study so inconsistency not applicable.

(d) Study meets eligibility criteria in protocol

(e) 95% confidence interval crosses line of no effect.

(f) OR as reported in the paper

F.3.4 School attendance

No data reported

F.3.5 Alcohol-related risky behaviours

Quality assessment							No of people		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Violent behaviour and intentions - Subgroup : males (follow-up 12 months; measured with: Self-reported measures ^(a))											
Perry 2003	cRCT	Serious ^(b)	N/A ^(c)	Serious ^(d)	Serious ^(e)	none	N not reported	N not reported	Intervention mean change 0.35 SE (0.08) Control mean change 0.54 SE (0.09)		VERY LOW
Violent behaviour and intentions -Subgroup: females(follow-up 12 months; measured with: Self-reported measures ^(a))											
Perry 2003	cRCT	Serious ^(b)	N/A ^(c)	Serious ^(d)	Serious ^(e)	none	N not reported	N not reported	Intervention mean change 0.30 SE (0.07) Control mean change 0.26 SE (0.07)		VERY LOW
Any risky behaviour (including unprotected sex) (follow-up 12 months; assessed with: Self-reported measures)											

Quality assessment							No of people		Effect		Quality
Studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Patton 2006	cRCT	Serious ^(h)	N/A ^(c)	Serious ^(d)	Serious ^(e)	none	-	-	aOR 0.89 (0.68 to 1.17) ⁽ⁱ⁾	-	VERY LOW

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

(b) Study judged to have concerns due to lack of information on allocation concealment with subjective outcomes.

(c) Single study so inconsistency not applicable.

(d) Study meets eligibility criteria in protocol

(e) 95% CI crosses the line of no effect.

(f) For cluster RCTs where an adjusted point estimate is not reported in the paper effective sample sizes have been calculated by the reviewer.

(g) MD calculated by reviewer using effective sample sizes to adjust for clustering. Used ICC from published in another study in a similar outcome.

(h) Study judged to have concerns due to lack of information on allocation concealment with subjective outcomes.

(i) OR as reported in the paper.

F.3.6 Mental health and wellbeing

Quality assessment							No of people		Effect		Quality
Studies ^(b)	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Universal multi component interventions	Control	Relative (95% CI)	Absolute	
Alcohol use problems (follow-up 3-6 months ^(a) ; measured with: Self-reported measures ^(c))											
Werch 2003	RCT	very serious ^(d)	N/A ^(e)	no serious indirectness ^(f)	Serious ^(g)	none	152	152	-	MD 0.31 (0.06, 0.56) ^(h)	VERY LOW
Werch 2005b	RCT						299	149			
Werch 2010	RCT						179	181			
										MD 0.0 (-0.56, 0.56) ^(h)	

(a) Outcome measures varied in follow-up (3-6 months).

(b) Interventions given in studies were similar but the populations differed slightly (11-13 years and 15-17 years).

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

(d) Studies judged to at high risk of bias due to potential contamination within clusters, lack of information on allocation concealment for a subjective outcome and no attrition data reported.

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

(f) Studies meet eligibility criteria in protocol.

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

(h) MD calculated by reviewer.

F.3.7 Adverse or unintended effects

No data reported

Appendix G: 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, <i>Clinical practice and epidemiology in mental health : CP & EMH</i> , 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, <i>Preventive medicine</i> , 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, <i>Health education research</i> , 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, <i>Sucht</i> , 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, <i>European Journal of Public Health</i> , 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, <i>Journal of Scandinavian Studies in Criminology & Crime Prevention</i> , 12, 1, 3, 2011	No outcomes of interest. Perceptions of alcohol only

Study	Reason for exclusion
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, <i>Early intervention in psychiatry</i> , 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, <i>Drug and alcohol review</i> , 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., <i>Preventive medicine</i> , 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, <i>Australian and New Zealand Journal of Psychiatry</i> , 49, 10, 945-946, 2015	Letter
11. Bobrowski KJ; Pisarska A; Staszewski KO; Borucka A, Effectiveness of alcohol prevention program for pre-adolescents., <i>Psychiatria polska</i> , 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., <i>Addiction (Abingdon, England)</i> , 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, <i>Games for health journal</i> , 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:	Abstract only

Study	Reason for exclusion
findings from the inclusive cluster 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	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
children from substance-affected families: A comprehensive systematic review, <i>Substance Abuse Treatment, Prevention, and Policy</i> , 7, 2012	
22. Brooks S G, School-based substance abuse prevention: An initial review of the red ribbon certified schools program, <i>Journal of Global Drug Policy and Practice</i> , 7, 4, 1-28, 2013	Non-RCT
23. Bukstein O G, Personality-targeted interventions delivered by teachers may be effective at reducing alcohol use, <i>Evidence-Based Mental Health</i> , 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., <i>Addictive behaviors</i> , 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, <i>Health Education</i> , 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., <i>Journal of consulting and clinical psychology</i> , 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, <i>BMC public health</i> , 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., <i>The Journal of adolescent health : official publication of the Society for Adolescent Medicine</i> , 48, 2, 182-8, 2011	Post-hoc analysis of Faggiano 2008. No usable data

Study	Reason for exclusion
29. Carlson Joan M; Agley Jon; Gassman Ruth A; McNelis Angela M; Schwindt Rhonda; Vannerson Julie; Crabb David; Khaja Khadija, Effects and durability of an SBIRT training curriculum for first-year MSW students, <i>Journal of Social Work Practice in the Addictions</i> , 17, 12, 135-149, 2017	University students
30. Carney Tara; Myers Bronwyn J; Louw Johann; Okwundu Charles I, Brief school-based interventions and behavioural outcomes for substance-using adolescents, <i>Cochrane Database of Systematic Reviews</i> , , 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?, <i>Current Opinion in Psychiatry</i> , 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, <i>Dissertation Abstracts International: Section B: The Sciences and Engineering</i> , 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., <i>American journal of public health</i> , 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, <i>Health Education and Behavior</i> , 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., <i>Preventive medicine</i> , 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	Not school-based

Study	Reason for exclusion
Young Adult Drinkers: Results from a Randomized Clinical Trial, <i>Alcoholism: Clinical & Experimental Research</i> , 42, 7, 1342-1351, 2018	
37. Collier Crystal; Henriksen Richard C, Teachers' Perceptions of a Multiple High-Risk Behavior Prevention Program and Delivery of Universal Programming, <i>Qualitative Report</i> , 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., <i>Journal of consulting and clinical psychology</i> , 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, <i>Journal of child psychology and psychiatry, and allied disciplines</i> , 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, <i>Alcoholism, clinical and experimental research</i> , 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, <i>Journal of clinical child and adolescent psychology</i> , 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, <i>Cochrane Database of Systematic Reviews</i> , , 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, <i>Cognitive Therapy and Research</i> , 34, 6, 522-532, 2010	Participants age falls outside of inclusion criteria

Study	Reason for exclusion
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
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	No outcomes of interest

Study	Reason for exclusion
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	
53. Donaldson SI; Thomas CW; Graham JW; Au JG; Hansen WB, Verifying drug abuse prevention program effects using reciprocal best friend reports., Journal of behavioral medicine, 23, 6, 585-601, 2000	No outcomes of interest
54. Dumas 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. Dumas 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. Dumas 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. Dumas 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

Study	Reason for exclusion
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 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	Data only over 18s reported
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.

Study	Reason for exclusion
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 a systematic review, JAMA Pediatrics, 169, 11, 1046-1052, 2015	Systematic review. Used as source for RCTs only
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

Study	Reason for exclusion
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., <i>Drug and alcohol dependence</i> , 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, <i>Journal of Groups in Addiction & Recovery</i> , 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 and meta-analysis, <i>Addiction (Abingdon, England)</i> , 111, 3, 391-407, 2016	Systematic review. Used as source for RCTs only
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, <i>Journal of substance abuse treatment</i> , 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, <i>Journal of Drug Education</i> , 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., <i>International journal of public health</i> , 57, 6, 935-44, 2012	Quasi-randomised. Results - Not all schools were randomised and the data available was not disaggregated.

Study	Reason for exclusion
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., <i>Journal of consulting and clinical psychology</i> , 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, <i>JAMA Psychiatry</i> , 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, <i>Health education & behavior : the official publication of the Society for Public Health Education</i> , , 1090198117731601, 2017	A quasi-experimental wait-list control design
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, <i>Health Education & Behavior</i> , 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, <i>Drug and alcohol review</i> , 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., <i>Journal of drug education</i> , 33, 2, 119-42, 2003	Literature review with summary of Hecht 2003.

Study	Reason for exclusion
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 Drug Use, Journal of Drug Education, 43, 3, 277-300, 2013	No useable data as only modelling data reported
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	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
alcohol use prevention programs, <i>Prevention science : the official journal of the Society for Prevention Research</i> , 16, 3, 463-74, 2015	
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, <i>Cochrane Database of Systematic Reviews</i> , , 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, <i>Preventive Medicine</i> , 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, <i>Children & Schools</i> , 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 follow-up, <i>Drug and alcohol dependence</i> , 133, 2, 556-61, 2013	Cost effectiveness
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., <i>Journal of consulting and clinical psychology</i> , 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	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
misuse: a systematic review of qualitative evidence, Journal of public health (Oxford, England), 33, 3, 412-21, 2011	
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 and White High School Students in the Cherokee Nation, American journal of public health, 107, 3, 453-459, 2017	No usable data
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

Study	Reason for exclusion
105. Koutakis N; Stattin H; Kerr M, Reducing youth alcohol drinking through a parent-targeted intervention: the Orebro Prevention Program., <i>Addiction</i> (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., <i>Evaluation review</i> , 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, <i>Journal of health communication</i> , 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, <i>Addictive behaviors</i> , 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, <i>Alcoholism: clinical and experimental research</i> ., 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, <i>Health Education Journal</i> , 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 Christina, A systematic review of school-based marijuana and alcohol prevention programs targeting adolescents aged 10--15, <i>Addiction Research & Theory</i> , 18, 1, 84-96, 2010	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
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

Study	Reason for exclusion
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, Health education research, 27, 2, 214-225, 2012	Not school based
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	Active comparator only

Study	Reason for exclusion
universal prevention., Drug and alcohol dependence, 114, 23, 177-84, 2011	
125. McCambridge J; Strang J, The efficacy of single-session motivational interviewing in reducing drug consumption and perceptions of drug-related risk and harm among young people: results from a multi-site cluster randomized trial., Addiction (Abingdon, England), 99, 1, 39-52, 2004	Age range 16-20 years but results not disaggregated.
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

Study	Reason for exclusion
131. Neighbors Clayton; Larimer Mary E; Lostutter Ty W; Wood Briana A, Harm Reduction and Individually Focused Alcohol Prevention, <i>International Journal of Drug Policy</i> , 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; Drummond C; McArdle P; Kaner E, A feasibility trial of alcohol screening and brief interventions for risky drinking in young people in a high school setting in the UK: sips jr-high, <i>Alcoholism: clinical and experimental research.</i> , 37, 147a, 2013	Abstract only
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 feasibility C-RCT of screening and brief alcohol intervention in young people aged 14-15 in a high school setting: sips Jr-high, <i>Alcoholism: clinical and experimental research</i> , 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, <i>Drug and alcohol review</i> , 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, <i>BMJ open</i> , 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, <i>Drug and alcohol review</i> , 36, 3, 337-351, 2017	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
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, <i>Lancet</i> , , 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 analysis, <i>Clinical psychology review</i> , 44, 45-59, 2016	Systematic review. Used as source for RCTs only
139. Palmer RF; Graham JW; White EL; Hansen WB, Applying multilevel analytic strategies in adolescent substance use prevention research., <i>Preventive medicine</i> , 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, <i>Revista de saude publica</i> , 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, <i>Addictive Behaviors</i> , 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., <i>World health statistics quarterly. Rapport trimestriel de statistiques sanitaires mondiales</i> , 44, 2, 70-3, 1991	No usable data
143. Piper DL; Moberg DP; King MJ, The healthy for life project: Behavioral outcomes, <i>Journal of Primary Prevention</i> , 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-focused intervention only. Pupils randomised at age 10

Study	Reason for exclusion
family environment., Western journal of nursing research, 34, 3, 340-76, 2012	
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 : the official publication of the Society for Public Health Education, 36, 4, 696-710, 2009	Study compared coached and noncoached implementation All Stars curriculum
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	No not school-based

Study	Reason for exclusion
Computer-Based Intervention, Journal of Studies on Alcohol and Drugs, 71, 4, 535-8, 2010	
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 Component, Health Education, 116, 4, 410-431, 2016	Age group too young (Under 11s only)
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	Quasi-randomised Data not disaggregated

Study	Reason for exclusion
community-based media efforts: reducing marijuana and alcohol uptake among younger adolescents., Health education research, 21, 1, 157-67, 2006	
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
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

Study	Reason for exclusion
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 disaggregated
166. Spoth Richard; Shin Chungyeol; Gyll 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; Gyll Max; Shin Chungyeol; Redmond Cleve, Universal intervention effects on substance use among young adults mediated by delayed adolescent substance initiation, Journal of consulting and clinical psychology, 77, 4, 620-32, 2009	Family-focused interventions only
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	Family-focused interventions only

Study	Reason for exclusion
intervention in public middle schools, <i>Child development</i> , 82, 1, 209-25, 2011	
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, <i>Substance abuse treatment, prevention, and policy</i> , 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; Kuposov Roman, Preventing alcohol use with a universal school-based intervention: results from an effectiveness study, <i>BMC public health</i> , 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, <i>American Journal of Drug and Alcohol Abuse</i> , 42, 2, 140-151, 2016	Systematic review. Used as source for RCTs only
174. Tanner-Smith Emily E; Lipsey Mark W, Brief alcohol interventions for adolescents and young adults: a systematic review and meta-analysis, <i>Journal of substance abuse treatment</i> , 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, <i>Journal of youth and adolescence</i> , 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, <i>BMC public health</i> , 16, 517, 2016	Systematic review. Used as source for RCTs only

Study	Reason for exclusion
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, <i>Journal of Adolescent Health</i> , 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, <i>Psychological medicine</i> , 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, <i>BMC Psychiatry</i> , 14, 1, 32, 2014	Protocol only
180. Teesson M; Newton Nc; Barrett EI, Australian school-based prevention programs for alcohol and other drugs: a systematic review (Provisional abstract), <i>Drug and Alcohol Review</i> , 31, 6, 731-736, 2012	Systematic review. Used as source for RCTs only
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., <i>Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors</i> , 23, 1, 146-51, 2009	No useable data as only modelling data reported
182. Toumbourou Jw; Gregg Me; Shortt AI; Hutchinson Dm; Slaviero Tm, Reduction of adolescent alcohol use through family-school intervention: a randomized trial, <i>Journal of adolescent health</i> , 53, 6, 778-784, 2013	No extractable data

Study	Reason for exclusion
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 energy balance behaviors in middle school students., Translational behavioral medicine, 3, 1, 82-93, 2013	Active comparator only
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

Study	Reason for exclusion
189. Vicary JR; Henry KL; Bechtel LJ, Life Skills Training Effects for High and Low Risk Rural Junior High School Females, <i>Journal of Primary Prevention</i> , 25, 4, 399-416, 2004	Active comparator only
190. Vigna-Taglianti F D; Galanti M R; Burkhardt 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, <i>New directions for youth development</i> , 2014, 141, 67-2, 2014	Secondary publication of Faggiano 2008
191. Vigna-Taglianti F; Vadrucci S; Faggiano F; Burkhardt 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, <i>Journal of Epidemiology & Community Health</i> , 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, <i>Open J Prev Med</i> , 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, <i>BMC public health</i> , 13, 694, 2013	Age range 15-20 years old but results not disaggregated.
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:	Emergency department setting

Study	Reason for exclusion
Examination of Within-Session Interactions, <i>Journal of Studies on Alcohol and Drugs</i> , 78, 5, 725, 2017	
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., <i>Substance use & misuse</i> , 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, <i>American journal of health promotion : AJHP</i> , 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, <i>Journal of Child & Adolescent Substance Abuse</i> , 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., <i>Journal of drug education</i> , 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., <i>European journal of public health</i> , 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., <i>Journal of substance abuse treatment</i> , 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 mediators of a brief intervention for drug abusing adolescents, <i>Psychology of addictive</i>	Randomised to two intervention groups only; control group not randomised

Study	Reason for exclusion
behaviors : journal of the Society of Psychologists in Addictive Behaviors, 28, 2, 464-74, 2014	

Appendix H: Research recommendations

H.1.1.1 What components of alcohol education delivery contribute to its effectiveness for children and young people aged 11 to 18 in full-time education, and those with special educational needs and disabilities (SEND) up to the age of 25?

Criterion	Explanation
Population	Children and young people aged 11-18 years in full time education including those with SEND up to the age of 25
Intervention	Components of alcohol education
Comparators	Not applicable
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 <ul style="list-style-type: none"> Increased use of other substances (e.g. cannabis) Process evaluation using guidance from the MRC framework
Study design	Natural experiment
Timeframe	5 years following of national rollout of statutory health education

H.1.1.2 How effective and cost-effective are universal, education-based alcohol interventions for children and young people aged 11 to 25 with SEND?

Criterion	Explanation
Population	Young people aged 11 - 25 years with SEND in full time education
Intervention	Universal school-based interventions

Comparators	Control
Outcomes	<p>Age at first experience of binge drinking</p> <p>Units of alcohol consumed in the last 30 days</p> <p>Alcohol-related risky behaviours</p> <p>Alcohol-related absence from school</p> <p>Mental health and wellbeing</p> <p>Measures of alcohol knowledge, awareness and resilience</p> <p>Adverse effects and unintended consequences</p> <ul style="list-style-type: none"> Increased use of other substances (e.g. cannabis) <p>Process evaluation using guidance from the MRC framework</p>
Study design	Study design should be an RCT with the purpose of measuring effectiveness. A cluster design would be favoured to minimise contamination where appropriate.
Timeframe	3 years

H.1.1.3 How effective are education-based alcohol prevention interventions (universal or targeted) for children and young people aged 11 to 25 with SEND in full-time education?

Criterion	Explanation
Population	Young people aged 11 - 25 years with SEND in full time education including those considered vulnerable to alcohol misuse.
Intervention	<p>Universal alcohol education</p> <p>Targeted alcohol interventions</p>
Outcomes	<p>Age at first experience of binge drinking</p> <p>Units of alcohol consumed in the last 30 days</p> <p>Alcohol-related risky behaviours</p> <p>Alcohol-related absence from school</p> <p>Mental health and wellbeing</p> <p>Measures of alcohol knowledge, awareness and resilience</p> <p>Adverse effects and unintended consequences</p> <ul style="list-style-type: none"> 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

H.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 I: Expert testimony

I.1 PSHE

Section A	
Name:	Jonathan Baggaley
Role:	Chief Executive
Institution/Organisation (where applicable):	PSHE Association
Guideline title:	Alcohol interventions in primary and secondary education
Guideline Committee:	PHAC C
Subject of expert testimony:	PSHE education, alcohol and mandatory Health Education
Evidence gaps or uncertainties:	[Research questions or evidence uncertainties that the testimony should address are summarised below]
Forthcoming changes to the teaching of PSHE in UK schools where Health Education will receive statutory status.	

Section B:

Personal, social, health and economic (PSHE) education is a school subject through which pupils develop the knowledge, skills and attributes they need to keep themselves healthy, safe and prepared for life and work both now and in the future. PSHE lessons cover a range of areas including physical and mental health, relationships and sex, drugs and alcohol, careers and economic wellbeing. As a curriculum subject PSHE is distinct from schools' pastoral and behaviour systems but is best delivered as part of a whole school approach to mental health, wellbeing and safeguarding.

Effective PSHE is delivered through a spiral curriculum which revisits themes, gradually building knowledge and developing skills and attributes. It is also matched to pupils' needs, taught by appropriately trained teachers and in regular timetabled lessons, where 'drop-down days', speakers, tutor time and assemblies enhance the taught programme, rather than replacing it.

There is a significant body of evidence of 'what works' in preventative education which highlights that effective programmes will be developmental in approach and appropriate to pupils' age and maturity. They will also use interactive, participatory teaching, providing ample opportunity to practise and develop skills and attributes. They will promote positive social norms, be theory based and factual and avoid 'scare tactics' or confrontational strategies.

With regards to alcohol, PSHE education should support young people to live confidently, competently, knowledgably and safely in an alcohol using world. It will start 'where children are' using baseline assessment to understand what knowledge, skills, attitudes and misconceptions young people bring to a topic before beginning any programme of learning. This will then include learning *about* alcohol – the knowledge – and learning how to *manage* alcohol, including understanding our personal values and those of others and their impact on our choices and skills of managing risk. It will provide strategies, language and skills to manage 'alcohol related situations and choices.' It will also include underpinning learning – all the learning that enables this specific learning to be relevant, understood and usable.

Unlike in the independent sector, where delivery of the subject is a core expectation, PSHE education is currently a non-statutory subject in state schools. In effect, this means schools don't have to teach it, and when lessons are provided they are often not as rigorously planned or delivered as other subjects. The status of PSHE is different from all other subjects as it is neither part of the national curriculum – like subjects such as maths or science – nor part of the basic curriculum, like religious education.

Despite this, statutory status for PSHE education is supported by 85% of business leaders, 88% of teachers, 92% of parents, 92% of pupils, the Children's Commissioner, the Chief Medical Officer and the National Police Chiefs' Council lead for child sexual abuse, Public Health England, 100 leading organisations including the Association of Police and Crime Commissioners, the NSPCC, the Children's Society, Barnardo's and a host of leading Parliamentarians from across the political spectrum, including the Commons Education, Home Affairs and

Women and Equalities Committees, the Joint Committee on Human Rights and the chairs of Commons Health and Business, Innovation and Skills Committees.

Following a lengthy campaign, and growing concerns about safeguarding, in March 2017 the Government took historic steps towards changing the status of PSHE through amendments it tabled to what eventually became the Children and Social Work Act. The amendments mean that 'relationships education' will be statutory on the curriculum in all primary schools from September 2020 and 'relationships and sex' education in all secondary schools, while also giving the Government a 'power' to make PSHE statutory in its entirety, pending consultation.

A 'call for evidence' on these proposals was launched in December 2017, following a period of initial engagement with organisations in the sector. In July 2018 the Government announced that it would be making the 'health education' component of PSHE mandatory and published draft guidance on 'Relationships, sex and health education', which is open for consultation until November 2018.

The guidance has some real strengths. It is extremely broad in scope, with health education encompassing physical and mental health. It clearly states that "schools should have the same high expectations of the quality of pupils' work" as for other curriculum areas. It also provides a clear message that the subject should be properly "resourced, staffed and timetabled" with a dedicated "subject lead", not replaced by a series of visiting speakers or isolated interventions. It is hard to see how a school could meet the new requirements without having a planned PSHE programme in place.

With regards to alcohol the guidance states that in primary school:

Healthy Eating

Pupils should know:

- the characteristics of a poor diet and risks associated with unhealthy eating (including, for example, obesity) and other behaviours (e.g. the impact of alcohol on diet or health).

Drugs, alcohol and tobacco

Pupils should know:

- the facts about legal and illegal harmful substances and associated risks, including smoking, alcohol use and drug-taking.

And in secondary school:

Drugs, Alcohol and tobacco

Pupils should know

- the physical and psychological risks associated with alcohol consumption and what constitutes (relatively) safe alcohol consumption.
- the physical and psychological consequences of addiction, including alcohol dependency.

Secondary relationships and sex education

Pupils should know

- how the use of alcohol and drugs can lead to risky sexual behaviour.

The guidance sets out a broad content framework but does not reflect the evidence of effective practice in health education as it makes no reference to the development of skills. Knowledge of facts about physical health and wellbeing is of course vital but effective health education, including alcohol education, also needs to develop personal and social skills. UNODC guidance on drug prevention (2015), for example, states that effective programmes will ‘develop personal and social skills and discuss social influences (social norms, expectations, normative beliefs)’, whilst UNESCO Good Policy and Practice Guidance on Health Education (2017) states that successful approaches will ensure ‘the core curriculum facilitates the development of students’ personal and social skills relevant to health-seeking behaviours’.

The guidance is open for consultation until 7 November 2018. The PSHE Association will be arguing for its five key priorities for statutory status for PSHE education. These are that PSHE education should be taught:

- **regularly** – regular lessons on the timetable like other subjects
- **as a whole subject** – from relationships & sex education to mental health, online safety to employability skills
- **by trained teachers** – PSHE covered in teacher training and ongoing opportunities to learn
- **in all schools** – all schools including academies and free schools
- **to all pupils** – from year 1 to finishing secondary school

Revised guidance will be published in 2019 and debated in parliament before being finalised. The DfE have stated that the final guidance will be ready for schools to use by September 2019, giving them a year to prepare before relationships, sex and health education become mandatory in 2020.

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

Key principles of effective prevention education – PSHE Association - <https://www.pshe-association.org.uk/curriculum-and-resources/resources/key-principles-effective-prevention-education>

UNODC International Standards on Drug Use Prevention (2015)

https://www.unodc.org/documents/prevention/UNODC_2013_2015_international_standards_on_drug_use_prevention_E.pdf

UNESCO Education Sector Responses to the Use of alcohol, tobacco and drugs (2017)

<http://unesdoc.unesco.org/images/0024/002475/247509E.pdf>

I.2 Millennium cohort study

Section A	
Name:	Dr Aase Villadsen
Role:	Academic
Institution/Organisation (where applicable):	Centre for Longitudinal Studies, UCL Institute of Education
Guideline title:	Alcohol interventions in primary and secondary education
Guideline Committee:	PHAC C
Subject of expert testimony:	Drinking behaviours in the millennial generation
Evidence gaps or uncertainties:	[Research questions or evidence uncertainties that the testimony should address are summarised below]

Age at first drink of alcohol

Age at first experience of drunkenness

Section B

Summary testimony:

Title of presentation: Drinking behaviours in the millennial generation

The evidence presented is based on the Millennium Cohort Study (MCS), which one of the birth cohort studies managed by the Centre for Longitudinal Studies (CLS), under UCL Institute of Education.

The MCS is a longitudinal birth cohort study involving around 19,000 children born between September 2000 and January 2002 in the UK (England, Wales, Scotland and Northern Ireland). The initial survey was carried out at age 9 months, with follow-ups at age 3, 5, 7, 11, and 14 years. Currently the age 17 survey is being carried out. Interviews and self-reported modules are conducted out with the main parent (usually the mother), the residents partner, and with the child self in later sweeps.

A wealth of detailed information has been collected on children and their families. This includes socioeconomic and demographic variables, such as parental education; employment and income, housing, family structure, ethnicity. Family environment include measures of parent mental health, and parenting practices and activities. Central to the study are a wide range of child outcomes related to health, cognitive functioning, and social and behavioural development. The data collected are specific to the life stage of the cohort. For example, at 9 months measures included information on birth weight, gestational age, and breastfeeding, and at age 14 children provided self-reports on 'risky' behaviours.

The evidence presented here on alcohol intake originate from a paper on adolescent risky behaviours (Fitzsimons et al., 2018). This reports the prevalence and predictive factors of various risk-taking behaviours (substance use, antisocial behaviour; criminal behaviour, gambling, and sexual activities). The focus was on behaviours at age 14 with some analyses also at age 11.

In relation to alcohol use, it was found that just under half (48%) of 14-year-olds had tried alcohol, defined as having more than just one sip. This was a significant increase from age 11 where 13% reported having tried alcohol. There was no significant gender difference (males: 49%, females: 48%). Significant country differences were apparent with the highest rates in Wales (57%) and much lower rates in Northern Ireland (26%), whilst the figure was 49% in both England and Scotland.

In terms of the age at which cohort members had first tried alcohol, 17% were early starters, meaning that they had first tried alcohol at age 11 or before. A significantly higher proportion of males (20%) had tried alcohol early compared to females (14%). Fewer teens in Northern Ireland were early starters (10%), versus 17% in England (17%), Wales (16%), and Scotland (12%).

Looking at drinking behaviour at harmful levels or binge drinking - defined as having had five or more alcoholic drinks in one sitting - 11% of the young people had tried this by age 14. This figure includes those who had never drunk, meaning that around one in five of those who had tried alcohol by age 14 had also tried binge drinking. There was no gender difference in binge drinking. Rates were much lower in Northern Ireland (5%) compared to the other UK countries where rates were comparable (England: 11%, Wales: 14%, Scotland: 13%). Binge drinking at age 14 had increased markedly since age 11 where less than 1% reported this.

In a multivariate regression model predicting binge drinking at age 14, significant predictors were: male, age, white ethnicity; smaller family size, homosexual/bisexual orientation, pubertal status, externalising behaviour, spending lots of time with peers, and parent having taken recreational drugs in the last year. However, was no effect of frequency of parental alcohol use. Neither were there any socioeconomic effects, meaning that there was no effect of parental education, social class, or single parent status.

Bullet point summary:

- Just under half of 14 year olds had tried alcohol, no gender difference, but much lower rates in N.Ireland
- Around 10% had tried binge drinking, no gender difference, but in N.Ireland noticeably lower.
- 17% were early starters (age 11 or before), boys more so than girls, less common in N.Ireland.
- Steep increase in alcohol use between age 11 and 14
- On overall model predictors of binge drinking were: male, age, white ethnicity, smaller family size, homosexual/bisexual, externalising behaviour, pubertal status, spending lots of time with peers, parent drug use. No effect of parent alcohol use. Lack of socioeconomic effects (education, social class, single parent).

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

Fitzsimons, E.; Jackman, J.; Kyprianides, A.; Villadsen, A. (2018). *Determinants of risk behaviour in adolescence: Evidence from the UK*. Centre for Longitudinal Studies, UCL Institute of Education, London.

<http://www.cls.ioe.ac.uk/shared/get-file.ashx?id=3365&itemtype=document>

I.3 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.

I.4 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%).

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- 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.