

Appendix II

Annex V

Summary results of 'good' and 'acceptable' studies

As detailed in the methodological appendix, the evidence on which the Standards are based is constituted by the systematic reviews and the primary studies that were assessed to be 'good' or 'acceptable'. For each intervention or policy (in alphabetical order), this table reports the relevant studies. In some cases, studies evaluated the impact of different interventions and policies. In these cases, the studies have been reported more than once, under each intervention or policy. The table also summarizes the findings of each study with regard to the prevention of drug use, alcohol use, tobacco use, mediating factors, and recommendations for intervention delivery.

First author, Year of publication Title Type of review or Study design Quality rating	Intervention/Policy type Age Setting Country	REVIEWS: Number and type of included studies, Follow-up (12 months or more) PRIMARY STUDIES: Sample size and retention rates, Time to follow-up	Findings (substance use, mediators, other risky behaviours, moderators and recommendations for intervention delivery)
Addressing individual psychological vulnerabilities			
Piquero 2010 Title: Self-control interventions for children under age 10 for improving self-control and delinquency and problem behaviors	Addressing individual psychological vulnerabilities Pre-natal and early childhood Middle childhood Family	34 RCTs Follow-up not reported	Drug use: The study did not report any drug use outcomes. Mediators: The results indicate that self-control improvement programs are an effective

Campbell review	School Community USA (31), Canada (2), Israel (1)		intervention for improving self-control and reducing delinquency and problem behaviors. Mean effect sizes were reported by information source. For self-control, mean effect sizes lay between 0.28 (teacher report, 95% CI from 0.07 to 0.48, $p < .01$) and 0.61 (self-report, 95% CI from 0.20 to 1.02, $p < .05$). For delinquency and problem behaviour, parent and direct observer reports found no significant effects whereas teacher reports suggested a mean effect size of 0.30 (95% CI from 0.13 to 0.46, $p < .001$).
Conrod 2008 Title: Personality-targeted interventions delay the growth of adolescent drinking and binge drinking RCT Quality: Acceptable	Addressing individual psychological vulnerabilities Adolescence School UK	Intervention group: 199 (baseline), 151 (last follow-up) (76%) Control group: 169 (baseline), 132 (last follow-up) (78%) Follow-up at 6 months and 12 months post-intervention	Alcohol use: The authors conclude that brief, personality-targeted interventions may prove effective in preventing the onset of adult alcohol use disorders, by helping high-risk youth delay the growth of their drinking to a later developmental stage. Multi-group analysis of a latent growth curve model showed a group difference in the growth of alcohol use between baseline and 6-months follow-up, with the control group showing a greater increase in drinking than the intervention group for this period. Interventions were particularly effective in preventing the growth of binge drinking in those students with a sensation seeking (SS) personality. SS drinkers in the intervention group were 45% and 50% less likely to binge drink at 6 (OR = .45) and 12 months (OR = .50) respectively, than SS drinkers in the control group ($p = .001$, $\phi = .49$, Number Needed to Treat = 2.0).
Conrod 2010 Title: Brief, Personality-Targeted Coping Skills Interventions and Survival as a Non-Drug User Over a 2-Year Period During Adolescence	Addressing individual psychological vulnerabilities Adolescence School	Intervention group: 395 (baseline), 215 (last follow-up) (54%) Control group: 337 (baseline), 171 (last follow-up) (51%) Follow-up at 6, 12, 18, and 24 months post-intervention	Drug use: The authors conclude that brief, personality-targeted interventions can prevent the onset and escalation of substance misuse in high-risk adolescents. Intent-to-treat repeated-measures analyses on continuous

<p>RCT Quality: Acceptable</p>	<p>UK</p>		<p>measures of drug use revealed time intervention effects on the number of drugs used ($P < .01$) and drug use frequency ($P < .05$), whereby the control group showed significant growth in the number of drugs used as well as more frequent drug use over the 2-year period relative to the intervention group. The intervention was associated with reduced odds of taking up the use of cocaine (Beta = -1.4; robust SE=0.4; $P < .001$; odds ratio=0.2; 95% confidence interval, 0.1-0.5), and other drugs (Beta = -0.7; robust SE=0.3; $P = .03$; odds ratio=0.5; 95% CI [0.3-0.9]) over the 24-month period. The number-needed-to-treat (NNT) indices of effect size indicated that for every 10 interventions provided, 1 case of cocaine use was prevented over the 24-month period. The NNT for other drug use over the 24-month period was 16. Reduced odds of taking up the use of marijuana were also found, although this effect was non-significant (Beta = -0.3; robust SE=0.2; $P = .12$; odds ratio= 0.7; 95% CI [0.5-1.1]).</p> <p>Delivery: The authors argue that the success of this program is likely due to its selective nature in that only high-risk youth with known personality risk factors for early-onset substance use were targeted. This selective approach allowed them to deliver interventions that were brief, personally relevant, and focused on risk factors directly related to the individual's risk for substance use.</p>
<p>Conrod 2011 Title: Long-Term Effects of a Personality-Targeted Intervention to Reduce Alcohol Use in Adolescents RCT</p>	<p>Addressing individual psychological vulnerabilities Adolescence School UK</p>	<p>Intervention group: 196 (baseline), 124 (last follow-up) (63%) Control group: 168 (baseline), 94 (last follow-up) (56%) Follow-up at 6, 12, and 24 months</p>	<p>Alcohol use: The authors conclude that personality-targeted interventions reduce drinking behavior in adolescents in the short term. Relative to the control group, the intervention group showed significantly reduced drinking and binge drinking levels at 6 months post-intervention.</p>

Quality: Acceptable			Intent-to-treat repeated measures analyses revealed a Time × Intervention effect on drinking quantity/frequency and binge drinking frequency, which meant that the intervention effect disappeared gradually over time. However, with regard to problem drinking symptoms (e.g., negative consequences of alcohol use), the study found a significant overall intervention effect in reducing problem drinking symptoms for the full 24-month follow-up period (Cohen's $d = 0.33$).
<p>Conrod 2013; O'Leary-Barrett 2010</p> <p>Title: Effectiveness of a Selective, Personality-Targeted Prevention Program for Adolescent Alcohol Use and Misuse: A Cluster Randomized Controlled Trial (Conrod 2013); Personality-Targeted Interventions Delay Uptake of Drinking and Decrease Risk of Alcohol-Related Problems When Delivered by Teachers (O'Leary-Barrett 2010)</p> <p>Cluster-RCT Quality: Acceptable</p>	<p>Addressing individual psychological vulnerabilities</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>UK</p>	<p>Intervention group: 696 pupils (baseline), 624 (at 6 months) (90%) Control group: 463 (baseline), 384 (at 6 months) (83%)</p> <p>Follow-up at 6, 12, 18, and 24 months after the intervention (note, only the retention rates for the 6-month follow-up are shown above)</p>	<p>Alcohol use: According to the authors, the results of this randomized trial indicate long-term benefits of personality-targeted interventions on drinking outcomes for high risk students. Targeted effects of the program were observed on all drinking outcomes and for the duration of the follow-up period, with high risk youth in intervention schools reporting 29% reduced odds of drinking, 43% reduced odds of binge drinking, and 29% reduced odds of problem drinking relative to high risk students in control schools. The intervention was also found to delay the natural progression to more risky drinking behavior, such as frequency of binge drinking, greater quantity of drinking, and severity of problem drinking in these students. The findings also suggest indirect effects of the selective alcohol prevention program in low risk students, specifically on long-term drinking rates (Beta= -0.259, SE=0.132, P=.049) and growth of binge drinking (Beta = -0.244, SE=0.073, P=.001), and some signs of a marginal herd effect on problem drinking symptoms in the longer term.</p> <p>Delivery: These findings not only provide replication of the efficacy of this</p>

			intervention program for high risk youth but also contribute to the evidence in support of its long-term effectiveness when administered by appropriately trained school staff.
Alcohol policies			
Anderson 2009 Title: Impact of Alcohol Advertising and Media Exposure on Adolescent Alcohol Use: A Systematic Review of Longitudinal Studies Systematic Review Quality: Acceptable	Alcohol policies Early adolescence Adolescence Community Media USA, Belgium, Germany, New Zealand	13 longitudinal studies In 10 studies, participants were followed up at 12 months or more.	Alcohol use: Twelve of the thirteen studies found evidence that exposure to alcohol advertising and promotion predicts both the onset of drinking amongst non-drinkers and increased levels of consumption among existing drinkers.
Bühler 2008 Title: Prevention of substance abuse (EMCDDA Insights Nr 7) Review of reviews and primary studies Quality: Acceptable	Alcohol policies Age not specified Community Most included reviews originated from the USA.	4 reviews Follow-up not consistently reported	Alcohol use: - Raising the minimum legal drinking age reduces alcohol consumption. - Raising the minimum legal drinking age reduces the negative consequences of alcohol consumption (alcohol-related accidents; other health and social problems). - Lower blood/alcohol limits for young and/or inexperienced drivers have a positive effect on alcohol-related accidents. - Higher 'total alcohol prices' (inclusive of indirect costs) have effects on alcohol consumption and alcohol-induced deviance. They reduce consumption by both moderate and heavy drinkers. - Price elasticity for alcohol: 10 % price increase results in a 3 % to 6.5 % decline in alcohol consumption
Campbell 2009 Title: The Effectiveness of Limiting Alcohol Outlet Density As a Means of Reducing Excessive Alcohol Consumption and Alcohol-Related Harms Community Guide review	Alcohol policies Early adolescence Adolescence Adulthood Community USA, Canada, UK, Norway,	Alcohol outlet density change: 10 interrupted time-series studies; Privatization: 17 studies using autoregressive integrated moving average (ARIMA) time-series study design (all except two studies reported results for comparison populations); Alcohol bans: 9 studies; Licensing-Policy Changes:	Alcohol use: This review considered studies that directly evaluated outlet density (or changes in outlet density) and those that evaluated the effects of policy changes that had a substantial impact on outlet density, including studies of privatization, remonopolization, bans on alcohol sales and the removal of bans,

	Sweden, Finland, Iceland, New Zealand	4 studies Follow-up periods not reported consistently / not applicable	and changes in density from known policy interventions and from unknown causes. Most of the studies included in this review found that greater outlet density is associated with increased alcohol consumption. With regard to alcohol outlet density change, all five studies that assessed the association between outlet density and population-level alcohol consumption found that they were positively associated; increased density was associated with increased consumption, and vice versa. With regard to privatization, the reviewed studies indicate that privatization increases the sales of privatized beverages but has little effect on the sales of non-privatized alcoholic beverages. The median relative increase in alcohol sales subsequent to privatization was 42.0%, with an interquartile interval of 0.7% to 136.7%. That is, among the studies reviewed, compared with consumption prior to privatization, the median effect was an increase of 42.0% in consumption of the privatized alcoholic beverage. Studies of three events of privatization yielded inconsistent findings. Five publications assessed the effects of privatization on the concomitant sales of alcoholic beverages that were not privatized during the same period. Overall, these studies reported that there was a minimal decline: a median of 2.1% (interquartile interval [IQI]: -4.8% to 2.7%) in the sales on nonprivatized beverages. With regard to licensing-policy changes, more permissive licensing procedures appeared to increase the number of on- and off-premises alcohol outlets, which in turn led to increases in alcohol consumption. Two studies specifically reported increases in alcohol consumption among heavy drinkers, and one study reported an increase in
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			<p>drinking among survey subjects who reported not drinking during a specified period at the baseline assessment.</p> <p>Other risky behaviours: Most of the studies included in this review found that greater outlet density is associated with increased alcohol-related harms, including medical harms, injury, crime, and violence. With regard to alcohol outlet density change, the studies reviewed suggested that the association between outlet density and interpersonal violence may at least partially be due to social aggregation in and around alcohol outlets, and that the density of outlets in a given locale can also influence the probability of assaults involving residents of neighboring communities. The two studies assessing the relationship between alcohol outlet density and motor-vehicle crashes produced mixed results. With regard to privatization, the one study that evaluated the reintroduction of government monopoly control of sale of an alcoholic beverage (medium-strength beer) found that remonopolization led to a significant decrease in motor-vehicle crashes for most age groups and a significant decrease among youth for several, but not all, alcohol-related harms. With regard to alcohol bans, the effectiveness of bans in reducing alcohol-related harms appears to be highly dependent on the availability of alcohol in the surrounding area. In isolated communities, bans can substantially reduce alcohol-related harms. However, where alcohol is available in areas nearby those with bans, travel between these areas may lead to serious harms. With regard to licensing-policy changes, the single study that evaluated alcohol-related harms (alcohol-related motor-vehicle crashes) found that they increased substantially after allowing the sale of</p>
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<p>Elder 2010</p> <p>Title: The Effectiveness of Tax Policy Interventions for Reducing Excessive Alcohol Consumption and Related Harms</p> <p>Community Guide review</p>	<p>Alcohol policies</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community</p> <p>Included studies had to be conducted in a high-income economy; all but two of the studies on individual consumption were conducted in the U.S. The other two took place in Switzerland.</p>	<p>73 evaluation studies; 50 assessed overall alcohol consumption and 38 (76%) of these reported price elasticities; 16 studies in the review used survey data to evaluate the effects of alcohol prices or taxes on individual alcohol consumption patterns.</p> <p>Follow-up unclear.</p>	<p>Alcohol use:</p> <p>For societal levels of alcohol consumption, the majority of estimates of price elasticity fell within the range of approximately 0.30 to 1.00, indicating that a 10% increase in alcohol prices would be expected to result in a 3% to 10% decrease in alcohol consumption. These results indicate that alcohol consumption is responsive to price, and suggest that the impact of a potential tax increase is likely to be proportional to its size. Detailed estimates on the price elasticity of alcohol consumption (i.e., the expected percentage change in alcohol consumption when the price increases by 1%):</p> <ul style="list-style-type: none"> - Beer consumption: -0.50 (interquartile interval [IQI]: -0.91 to -0.36; 18 studies); - Wine consumption: -0.64 (IQI: -1.03 to -0.38; 22 studies); - Spirits consumption: -0.79 (IQI: -0.90 to -0.24; 21 studies); - Total alcohol (ethanol) consumption: -0.77 (IQI: -2.00 to -0.50; 11 studies). <p>Price and consumption by high school or college age youth: Six studies found consistent evidence that higher alcohol prices were associated with less youth drinking [three of these studies reported price elasticities: 0.29 for drinking among high school students; 0.53 for heavy drinking among those aged 16–21 years; and 0.95 and 3.54, respectively, for binge drinking among men and women aged 18–21 years]; 3 studies found mixed results. The nine studies that assessed the relationship between price or taxes and alcohol consumption patterns in adults or in the general population also generally found that increasing the prices or taxes on alcoholic beverages was associated with a lower prevalence of excessive alcohol consumption and related harms.</p>

			<p>Other risky behaviours: Three additional studies found that higher alcohol taxes are associated with decreased violence. When the differences among tax and price elasticities are taken into account, the strength of the relationships reported in these studies were comparable to those found for alcohol consumption outcomes.</p>
<p>Hahn 2010 Title: Effectiveness of Policies Restricting Hours of Alcohol Sales in Preventing Excessive Alcohol Consumption and Related Harms Community Guide review</p>	<p>Alcohol policies Adolescence Adulthood Community Australia, UK, Canada, Iceland</p>	<p>16 studies with a variety of study designs (more than half had a pre-post design without a comparison or control group) At least 7 studies had a follow-up period of 12 months or more post-intervention</p>	<p>Alcohol use: The studies included in this review assessed the effects of increasing hours of sale in on-premises settings (in which alcoholic beverages are consumed where purchased). Studies of Changes of >2 Hours in Hours of Sale: Among the ten studies in this body of evidence, two studies found that an increase of 2 hours in the hours of sale led to decreased alcohol-related harms (i.e., injury and serious violent crime), and six studies found an increase in alcohol-related harms relative to the period before the increase in hours of sale took place . One study found no effect. One study found a nonsignificant increase in alcohol consumption associated with the increase in hours. Studies of Changes of <2 Hours in Hours of Sale: This small body of evidence indicated no consistent effects of changes of <2 hours on alcohol-related outcomes. Four events of increases in hours of sale were studied. Only one study of increased hours of sale reported substantial increases in wholesale alcohol purchases, assaults, and motor vehicle crashes. Two studies did not provide numeric results but reported small and inconsistent changes in alcohol-related outcomes including alcohol consumption, multiple alcohol-related causes of mortality, and motor vehicle crashes. Two studies of</p>

			<p>increased hours of sale also reported small and inconsistent changes in alcohol sales and consumption. The authors conclude that there was sufficient evidence in ten qualifying studies to conclude that increasing hours of sale by 2 or more hours increases alcohol-related harms. Thus, disallowing extensions of hours of alcohol sales by 2 or more should be expected to prevent alcohol-related harms, while policies decreasing hours of sale by 2 hours or more at on-premises alcohol outlets may be an effective strategy for preventing alcohol-related harms. The evidence from six qualifying studies was insufficient to determine whether increasing hours of sale by less than 2 hours increases excessive alcohol consumption and related harms. No qualifying study assessed the effects of reducing hours of sale.</p> <p>Other risky behaviours: Please see information on alcohol use.</p>
<p>Hahn 2012</p> <p>Title: Effects of Alcohol Retail Privatization on Excessive Alcohol Consumption and Related Harms</p> <p>Community Guide review</p>	<p>Alcohol policies</p> <p>Adolescence Adulthood</p> <p>Community</p> <p>USA, Canada, Finland</p>	<p>18 studies (17 studies on privatization, 1 study on remonopolization) (variety of study designs)</p> <p>Follow-up periods not consistently reported</p>	<p>Alcohol use:</p> <p>The authors conclude that there is strong evidence that privatization of retail alcohol sales leads to increases in excessive alcohol consumption. A total of 17 studies assessed the impact of privatizing retail alcohol sales on the per capita alcohol consumption, a well-established proxy for excessive alcohol consumption.</p> <p>Effects of privatization on consumption of privatized beverages: Across the 17 studies, there was a 44.4% median increase in the per capita sales of privatized beverages in locations that privatized retail alcohol sales (interquartile interval: 4.5% to 122.5%).</p> <p>Effects of privatization on the consumption of nonprivatized alcoholic beverages: Nine of the 17 studies also</p>

			<p>examined the effects of privatization on the per capita consumption of alcoholic beverages that were not privatized. Sales of nonprivatized alcoholic beverages decreased by a median of 2.2% (interquartile interval: -6.6% to -0.1%). The authors highlight that these decreases are not of sufficient magnitude to offset the overall increase in per capita sales of privatized beverages.</p> <p>One cohort study in Finland assessed the impact of privatizing the sales of medium-strength beer (MSB) on self-reported alcohol consumption. This was associated with a mean increase in alcohol consumption of 1.7 liters of pure alcohol per person per year.</p> <p>Effects of re-monopolization on alcohol-related outcomes: One study in Sweden assessed the impact of re-monopolizing the sale of MSB on alcohol-related harms. This was associated with reductions in most of the alcohol-related harms (e.g., hospitalizations for acute alcohol intoxication) assessed across all age groups; however, many of these effects were not significant.</p>
<p>Middleton 2010</p> <p>Title: Effectiveness of Policies Maintaining or Restricting Days of Alcohol Sales on Excessive Alcohol Consumption and Related Harms</p> <p>Community Guide review</p>	<p>Alcohol policies</p> <p>Adulthood Age not specified</p> <p>Community</p> <p>Australia, USA, UK, Norway, Sweden</p>	<p>14 studies (variety of study designs, including time series, controlled and uncontrolled before and after studies)</p> <p>At least six events were followed-up at 12 months or more</p>	<p>Alcohol use:</p> <p>This review focused on the effectiveness for preventing excessive alcohol consumption and related harms of laws and policies maintaining or reducing the days when alcoholic beverages may be sold. Qualifying studies assessed the effects of changes in days of sale in both on-premises settings (at which alcoholic beverages are consumed where purchased) and off-premises settings (at which alcoholic beverages may not be consumed where purchased). Eleven studies assessed the effects of adding days of sale, and three studies assessed the effects of imposing a ban on sales on a given weekend day. The evidence from these studies indicated that increasing days of sale</p>

			<p>leads to increases in excessive alcohol consumption and alcohol-related harms and that reducing the number of days that alcoholic beverages are sold generally decreases alcohol-related harms. Based on these findings, the review concludes that there is strong evidence for the effectiveness of maintaining limits on days of sale for the reduction of alcohol related harms.</p> <p>Other risky behaviours: This review found that increasing days of sale by allowing previously banned alcohol sales on either Saturdays or Sundays increased alcohol-related harms, including motor vehicle crashes, incidents of driving under the influence of alcohol, police interventions against intoxicated people, and, in some cases, assaults and domestic disturbances.</p>
<p>Popova 2009</p> <p>Title: Hours and Days of Sale and Density of Alcohol Outlets: Impacts on Alcohol Consumption and Damage: A Systematic Review</p> <p>Systematic Review Quality: Acceptable</p>	<p>Alcohol policies</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community</p> <p>USA (36), Australia (8), Canada (5), New Zealand (2), UK (2), Brazil (1), Iceland (1), Mexico (1), Norway (1), Sweden (1), Switzerland (1)</p>	<p>59 studies (44 studies on density of alcohol outlets and 15 studies on hours and days of sale) (range of study designs, including cross-sectional and longitudinal designs)</p> <p>Follow-up not reported consistently / not applicable</p>	<p>Alcohol use: The authors conclude that restricting availability of alcohol is an effective measure to prevent alcohol-attributable harm. The majority of studies reviewed found that alcohol outlet density and hours and days of sale had an impact on one or more of the three main outcome variables, such as overall alcohol consumption, drinking patterns and damage from alcohol. With regard to outlet density, it appeared that alcohol outlet density was associated, for example, with a higher overall consumption in the jurisdiction, frequency of drinking, as well as college campus means for the average number of drinks when partying. With regard to hours/days of sale, one study found that higher volumes of high alcohol content beer, wine and distilled spirits were purchased in the licensed hotels during late trading hours, and that extended hours were also associated with young crowds, more likely to be women, and lower blood alcohol levels among</p>

			<p>women but not men. Another study examined the impact of changes in trading days (opening on Saturdays), and found a statistically significant increase in alcohol sales.</p> <p>Other risky behaviours: With regard to alcohol outlet density, a general finding is that higher alcohol outlet density tends to be associated with higher rates of damage, harm or problems. These problems included, for example, alcohol-involved pedestrian collisions, self-reported injuries and suicide, alcohol-related crashes and alcohol-related crash fatalities. With regard to hours/days of sale, findings were mixed.</p>
<p>Rammohan 2011</p> <p>Title: Effects of Dram Shop Liability and Enhanced Oversight Law Enforcement Initiatives on Excessive Alcohol Consumption and Related Harms: Two Community Guide Systematic Reviews</p> <p>Community Guide review</p>	<p>Alcohol policies</p> <p>Adolescence Adulthood</p> <p>Community</p> <p>Studies were conducted in multiple states in the United States.</p>	<p>13 outcome evaluations - 11 studies of the effectiveness of dram shop liability and 2 studies on enhanced enforcement of overservice laws; including only 2 studies in relation to alcohol consumption.</p> <p>Follow-up unclear.</p>	<p>Alcohol use: With regard to dram shop liability, only two studies assessed changes in alcohol consumption (i.e., self-reported binge drinking) as an outcome. These studies were of least suitable design but had a fair quality of execution. Both studies found small, non-significant decreases (1.2% and 2.4%) associated with dram shop liability in states.</p> <p>With regard to enhanced enforcement of overservice laws, two studies were available. Both studies were of greatest design suitability and fair quality of execution. Both studies had pre-post designs, with concurrent comparisons. However, the small number of studies and inconsistent findings provided an insufficient body of evidence to determine the effectiveness of enhanced enforcement of overservice laws on excessive alcohol consumption and related harms.</p> <p>Other risky behaviours: Eleven studies of dram shop liability consistently found that this intervention reduced motor vehicle crash deaths in general and alcohol-related crash</p>

			deaths in particular. Strong evidence indicated that dram shop liability is an effective intervention for reducing alcohol-related harms, as indicated by reduced motor vehicle crashes.
<p>Smith 2009</p> <p>Title: The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: systematic review of prospective cohort studies</p> <p>Systematic review Quality: Acceptable</p>	<p>Alcohol policies</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community Media</p> <p>Five studies were conducted in the USA, one in Belgium and one in New Zealand.</p>	<p>7 prospective cohort studies</p> <p>In five studies, participants were followed up at 12 months or more (in one study up to 14 years).</p>	<p>Alcohol use:</p> <p>Data from prospective cohort studies suggest there is an association between exposure to alcohol advertising or promotional activity and subsequent alcohol consumption in young people. All seven studies demonstrated significant effects across a range of different exposure variables and outcome measures. Notably, three studies showed that onset of drinking in adolescent non-drinkers at baseline was significantly associated with exposure. One study showed that for each additional hour of TV viewing per day the risk of starting to drink increased by 9% during the following 18 months. Another study found that for each additional hour of exposure to alcohol use depicted in popular movies there was a 15% increase in likelihood in having tried alcohol 13 to 26 months later. A third study showed that exposure to in-store beer displays significantly predicted drinking onset two years later. Effects were less clear in baseline drinkers: whilst greater exposure predicted greater drinking frequency, analyses adjusting for possible confounding factors failed to detect significant relationships.</p>
<p>Spoth 2008</p> <p>Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps Toward Public Health Impact</p> <p>Review of reviews and primary studies Quality: Acceptable</p>	<p>Alcohol policies</p> <p>Adolescence Adulthood</p> <p>Community</p> <p>USA</p>	<p>17 studies (study designs not consistently reported)</p> <p>Follow-up times not consistently reported; a follow-up period of at least 6 months was an inclusion criterion</p>	<p>Alcohol use:</p> <p>The evidence on effects of laws raising the minimum drinking age and zero-tolerance laws from studies with quasiexperimental designs suggests that minimum legal drinking age laws can reduce rates of underage drinking. The preventive effects from studies examining the minimum drinking age laws were not completely consistent,</p>

			<p>however. For example, some studies noted that drinking levels among 18- to 19-year-old students on college campuses remained high after enactment of underage drinking laws. These interventions were therefore classed by the review authors as having mixed or emerging evidence.</p> <p>Other risky behaviours: There was evidence to suggest that laws raising the minimum drinking age and zero-tolerance laws can reduce rates of single-vehicle nighttime car accidents and fatalities. However, some studies noted that rates of accidents and fatalities remained the same after the change in law. These interventions were therefore classed by the review authors as having mixed or emerging evidence.</p>
<p>Wagenaar & Toomey 2002</p> <p>Title: Effects of Minimum Drinking Age Laws: Review and Analyses of the Literature from 1960 to 2000</p> <p>Systematic review Quality: Acceptable</p>	<p>Alcohol policies</p> <p>Adolescence Adulthood</p> <p>Community</p> <p>USA, Canada, Australia</p>	<p>48 studies that assessed the effects of changes in the legal minimum drinking age on indicators of alcohol consumption and 57 studies that assessed the effects of changes in the legal minimum drinking age on indicators of driving after drinking and traffic crashes (variety of study designs, including cross-sectional and longitudinal designs, as well as studies with and without a comparison group)</p> <p>Follow-up not reported consistently / not applicable</p>	<p>Alcohol use: The authors conclude that higher legal drinking ages appear to reduce alcohol consumption. Of the 33 higher quality analyses of minimum drinking age laws and alcohol consumption, 11 (33%) found an inverse relationship; only 1 found the opposite. The quality of the studies of specific populations such as college students was considered poor, preventing any conclusions for this population. Only 6 of the 64 college-specific studies (9%) were of high quality; none found a significant relationship between the minimum legal drinking age and outcome measures.</p> <p>Other risky behaviours: The authors conclude that there appears to be an inverse relationship between the minimum legal drinking age and traffic crashes. Of the 79 higher quality analyses of minimum drinking age laws and traffic crashes, 46 (58%) found a higher minimum legal drinking age related to decreased traffic crashes; none found the opposite. Eight of the 23</p>

			analyses of other problems found a higher minimum legal drinking age associated with reduced problems; none found the opposite.
Brief intervention			
<p>Ballesteros 2004</p> <p>Title: Efficacy of Brief Interventions for Hazardous Drinkers in Primary Care: Systematic Review and Meta-Analyses</p> <p>Meta-analysis Quality: Good</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>Health sector</p> <p>USA (5), UK (4), Spain (3), Australia (1)</p>	<p>13 RCTs</p> <p>10 studies had a follow-up time of 12 months or more</p>	<p>Alcohol use: The authors conclude that the results of this review, although indicating smaller effect sizes than previous meta-analyses, support the moderate efficacy of brief interventions for hazardous (not dependent) drinkers in primary care settings. Brief interventions outperformed minimal interventions and usual care (random effects model OR = 1.55, 95% confidence interval [CI] = 1.27-1.90; RD = 0.11, 95% CI = 0.06-0.16; NNT = 10, 95% CI = 7-17). Similar results were obtained when two influential studies were removed (fixed effect model OR = 1.57, 95% CI = 1.32-1.87; RD = 0.11, 95% CI = 0.07-0.15; NNT = 9, 95% CI = 7-15). This translates to an improvement of 11% in the success rate between brief interventions and usual care or simple advice, or to the necessity to treat nine hazardous drinkers to obtain one additional success.</p> <p>Delivery: Brief interventions seem to have greater efficacy when applied in general screening programs (nontreatment seekers, fixed effect model OR = 2.19, 95% CI = 1.68-2.84) than at consultation (treatment seekers, fixed effect model OR = 1.41, 95% CI = 1.20-1.65). Also, brief interventions seem to work better when applied to heavy drinkers (fixed effect model OR = 1.94, 95% CI = 1.55-2.43) than when applied to moderate drinkers (fixed effect model OR = 1.42, 95% CI = 1.19 - 1.68).</p>
Beich 2003	Brief intervention	19 RCTs of which 8 were combined	Alcohol use:

<p>Title: Screening in brief intervention trials targeting excessive drinkers in general practice: systematic review and meta-analysis</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Adolescence Adulthood</p> <p>Health sector</p> <p>USA (4), UK (3), Australia (1)</p>	<p>in meta-analysis</p> <p>Of the 8 studies included in the meta-analysis, 7 had a follow-up period of 12 months or more (up to 4 years in one study)</p>	<p>The pooled absolute risk reduction was 10.5% (95% confidence interval 7.1% to 13.9%). A random effects model yielded a similar result: 10% (6% to 14%). The pooled number needed to treat (NNT) was 10 (7 to 14). NNTs of single studies ranged from 5 to 61 and all results favoured intervention to some degree (table 4). Two studies had notably higher NNTs, and the 95% confidence intervals of five studies included the possibility of harm. The review found that, overall, in 1000 screened patients, 90 screened positive and required further assessment, after which 25 qualified for brief intervention; after one year 2.6 (95% confidence interval 1.7 to 3.4) reported they drank less than the maximum recommended level. This means that if a practitioner screens 1000 patients, carries out further assessment in those 90 patients (9%) who screen positive, and gives feedback, information, and advice to those 25 (2.5%) who qualify for brief intervention, two or three patients can be expected to have reduced their alcohol consumption to below recommended maximum levels after 12 months. The authors conclude that although even brief advice can reduce excessive drinking, screening in general practice does not seem to be an effective precursor to brief interventions targeting excessive alcohol use. This meta-analysis therefore raises questions about the feasibility of screening in general practice for excessive use of alcohol.</p>
<p>Bertholet 2005</p> <p>Title: Reduction of Alcohol Consumption by Brief Alcohol Intervention in Primary Care: Systematic Review and Meta-analysis</p>	<p>Brief intervention</p> <p>Adulthood</p> <p>Health sector</p> <p>9 trials conducted in North America, 7 in Europe, 2 in Africa,</p>	<p>19 RCTs; the meta-analysis was restricted to 10 trials for which necessary data was available.</p> <p>All studies had a follow-up of at least 6 months. In 15 out of 19 trials, follow-up was at 12 months or more (up to 48 months in one</p>	<p>Alcohol use:</p> <p>The authors conclude that, focusing on patients in primary care, brief alcohol intervention is effective in reducing alcohol consumption at 6 and 12 months. Seventeen trials reported a measure of alcohol consumption, of which 8 reported a significant effect of</p>

<p>Systematic Review / Meta-analysis Quality: Good</p>	<p>and 1 in Australia.</p>	<p>study).</p>	<p>intervention. The adjusted intention-to-treat analysis showed a mean pooled difference of -38 g of ethanol (approximately 4 drinks) per week (95% confidence interval, -51 to -24g/wk) in favor of the brief alcohol intervention group. Evidence of other outcome measures was inconclusive.</p> <p>Delivery: The authors suggest that brief alcohol intervention lasting from 5 to 15 minutes, accompanied by written material and the opportunity for the patient to schedule a follow-up visit, has the potential to significantly reduce alcohol consumption compared with either no intervention, usual care, or less than 5 minutes of intervention. However, specific moderator analyses to verify this were not carried out.</p>
<p>Carney 2012 Title: Effectiveness of early interventions for substance using adolescents: findings from a systematic review and meta-analysis Meta-analysis Quality: Acceptable</p>	<p>Brief intervention Adolescence School Community Health sector USA (8), Australia (1)</p>	<p>9 studies (6 RCTs, 3 quasi-experimental) of which 7 were combined in meta-analysis Follow-up times ranged from 1 to 12 months; follow-up periods not reported per study</p>	<p>Drug use: The authors conclude that early interventions for adolescent substance use do hold benefits for reducing substance use and associated behavioural outcomes. When alcohol and drug outcomes were considered together, the overall effect size was significant at $g = 0.24$ ($p < 0.0001$). Marijuana/Cannabis frequency: The overall effect size was Hedge's $g = 0.22$ and was not significant ($p = 0.16$; 3 studies). All of these studies delivered individual interventions. Subgroup analyses showed that while single-session interventions had a significant effect on outcomes ($g = 0.06$, $p = 0.05$), a stronger effect size was obtained for multiple-session interventions ($g = 0.42$, $p = 0.006$). Alcohol use: Alcohol frequency: The overall effect size was significant at Hedge's $g = 0.44$ ($p = 0.008$; 4 studies). Alcohol quantity: The effect size was small at 0.05, but significant ($p < 0.001$;</p>

			<p>4 studies). Binge drinking: The overall mean difference score was significantly different to zero ($g=0.14$, $p = 0.001$; 4 studies).</p> <p>Other risky behaviours: The results of the overall meta-analysis found that the interventions had a significant effect on problem and criminal behaviours related to substance use.</p> <p>Delivery: Subgroup analysis suggested that interventions delivered in an individual format and over multiple sessions had a stronger effect on the outcomes of interest. Across all outcomes, the results of the subgroup analysis indicated that there was a difference in delivering the intervention in a group setting ($g = -0.03$, $p = 0.74$) in comparison to an individual setting ($g = 0.29$, $p<0.001$) showing better outcomes for interventions delivered in individual formats. Results indicated that both single ($g = 0.11$, $p = 0.008$) and multiple intervention sessions ($g = 0.44$, $p = <0.001$) had a significant effect on the outcomes, but the effect size was larger for multiple-session interventions. Moreover, the authors note that some of the studies clearly seemed more effective than others, for example the outcome effect size for "Teen Intervene" were generally consistently larger than that of the other studies. Of the nine interventions included in this systematic review, it is the only intervention that included a session with the adolescents' parents.</p>
Christakis 2003 Title: Pediatric Smoking	Brief intervention Early adolescence	4 RCTs Follow-up ranged from 12 to 36	Tobacco use: The authors conclude that, although the cumulative results do not conclude that

<p>Prevention Interventions Delivered by Care Providers: A Systematic Review</p> <p>Systematic Review Quality: Acceptable</p>	<p>Adolescence Health sector USA (2), UK, Finland</p>	<p>months</p>	<p>smoking prevention is ineffective, definitive evidence of effectiveness is lacking. Included were two studies conducted in primary care, and one each in dental and orthodontic offices. Three studies found no significant differences between treatment and control groups with respect to initiation of smoking at follow-up Only one study demonstrated a small but significant effect on smoking initiation; in that study, 5.1% of the intervention group and 7.8% of the control group reported smoking at 12-month follow-up (odds ratio 0.63; 95% confidence interval, 0.44–0.91).</p>
<p>Dunn 2001</p> <p>Title: The use of brief interventions adapted from motivational interviewing across behavioral domains: a systematic review</p> <p>Systematic review Quality: Acceptable</p>	<p>Brief intervention Adolescence Adulthood School Health sector Countries not reported (likely USA only)</p>	<p>29 RCTs (17 in substance abuse, 2 in smoking cessation, 4 in HIV risk reduction and 6 in diet/exercise); 26 studies reported adequate information to calculate effect sizes.</p> <p>Out of the 17 studies on substance use, 6 had a follow-up period of 12 months or more. Neither of the two studies on smoking cessation had a follow-up period of 12 months or more.</p>	<p>Drug use: Please see information on alcohol use. Alcohol use: The effect sizes in 10 of 15 substance abuse studies (including alcohol and illicit drugs, although about half of these studies focused on alcohol only) were significant and in favor of Motivational Interviewing (MI), ranging from 0.30 to 0.95. One study found a significant negative effect for MI, Project MATCH, in which 9- month drinking consequences were worse for 4 hours of MI versus 12 hours of Twelve-Step facilitation treatment. The authors state that there is good evidence that MI works with substance-dependent as well as substance-abusing people. Both substance abuse studies of MI with youth had significant, positive results. Tobacco use: One of two smoking cessation studies had a small and significant effect size; the effect size for percent of smokers abstinent in the past 24 hours was 0.23. The other study, a small-sample study of youth in the emergency room, was also encouraging in that most of its effect sizes were in a positive direction, although non-significant.</p>

			<p>Other risky behaviours: In two studies of HIV risk reduction, MI was found to increase condom use and reduce unprotected sex among high-risk women. The effects of both studies were consistent in size and direction. However, among injecting drug users, other studies found that MI did not reduce HIV risk by reducing injecting.</p> <p>Delivery: Focusing on study results that are consistent in size and direction, the best evidence for MI effectiveness found by this review was when it was used as an enhancement to more intensive substance abuse treatment. The authors highlight that in these cases that MI was not simply blended into the repertoires of real-world, specialist substance abuse clinicians after an inservice training. Rather, one or two separate MI sessions were added before the start of treatment-as-usual, usually performed at the treatment-as-usual site by intensively trained MI research interventionists not on the clinical staff at that site.</p>
<p>Emmen 2004</p> <p>Title: Effectiveness of opportunistic brief interventions for problem drinking in a general hospital setting: systematic review</p> <p>Systematic review Quality: Good</p>	<p>Brief intervention</p> <p>Age not specified</p> <p>Health sector</p> <p>Countries not specified</p>	<p>8 studies (3 individually randomised trials, 4 cluster randomised trials, 1 non-randomised trial with matched controls)</p> <p>5 out of 8 studies had follow-up times of 12 months or more.</p>	<p>Alcohol use: Evidence for the effectiveness of opportunistic brief interventions in a general hospital setting for problem drinkers is still inconclusive. Only one study, with a short follow-up period of two months, found a significant reduction in weekly alcohol consumption in the intervention group. The other studies found no significant effects.</p>
<p>Fager 2004</p> <p>Title: The effectiveness of intervention studies to decrease alcohol use in college undergraduate students: an integrative analysis</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>School</p>	<p>15 studies (13 RCTs, 2 quasi-experimental)</p> <p>Only two studies had a follow-up at 12 months or more.</p>	<p>Alcohol use: The authors conclude that there is little empirical support for many approaches used to intervene in high-risk college alcohol use. Alcohol education or awareness programmes are ineffective when used alone and sometimes even</p>

<p>Literature review Quality: Acceptable</p>	<p>USA, Sweden</p>		<p>when they are used with other intervention strategies. Two studies suggested that brief motivational interventions (BMIs) were effective in the short-term; however, the only study with a long-term follow-up (4 years) found differences only in alcohol-related problems but not alcohol intake.</p> <p>Other risky behaviours: The authors conclude that brief motivational interventions appeared promising with regard to reducing alcohol-related harms, but the evidence is not clear-cut.</p> <p>Delivery: The authors provide recommendations for the delivery and content of interventions (Table 2).</p>
<p>Gates 2006 Title: Interventions for prevention of drug use by young people delivered in non-school settings Cochrane review</p>	<p>Brief intervention Adolescence Adulthood School Health sector USA, UK</p>	<p>2 RCTs (one cluster randomised and one individually randomised) Both studies had a follow-up of only 3 months</p>	<p>Drug use: There is a lack of evidence concerning the effectiveness of non-school based interventions in preventing or reducing drug use by young people. One of two studies of motivational interviewing suggested that this intervention was beneficial on self-reported cannabis use. The authors conclude that further evaluation is needed before it can be firmly established that these interventions are effective.</p>
<p>Jensen 2011 Title: Effectiveness of Motivational Interviewing Interventions for Adolescent Substance Use Behavior Change: A Meta-Analytic Review Meta-analysis Quality: Acceptable</p>	<p>Brief intervention Adolescence Health sector Setting not specified Countries not reported</p>	<p>21 controlled trials (some of which randomised, no detail reported) Follow-up not reported in detail (7 studies had a follow-up period of 6 months or more, up to 24 months post-treatment)</p>	<p>Drug use: Of the included studies, 57.1% (n = 12) included an outcome measure for frequency of marijuana use, 57.1% (n = 12) examined alcohol use, 33.3% (n = 7) included tobacco use, 28.6% (n = 6) examined the use of various street drugs (e.g., cocaine; methamphetamines), and 28.6% (n = 9) examined use of multiple restricted substances. The authors conclude that the effectiveness of MI interventions for adolescent substance use behavior</p>

			<p>change is supported by this meta-analytic review. Across all substances (including alcohol and tobacco) and all identified interventions, the random effects weighted mean effect size revealed a small, but significant, post-treatment effect size (mean $d = 0.173$, 95% CI [.094, .252], $n = 21$). Not considering studies that addressed only tobacco cessation, studies that addressed alcohol and other drug use yielded a small, but significant, effect size comparable to the total sample effect size (mean $d = 0.146$, 95% CI [.059, .233], $n = 16$).</p> <p>Across all substances (including alcohol and tobacco), small, but significant, effect sizes were observed at follow-up suggesting that MI interventions for adolescent substance use retain their effect over time. Follow-up effect sizes were categorized into groups of greater or less than 6 months. Follow-up effect sizes less than 6 months were relatively larger (mean $d = 0.323$, 95% CI [.040, .607], $n = 4$) than those occurring over a period greater than 6 months (mean $d = 0.133$, 95% CI [.023, .244], $n = 7$).</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Studies that addressed only tobacco smoking yielded a larger, but not statistically different, effect size (mean $d = 0.305$, 95% CI [.113, .497], $n = 5$). Please also see information on drug use.</p>
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies</p>	<p>Brief intervention</p> <p>Age not specified</p> <p>School Health sector</p> <p>Countries not specified</p>	<p>7 studies (2 systematic review, 3 RCTs, 1 controlled non-randomised trial, 1 before-and-after study)</p> <p>Only one study had a follow-up of 12 months</p>	<p>Drug use: There was evidence from one review and three primary studies to suggest that motivational interviewing and brief intervention can have short term effects on the use of cigarettes, alcohol and cannabis. The only RCT with a longer follow-up period, however, suggested that motivational interviewing does not have an impact on the use of cigarettes,</p>

Quality: Good			alcohol or cannabis at 12 months follow-up. Alcohol use: Please see information on drug use. Tobacco use: Please see information on drug use.
Kahan 1995 Title: Effectiveness of physician-based interventions with problem drinkers: a review Systematic review Quality: Acceptable	Brief intervention Adulthood Health sector USA, UK, Sweden, and others (countries not consistently reported)	11 RCTs (3 studies presented separate results for men and women, 1 study involved women only, 2 involved men only, and 5 presented results for men and women as a combined sample) Follow-up times not reported	Alcohol use: This review examined the effectiveness of interventions by physicians in reducing alcohol consumption among problem drinkers attending a health-care facility. The authors conclude that the reviewed trials support the use of brief interventions by physicians for patients with drinking problems. The four trials with the highest validity scores showed that men in the intervention groups reduced their weekly alcohol consumption by five to seven standard drinks more than the men in the control groups. Considering all trials, in the seven studies that calculated weekly alcohol intake, consumption tended to decrease in both the intervention and control groups. Five of the studies showed significantly greater declines in alcohol consumption among men in the intervention group. Results for women were inconsistent. Only one trial showed statistically significant improvements in the serum GGT level and in alcohol intake (by four drinks per week on average). Two other trials both had negative results. Another trial found that women, like men, had significantly fewer sick days following intervention.
Kaner 2007 Title: Effectiveness of brief alcohol interventions in primary care populations Cochrane review	Brief intervention Adolescence Adulthood Health sector USA (11), UK (5), Spain (5), Canada (2), Finland (2), Sweden	29 RCTs of which 22 RCTs were included in meta-analysis 24 trials conducted a follow-up at 12 months or more.	Alcohol use: The authors conclude that, overall, brief interventions lowered alcohol consumption. Meta-analysis of 22 RCTs (enrolling 7,619 participants) showed that participants receiving brief intervention had lower alcohol consumption than the control group after follow-up of one year or longer

	(2), France (1), Australia (1).		(mean difference: -38 grams/week, 95% CI: -54 to -23), although there was substantial heterogeneity between trials. Sub-group analysis (8 studies, 2,307 participants) confirmed the benefit of brief intervention in men (mean difference: -57 grams/week, 95% CI: -89 to -25, I2 = 56%), but not in women (mean difference: -10 grams/week, 95% CI: -48 to 29, I2 = 45%). Thus, when data were available by gender, the effect was clear in men at one year of follow up, but not in women. Longer duration of counselling probably has little additional effect. Meta-regression showed little evidence of a greater reduction in alcohol consumption with longer treatment exposure or among trials which were less clinically representative. Extended intervention was associated with a non-significantly greater reduction in alcohol consumption than brief intervention (mean difference = -28, 95%CI: -62 to 6 grams/week, I2 = 0%). The lack of evidence of any difference in outcomes between efficacy and effectiveness trials suggests that the current literature is relevant to routine primary care.
<p>Khadjesari 2010</p> <p>Title: Can stand-alone computer-based interventions reduce alcohol consumption? A systematic review</p> <p>Systematic Review / Meta-analysis Quality: Good</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>Computer/Internet</p> <p>USA, UK, New Zealand, Netherlands, Germany</p>	<p>24 RCTs of which 19 trials were included in meta-analysis</p> <p>3 out of 24 studies had a follow-up at 12 months; 9 studies followed up at 1 month or less.</p>	<p>Alcohol use:</p> <p>The data identified by this review suggest that computer-based interventions were more effective than minimally active comparator groups at reducing alcohol consumed per week (in both student and non-student adult populations) and binge frequency (in student populations). A small number of studies found no difference between alcohol consumed per week in those receiving the intervention or an active comparator. Notwithstanding the limitations of the data in the current review, a mean difference of 26 g of alcohol per week was found between computer-based interventions and minimally active comparator</p>

			groups. The effectiveness of computer based interventions in student populations was less pronounced than in non-student populations and diluted the overall reduction in alcohol consumption (mean difference of 19 g of alcohol per week for student populations (12 studies), 115 g per week for non student adult populations (4 studies)).
McQueen 2011 Title: Brief interventions for heavy alcohol users admitted to general hospital wards Cochrane review	Brief intervention Adolescence Adulthood Health sector UK (5), USA (4), Australia (1), Germany (1), Finland (1), Taiwan, Province of China (2)	14 randomised controlled trials and controlled clinical trials 9 studies had a follow-up period of 12 months or more	Alcohol use: The main results of this review indicate that there are benefits to delivering brief interventions to heavy alcohol users in general hospital. Patients receiving brief interventions had a greater reduction in alcohol consumption compared to those in control groups at six month, MD -69.43 (95% CI -128.14 to -10.72; meta-analysis of 4 studies) and nine months follow up, MD -182.88 (95% CI -360.00 to -5.76; based on 1 study) but this was not maintained at one year. Self reports of reduction of alcohol consumption at 1 year were found in favour of brief interventions, SMD -0.26 (95% CI -0.50 to -0.03), but there was no significant difference between the groups at 3 or 6 months. These findings are based on studies involving mainly male participants.
Nilsen 2008 Title: A systematic review of emergency care brief alcohol interventions for injury patients Systematic review Quality: Acceptable	Brief intervention Adolescence Adulthood Health sector USA (9), Finland (1), Wales (1), Spain (1), Germany (1), Switzerland (1)	14 RCTs 12 studies had a follow-up period of 12 months or more	Alcohol use: This review focused on the effectiveness of brief interventions (BIs) delivered to injury patients in emergency care settings. There was a general trend of reduced alcohol intake at follow-up assessments. Alcohol intake reduced more among BI patients than CG patients in most studies. Of the 12 studies that compared pre- and post-BI results, 11 observed a significant effect of BI on at least some of the outcomes: alcohol intake, risky drinking practices, alcohol-related negative consequences, and injury frequency. Two studies

			<p>assessed only post-BI results. BI patients achieved greater reductions than control group patients, although there was a tendency for the control group(s) to also show improvements. Five studies failed to show significant differences between the compared treatment conditions. Variations in the study protocol, alcohol-related recruitment criteria, screening and assessment methods, and injury severity limit the specific conclusions that can be drawn.</p> <p>Delivery: More intensive interventions tended to yield more favorable results. However, the authors were unable to draw any dose-response conclusions about BI because it is unclear whether more BI (either in number, length, or intensity of sessions) results in a greater treatment effect. No study suggested a simple stepwise increase in effect with higher dosage of the initial BI, although one study did find a booster session to be needed.</p>
<p>Riper 2009</p> <p>Title: Curbing Problem Drinking with Personalized-Feedback Interventions: A Meta-Analysis</p> <p>Meta-analysis Quality: Good</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>School Community Workplace Computer/Internet</p> <p>USA (9), Netherlands (2), Canada (2), Australia (1)</p>	<p>14 RCTs of single-session personalized-feedback interventions without therapeutic guidance</p> <p>No study had a follow-up period of 12 months or more; maximum follow-up period was 9 months in one study</p>	<p>Alcohol use: The pooled standardized-effect size (14 studies, 15 comparisons) for reduced alcohol consumption at post-intervention was $d = 0.22$ (95% CI 0.16, 0.29; the number needed to treat = 8.06; areas under the curve = 0.562). The authors conclude that single-session personalized-feedback interventions without therapeutic guidance can be effective for reducing problem drinking in student and general populations.</p>
<p>Smedslund 2011</p> <p>Title: Motivational interviewing for substance abuse</p> <p>Cochrane review</p>	<p>Brief intervention</p> <p>Early adolescence Adolescence Adulthood</p>	<p>59 RCTs (29 studies on alcohol use, 8 studies on cannabis use, 4 studies on cocaine use, 18 studies on poly substance use)</p> <p>19 studies conducted follow-up at</p>	<p>Drug use: The authors conclude that motivational interviewing can reduce the extent of alcohol and illicit drug use compared to no intervention. Compared to no treatment control motivational</p>

	<p>School Community Health sector</p> <p>USA (44), Australia (5), Netherlands (3), UK (3), Canada (2), Germany (1), New Zealand (1)</p>	12 months or more	<p>interviewing showed a significant effect on substance use which was strongest at post-intervention [standardised mean difference 0.79, (95% CI 0.48 to 1.09)] and weaker at short follow-up [standardised mean difference 0.17 (95% CI 0.09 to 0.26)], and medium follow-up [standardised mean difference 0.15 (95% CI 0.04 to 0.25)]. For long follow-up, the effect was not significant [standardised mean difference 0.06 (95%CI-0.16 to 0.28)]. However, it seems that other active treatments, treatment as usual and being assessed and receiving feedback can be as effective as motivational interviewing. There were no significant differences between motivational interviewing and treatment as usual for either follow-up post-intervention, short and medium follow up. Motivational interviewing did better than assessment and feedback for medium follow-up [standardised mean difference 0.38 (95% CI 0.10 to 0.66)]. For short follow-up, there was no significant effect. For other active interventions, there were no significant effects for either follow-up. The evidence is mostly of low quality, so further research is very likely to change the estimates of effect.</p> <p>Alcohol use: Please see information on drug use.</p>
<p>Tait 2003</p> <p>Title: A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug</p> <p>Systematic review Quality: Acceptable</p>	<p>Brief intervention</p> <p>Adolescence</p> <p>School Health sector</p> <p>USA (10), Finland (1)</p>	<p>11 controlled trials (all the studies used cohort designs, with most adopting a two-group randomized control design) (7 reported outcomes for alcohol interventions and 4 involved other substances (one of which reported alcohol outcomes separately))</p> <p>3 studies had a follow-up period of 12 months or more</p>	<p>Drug use:</p> <p>The review focused on the effectiveness of brief interventions (BI) with adolescents in reducing alcohol, tobacco or other drug use. The evidence with regard to illicit drugs was limited in this review. The effect of BI with multiple substances (including alcohol and tobacco) appears substantial but the small sample cautions against expansive generalization. The two interventions addressing multiple substances involved few participants (n =110). One had a medium to large effect (d = 0.78). The</p>

			<p>data presented for the other study did not allow an effect size to be calculated.</p> <p>Alcohol use: The review suggested that BI, including those based on the motivational approach, were effective in reducing alcohol consumption by young people. The effect size from the eight alcohol interventions on alcohol consumption and related measures was significant but was considered "small" ($d = 0.275$).</p> <p>Tobacco use: The data for tobacco interventions suggested a very small reduction, particularly with general community interventions. The two interventions with tobacco involved a substantial sample ($n = 2626$) but had a very small, non-significant effect ($d = 0.037$).</p>
<p>Vasilaki 2006</p> <p>Title: The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>School Community Health sector</p> <p>Countries not reported</p>	<p>22 RCTs of which 15 were included in the meta-analyses</p> <p>8 out of 15 studies had a follow-up period of 12 months or more</p>	<p>Alcohol use: The authors conclude that brief motivational interviewing (MI) is an efficacious strategy for reducing alcohol consumption.</p> <p>Nine trials compared brief MI with no treatment. In these, the aggregate effect size was 0.18 (95% C.I. 0.07, 0.29), but was greater at 0.60 (95% C.I. 0.36, 0.83) when, in a post-hoc analysis, the follow-up period was three months or less. The aggregate effect size for the five studies that compared MI with no treatment was significant at the <3 month follow-up but not significant at the <6 month follow-up. This suggests that MI's effects fade across time. Efficacy also increased when dependent drinkers were excluded.</p> <p>Nine studies compared brief MI with another treatment (one of a diverse set of interventions), yielding an aggregate effect size of 0.43 (95% C.I. 0.17, 0.70).</p> <p>Delivery: The authors state that ~87 min of MI</p>

			<p>was more efficacious than no treatment in reducing alcohol consumption among non-dependent drinkers in the short term (<3 months), and that ~53 min of MI was more efficacious than an aggregated set of diverse comparison treatments, although it cannot be inferred from this result that MI is more efficacious than any one of the other treatments alone. When brief MI was compared with extended treatments (cognitive behavioural therapy (CBT), skill-based counseling, or directive-confrontational counseling), its average duration was shorter (53 min vs. 90 min), making MI more cost-effective than more extensive treatments. For instance, in one study in which both MI and CBT were effective in reducing alcohol use, MI lasted 60 min, but CBT lasted four and one-half hours. In addition, MI was found to be more effective than other brief interventions, such as brief advice and standard care. The review also showed that MI is more effective with young adults who are heavy- or low-dependent drinkers than with older drinkers or those with a more severe drinking problem. Specifically, the authors suggest that low-dependent drinkers who voluntarily seek help seem to benefit the most from MI.</p>
<p>Wachtel 2010</p> <p>Title: The effectiveness of brief interventions in the clinical setting in reducing alcohol misuse and binge drinking in adolescents: a critical review of the literature</p> <p>Systematic review Quality: Acceptable</p>	<p>Brief intervention</p> <p>Early adolescence Adolescence Adulthood</p> <p>School Health sector</p> <p>USA, Australia, Netherlands</p>	<p>14 RCTs</p> <p>8 studies had a follow-up of 12 months or more</p>	<p>Alcohol use:</p> <p>Twelve studies used a Motivational Intervention (MI) style of intervention, seven of which reported reduced alcohol frequency and amount. Two studies specifically found a reduction in binge-drinking episodes and seven reported a decrease in harmful alcohol effects. Two studies that had held multiple Motivational Interview sessions for its participants reported no significant results in relation to alcohol misuse. Two trials that used a brief intervention other than MI found the intervention ineffective for reducing alcohol misuse</p>

			<p>for adolescents. However, as there were only two trials with which to make a comparison and because the MI studies had varying outcomes, it remains inconclusive.</p> <p>Two trials on Motivational Interviewing conducted a follow-up of 24 months or more. Both had one intervention group (providing a single session) and a control group; but also included a second normative control group (chosen from the entire screening pool as a normative comparison). One study reported significant reductions in the negative consequences of high-risk drinking and in the quantity of consumption over the four-year follow-up. The greatest effect was found in a reduction of the negative consequences of drinking. It was also found that the high-risk control group drinkers, although they continued to drink more than the normative group, steadily reduced the quantity of alcohol intake and associated problems over time. This may be attributed to a normal maturation trend whereby adolescents reduce high-risk drinking as they get older. This maturation trend was also evident in the second long-term study, which reported at the final two-year follow-up a reduction in drinking rates and harmful effects in the intervention group, when compared to the no-treatment control group.</p> <p>Delivery: The authors note that MI appeared to have more success than other brief intervention types and that even a single-session intervention can produce positive results. They also highlight that face-to-face delivery of the intervention might possibly be more effective for adolescents than audio or laptop-computer delivery.</p>
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<p>White 2010</p> <p>Title: Online Alcohol Interventions: A Systematic Review</p> <p>Systematic review Quality: Acceptable</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>Computer/Internet</p> <p>Countries not specified</p>	<p>8 RCTs</p> <p>Only 1 study conducted a follow-up assessment at 12 months, 7 studies had a maximum follow-up of one month</p>	<p>Alcohol use: This review suggests that users can benefit from online alcohol interventions and that this approach could be particularly useful for groups less likely to access traditional alcohol-related services, such as women, young people, and at-risk users. In relation to alcohol units per week or month and based on 5 RCTs where a measure of alcohol units per week or month could be extracted, differential effect sizes to posttreatment ranged from 0.02 to 0.81 (mean 0.42, median 0.54). Pre-post effect sizes for brief personalized feedback interventions ranged from 0.02 to 0.81, and in 2 multi-session modularized interventions, a pre-post effect size of 0.56 was obtained in both. Pre-post differential effect sizes for peak blood alcohol concentrations (BAC) ranged from 0.22 to 0.88, with a mean effect size of 0.66.</p>
<p>Wilk 1997</p> <p>Title: Meta-analysis of Randomized Control Trials Addressing Brief Interventions in Heavy Alcohol Drinkers</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Brief intervention</p> <p>Adulthood</p> <p>Community Health sector</p> <p>Countries not consistently reported</p>	<p>12 RCTs (odds ratios could be calculated for 8 trials)</p> <p>8 studies had a follow-up time of 12 months or more</p>	<p>Alcohol use: This review focused on the effectiveness of brief interventions in heavy drinkers. The authors concluded that heavy drinkers who received a brief intervention were twice as likely to moderate their drinking 6 to 12 months after an intervention when compared with heavy drinkers who received no intervention. The combined odds ratio from the six high-quality RCTs was 1.91 (95% CI 1.16, 2.27) in favour of brief alcohol interventions over no intervention. This was consistent across gender, intensity of intervention, type of clinical setting, and similar to the results obtained when including the lower-quality clinical trials.</p> <p>Delivery: Calculated odds ratios suggested a greater likelihood of alcohol moderator with greater intensity of intervention (OR 2.12 for more than 1 session</p>

			compared to OR 1.83 for 1 session), female gender (OR 2.42 for women compared with OR 1.90 for men), and the intervention in the inpatient setting (OR 2.41 for inpatient compared with OR 1.91 for outpatient), although none of these comparisons was significant by Z statistic.
<p>Humeniuk 2012</p> <p>Title: A randomized controlled trial of a brief intervention for illicit drugs linked to the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) in clients recruited from primary health-care settings in four countries</p> <p>RCT Quality: Acceptable</p>	<p>Brief intervention</p> <p>Adolescence Adulthood</p> <p>Health sector</p> <p>USA, Australia, Brazil, India</p>	<p>Intervention group: 372 (baseline), 323 (last follow-up) (87%) Control group: 359 (baseline), 308 (last follow-up) (86%)</p> <p>Follow-up at 3 months post-randomization</p>	<p>Drug use: The authors conclude that brief interventions linked to the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) with an average duration of 15 minutes reduced illicit substance use and associated risk significantly among clients recruited from a range of primary health-care settings and countries, at least in the short term. Country-specific analyses showed that, with the exception of the site in the United States, BI participants had significantly lower ASSIST total illicit substance involvement scores at follow-up compared with the control participants. The sites in India and Brazil demonstrated a very strong brief intervention effect for cannabis scores ($P < 0.005$ for both sites), as did the sites in Australia ($P < 0.005$) and Brazil ($P < 0.01$) for stimulant scores and the Indian site for opioid scores ($P < 0.01$). However, ASSIST follow-up scores were significantly lower than baseline scores in both intervention and control groups, indicating that there was an overall decrease in substance use and risk over time. Therefore, other factors may have also contributed to changes in substance use over time. The analyses of all participants showed no significant group X time interaction effect for inhalants ($F(1,729) = 2.3, P = 0.13$), sedatives ($F(1,729) = 0.1, P = 0.8$) or hallucinogens ($F(1,729) = 0.005, P = 0.94$).</p> <p>Alcohol use: The analyses of all participants showed</p>

			<p>no significant group X time interaction effect for alcohol ($F(1,729) = 3.5, P = 0.06$), although the BI group showed a trend towards decreased alcohol scores at follow-up.</p> <p>Tobacco use: The analyses of all participants showed no significant group X time interaction effect for tobacco ($F(1,729) = 1.2, P = 0.23$).</p>
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Classroom environment improvement programmes

<p>Oliver 2011</p> <p>Title: Teacher classroom management practices: effects on disruptive or aggressive student behavior</p> <p>Campbell review</p>	<p>Classroom environment improvement programmes</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA (11), Netherlands (1)</p>	<p>12 studies (7 individually randomised studies, 4 cluster-randomised studies, 1 non-randomised study)</p> <p>Follow-up not reported</p>	<p>Drug use: This review does not report drug use outcomes but effects on problem student behavior (i.e., any intentional behavior that is disruptive, defiant, or intended to harm or damage persons or property, and includes off task, inappropriate, disruptive or aggressive classroom behavior).</p> <p>Mediators: The classroom-level mean effect size for the 12 programs was positive and statistically significant ($d=.80$ with an $ICC=.05$; $d=.71$ with an $ICC=.10$; $p<.05$). These effect sizes refer to classroom-level differences and cannot be compared to the typical student-level effect sizes commonly reported in the literature. The review found that teachers' classroom management practices have a significant, positive effect on decreasing problem behavior in the classroom. Students in the treatment classrooms in all 12 studies located for the review showed less disruptive, inappropriate, and aggressive behavior in the classroom compared to untreated students in the control classrooms. The overall mean classroom effect size of either $.80$ or $.71$ indicates a positive effect that significantly impacts the classroom environment. The classroom-level mean effect sizes of $.80$ and $.71$ are roughly</p>
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			comparable to student level effect sizes of .18 and .22 for ICC=.05 and ICC=.10, respectively. Teachers who use effective classroom management can expect to experience improvements in student behavior and improvements that establish the context for effective instructional practices to occur.
Community-based multi-component initiatives			
Bühler 2008 Title: Prevention of substance abuse (EMCDDA Insights Nr 7) Review of reviews and primary studies Quality: Acceptable	Community-based multi-component initiatives Age not specified Community Most included reviews originated from the USA.	6 reviews Follow-up not consistently reported	Alcohol use: - One review suggested that cross-system projects with numerous components (involving school, family, media etc.) have preventive effects on consumption behaviour, other reviews have been inconclusive. - Two individual studies recorded 10–20 absolute percentage points fewer smokers than in the control group. Effect size from a meta-analysis based on nine projects: .27 (not differentiated by substance) - Programmatic legislative provisions at community level (in relation to programme financing, implementation measures/quality assurance, conditions for running programmes etc.) have an indirect long-term effect on consumption (of tobacco and alcohol). Effect: 2–40 % reduction in consumption (review authors note that it is unclear whether percentage difference is absolute or relative) - Regulatory provisions at community level (in relation to rates of duty and to compliance monitoring) have a direct, short-term effect on consumption (of tobacco and alcohol). Effect: 5–10 % reduction in consumption (review authors note that it is unclear whether percentage difference is absolute or relative) Tobacco use: Please see information on alcohol use.
Carson 2011	Community-based multi-component initiatives	25 controlled trials (15 cluster randomised controlled trials, 10	Tobacco use: The authors conclude that there is some

<p>Title: Community interventions for preventing smoking in young people</p> <p>Cochrane review</p>	<p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>Family School Community Media Multi-setting</p> <p>USA (17), Australia (3), UK (2), Finland (1), multiple countries in Europe (1), India (1)</p>	<p>controlled clinical trials)</p> <p>Most studies had a follow-up of 12 months or more</p>	<p>evidence to support the effectiveness of community interventions in reducing the uptake of smoking in young people, but the evidence is not strong and contains a number of methodological flaws. Of the 25 studies included in the study, ten were associated with a reduction in the uptake of smoking amongst young people. One study reported a reduction in short-term smoking prevalence (twelve months or less), while nine studies detected significant long-term effects. Two studies reported significantly lower smoking rates in the *control* population while the remaining thirteen studies showed no significant difference between groups.</p> <p>Delivery: Common features to the successful programmes include nine of the ten incorporating school based multi-component interventions with intervention delivery by school teachers and other faculty members, six had parental involvement in the intervention programme, and eight had intervention durations longer than 12 months.</p>
<p>Carson 2012</p> <p>Title: Interventions for tobacco use prevention in Indigenous youth</p> <p>Cochrane review</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence</p> <p>Community</p> <p>USA</p>	<p>2 RCTs</p> <p>One study had a follow-up of 12 months or more (up to 36 months), the other study had a follow-up of 6 months</p>	<p>Tobacco use: This review found that there is not enough published research evaluating programmes aiming to prevent Indigenous youth from starting to use tobacco. The two included studies employed multi-component community-based interventions tailored to the specific cultural aspects of the population and were based in Native American populations. At final follow-up, neither study detected statistically significant changes between intervention and control groups. No difference was observed in weekly smoking at 42 months follow-up in the one study assessing this outcome (skills-community group versus control: risk ratio [RR] 0.95, 95% CI 0.78 to</p>

			1.14; skills-only group versus control: RR 0.86, 95% CI 0.71 to 1.05). For smokeless tobacco use, no difference was found between the skills-community arm and the control group at 42 weeks (RR 0.93, 95% CI 0.67 to 1.30), though a significant difference was observed between the skills-only arm and the control group (RR 0.57, 95% CI 0.39 to 0.85). Whilst the second study found positive changes for tobacco use in the intervention arm at post-test ($p < 0.05$), this was not maintained at six month follow-up (change score -0.11 for intervention and 0.07 for control).
<p>Foxcroft 2011</p> <p>Title: Universal multi-component prevention programs for alcohol misuse in young people</p> <p>Cochrane review</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Multi-setting</p> <p>USA (17), Australia (1), the Netherlands (1), India (1)</p>	<p>20 RCTs (15 cluster randomised, 5 individually randomised)</p> <p>8 studies had a post-intervention follow-up of 12 months or more (up to 6 years in one study)</p>	<p>Alcohol use:</p> <p>The authors conclude that there is some evidence that multi-component interventions for alcohol misuse prevention in young people can be effective. 12 of the 20 trials reported positive effects of multi-component programs for the prevention of alcohol misuse in young people, with persistence of effects ranging from 3 months to 3 years. One trial reported statistically significant effects using one-tailed tests and may have been underpowered to detect significant effects using more conventional two-tailed tests. One trial found significant effects but only in a subsample of baseline drinkers. The remaining six trials reported no significant effects of the multi-component interventions for reducing alcohol misuse.</p> <p>Delivery:</p> <p>There is no clear evidence to suggest that multi-component interventions are more effective than single-component interventions. In seven studies the authors were able to assess the impact of single versus multiple components, and only 1 out of the 7 studies clearly showed a benefit of components</p>

			delivered in more than one setting. Three indicated some possible benefit though this was straightforward to interpret in only one, and three trials showed no benefit of additional components.
<p>Gates 2006</p> <p>Title: Interventions for prevention of drug use by young people delivered in non-school settings</p> <p>Cochrane review</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>School Community</p> <p>USA (4), China (1)</p>	<p>5 RCTs (cluster randomised)</p> <p>All 5 studies had a follow-up of 12 months or more (42 months or more in three studies)</p>	<p>Drug use:</p> <p>There is a lack of evidence concerning the effectiveness of non-school based interventions in preventing or reducing drug use by young people. The studies of multi-component community interventions did not find any strong effects on drug use outcomes. There were five studies, four of which added the community component to a school drug education program.</p>
<p>Jackson 2012</p> <p>Title: Interventions to prevent substance use and risky sexual behaviour in young people: a systematic review</p> <p>Systematic review Quality: Acceptable</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Multi-setting</p> <p>USA (4), Canada (1), Australia (1)</p>	<p>6 studies (4 RCTs, 2 controlled trials)</p> <p>At least 3 studies had a follow-up of 12 months or more post-intervention</p>	<p>Drug use:</p> <p>Of the six programmes included in the review, none provided clear evidence of effectiveness for programmes targeting substance use and sexual health. The 'Forth R: Skills for Youth Relationships' programme included a curriculum-focused component, additional information for parents and a student-led school committee. After 30 months there was no effect on problem substance use among males and females (OR 1.11, 95% CI 0.84–1.44). The Aban Aya Youth Project evaluated a multi-component programme, composed of a classroom-based social development curriculum plus parental, school climate and community components. After 4 years, growth in rates of substance use was reduced in the intervention compared with control group among boys only (relative reduction 34%, P = 0.05), with no significant effects among girls. This study also included a comparison of the curriculum component only with the control group, and found a reduction in substance use among boys only</p>

(relative reduction 32%, $P = 0.05$). The Gatehouse Project, a whole-school programme aimed at promoting social and emotional wellbeing through improving social inclusion and connection in secondary schools, found that after 3 years, there were non-significant trends towards reduced regular smoking (OR 0.79, 95% CI 0.58–1.07) and past 6-month cannabis use (0.81, 95% CI 0.57–1.16), but no effects on alcohol use. In a further survey of 14-year-olds, carried out 4 years post-intervention, there was no significant difference in substance use. The Healthy For Life Project consisted of a classroom-based social influence curriculum, alongside peer, parental and community components. After 2 years, there were no significant effects on past-month alcohol, tobacco or cannabis use. However, in the intervention group which contained the intensive classroom-based curriculum element, smoking and cannabis were reduced. The Seattle Social Development Project (SSDP) sought to promote bonding to school and family and strengthening of children's social competencies during elementary school years. At age 18, heavy drinking was reduced significantly in the intervention group (OR 0.54, 95% CI 0.32–0.92). There was, however, no difference in life-time smoking or cannabis use. At age 21, there was no significant difference in substance use, and there were no significant effects on substance use at age 24. Youth Action Research for Prevention sought to empower young people to use research to understand their community more clearly, and to promote social action at multiple levels, from the individual to group and community levels. After 3 years there was a significant reduction in cannabis use, but not in alcohol use. Alcohol use:
Please see information on drug use.

			<p>Tobacco use: Please see information on drug use.</p> <p>Other risky behaviours: With regard to sexual health, the 'Forth R: Skills for Youth Relationships' programme showed significant increase in condom use in the intervention group among sexually active males (OR 1.70, 95% CI 1.10–2.66), but not females. The Aban Aya Youth Project reduced sexual intercourse among boys only (relative reduction 65%, with had no significant effects among girls. The Gatehouse Project had not effects on early initiation of sex in the short-term, but in the long term there was a significant reduction in early initiation of sexual intercourse (OR 0.55, 95% CI 0.37–0.83). The review authors concluded that it may take time for whole-school changes to impact upon risk behaviour. The Healthy For Life Project found no significant effects on sexual intercourse. The SSDP reduced life-time sexual activity, and sex with multiple partners significantly in the intervention group at age 18 (OR 0.52, 95% CI 0.38–0.72; and OR 0.61, 95% CI 0.43–0.88, respectively), as well as pregnancy or causing pregnancy (OR 0.57, 95% CI 0.34–0.95). At age 21, mean age at first sexual intercourse was significantly higher in the intervention versus control group (mean 16.3 versus 15.8; $P < 0.05$), and condom use during last sexual intercourse (if single) was more common in the intervention group (OR 1.88, 95% CI 1.11–3.19). There was no difference in condom use at first intercourse. Having multiple sex partners was reduced significantly in the intervention group ($P < 0.05$). Among women, pregnancy and giving birth were both reduced significantly ($P < 0.05$), but there was no effect among men on causing pregnancy or fathering a child. The prevalence of life-time</p>
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			<p>sexually transmitted disease (STD) was not significantly different at age 21, but the life-time STD index was significantly lower in the intervention than control group at age 24 (P = 0.02). Youth Action Research for Prevention had no significant effect concerning multiple sexual partners.</p> <p>Delivery: The authors conclude in this review, which included different types of interventions, that the most promising interventions addressed multiple domains (individual and peer, family, school and community) of risk and protective factors for risk behaviour. Programmes that addressed just one domain (e.g., school) were generally less effective in preventing multiple risk behaviour.</p>
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies Quality: Good</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Multi-setting</p> <p>USA</p>	<p>7 studies (1 systematic review, 5 RCTs, 1 before-and-after study)</p> <p>3 studies had a follow-up of 12 months or more</p>	<p>Drug use: There was evidence from one review to suggest that multicomponent community-based approaches are more effective for high-risk youth at preventing, delaying, or reducing drug use than school and community projects alone. Compared with low risk youth, this population may respond more favourably to comprehensive interventions targeting alcohol, cannabis, tobacco, and generic substance use. One RCT found that multicomponent interventions can be effective in reducing substance use in the short term, however there is inconsistent evidence from one review and two RCTs about their effectiveness in the long-term, with studies either indicating no change in substance use, or a reduction in patterns of alcohol use. Findings from one RCT suggest that a community mobilisation and youth development programme had no effect on neighbourhood co-operation or pride, indicators of community mobilisation, or</p>

			<p>generic youth risk behaviours.</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p>
<p>Müller-Riemenschneider 2008</p> <p>Title: Long-Term Effectiveness of Behavioral Interventions to Prevent Smoking among Children and Youth</p> <p>Meta-analysis Quality: Good</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family Community Multi-setting</p> <p>UK, USA, Canada, Netherlands, India</p>	<p>21 RCTs (10 included in meta-analysis)</p> <p>A follow-up of 12 months or more was an inclusion criterion; follow-up of included studies ranged from 12 months to 120 months.</p>	<p>Tobacco use: The present work identified moderate evidence for the effectiveness of behavioural interventions to prevent smoking. There was evidence that community-based and multisectorial interventions were effective in reducing smoking rates, although the reductions observed in smoking rates were only modest. Seven good/high-quality studies on community-based intervention were available, of which four reported strong evidence of intervention effectiveness, as demonstrated by reductions in smoking rates of up to 10.6%. Conversely, two studies reported a trend towards unfavourable intervention effects, reflecting an increase in smoking rates of up to 1.5% within the intervention group.</p> <p>Six good/high-quality studies on multisectorial intervention were available (i.e., interventions consisting of a school and an out-of-school component), of which four studies reported strong evidence of long-term effectiveness, and two studies reported positive intervention effects for only some groups. One study reported different outcome measures for smoking behaviour, indicating similar intervention effects, and none of the studies identified found any association between the intervention strategies and unfavourable effects on smoking rates. The difference in smoking rates between intervention and control groups was as high as 6.1%, favouring the intervention group in all cases.</p> <p>Delivery:</p>

			Specific intervention components were investigated only infrequently. Family-based interventions were used in many community-based and multisectorial intervention strategies. Although it was difficult to identify their specific impact, there seems to be some evidence for the additional effectiveness of this approach. In order to achieve reductions in smoking rates however, it appears that providing smoking related information to parents was not sufficient on its own, but rather that the family members needed to be actively involved. Activities targeted at parents who smoke were found to be especially effective. Further research will be necessary to confirm these results and investigate the additional reductions in smoking rates associated with this approach.
Roe 2005 Title: Drug prevention with vulnerable young people: A review Systematic review Quality: Acceptable	Community-based multi-component initiatives Middle childhood Early adolescence Adolescence Adulthood Family School Community Multi-setting USA	5 evaluation studies with control or comparison groups (2 RCTs, 3 quasi-experimental designs) 3 studies had a follow-up of 12 months or more	Delivery: In the community, an intensive multi-component intervention (the Children at Risk program) was found to be the most effective in this review. Evaluated in five US cities, the CAR program made use of case managers to assess the multiple needs of at-risk young people and to coordinate the provision of necessary services. According to the review authors, this high-quality study supports other evidence to suggest that the most vulnerable young people experience multiple problems that can lead to drug use, and therefore effective interventions need to be multi-faceted. The authors conclude that across different settings the 11–13 age range appeared to be a crucial period for intervention with vulnerable young people. They describe this as a time when high-risk young people start to experiment with drugs, which appears to be a few years earlier than the onset of drug use amongst the general

			population.
<p>Schröder-Günther 2011</p> <p>Title: Primary Tobacco Prevention in China - A Systematic Review</p> <p>Systematic review Quality: Good</p>	<p>Community-based multi-component initiatives</p> <p>Adulthood</p> <p>School Community Media Multi-setting</p> <p>China</p>	<p>5 RCTs</p> <p>1 study had a follow-up of 12 months</p>	<p>Tobacco use: The evidence for the effectiveness of smoking prevention interventions in China is weak, partly due to methodological limitations of the studies. The available research suggests that community-based smoking prevention and cessation programmes can have a significant effect on adults in the very short-term. Four out of five studies found significant differences between intervention and control groups at post-intervention. However, follow-up data was only available from one study. That study found significant differences at post-intervention, but not at 12 months.</p> <p>Delivery: With regard to the wider range of smoking prevention and cessation programmes included in this review, the authors conclude that interventions applying health promotion techniques were more often successful than interventions that were only based on health education.</p>
<p>Skara 2003</p> <p>Title: A review of 25 long-term adolescent tobacco and other drug use prevention program evaluations</p> <p>Systematic review Quality: Acceptable</p>	<p>Community-based multi-component initiatives</p> <p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>School Community</p> <p>USA (5), Finland (1)</p>	<p>6 quasi-experimental studies</p> <p>Only studies with a long-term follow-up of at least 24 months were included in this review (follow-up ranged from 27 to 180 months)</p>	<p>Drug use: This review of long-term tobacco and drug use prevention intervention studies indicates that school- and community-based programs were effective in preventing or reducing adolescent cigarette, alcohol, and marijuana use across follow-up periods ranging from 2 to 15 years. Of the six multi-component studies in this review, two studies had measured marijuana use. Both of these studies found sustained reductions in marijuana use among the intervention groups.</p> <p>Alcohol use: Two studies had also measured alcohol use; both studies found significant reductions in alcohol use at the initial</p>

			<p>follow-ups, but only one study still reported reduced alcohol use at the final follow-up (7 years).</p> <p>Tobacco use: Four studies consistently found significant reductions on a variety of smoking outcomes over multiple time points. This included the study with the longest follow-up (15 years). Two studies found no significant differences at any time point.</p> <p>Delivery: Results indicated that program effects were less likely to decay among studies that delivered booster programming sessions as a supplement to the program curricula.</p>
<p>Spoth 2008</p> <p>Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps Toward Public Health Impact</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Community-based multi-component initiatives</p> <p>Pre-natal and early childhood Middle childhood Early adolescence</p> <p>Family School Community Health sector Multi-setting</p> <p>USA, Canada (countries not consistently reported)</p>	<p>11 programmes in 21 reports (study designs not consistently reported)</p> <p>9 out of 11 programmes were followed up at 12 months or more; a follow-up period of at least 6 months was an inclusion criterion</p>	<p>Alcohol use: Across different types of interventions (including single-component interventions), the review authors found that most of the effective interventions in the younger age group used multidomain models (i.e., focusing on 2 or more different domains such as family, school, community) (e.g., Linking the Interests of Families and Teachers, Fast Track, Seattle Social Development Project, Raising Healthy Children, and Preventive Treatment Program).</p> <p>Delivery: Analyses of components across domains conducted on one of the most-promising multidomain interventions reviewed (Project Northland) suggested that the relatively strongest effects on tendency toward alcohol use were shown for the parent program component.</p>
<p>Spoth 2008</p> <p>Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps</p>	<p>Community-based multi-component initiatives</p> <p>Adolescence Adulthood</p>	<p>2 programmes in 3 reports (study designs not consistently reported)</p> <p>Both programmes were followed up at 12 months or more; a follow-</p>	<p>Alcohol use: With regard to community mobilisation programmes, the review authors found two relatively effective interventions that focused on decreasing sales to</p>

<p>Toward Public Health Impact</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Community</p> <p>USA</p>	<p>up period of at least 6 months was an inclusion criterion</p>	<p>minors, increasing identification checks by vendors, or reducing community tolerance of underage purchasing and consumption of alcohol (Communities Mobilizing for Change on Alcohol, Community Trials Intervention to Reduce High-Risk Drinking). The review authors conclude that studies of these interventions provided only mixed or emerging evidence, either because of failure to measure specific alcohol use outcomes (or direct logical consequences of use) or because too few communities were studied to allow definitive statements regarding the generalizability of findings.</p>
<p>Early childhood education</p>			
<p>D'Onise 2010</p> <p>Title: Does attendance at preschool affect adult health? A systematic review</p> <p>Systematic review</p> <p>Quality: Good</p>	<p>Early childhood education</p> <p>Pre-natal and early childhood</p> <p>Family</p> <p>School</p> <p>Community</p> <p>USA</p>	<p>12 studies with comparison groups regarding all health behaviours (6 studies on substance use)</p> <p>The intervention took place at around age of 4 years; follow-up was conducted at age 18 or later</p>	<p>Drug use:</p> <p>There was consistent evidence for a reduction in the absolute risk of marijuana consumption in the methodologically rigorous Perry Preschool, Abecedarian and Project CARE studies (-7 to -23%). There was an overall beneficial effect of preschool programmes on cocaine or other illicit drug use; however, the absolute number of participants who reported heroin or LSD use was small. Risk ratio = .84 for marijuana.</p> <p>Alcohol use:</p> <p>There was a moderate *increase* in the absolute risk of binge drinking in the past month in the Perry Preschool and Abecedarian studies (10 and 13%), but no difference in reports of driving after 'probably drinking too much' in the Perry Preschool study.</p> <p>Tobacco use:</p> <p>Six studies examined tobacco smoking. For five of the six studies, there was consistent evidence for centre-based preschool programmes reducing the prevalence of current and ever smoking . There was an absolute risk difference in the two methodologically</p>

			rigorous randomized studies, the Perry Preschool study (followed to 40 years of age) and the Abecedarian study (followed to 21 years of age), of 13% and 16%, respectively. The Project CARE intervention was the only study to find an increased risk of smoking in the intervention group, although with wide CIs due to small numbers (n = 9) in both the intervention and control groups. Risk ratio = .81 for tobacco.
Jones 2006 Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people Systematic review of reviews and primary studies Quality: Good	Early childhood education Pre-natal and early childhood School USA	2 controlled non-randomised trials 1 study had a follow-up of 12 months or more (6 years)	Mediators: There was evidence from two studies to suggest that early, pre-school intervention, delivered by specially trained teachers can produce immediate and long term effects (up to 6 years) on behaviours promoting education, risk reduction, and social inclusion.
Entertainment venues			
Bolier 2011 Title: Alcohol and Drug Prevention in Nightlife Settings: A Review of Experimental Studies Literature review Quality: Acceptable	Entertainment venues Early adolescence Adolescence Adulthood Community USA, Canada, Australia, Sweden	17 studies, of which 2 studies focused on drug prevention programmes and 15 on alcohol prevention (4 RCTs, 5 studies with pretest-posttest and matched control group design, 4 studies employing time series quasi-experimental designs, 4 uncontrolled before and after studies) The follow-up periods ranged from immediate post-tests through 3 months to up to 3- or 4-year follow-up periods. More detailed information was not provided.	Alcohol use: The authors conclude that, taking the results and quality of studies into account, both server training interventions and policy interventions could have an effect on alcohol-use-related problems in nightlife settings. In particular, community interventions in which these interventions are combined seem recommendable, especially with regard to reducing high-risk consumption and use-related harms. Furthermore, the chances of these types of interventions (particularly policies) being effective appear to increase when interventions are combined with enforcement. The evidence base for educational interventions and drug prevention interventions is limited.
Brennan 2011 Title: Interventions for disorder	Entertainment venues Adolescence	15 studies (5 RCTs and 10 non-randomized quasi-experimental evaluations)	Alcohol use: The authors conclude that there is only limited evidence that premises-level

<p>and severe intoxication in and around licensed premises, 1989–2009</p> <p>Systematic review Quality: Acceptable</p>	<p>Adulthood Community USA (5), Australia (5), Sweden (3), Canada (2)</p>	<p>Only 4 included studies measured breath alcohol concentration, and none of these had a follow-up of 12 months or more</p>	<p>interventions reduce intoxication and disorder. Five studies used RCT methods to evaluate interventions, of which three focused on preventing disorder, one focused on reducing intoxication, and one was concerned with both. None can be compared easily due to differences in intervention technique. One intervention evaluated using RCT methods demonstrated a significant *increase* in patron BrAC (breath alcohol concentration). Ten evaluations did not use RCT methods, of which three reported significant reductions in intoxication. Premises-level interventions were the most commonly used intervention type but were not likely to reduce intoxication.</p> <p>Other risky behaviours: According to the authors, of the RCTs for violence prevention interventions, server training appears to be the most successful, although the content varied considerably. No other intervention reduced violence. Ten evaluations did not use RCT methods, of which three reported a significant reduction in disorder. Premises-level interventions were the most commonly used intervention type and were most likely to reduce disorder. Two community-level interventions were evaluated using RCT methods and neither reported a significant reduction in disorder. Of the other five community-level evaluations, only three reported significant reductions in disorder, but varied considerably in respect of intervention content.</p>
<p>Interventions targeting pregnant women with substance abuse disorders</p>			
<p>Niccols 2012a Title: Integrated programs for mothers with substance abuse issues: A systematic review of</p>	<p>Interventions targeting pregnant women with substance abuse disorders Pre-natal and early childhood</p>	<p>4 RCTs 1 study had a follow-up of 12 months</p>	<p>Drug use: This review did not report on drug use outcomes. Mediators:</p>

<p>studies reporting on parenting outcomes</p> <p>Systematic review Quality: Good</p>	<p>Community Health sector</p> <p>Countries not specified</p>		<p>The limited available evidence suggests that integrated programs are associated with improvements in parenting skills, although due to methodological limitations of the reviewed studies it is not possible to make firm conclusions. In the three randomized trials comparing integrated programs to addiction treatment-as-usual (N = 419), most improvements in parenting skills favored integrated programs and most effect sizes indicated that this advantage was small, $d_s = -0.02$ to 0.94. Results for child protection services involvement did not differ by group.</p> <p>Delivery: In the three studies that examined factors associated with treatment effects, parenting improvements were associated with attachment-based parenting interventions, children residing in the treatment facility, and improvements in maternal mental health.</p>
<p>Niccols 2012b</p> <p>Title: Integrated programs for mothers with substance abuse issues and their children: A systematic review of studies reporting on child outcomes</p> <p>Systematic review Quality: Good</p>	<p>Interventions targeting pregnant women with substance abuse disorders</p> <p>Pre-natal and early childhood Middle childhood</p> <p>Community Health sector</p> <p>Countries not specified</p>	<p>13 studies (8 cohort studies, 3 quasi-experimental studies, and 2 RCTs comparing integrated to non-integrated programs)</p> <p>7 studies had a follow-up of 12 months or more</p>	<p>Drug use: This review did not report on drug use outcomes.</p> <p>Mediators: Although due to a weak evidence it is difficult to draw definite conclusions, integrated programs appear to have a positive impact on child development and emotional and behavioral functioning from intake to post-test. In the studies reviewed, developmental test scores for 6- to 24-month-old infants of women who participated in integrated programs were within or above one standard deviation of the normative mean. Most pre-post effects indicated small to large improvements in child development scores. With regard to emotional and behavioral</p>

			<p>functioning, most effects indicated improvements from pre-test to post-test and, where available, most effect sizes were large. Most developmental scores for infants in integrated programs appeared higher than those for infants of women not in treatment and similar to those for infants of non-users. In terms of growth parameters (length, weight, and head circumference), most measures for infants in integrated programs were higher than those for infants of women not in treatment and, where available, all effect sizes were large. Therefore, integrated programs may be more effective than no treatment in improving child development and child growth. In comparison group studies of emotional and behavioral functioning, most effects favored integrated over non-integrated treatment and, where available, most effect sizes were small. As such, available evidence suggests that integrated programs may be associated with a small advantage over non-integrated programs in some child emotional and behavioral functioning outcomes. There were no studies comparing integrated to non-integrated programs on child development and growth outcomes.</p>
<p>Turnbull 2012</p> <p>Title: Home visits during pregnancy and after birth for women with an alcohol or drug problem</p> <p>Cochrane review</p>	<p>Interventions targeting pregnant women with substance abuse disorders</p> <p>Pre-natal and early childhood Adolescence Adulthood</p> <p>Family</p> <p>USA, Australia</p>	<p>7 trials (6 RCTs, 1 quasi-experimental study)</p> <p>At least two studies had a follow-up period of 12 months or more</p>	<p>Drug use:</p> <p>The authors conclude that there is insufficient evidence to recommend the routine use of home visits for pregnant or postpartum women with a drug or alcohol problem. Seven studies compared home visits mostly after birth with no home visits. There was no significant difference in continued illicit drug use among mothers (three studies, 384 women; risk ratio (RR) 1.05, 95% confidence interval (CI) 0.89 to 1.24), continued alcohol use (three studies, 379 women; RR 1.18, 95% CI 0.96 to 1.46), or failure to enroll in a drug</p>

			<p>treatment program (two studies, 211 women; RR 0.45, 95% CI 0.10 to 1.94).</p> <p>Mediators: The authors found evidence that home visits after the birth may increase the engagement of these women in drug treatment services and their use of contraception, but there were insufficient data to say if this improved the health of the baby or mother. There was no significant difference in not breastfeeding at six months (two studies, 260 infants; RR 0.95, 95% CI 0.83 to 1.10), incomplete six-month infant vaccination schedule (two studies, 260 infants; RR 1.09, 95% CI 0.91 to 1.32), the Bayley Mental Development Index (three studies, 199 infants; mean difference 2.89, 95% CI -1.17 to 6.95) or Psychomotor Index (MD 3.14, 95% CI -0.03 to 6.32), child behavioural problems (RR 0.46, 95% CI 0.21 to 1.01), infants not in care of biological mother (two studies, 254 infants; RR 0.83, 95% CI 0.50 to 1.39), non-accidental injury and non-voluntary foster care (two studies, 254 infants; RR 0.16, 95% CI 0.02 to 1.23) or infant death (three studies, 288 infants; RR 0.70, 95% CI 0.12 to 4.16). Individual studies reported a significant reduction in involvement with child protective services (RR 0.38, 95% CI 0.20 to 0.74) and failure to use postpartum contraception (RR 0.41, 95% CI 0.20 to 0.82).</p> <p>Delivery: According to this review, there is insufficient evidence at present to recommend the routine use of home visits, any particular model of home visits or any specific home interventions in women with a drug or alcohol problem.</p>
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Media campaigns

<p>Brinn 2010</p> <p>Title: Mass media interventions for preventing smoking in young people</p> <p>Cochrane review</p>	<p>Media campaigns</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School Media</p> <p>USA (6), Norway (1)</p>	<p>7 trials (parallel group RCTs or controlled clinical trials)</p> <p>At least 4 studies had a follow-up of 12 months or more</p>	<p>Tobacco use: The authors conclude that there is some evidence that mass media can prevent the uptake of smoking in young people, however the evidence is not strong and contains a number of methodological flaws. Three studies concluded that mass media reduced the smoking behaviour of young people, whilst the remaining four demonstrated no effect.</p> <p>Delivery: All of the effective campaigns had a solid theoretical basis, used formative research in designing the campaign messages, and message broadcast was of reasonable intensity over extensive periods of time. Campaigns which researched and developed their message to reach their target audience had a higher success rate than those which did not. Overall, effective campaigns lasted longer with a minimum of three consecutive years, and were also more intense than less successful ones for both school based lessons (minimum eight lessons per grade) and media spots (minimum 4 weeks' duration across multiple media channels with between 167 and 350 TV and radio spots). The timing and type of broadcast made a difference to their success, with older youths in one study preferring radio to television. Implementation of combined school based curriculum/components (i.e. school posters) and the use of repetitive media messages delivered via multiple channels (i.e. newspapers, radio, television) over a minimum period of three years contributed to successful campaigns. Changes in attitudes, knowledge or intention to smoke did not generally seem to affect the long-term success of the campaigns.</p>
<p>Bühler 2008</p>	<p>Media campaigns</p>	<p>5 reviews</p>	<p>Alcohol use: - Warnings on drinks bottles, as an</p>

<p>Title: Prevention of substance abuse (EMCDDA Insights Nr 7)</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>Community Media</p> <p>Most included reviews originated from the USA.</p>	<p>Follow-up not consistently reported</p>	<p>isolated measure, have no effect on alcohol consumption.</p> <ul style="list-style-type: none"> - TV advertisements to combat alcohol-impaired driving, in combination with supporting measures, have effects on the incidence of alcohol-impaired driving and on alcohol-related accidents. <p>Tobacco use:</p> <ul style="list-style-type: none"> - Mass-media campaigns in combination with other components (school-based, community-based and national programmes) have preventive effects on consumption behaviour (in relation to tobacco), whereas isolated mass-media campaigns do not reduce consumption (of tobacco). - Effects in combination with other components (one systematic review): 0–10 absolute percentage points fewer smokers than in the control group - Media campaigns tend to be more influential in preventing uptake of smoking than in promoting cessation of smoking and also tend to be more effective with young people at the lower end of the age band. <p>Delivery:</p> <ul style="list-style-type: none"> - Youth-orientated media campaigns are more effective as part of national programmes than as part of community programmes (in relation to tobacco). - Effective measures have the following characteristics: (i) they deploy powerful emotional imagery; (ii) they are not humorous; (iii) they make no ambiguous statements; (iv) they do not confront young people with the decision to consume or not; (v) they uncover the strategies of the tobacco industry, and their messages are delivered by young spokespersons (in relation to tobacco).
<p>Ferri 2013 (in press)</p> <p>Title: Media campaigns for the prevention of illicit drug use in</p>	<p>Media campaigns</p> <p>Early adolescence Adolescence</p>	<p>23 studies (12 RCTs, 2 perspective cohort studies, 1 RCT with a perspective cohort study nested, 7 interrupted time series, 1 before</p>	<p>Drug use: The authors reviewed 23 studies, the majority of which were conducted in the USA, and found a weak evidence in</p>

<p>young people</p> <p>Cochrane review</p>	<p>Adulthood</p> <p>Media</p> <p>USA (21), USA and Canada (1), Australia (1)</p>	<p>and after study)</p> <p>No follow-up was described, or was applicable, for six studies. Follow-up was shorter than 12 months for four studies, and longer than or equal to 12 months for the remaining thirteen studies.</p>	<p>favour of media campaigns to prevent illicit drug use. Given the absence of strong evidence, media campaigns for prevention of illicit drug use among young people should not be provided out of rigorously designed and evaluated programs. This is particularly relevant, as these are prevention interventions which are provided without a demand from the target population.</p>
<p>Hopkins 2001</p> <p>Title: Reviews of Evidence Regarding Interventions to Reduce Tobacco Use and Exposure to Environmental Tobacco Smoke</p> <p>Community Guide review</p>	<p>Media campaigns</p> <p>Early adolescence Adolescence Adulthood</p> <p>Media Multi-setting</p> <p>USA (10), Norway (1), Finland (1)</p>	<p>12 studies</p> <p>Follow-up periods not reported consistently</p>	<p>Tobacco use: According to the Community Guide's rules of evidence, strong scientific evidence exists that mass media campaigns are effective in reducing tobacco use prevalence in adolescents when combined with other interventions. The contribution of individual components to the overall effectiveness of these interventions cannot be attributed. In follow-up periods that ranged from 2 to 5 years, self-reported tobacco use was a median 2.4 percentage points lower in groups exposed to a mass media campaign (range: 0.02% to -9.5%; 5 studies). All seven studies of mass media campaigns that ran for 2 or more years indicated that they reduced tobacco use.</p> <p>Delivery: In all but one study, the mass media campaign occurred in coordination or concurrently with other interventions including contests, school-based education programs, community education programs, or excise tax increases on tobacco products.</p>
<p>NCI 2008</p> <p>Title: The Role of the Media in Promoting and Reducing Tobacco Use (Chapter 12: Assessing the Effectiveness of the Mass Media in Discouraging Smoking Behavior)</p>	<p>Media campaigns</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community</p>	<p>Youth: 10 programmes examined in 25 controlled studies; Cardiovascular Health Promotion in adults: 10 programmes in 24 quasi-experimental studies; Population-based studies using a variety of study designs (total</p>	<p>Tobacco use: The authors conclude that, although methodological limitations present problems in interpretation, antitobacco mass media campaigns can reduce tobacco use. The findings suggest that antismoking media campaigns can</p>

<p>Systematic Review Quality: Acceptable</p>	<p>Media Multi-setting</p> <p>USA, Canada, Australia, UK, Ireland, Finland, Norway, Germany, Austria, Greece, South Africa, Singapore, and others</p>	<p>number of studies not reported)</p> <p>Youth: At least 5 out of the 10 programmes were followed up at 12 months or more; adults: at least 6 out of the 10 programmes were followed up at 12 months or more</p>	<p>influence attitudes toward tobacco within a short period, followed by longer-term effects on smoking behavior.</p> <p>Evidence from controlled field experiments (quasi-experimental studies) suggests that antitobacco mass media campaigns conducted in conjunction with school- or community-based programming can be effective in curbing smoking initiation in youth and promoting smoking cessation in adults. The majority (seven of ten) of the youth studies provided evidence that media can play an important role in affecting smoking behavior. Although one of the studies that evaluated the effect of media alone (versus no intervention) found evidence for an effect, three did not, and one did not test the effect. In studies comparing media combined with a school-based intervention to a school-based intervention alone, or to no intervention, all but one found evidence for an effect. The results for the role of media in influencing adult smoking behavior are also mixed. Among studies concerned with promoting cardiovascular health, which had many other media messages besides those related to smoking cessation, seven of ten found at least some evidence of an effect on adult smoking prevalence or quitting. However, if strong and consistent evidence of an effect is the criterion (uniformly decreased smoking prevalence or increased quitting), only five of the studies concerning cardiovascular health would meet this standard.</p> <p>The few population-based studies of antitobacco mass media campaigns, in which the media campaign was the only antitobacco program, demonstrate that the media campaigns were effective in reducing smoking in the youth and adult target populations. Population-based studies of antitobacco mass media</p>
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			<p>campaigns that were only one component of multicomponent tobacco control programs provide considerable evidence for reduced use of tobacco by youth and adults.</p> <p>Delivery: The findings suggest that for maximal effect on youth smoking, media need to be combined with other smoking prevention efforts. Whether media alone are as effective as media combined with other program components in promoting quitting in adults is difficult to discern. Of the six studies with designs allowing for a comparison of media alone versus no intervention, one did not make the comparison (only analyzed dose-response of intervention intensity), and all of the others showed at least some evidence for an effect. Of those studies with a media-alone condition, five also included a condition for media combined with other program components. Often, there appeared to be a greater effect for the combined intervention, but only one study provided a direct comparison of these two conditions, and that study did not find them to be significantly different. Although results are less clear than for youth, it is likely that multicomponent interventions that include media will have a greater chance of having an impact than will media-only or other-modes-only interventions.</p>
<p>Ranney 2006</p> <p>Title: Tobacco Use: Prevention, Cessation, and Control</p> <p>Systematic review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Media campaigns</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community Media</p> <p>One of the inclusion criteria was that studies were from "Developed</p>	<p>4 systematic reviews/meta-analyses, 1 cross-sectional study</p> <p>No follow-up in the primary study</p>	<p>Tobacco use: The authors note that previous systematic reviews investigating tobacco prevention among adolescents and young adults reported strong evidence of effectiveness for mass media campaigns that run concurrently with other interventions.</p>

	countries: United States, Canada, United Kingdom, Western Europe, Australia, and New Zealand"		
Mentoring			
Bühler 2008 Title: Prevention of substance abuse (EMCDDA Insights Nr 7) Review of reviews and primary studies Quality: Acceptable	Mentoring Middle childhood Early adolescence Adolescence Setting not specified Countries not specified	1 review of 7 studies Follow-up not reported	Drug use: There is a lack of evidence concerning mentoring programmes and the authors were therefore unable to draw conclusions.
Thomas 2011 Title: Mentoring adolescents to prevent drug and alcohol use Cochrane review	Mentoring Middle childhood Early adolescence Adolescence School Community USA	4 RCTs 3 studies had a follow-up of 12 months or more (up to 3 years in one study)	Drug use: Of the four trials included in this review, one found evidence for the reduction of drug usage. Three RCTs provided evidence about mentoring and preventing drug use, but could not be pooled due to different outcome measures. One found significantly less use of illegal drugs, one did not, and one assessed only marijuana use and found no significant differences. One RCT measured "substance use" without separating alcohol and drugs, and found no difference for mentoring at the 3 year follow-up. The studies assessed structured programmes and not informal mentors. Alcohol use: Of the four trials included in this review, two RCTs found mentoring reduced the rate of initiation of alcohol. Three RCTs provided evidence about mentoring and preventing alcohol use. The authors pooled two RCTs (RR for mentoring compared to no intervention = 0.71 (95% CI = 0.57 to 0.90, P value = 0.005; the follow-up in both studies was 12 months or more). A third RCT found no significant differences at 6 months. The ability of the interventions to be effective was limited by the low rates of commencing alcohol and drug use

			during the intervention period. All students at baseline were non-users of alcohol and drugs. In one study the use of marijuana increased to 1% in the experimental and to 1.6% in the control group, and in another study drug usage rose to 6% in the experimental and 11% in the control group. However, in a third study there was scope for the intervention to have an effect as alcohol use rose to 19% in the experimental and 27% in the control group.
<p>Tolan 2008</p> <p>Title: Mentoring Interventions to Affect Juvenile Delinquency and Associated Problems</p> <p>Campbell review</p>	<p>Mentoring</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Community</p> <p>The review was limited to studies conducted in the USA or another predominately English-speaking country (countries not reported)</p>	<p>39 studies (22 RCTs, 17 quasi-experimental studies involving non-random assignment, but with matched comparison groups)</p> <p>22 studies had a follow-up period of 12 months or more</p>	<p>Drug use: The review suggests mentoring for high-risk youth has a modest positive effect for drug use. For drug use, the mean effect size using random effects calculation was SMD = 0.13, 95% CI = -0.02 – 0.28.</p> <p>Alcohol use: Please see information on drug use (the study did not distinguish between alcohol and illicit drugs).</p> <p>Other risky behaviours: The review suggests mentoring for high-risk youth has a modest positive effect for delinquency, aggression, and academic achievement. For delinquency, the mean effect size using random effects calculation was SMD = 0.23, 95% CI = 0.11 – 0.36. For aggression, the mean effect size using random effects calculation was SMD = 0.40, 95% CI = 0.06 – 0.74. For academic achievement, the weighted random effects estimate of effect size was SMD = 0.08, 95% CI = 0.01 – 0.15. Overall, effects were largest for delinquency and aggression. However, these categories also showed the most heterogeneity across studies.</p> <p>Delivery: Effects tended to be stronger when emotional support was emphasized within the intervention, and when</p>

			professional development was an explicit motive for becoming a mentor. However, due to limited description of content of mentoring programs and substantial variation in what is included as part of mentoring efforts, the review authors highlighted that the valuable features and most promising approaches can not be stated with any certainty.
Parenting skills			
Barlow 2005 Title: Group-based parent-training programmes for improving emotional and behavioural adjustment in 0-3 year old children Campbell review	Parenting skills Pre-natal and early childhood Family USA (4), UK (1)	5 RCTs 2 studies had a follow-up period of 12 months or more	Drug use: The study did not report any drug use outcomes. Mediators: The findings of this review provide some support for the use of group-based parenting programmes to improve the emotional and behavioural adjustment of children under the age of 3 years. Meta-analyses were conducted for both parent-reports and independent assessments of children's behaviour. The result for parent reports showed a nonsignificant result favouring the intervention group (ES -0.29, CI -0.55 to 0.02). The result for independent observations of children's behaviour showed a significant result favouring the intervention group (ES -0.54, CI -0.84 to -0.23). There were limited data available concerning the long-term effectiveness of these programmes. A meta-analysis of the two studies for which data were available showed a small non-significant result favouring the intervention group (ES -0.24, CI -0.56 to 0.09). The authors conclude that there is currently insufficient evidence to reach any firm conclusions regarding the role of parenting programmes in the primary prevention of mental health problems.
Bühler 2008	Parenting skills	7 studies, mostly reviews	Alcohol use: - Comprehensive family-orientated

<p>Title: Prevention of substance abuse (EMCDDA Insights Nr 7)</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>Family</p> <p>Most included reviews originated from the USA.</p>	<p>Follow-up not consistently reported</p>	<p>approaches (training for parents, children and whole families) have preventive effects on consumption behaviour (in relation to alcohol).</p> <ul style="list-style-type: none"> - Parental training alone influences risk factors but not consumption. - Family-orientated measures are particularly effective with non-consumers (of alcohol). - Impact on consumption behaviour and on risk factors is delayed (so-called sleeper effects). - Negative effects on risk factors cannot be ruled out. <p>Delivery:</p> <ul style="list-style-type: none"> - Characteristics of effective measures are: a focus on the promotion of positive parent-child interaction, training in the social-reinforcement approach and constructive discipline; interactive training methods; an empirically confirmed theoretical basis; mediator training; evaluation; comprehensive intervention that starts at an early age, continues throughout life, addresses numerous risk factors and protective factors and embraces several settings; material tailored to different stages of development; attention to cultural and community context; and sufficient treatment and follow-up. - Preventive measures for pre-school children (aged 3–5 years) should be family orientated.
<p>Foxcroft 2011</p> <p>Title: Universal family-based prevention programs for alcohol misuse in young people</p> <p>Cochrane review</p>	<p>Parenting skills</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School</p> <p>USA (11), the Netherlands (1)</p>	<p>12 RCTs (4 cluster-randomised, 3 studies randomised by adolescent-family pair, 4 studies randomised by adolescent-parent pair, 1 trial individually randomised)</p> <p>At least 5 studies had a follow-up of 12 months or more</p>	<p>Alcohol use:</p> <p>The authors conclude that the effects of family-based prevention interventions are small but generally consistent and also persistent into the medium- to longer-term. Most of the studies included in the review (9 out of 12) reported positive effects of family-based universal programs for the prevention of alcohol misuse in young people. Four of</p>

			<p>these effective interventions were gender-specific, focusing on young females. One study suggested a positive, though not statistically significant effect which may have been due to the small sample size. Two studies, each with a large sample size, reported no effects.</p> <p>Delivery: There was no discernible pattern in characteristics (e.g., sample size, appropriate analysis, attrition rates, subgroups, intervention duration, unit of randomisation) that would distinguish trials with positive results from those with negative results. One of these studies found that the family-based intervention was effective when combined with a school-based intervention.</p>
<p>Furlong 2012</p> <p>Title: Behavioural and cognitive-behavioural group-based parenting programmes for early-onset conduct problems in children aged 3 to 12 years</p> <p>Campbell review</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood Middle childhood Early adolescence</p> <p>Family Community</p> <p>USA (5), UK (3), Ireland (1), Belgium (1), Norway (1), Sweden (1), Australia (1)</p>	<p>13 trials (10 RCTs and three quasi-randomised trials) as well as two economic evaluations based on two of the trials</p> <p>No study had a follow-up period of 12 months or more. All outcomes were measured either immediately post-treatment or up to three months post-treatment.</p>	<p>Drug use: The study did not report any drug use outcomes.</p> <p>Mediators: The authors conclude that behavioural and cognitive-behavioural group-based parenting interventions are effective and cost-effective for improving child conduct problems, parental mental health and parenting skills in the short term. The results indicate that parent training produced a statistically significant reduction in child conduct problems, whether assessed by parents (standardised mean difference (SMD) -0.53; 95% confidence interval (CI) -0.72 to -0.34) or independently assessed (SMD -0.44; 95% CI -0.77 to -0.11). The intervention led to statistically significant improvements in parental mental health (SMD -0.36; 95% CI -0.52 to -0.20) and positive parenting skills, based on both parent reports (SMD -0.53; 95% CI -0.90 to -0.16) and independent reports (SMD -</p>

			<p>0.47; 95% CI -0.65 to -0.29). Parent training also produced a statistically significant reduction in negative or harsh parenting practices according to both parent reports (SMD -0.77; 95% CI -0.96 to -0.59) and independent assessments (SMD -0.42; 95% CI -0.67 to -0.16). Evidence for the longer-term effects of these programmes is unavailable. Moreover, the intervention demonstrated evidence of cost-effectiveness. When compared to a waiting list control group, there was a cost of approximately \$2500 (GBP 1712; EUR 2217) per family to bring the average child with clinical levels of conduct problems into the non-clinical range. These costs of programme delivery are modest when compared with the long-term health, social, educational and legal costs associated with childhood conduct problems.</p> <p>Delivery: Faithful implementation of the programme appears to be an important component of clinical effectiveness. For example, studies with higher levels of implementation fidelity were statistically significantly better than those with lower levels of fidelity in reducing negative parenting practices</p>
<p>Gates 2006</p> <p>Title: Interventions for prevention of drug use by young people delivered in non-school settings</p> <p>Cochrane review</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>Family School Health sector</p> <p>USA</p>	<p>8 RCTs (3 cluster randomised studies, 5 individually randomised studies)</p> <p>5 studies had a follow-up of 12 months or more (up to 6 years in two studies)</p>	<p>Drug use:</p> <p>There is a lack of evidence concerning the effectiveness of non-school based interventions in preventing or reducing drug use by young people. Three family interventions (Focus on Families, Iowa Strengthening Families Program and Preparing for the Drug-Free Years), each evaluated in only one study, suggested that they may be beneficial in preventing self-reported cannabis use. The latter two programs were compared to the school-based Life Skills Training program. All of the eight studies of family interventions included contact</p>

			with parents, in family groups or in separate sessions for parents and their children. The authors conclude that further evaluation is needed before it can be firmly established that these interventions are effective.
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies</p> <p>Quality: Good</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood</p> <p>Age not specified</p> <p>Family</p> <p>Countries not specified</p>	<p>16 studies (11 RCT, 2 controlled non-randomised trials, 3 before and after studies)</p> <p>9 studies had a follow-up of 12 months or more (up to 4 years in one study)</p>	<p>Drug use:</p> <p>In this comprehensive review of interventions to reduce substance misuse among vulnerable young people, for young people exhibiting multiple risk factors, the authors conclude that family focused work showed the most potential for success. There was evidence from six primary studies to suggest that family based interventions may be effective in producing long term reductions in substance use, except for tobacco and alcohol. There was evidence from three studies to suggest that the Adolescent Transitions Programme can produce long-term increases in overall substance use abstinence (although tobacco smoking may increase). One RCT suggested that the Family Check Up intervention can produce long-term reductions in substance use. Another RCT suggested that the Preparing for the Drug Free Years programme may result in a long-term trend towards a reduction in alcohol and cannabis initiation, but an increase in tobacco smoking and alcohol consumption (although the rise in alcohol may be less in pre-existing alcohol users).</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p> <p>Mediators: Many parent and family focused interventions also produced significant improvements in some secondary outcomes of family functioning (including parenting styles and child</p>

			<p>behaviour). There was evidence from seven RCTs to suggest that family based interventions can be effective in producing long term improvements in parenting skills. There was evidence from one RCT to suggest that the early intervention Healthy Start Programme has no effects on child developmental status, perceived parental competence, parents' stress levels or mother-child interaction in the medium term, or on use of physical assault as discipline and child developmental status in the long-term, but that the intervention can produce improvements in non-violent discipline in the long term. Four RCTs suggested that Preparing for the Drug Free Years may lead to long term improvements in parenting skills and family responses to substance use but not family conflict or adolescent refusal skills compared with no intervention or information leaflets alone. One RCT suggested that a non-programmed multicomponent family based approach may increase some parenting skills and parental self-efficacy and self-esteem in the long term, compared to no intervention, but have no effects on parenting stress. There was evidence from one RCT to suggest that a programmed multicomponent family based approach, the Family Check Up, can produce long term increases in parental monitoring of child activities.</p> <p>There is inconsistent evidence from two RCTs about the long term effectiveness of family based interventions on child development. There was evidence from one RCT to suggest that a comprehensive early intervention in at risk families does not lead to long-term changes in ratings of child development. There was evidence from one RCT to suggest that non programmed multicomponent interventions may be effective at producing improvements in</p>
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			child development and oppositional behaviours in the long term and problem behaviours in the medium term. Finally, there was evidence from one non-randomised trial to suggest that participation in the peer support component of Adolescent Transitions Program produces a long-term increase in ratings of delinquency. This appears to be greatest in those participants expressing low levels of baseline delinquency.
<p>Knerr 2013</p> <p>Title: Improving Positive Parenting Skills and Reducing Harsh and Abusive Parenting in Low- and Middle-Income Countries: A Systematic Review</p> <p>Systematic review Quality: Good</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood Middle childhood</p> <p>Family</p> <p>South Africa (3), Ethiopia (2), Brazil, Chile, China, Iran, Jamaica, Pakistan and Turkey</p>	<p>12 RCTs (11 individually randomised, 1 cluster randomised)</p> <p>5 studies had a follow-up time of 12 months or more</p>	<p>Drug use: The study did not report any drug use outcomes.</p> <p>Mediators: Overall, the studies reviewed reported results favoring the intervention group on a range of parenting measures, including parent-child interaction, parent attitudes and knowledge, and reductions in harsh parenting. Only two trials had large sample sizes and were judged to be at low risk of bias, but both indicated that parenting interventions can be both feasible and effective in improving parent-child interaction and parental knowledge, respectively.</p> <p>Positive Parent-Child Interaction: Five studies evaluated the effects of intervention, compared to a no-treatment or treatment-as-usual control group, on measures of parent-child interaction. All studies reported significant ($p < .05$), positive effects of the intervention on parent-child interaction. Effect sizes were available for four of the seven parent-child interaction outcomes, and ranged from .24 (small) in the study with the largest sample to 1.59 (large), in the smallest study ($N=26$).</p> <p>Negative or Harsh Parenting: Two studies evaluated the effects of intervention compared to a no-</p>

			<p>treatment or treatment-as-usual control group, on measures of self-reported harsh or abusive parenting. Both studies reported significant ($p < .03$), positive effects of the intervention in reducing dysfunctional or harsh parenting. Effect sizes were available for all three of the outcomes in this category, and ranged from .28 (small) to 1.2 (large). The study with the longest follow up, 6 years, produced the smallest effect size ($d = .28$).</p> <p>Delivery: Trials in South Africa and Pakistan indicated the feasibility of using non-professional local staff, delivery through home visits and adding interventions to routine services for pregnant women and new mothers.</p>
<p>McGrath 2006</p> <p>Title: Drug use prevention among young people: a review of reviews</p> <p>Review of reviews</p> <p>Quality: Acceptable</p>	<p>Parenting skills</p> <p>Age not specified</p> <p>Family</p> <p>School</p> <p>Mostly USA, one review included a study from Norway</p>	<p>2 reviews</p> <p>Follow-up not reported in detail although most studies appear to have had a follow-up of 12 months or more</p>	<p>Mediators: Both included reviews highlighted the possible effectiveness of family involvement in prevention programmes. Behavioural parent training, family-skills training and family therapy were found to be the most effective family-strengthening interventions according to one review. However, more research is needed to determine whether family based interventions are significantly more effective than other types of approaches and which types of family interventions are most effective.</p> <p>Delivery: The review suggests that interactive approaches are more beneficial than non-interactive approaches for delivering family-focused interventions.</p>
<p>Mejia 2012</p> <p>Title: A Review of Parenting Programs in Developing Countries: Opportunities and</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood</p> <p>Middle childhood</p>	<p>44 studies of which 8 were included in systematic review (7 RCTs and one pilot study)</p> <p>2 studies included in the</p>	<p>Drug use: This review did not report on drug use outcomes.</p> <p>Mediators:</p>

<p>Challenges for Preventing Emotional and Behavioral Difficulties in Children</p> <p>Literature review and Systematic Review</p> <p>Quality: Acceptable</p>	<p>Family</p> <p>South Africa, Pakistan, China, Ethiopia, Chile, Iran, Brazil, Lebanon</p>	<p>systematic review had a follow-up of 12 months or more</p>	<p>The aim of this review was to examine the existing literature on parenting programs in developing countries. Results suggested that most programs to date have been primarily intended to prevent physical and neuro-cognitive difficulties. Of those designed to prevent emotional and behavioral outcomes, only one had a strong methodological design. Most of the reviewed studies reported positive results regarding the effectiveness of parenting programs. The mean of the effect sizes of this type of intervention was $d = 0.81$, and the range was 0.24 to 2.01. Effect sizes did not refer to the same outcome measures; outcomes reported related primarily to maternal wellbeing and parenting practices, although some studies also reported on infant development.</p>
<p>Miller 2012</p> <p>Title: Home-based Child Development Interventions for Preschool Children from Socially Disadvantaged Families</p> <p>Campbell review</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood</p> <p>Family</p> <p>USA (2), Canada (1), Ireland (1), Bermuda (1), Jamaica (1), unknown (1)</p>	<p>7 RCTs comparing home-based preschool child development interventions with a 'standard care' control</p> <p>Follow-up periods not reported consistently</p>	<p>Drug use: The study did not report any drug use outcomes.</p> <p>Mediators: The authors conclude that this review does not provide evidence of the effectiveness of home-based interventions that are specifically targeted at improving developmental outcomes for preschool children from socially disadvantaged families. It was possible to combine the results from four of the seven studies. Compared to the control group, there was no statistically significant impact of the intervention on cognitive development (standardised mean difference (SMD) 0.30; 95% confidence interval -0.18 to 0.78). Only three studies reported socioemotional outcomes and there was insufficient data to combine into a meta-analysis. No study reported on adverse effects.</p>
<p>Petrie 2007</p>	<p>Parenting skills</p>	<p>20 studies (16 RCTs, 1 controlled</p>	<p>Drug use:</p>

<p>Title: Parenting programmes for preventing tobacco, alcohol or drugs misuse in children <18: a systematic review</p> <p>Systematic review Quality: Good</p>	<p>Middle childhood Early adolescence Adolescence</p> <p>Family School Multi-setting</p> <p>USA (17), Australia (1), Norway (1), Russia (1); the Russian study was an offshoot of the US study, Project Northland.</p>	<p>trial, 3 controlled before and after studies)</p> <p>All studies had a follow-up of 12 months or more</p>	<p>The authors concluded that parenting programmes can be effective in reducing or preventing substance use. Statistically significant self-reported reductions of alcohol use were found in six of 14 studies, of drugs in five of nine studies and tobacco in nine out of 13 studies. Three interventions reported *increases* of tobacco, drug and alcohol use. The strongest evidence found in the review was based on work that had been undertaken with pre-teen and early adolescent children. Seven of the studies that were of good or fair quality, being well-designed and conducted RCTs, had focused on this group. Each of these studies reported that the parenting programme evaluated led to a significant reduction in one or more of the outcome variables measured, in particular the use of alcohol, drugs or tobacco, compared with controls.</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p> <p>Delivery: The most effective appeared to be those that shared an emphasis on active parental involvement and on developing skills in social competence, self-regulation and parenting. A key feature of the three interventions found to be effective was that they focused on developing strategies to involve adolescents in family activities, maintain good familial bonds and manage conflict, rather than just focusing on the issue of substance misuse. A second shared feature was an emphasis on parental engagement in an activity-based programme. Although brief, 5–7 weeks duration, the three interventions required parents to be active participants in group exercises. In addition, in these studies parents</p>
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			<p>demonstrated considerable commitment to the programme, with at least 61% attending all sessions two studies and >89% attending more than half of the sessions in the third study.</p> <p>Interventions with 11- to 14-year olds that were more specifically school-based were found to be effective in two high quality RCTs. These studies each found the intervention groups showed a significant reduction in substance use, compared with controls. A characteristic of the successful interventions was a focus on developing social skills and sense of personal responsibility among the young people. Although the interventions were primarily school-based, the homework tasks in two studies also involved active parental participation and there was direct communication with parents, either face to face or by telephone.</p>
<p>Spoth 2008</p> <p>Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps Toward Public Health Impact</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Parenting skills</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>Family Multi-setting</p> <p>USA, Canada, Australia, Germany (countries not consistently reported)</p>	<p>12 programmes in 24 reports (study designs not consistently reported)</p> <p>At least 11 of the 12 programmes were followed up at 12 months or more post-baseline; a follow-up period of at least 6 months was an inclusion criterion</p>	<p>Alcohol use:</p> <p>Of the reviewed family-focused interventions delivered in the infant and preschool years, only one preschool program has shown effects on reduced use of alcohol in the teen years (Nurse Family Partnership). A number of family or family-school integrated interventions during the elementary school years have shown effects on either delayed initiation or reduction in alcohol use in adolescence (e.g., Linking the Interests of Families and Teachers, Seattle Social Development Project, Raising Healthy Children, and the Preventive Treatment Program). The reviewed family interventions that target the period of 10 to 15 years of age seem to have considerable promise. Although no family-based interventions have shown effectiveness with young people 16 to over 20 years of age who are not college-bound, findings with the college-bound population indicate their potential effectiveness.</p>

			<p>Mediators: The reviewed family-focused interventions delivered in the infant and preschool years (e.g., The Incredible Years and Triple-P programs) have shown reductions in children's aggressive behavior in the short term.</p> <p>Delivery: Independent of the targeted developmental phase, promising interventions typically address a range of risk and protective factors originating in the family, including child monitoring, parent-child bonding or affective quality, effective discipline, and parental involvement in child activities (e.g., Strengthening Families Program: For Parents and Youth 10-14, Guiding Good Choices, and Family Matters). Both small group-format and home-based interventions have been developed; small group interventions have shown relatively stronger evidence.</p>
<p>Thomas 2007</p> <p>Title: Family-based programmes for preventing smoking by children and adolescents</p> <p>Cochrane review</p>	<p>Parenting skills</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Health sector Multi-setting</p> <p>USA (16), Norway (2), Australia (1), Finland (1), UK (1), India (1)</p>	<p>22 RCTs</p> <p>Included trials had to report outcomes measured at least six months from the start of the intervention; at least 11 studies had a follow-up of 12 months or more post-intervention</p>	<p>Tobacco use: The review authors conclude that it is not possible to draw firm conclusions from the current evidence base about the efficacy of family interventions to prevent adolescent smoking, or whether the interventions are intense enough to produce a sustained effect. Some high quality studies showed that family interventions may help to prevent adolescent smoking, but less well-conducted trials had mostly neutral or negative findings. Of the sixteen trials classed as having low or moderate risk of bias: (1) four of the nine that tested a family intervention against a control group had significant positive effects, but one showed significant negative effects; (2) one of the five RCTs that tested a family intervention against a school intervention had significant positive effects; (3) none of the seven</p>

			<p>that compared the incremental effects of a family plus a school programme to a school programme alone had significant positive effects; (4) the one RCT that tested a family tobacco intervention against a family non-tobacco safety intervention showed no effects; (5) two programmes which did not use tobacco interventions found positive outcomes: a parent-plus-teens general risk reduction intervention showed less tobacco use compared to a teen-only intervention or control, and an RCT using CD-ROMs to reduce alcohol use found both the family-and-teen and the teen interventions resulted in less tobacco usage. In neither trial was there a tobacco intervention, but tobacco outcomes were measured.</p> <p>Delivery: The authors note that how well the programme staff are trained and how well they deliver the programme may be related to effectiveness, but the number of sessions in the programme does not seem to make a difference.</p>
Personal and social skills education (middle childhood)			
<p>Bühler 2008</p> <p>Title: Prevention of substance abuse (EMCDDA Insights Nr 7)</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>Most included reviews originated from the USA.</p>	<p>16 reviews</p> <p>Follow-up not consistently reported</p>	<p>Drug use:</p> <ul style="list-style-type: none"> - Interactive school-based programmes have preventive effects on consumption behaviour (for tobacco, alcohol, cannabis and other illicit drugs). Based on two meta-analyses, interactive programmes show between .1 and .2 and up to .3 mean weighted effect size. - Long-term percentage differences between treatment group and control group (all approaches, based on a systematic review: treatment group 6-12 % absolute less than the control group) <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p>

			<p>Other risky behaviours:</p> <ul style="list-style-type: none"> - School-based preventive programmes have less effect on consumption behaviour than they do on risk factors such as dropping out of school, truancy and other forms of problem behaviour. <p>Delivery:</p> <ul style="list-style-type: none"> - School-based programmes that implement the concepts of social influence and life skills are effective and equally effective for all substances. - Additional components of general relevance to the school as a field of intervention improve effectiveness. - Non-interactive programmes are not effective: information-giving alone; emotional education alone; transmission of values and decision-making alone; and DARE-type programmes. - Smaller interactive programmes (with fewer participants) are more effective. - Interactive programmes are effective for ethnic minorities. - Interactive programmes are the most effective for younger pupils (up to and including age 11). - A substance-specific prevention focus is preferable in relation to tobacco but is not a determining factor in relation to alcohol. - Inclusion of substance-specific content such as information about short-term and long-term negative consequences; standard setting on the basis of school surveys and media analyses; and commitment to abstinence are all determining factors for effectiveness. - Programmes that include training in the ability to say 'no' are effective. - Programmes of moderate intensity and duration are more effective. - Programmes that include refresher sessions are more effective. - Involving peers as mediators increases the effectiveness of school-based
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			programmes.
<p>Faggiano 2005</p> <p>Title: School-based prevention for illicit drugs' use</p> <p>Cochrane review</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA (30), Canada (1), UK (1)</p>	<p>32 controlled studies (29 RCTs and three controlled prospective studies) (marijuana use: 19 studies; inhalants use: 3 studies; drugs use: 10 studies; hard drugs use: 6 studies)</p> <p>Approximately half of the included studies had a follow-up at 12 months or more (up to 10 years in one study).</p>	<p>Drug use:</p> <p>The authors conclude that skills based programs appear to be effective in deterring early-stage drug use. RCTs indicated that, compared to usual curricula, skills based interventions lowered drug use (RR 0.81; CI 95% 0.64 to 1.02), marijuana use (RR 0.82; CI 95% 0.73 to 0.92) and hard drug use (RR 0.45; CI 95% 0.24 to 0.85). No statistically significant results emerged from other study designs.</p>
<p>Foxcroft 2011</p> <p>Title: Universal school-based prevention programs for alcohol misuse in young people</p> <p>Cochrane review</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA, Canada, Australia, Europe (Austria, Belgium, Greece, Italy, Spain, Sweden, Netherlands, Norway, Germany), India, Swaziland</p>	<p>53 RCTs (46 cluster-randomised, 7 individually randomised)</p> <p>At least 23 studies had a follow-up of 12 month or more post-intervention</p>	<p>Alcohol use:</p> <p>The authors conclude that certain psychosocial and developmental alcohol misuse prevention in schools can be effective. The authors divided the studies into 1) programs targeting specifically prevention or reduction of alcohol misuse (n=11) and 2) generic programs with wider focus for prevention (e.g., other drug use/abuse, antisocial behavior) (n=19). The review authors found studies that showed no effects of the preventive program, as well as studies that demonstrated statistically significant effects. Six of the 11 trials evaluating alcohol-specific interventions showed some evidence of effectiveness compared to a standard curriculum, whereas five found no significant effects. In 14 of the 39 trials evaluating generic interventions, the program interventions demonstrated significantly greater reductions in alcohol use either through a main or subgroup effect, and 24 trials did not found statistically significant effects. Gender, baseline alcohol use, and ethnicity modified the effects of interventions. Results from the remaining 3 trials with interventions targeting cannabis, alcohol, and/or tobacco were inconsistent. Most</p>

			<p>commonly observed positive effects across programs were for drunkenness and binge drinking.</p> <p>Delivery: Effective programmes included the Life Skills Training Program, the Unplugged program, and the Good Behaviour Game.</p>
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies Quality: Good</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>Countries not specified</p>	<p>20 studies (10 RCTs, 9 controlled non-randomised trials, 1 controlled before and after study)</p> <p>10 studies had a follow-up of 12 months or more</p>	<p>Drug use: The evidence with regard to school based interventions and life skills training was considered inconclusive/mixed. There was evidence to suggest that schools-based Life Skills Training (LST) or generic life skills, on their own or in combination with other approaches, are not effective in reducing substance misuse in the long term. Three RCTs indicate that when delivered as a stand alone intervention, LST or generic life skills may produce medium, but not short or long term, reductions in substance use. There was evidence from one RCT to suggest that this effect on substance use may be strongest in girls. Seven trials suggested that school-based LST or generic life skills in combination with other approaches, including parent workshops, staff training or mentoring, has no effects on substance use outcomes in the short, medium or long term compared to no intervention. However, there was evidence from two controlled non-randomised trials to suggest that delivering generic life skills with family components can produce both immediate and medium term reductions in alcohol use and frequency, but only immediate effects on the frequency of cannabis use. One RCT indicates that female-targeted peer support can be effective at producing medium term reductions in substance use in younger participants, but not older students. There was evidence from</p>

			two trials to suggest that curricula addressing other risky behaviours (e.g. violence, sexual activity) have no indirect immediate or medium term effects on substance use outcomes.
<p>McGrath 2006</p> <p>Title: Drug use prevention among young people: a review of reviews</p> <p>Review of reviews</p> <p>Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA</p>	<p>4 reviews (2 meta-analyses, 2 systematic reviews)</p> <p>Follow-up not reported in detail although most studies appear to have had a follow-up of 12 months or more</p>	<p>Delivery:</p> <p>The review suggests that interactive approaches in universal school-based drug prevention programmes are more effective than non-interactive approaches in reducing drug use. Peer educators may contribute to the effectiveness of drug prevention programmes, although they may not produce positive effects per se. There is good evidence for the effectiveness of programmes based on social influences approaches, although the authors note that some social influence interventions may be more effective than others. The authors also found some evidence to support the efficacy of life skills training when added to social influence programmes. One review reported that there was no convincing evidence to indicate that intensive school programmes (10 or more lessons) were more effective than non-intensive ones.</p>
<p>Müller-Riemenschneider 2008</p> <p>Title: Long-Term Effectiveness of Behavioral Interventions to Prevent Smoking among Children and Youth</p> <p>Meta-analysis</p> <p>Quality: Good</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>UK, Australia, USA, Canada, Netherlands, Germany, Ireland, China</p>	<p>14 RCTs (8 included in meta-analysis)</p> <p>A follow-up of 12 months or more was an inclusion criterion; follow-up of included studies ranged from 12 months to 60 months.</p>	<p>Tobacco use:</p> <p>The evidence for school-based programs alone was inconclusive. Nine good/high-quality studies on school-based intervention were available, of which only two reported clearly positive intervention effects. The results of the seven remaining studies were inconclusive or even indicated that the intervention effects had been unfavourable. Differences in smoking rates between intervention groups varied considerably across studies, ranging from -3.8% (i.e., favouring intervention groups) to 5.4% (i.e., favouring control groups). The results of the meta-analysis carried out as part of</p>

			<p>this review provide no evidence for the long-term effectiveness of school-based interventions. These findings were similar for lifetime, 30-day and regular smoking.</p> <p>Delivery: One study found evidence that culturally adapting the approach and materials of an intervention to the needs of specific population groups was more effective than standardised strategies. The limited number of studies did not allow conclusions with regard to the effectiveness of number of sessions or use of booster sessions.</p>
<p>Pan 2009</p> <p>Title: A Multivariate Approach to a Meta-Analytic Review of the Effectiveness of the D.A.R.E. Program</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence</p> <p>School</p> <p>USA</p>	<p>20 controlled studies (level of randomisation not reported)</p> <p>14 studies had a follow-up time of 12 months or more</p>	<p>Drug use: This review indicated that the effects of the D.A.R.E. program on drug use were homogeneous but less than small. The unweighted mean effect size for any drug use was Cohen's $d = 0.05$ (ranging from -0.08 to 0.36) (including tobacco use, alcohol use, marijuana or other illicit drug use). Alcohol use: Please see information on drug use. Tobacco use: Please see information on drug use.</p>
<p>Roe 2005</p> <p>Title: Drug prevention with vulnerable young people: A review</p> <p>Systematic review Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School</p> <p>USA (8), Canada (1)</p>	<p>9 evaluation studies with control or comparison groups</p> <p>3 studies had a follow-up of 12 months or more</p>	<p>Drug use: In school settings, life-skills training has been found to be effective (at least in the short term). Universal school-based interventions involving life-skills training could have effects on the most high-risk young people, although most of the studies failed to find significant outcomes. Combination of interventions at different levels (universal and targeted) had additional benefits compared with the universal or the targeted initiative by themselves. Therefore, while universal interventions can affect the substance use of high-risk groups of young people, additional targeted components can increase the</p>

			<p>effectiveness of such universal programmes. Providing appropriate information is effective in altering young people's awareness of the dangers of drugs but does not inevitably change behaviour. The results of this review indicate that with vulnerable young people, life-skills training works better than the provision of drug knowledge in changing drug-using behaviour. The results of interventions involving counselling as the central component were mixed.</p> <p>Delivery: The authors conclude that across different settings the 11-13 age range appeared to be a crucial period for intervention with vulnerable young people. They describe this as a time when high-risk young people start to experiment with drugs, which appears to be a few years earlier than the onset of drug use amongst the general population.</p>
<p>Schröder-Günther 2011</p> <p>Title: Primary Tobacco Prevention in China - A Systematic Review</p> <p>Systematic review</p> <p>Quality: Good</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood</p> <p>Early adolescence</p> <p>Adulthood</p> <p>School</p> <p>China</p>	<p>7 RCTs</p> <p>Only one study had a follow-up of 12 months or more but it measured only knowledge and attitudes; of the studies that measured smoking behaviours, the maximum follow-up was 6 months (in 2 studies)</p>	<p>Tobacco use: The evidence for the effectiveness of smoking prevention interventions in China is weak, partly due to methodological limitations of the studies. Of the five studies that measured smoking behaviour, only two studies found significant differences between intervention and control groups at post-intervention. Two studies conducted a follow-up at 6 months. One found no significant effects, and the other found a significant effect on smoking initiation, but not on the smoking rate. Baseline characteristics of intervention and control group in this study were significantly different, such that no distinct effect of the program could be verified.</p> <p>Delivery:</p>

			With regard to the wider range of smoking prevention and cessation programmes included in this review, the authors conclude that interventions applying health promotion techniques were more often successful than interventions that were only based on health education.
<p>Skara 2003</p> <p>Title: A review of 25 long-term adolescent tobacco and other drug use prevention program evaluations</p> <p>Systematic review Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA (12), Canada (2), Australia, England, Italy, The Netherlands, Norway</p>	<p>19 studies (11 experimental, 8 quasi-experimental)</p> <p>Only studies with a long-term follow-up of at least 24 months were included in this review (follow-up ranged from 24 to 144 months)</p>	<p>Drug use: This review of long-term tobacco and drug use prevention intervention studies published indicates that school- and community-based programs were effective in preventing or reducing adolescent cigarette, alcohol, and marijuana use across follow-up periods ranging from 2 to 15 years. Seven studies had measured alcohol and/or other drug use. Six studies showed effectiveness in reducing marijuana use at initial follow-ups but not at the final assessment.</p> <p>Alcohol use: Six studies showed effectiveness in reducing alcohol at initial follow-ups, and of these, three studies also found significant differences in alcohol consumption between intervention and control groups at the final assessment.</p> <p>Tobacco use: Of the 19 school-based studies in this review, more than half (10 studies) found significant and sustained reductions on a variety of smoking outcomes over multiple time points. This included one study with a long follow-up of 15 years. One study found no significant differences at the initial 6 month follow-up but at the 48 month follow-up the intervention group reported significantly less use. In 5 studies, intervention and control groups differed significantly at the initial follow-ups, but these differences disappeared by the time of the final assessment. Three studies found no differences between intervention and control groups</p>

			<p>at any time. This included the study with the longest follow-up (144 months).</p> <p>Delivery: Results indicated that program effects were less likely to decay among studies that delivered booster programming sessions as a supplement to the program curricula.</p>
<p>Soole 2008</p> <p>Title: School-Based Drug Prevention Programs: A Review of What Works</p> <p>Systematic review / Meta-analysis Quality: Acceptable</p>	<p>Personal and social skills education (middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Media Multi-setting</p> <p>Countries not specified</p>	<p>58 controlled trials (including RCTs); meta-analysis based on 12 studies</p> <p>Follow-up not reported</p>	<p>Drug use: The authors report that there were a number of significant findings, with four of the six meta-analyses conducted producing significant mean effect sizes. Further, all analyses produced mean effect sizes in the desired direction, suggesting overall program effectiveness. The meta-analyses assessing the impact of school-based drug prevention programs on marijuana use provided significant results both in the short-term (d. = .136, 95% CI = .035-.237, p < .01) and the long-term (d. = .219, 95% CI = .071-.367, p < .01). Overall, these results suggest that, in the short term, around 54% of control participants performed worse than treatment participants, while in the long term around 58% of participants performed worse than treatment participants.</p> <p>Similarly, the meta-analyses assessing the impact of prevention programs on all illicit drug use (i.e. marijuana and other illicit drugs) also provided significant results both in the short-term (d. = .141, 95% CI = .042-.24, p = < .01) and the long-term (d. = .208, 95% CI = .087-.329, p = < .001). In both the marijuana and all drug analyses, results suggest that prevention programs not only have an immediate impact on self-reported drug use, but that this impact persists into the long term. Overall, these results</p>

			<p>suggest that around 56% of control participants performed worse in terms of short-term illicit drug use than treatment participants, while around 58% of control participants performed worse in terms of long-term drug use compared to treatment participants. The authors also explored the self-reported drug use outcomes for other categories of illicit drugs only, including cocaine and amphetamines (but excluding marijuana). The two treatment comparison contrasts contributing to each meta-analysis produced non-significant findings both for short-term and long-term other illicit drug outcomes.</p> <p>Delivery: The authors conclude that interactive programs adopting either social influence or competency enhancement components appear to be the most effective approach to school-based drug prevention. Further, more intensive programs appear to increase program effectiveness, and universal programs that are delivered in the middle school years may be slightly more effective. Generic skills training programs appear to have more impact on reducing or preventing harder drug use than marijuana use, and their effectiveness may be restricted to low-risk youths. The analysis suggests that the inclusion of booster sessions and multifaceted drug prevention programs have little impact on preventing illicit drug use among school-aged children.</p>
<p>Spoth 2008 Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps Toward Public Health Impact</p>	<p>Personal and social skills education (middle childhood) Middle childhood Early adolescence Adolescence</p>	<p>14 programmes in 26 reports (study designs not reported consistently) 12 programmes were followed up at 12 months or more post-baseline; a follow-up period of at</p>	<p>Alcohol use: The review findings indicate that school-based prevention interventions can reduce early initiation of alcohol use and progression of use in the young adolescent and adolescent years. Most elementary school interventions have</p>

<p>Review of reviews and primary studies Quality: Acceptable</p>	<p>School USA, Australia, Norway, Netherlands (countries not consistently reported)</p>	<p>least 6 months was an inclusion criterion</p>	<p>shown effects only on the risk precursor of aggressive behavior and not on alcohol use. Although a few classroom intervention trials have monitored their samples through the middle-school period and demonstrated effects on alcohol use (e.g., Classroom Centered Intervention), most studies have not been funded for a sufficient period to demonstrate whether there are direct effects on alcohol use. Numerous interventions exist that have shown effects on the delay of initiation of use during the middle and early high school periods. With regard to the high school years, the review authors found only one intervention (Project Toward No Drug Abuse) that could be classified as "most promising" and one (Athletes Training and Learning to Avoid Steroids) that could be classified as having "mixed or emerging" evidence in reducing the rate of drinking. The latter was limited in that it focused only on high school football players and not on the general population.</p> <p>Mediators: A number of interventions for younger children have shown significant reductions in aggression and disruption (e.g., I Can Problem Solve, Promoting Alternative Thinking Strategies, Second Step, and Good Behavior Game).</p> <p>Delivery: Interventions that have shown effects typically address the following: role-playing that provides practice in the use of new skills, a broad focus on life skills, support to improve emotional regulation, a focus on positive peer relationships and, with youths, provision of accurate norms for alcohol and substance use, plus instruction in peer refusal skills.</p>
<p>Thomas 2006</p>	<p>Personal and social skills education</p>	<p>94 RCTs (23 classed as high-</p>	<p>Tobacco use:</p>

<p>Title: School-based programmes for preventing smoking</p> <p>Cochrane review</p>	<p>(middle childhood)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Multi-setting</p> <p>USA (66), Canada (6), Netherlands (5), Italy (3), Australia (2), Germany (2), Norway (2), UK (2), Finland (1), France (1), Spain (1), India (1), Mexico (1), one multi-country study (Denmark, Finland, the Netherlands, Portugal, Spain, UK)</p>	<p>quality)</p> <p>Follow-up of six months or more was an inclusion criterion, follow-up period not reported consistently (at least 30 studies had follow-up of 12 months or more)</p>	<p>Twenty-three high quality studies addressed the issue of whether school programmes to prevent tobacco are more effective than minimal or no intervention. The authors conclude that there is no strong evidence for offering school-based programmes that provide information only. The high quality study on information-giving alone reported a significant effect of the intervention (odds ratio [OR] 0.61; 95% confidence interval [CI] 0.41 to 0.91). Studies that compared an information curriculum with other models of delivery showed the information curricula to be either less effective or detected no difference. Due to the limited number of rigorous studies, it is difficult to exclude a beneficial effect of information about tobacco alone, but there is little positive evidence available to support this intervention. The majority of studies drew on a social influences models. Although half of the best quality studies regarding this type of approach found short-term effects on children's smoking behaviour, there is conflicting evidence about the effects of such programmes, and the highest quality and longest trial (the Hutchinson Smoking Prevention Project) found no long-term effects from 65 lessons over eight years. There was limited evidence for the effects of interventions that included developing generic social competence, and for those with a multi-modal approach that included community initiatives. Three of the four high quality multi-modal interventions showed a positive significant effect. It is possible that combining social influences models with other components, such as community interventions and generic social competence training may improve effectiveness. However, these interventions have not been subject to the same rigorous evaluation as the social influences approach. In addition,</p>
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			there are few data from direct comparisons to suggest how large an increment might be achieved.
Prevention education based on personal and social skills and social influence (early adolescence & adolescence)			
<p>Bühler 2008</p> <p>Title: Prevention of substance abuse (EMCDDA Insights Nr 7)</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>Most included reviews originated from the USA.</p>	<p>16 reviews</p> <p>Follow-up not consistently reported</p>	<p>Drug use:</p> <ul style="list-style-type: none"> - Interactive school-based programmes have preventive effects on consumption behaviour (for tobacco, alcohol, cannabis and other illicit drugs). Based on two meta-analyses, interactive programmes show between .1 and .2 and up to .3 mean weighted effect size. - Long-term percentage differences between treatment group and control group (all approaches, based on a systematic review: treatment group 6–12 % absolute less than the control group) <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p> <p>Other risky behaviours:</p> <ul style="list-style-type: none"> - School-based preventive programmes have less effect on consumption behaviour than they do on risk factors such as dropping out of school, truancy and other forms of problem behaviour. <p>Delivery:</p> <ul style="list-style-type: none"> - School-based programmes that implement the concepts of social influence and life skills are effective and equally effective for all substances. - Additional components of general relevance to the school as a field of intervention improve effectiveness. - Non-interactive programmes are not effective: information-giving alone; emotional education alone; transmission of values and decision-making alone; and DARE-type programmes. - Smaller interactive programmes (with fewer participants) are more effective. - Interactive programmes are effective

			<p>for ethnic minorities.</p> <ul style="list-style-type: none"> - Interactive programmes are the most effective for younger pupils (up to and including age 11). - A substance-specific prevention focus is preferable in relation to tobacco but is not a determining factor in relation to alcohol. - Inclusion of substance-specific content such as information about short-term and long-term negative consequences; standard setting on the basis of school surveys and media analyses; and commitment to abstinence are all determining factors for effectiveness. - Programmes that include training in the ability to say 'no' are effective. - Programmes of moderate intensity and duration are more effective. - Programmes that include refresher sessions are more effective. - Involving peers as mediators increases the effectiveness of school-based programmes.
<p>Champion 2012</p> <p>Title: A systematic review of school-based alcohol and other drug prevention programs facilitated by computers or the Internet</p> <p>Systematic review Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School Computer/Internet</p> <p>Australia, USA, Canada, UK, Netherlands</p>	<p>12 RCTs on 10 programmes</p> <p>Follow-up data of 12 months or more (maximum 34 months) is reported for 5 out of 10 programmes.</p>	<p>Drug use:</p> <p>Only one programme targeted illicit drugs (cannabis). This program was associated with a significant reduction in the frequency of cannabis use at 6-month follow-up with a small effect size (0.19).</p> <p>Alcohol use:</p> <p>All four trials that measured alcohol consumption were associated with some reduction in alcohol use at post intervention and/or follow up. Effect size (ES) was small at post intervention (ES 0.09) and similarly modest at follow up (ES 0.16–0.38 and odds ratio 0.36–0.71). Two trials were associated with positive outcomes relating to the frequency of binge drinking.</p> <p>Tobacco use:</p> <p>Five trials targeted tobacco and three were associated with some reduction in smoking. In one trial, there was only a</p>

			<p>small effect at post intervention and in another the intervention was only effective at reducing cigarette use among nonsmokers at baseline. A third trial was associated with a medium effect at the 18-month follow up.</p> <p>Delivery: The review suggests that effective ingredients might include normative education, resistance skills and reducing positive expectancies, as well as parenting components. It was also noted that effective programmes had 4-12 sessions, whereas a programme with only 3 session showed no effects. However, a moderator analysis was not conducted and the number of trials was too small to make any definite conclusions.</p>
<p>Dobbins 2008</p> <p>Title: Effective practices for school-based tobacco use prevention</p> <p>Review of reviews</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>Countries not reported</p>	<p>12 reviews</p> <p>Follow-up not clear</p>	<p>Tobacco use: Overall, findings demonstrated that school-based tobacco use prevention interventions are effective in reducing smoking behavior, initiation, and intention to smoke, at least in the short term. However, these effects were not maintained until age 18 in the absence of ongoing intervention. Smoking behavior was reported in 11 of the 12 reviews. Six reviews reported a positive effect, two reported promising effects but did not reach statistical significance, and three reported no effect. Significant effects diminished over time. Initiating smoking was measured in 3 reviews. Two of the reviews reported a positive effect and the third reported a promising effect.</p> <p>Delivery: Interventions found to be effective included school curricula, social norms and influences training, social reinforcement and refusal skills training, and cognitive skill enhancement (self-esteem, decision making, self-control,</p>

			and coping skills). Interventions associated with positive effects included educational sessions on social norms and reinforcement training, peer- and adult-led support groups, and media campaigns.
<p>Faggiano 2005</p> <p>Title: School-based prevention for illicit drugs' use</p> <p>Cochrane review</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA (30), Canada (1), UK (1)</p>	<p>32 controlled studies (29 RCTs and three controlled prospective studies) (marijuana use: 19 studies; inhalants use: 3 studies; drugs use: 10 studies; hard drugs use: 6 studies)</p> <p>Approximately half of the included studies had a follow-up at 12 months or more (up to 10 years in one study).</p>	<p>Drug use:</p> <p>The authors conclude that skills based programs appear to be effective in deterring early-stage drug use. RCTs indicated that, compared to usual curricula, skills based interventions lowered drug use (RR 0.81; CI 95% 0.64 to 1.02), marijuana use (RR 0.82; CI 95% 0.73 to 0.92) and hard drug use (RR 0.45; CI 95% 0.24 to 0.85). No statistically significant results emerged from other study designs.</p>
<p>Faggiano 2008</p> <p>Title: The effectiveness of a school-based substance abuse prevention program: 18-Month follow-up of the EU-Dap cluster randomized controlled trial</p> <p>Cluster-RCT</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>Austria, Belgium, Germany, Greece, Italy, Spain and Sweden</p>	<p>Intervention group: 3547 pupils (baseline), 2811 (last follow-up) (79%) (across three intervention groups)</p> <p>Control group: 3532 (baseline), 2730 (last follow-up) (77%)</p> <p>Follow-up at 15 months post-intervention</p>	<p>Drug use:</p> <p>According to the authors, this study indicates that the school curriculum "Unplugged", based on a comprehensive social influence approach, had persistent positive effects over 18 months for alcohol abuse and for cannabis use, but not for cigarette smoking. Persisting beneficial program effects were found for frequent cannabis use in the past 30 days (POR = 0.74; 0.53–1.00). The number-need-to-treat (NNT) to prevent one additional event was 46 for frequent cannabis use.</p> <p>Alcohol use:</p> <p>Persisting beneficial program effects were found for episodes of drunkenness (any, adjusted prevalence odds ratio (POR) = 0.80; 0.67–0.97; frequent, POR = 0.62; 0.47–0.81). The NNT to prevent one additional event was 26 for any drunkenness.</p> <p>Tobacco use:</p> <p>Daily cigarette smoking was not affected by the program (although it was at the short-term follow-up). Baseline non-smokers that participated in the program progressed in tobacco</p>

			consumption to a lower extent than those in the control condition, but no difference was detected in the proportion of quitters or reducers among baseline daily smokers.
<p>Fletcher 2008</p> <p>Title: School Effects on Young People's Drug Use: A Systematic Review of Intervention and Observational Studies</p> <p>Systematic review Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence</p> <p>School</p> <p>USA, Netherlands, Australia, UK, Sweden</p>	<p>13 studies (4 intervention studies, 9 observational studies)</p> <p>All studies had a follow-up of 12 months or more</p>	<p>Drug use: The authors conclude that intervention studies provide some evidence that there is a causal association between, on the one hand, modifying the school environment to increase student participation, improve relationships, promote a positive school ethos, and address disaffection and truancy and, on the other hand, reduce student drug use and other risk behaviors, especially for boys. The Aban Aya study reported that, 4 years after the start of the intervention, there was a 34% reduction in the rate of increase of a combined measure of alcohol, tobacco, and cannabis use for boys in the intervention group compared to the comparison group. Boys at D.A.R.E. plus schools reported a significantly lower rate of "growth" in the use of drugs other than cannabis, and intentions to use these drugs, compared to the comparison group, after 2 years of the intervention. The other two interventions did not have a significant effect on drug use.</p> <p>Alcohol use: Three studies reported rates of smoking and drinking separately for young people's drug use. All three suggested that the interventions had a protective effect on these outcomes.</p> <p>Tobacco use: Please see information on drug and alcohol use.</p> <p>Delivery: Intervention studies suggest that action to improve ethos and support student engagement can be effective in reducing drug use. Observational studies also</p>

			suggest that positive ethos and overall levels of strong school relationships and engagement are associated with lower rates of drug use, and that, at the individual level, negative behaviors and attitudes relating to school are also associated with drug use.
<p>Foxcroft 2011</p> <p>Title: Universal school-based prevention programs for alcohol misuse in young people</p> <p>Cochrane review</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA, Canada, Australia, Europe (Austria, Belgium, Greece, Italy, Spain, Sweden, Netherlands, Norway, Germany), India, Swaziland</p>	<p>53 RCTs (46 cluster-randomised, 7 individually randomised)</p> <p>At least 23 studies had a follow-up of 12 month or more post-intervention</p>	<p>Alcohol use:</p> <p>The authors conclude that certain psychosocial and developmental alcohol misuse prevention in schools can be effective. The authors divided the studies into 1) programs targeting specifically prevention or reduction of alcohol misuse (n=11) and 2) generic programs with wider focus for prevention (e.g., other drug use/abuse, antisocial behavior) (n=19). The review authors found studies that showed no effects of the preventive program, as well as studies that demonstrated statistically significant effects. Six of the 11 trials evaluating alcohol-specific interventions showed some evidence of effectiveness compared to a standard curriculum, whereas five found no significant effects. In 14 of the 39 trials evaluating generic interventions, the program interventions demonstrated significantly greater reductions in alcohol use either through a main or subgroup effect, and 24 trials did not found statistically significant effects. Gender, baseline alcohol use, and ethnicity modified the effects of interventions. Results from the remaining 3 trials with interventions targeting cannabis, alcohol, and/or tobacco were inconsistent. Most commonly observed positive effects across programs were for drunkenness and binge drinking.</p> <p>Delivery:</p> <p>Effective programmes included the Life Skills Training Program, the Unplugged program, and the Good Behaviour</p>

			Game.
<p>Gates 2006</p> <p>Title: Interventions for prevention of drug use by young people delivered in non-school settings</p> <p>Cochrane review</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Adolescence Adulthood</p> <p>Community</p> <p>USA</p>	<p>2 RCTs</p> <p>Both studies had a follow-up of only 3 months</p>	<p>Drug use:</p> <p>There is a lack of evidence concerning the effectiveness of non-school based interventions in preventing or reducing drug use by young people. The two studies of education and skills training included in this review did not find any differences between the intervention and control groups.</p>
<p>Jackson 2012</p> <p>Title: Interventions to prevent substance use and risky sexual behaviour in young people: a systematic review</p> <p>Systematic review</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence Adulthood</p> <p>School</p> <p>South Africa (2), USA (1), Namibia (1)</p>	<p>4 studies (3 RCTs, 1 controlled trial)</p> <p>At least 2 studies had a follow-up of 12 months or more</p>	<p>Drug use:</p> <p>In this review, none of the four included studies provided clear evidence of effectiveness concerning programmes that target substance use and sexual health. In HealthWise, a leisure, life-skills and sexual education programme implemented among children aged approximately 14 years, past-month alcohol use, heavy alcohol use and heavy smoking were reduced significantly in the intervention group compared with the control group (OR 0.71, 95% CI 0.91–0.56; OR 0.63, 95% CI 0.83–0.45 and OR 0.71, 95% CI 0.91–0.56, respectively) for both genders. There was no significant difference in past-month cannabis use, and past-month smoking was reduced significantly among girls only. Stepping Stones is primarily a sexual health programme. There was no difference between intervention and control groups regarding alcohol or illicit drug use. My Future is My Choice was based in Namibian schools and focused on knowledge-giving, communication skills and decision-making around substance use and sexual health. Alcohol use was significantly lower in the intervention than control groups for females (14% versus 32, P<0.01) but *higher* in the intervention group for males (77% versus 57%, P <0.05). Project ALERT</p>

			<p>aimed to develop personal and social skills for increasing competence and resistance to drug use pressures. The effect on substance use was evaluated in two different cohorts, including a 6 year follow-up. Although there were short-term reductions in cannabis, tobacco and alcohol use, the long-term follow-up of the second cohort indicated that these were not sustained after 6 years, suggesting that the impact of the intervention did not continue once the classroom lessons had stopped.</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p> <p>Other risky behaviours: With regard to sexual health, the HealthWise programme found no significant difference in sexual intercourse. Stepping Stones was effective in reducing herpes simplex virus-2 infection incidence for both genders (OR for all subjects 0.67, 95% CI 0.47–0.97), but there was no difference in human immunodeficiency virus (HIV) infection, correct condom use, having casual partners, or pregnancy. The evaluation of My Future is My Choice found no significant differences in condom use between intervention and control groups. Abstinence was greater among baseline female (but not male) virgins (25% versus 13%; $P < 0.05$) in the intervention group. In Project ALERT, the short-term cohort was followed-up in young adulthood for effects on sexual risk behaviour, but the methodological quality of this long-term study was rated as weak because of selection bias and high attrition, and the authors highlight that the results should be interpreted cautiously. At a mean age of 21, sex with multiple partners and drug-related unprotected sex were reduced</p>
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			<p>significantly in the intervention group (OR 0.78, 95% CI 0.66–0.92 and OR 0.81, 95% CI 0.67–0.98, respectively), but there was no effect on inconsistent condom use (OR 1.01, 95% CI 0.87–1.16).</p> <p>Delivery: The authors conclude in this review, which included different types of interventions, that the most promising interventions addressed multiple domains (individual and peer, family, school and community) of risk and protective factors for risk behaviour. Programmes that addressed just one domain were generally less effective in preventing multiple risk behaviour.</p>
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies</p> <p>Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>Countries not specified</p>	<p>20 studies (10 RCTs, 9 controlled non-randomised trials, 1 controlled before and after study)</p> <p>10 studies had a follow-up of 12 months or more</p>	<p>Drug use: The evidence with regard to school based interventions and life skills training was considered inconclusive/mixed. There was evidence to suggest that schools-based Life Skills Training (LST) or generic life skills, on their own or in combination with other approaches, are not effective in reducing substance misuse in the long term. Three RCTs indicate that when delivered as a stand alone intervention, LST or generic life skills may produce medium, but not short or long term, reductions in substance use. There was evidence from one RCT to suggest that this effect on substance use may be strongest in girls. Seven trials suggested that school-based LST or generic life skills in combination with other approaches, including parent workshops, staff training or mentoring, has no effects on substance use outcomes in the short, medium or long term compared to no intervention. However, there was evidence from two controlled non-randomised trials to suggest that delivering generic life skills with family components can produce</p>

			both immediate and medium term reductions in alcohol use and frequency, but only immediate effects on the frequency of cannabis use. One RCT indicates that female-targeted peer support can be effective at producing medium term reductions in substance use in younger participants, but not older students. There was evidence from two trials to suggest that curricula addressing other risky behaviours (e.g. violence, sexual activity) have no indirect immediate or medium term effects on substance use outcomes.
<p>Lemstra 2010</p> <p>Title: A systematic review of school-based marijuana and alcohol prevention programs targeting adolescents aged 10–15</p> <p>Systematic review Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>USA</p>	<p>6 RCTs</p> <p>A follow-up period of 12 months or more was an inclusion criterion in this review</p>	<p>Drug use: With regard to marijuana, the review found that long-term school-based marijuana and alcohol prevention programs that utilized comprehensive program content resulted in a mean absolute reduction of 7 days of marijuana usage per month among adolescents aged 10–15 years old in comparison to no exposure. The results for knowledge only marijuana prevention could not be assessed as there was only one study and statistical pooling requires at least two studies.</p> <p>Alcohol use: With regard to alcohol, the review found that long-term school-based marijuana and alcohol prevention programs that utilized comprehensive program content resulted in a mean absolute reduction of 12 days of alcohol usage per month among adolescents aged 10–15 years old in comparison to no exposure. Programs that utilized knowledge only program content resulted in a mean absolute decrease of 2 days of alcohol usage per month in comparison to no exposure.</p> <p>Delivery: The authors conclude that the most effective primary prevention programs for reducing marijuana and alcohol use</p>

			among adolescents aged 10–15 years in the long-term were comprehensive programs that included anti-drug information combined with refusal skills, self-management skills and social-skills training. However, a moderator analysis was not carried out.
<p>McGrath 2006</p> <p>Title: Drug use prevention among young people: a review of reviews</p> <p>Review of reviews</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood</p> <p>Early adolescence</p> <p>Adolescence</p> <p>School</p> <p>USA</p>	<p>4 reviews (2 meta-analyses, 2 systematic reviews)</p> <p>Follow-up not reported in detail although most studies appear to have had a follow-up of 12 months or more</p>	<p>Delivery:</p> <p>The review suggests that interactive approaches in universal school-based drug prevention programmes are more effective than non-interactive approaches in reducing drug use. Peer educators may contribute to the effectiveness of drug prevention programmes, although they may not produce positive effects per se. There is good evidence for the effectiveness of programmes based on social influences approaches, although the authors note that some social influence interventions may be more effective than others. The authors also found some evidence to support the efficacy of life skills training when added to social influence programmes. One review reported that there was no convincing evidence to indicate that intensive school programmes (10 or more lessons) were more effective than non-intensive ones.</p>
<p>Moreira 2009</p> <p>Title: Social norms interventions to reduce alcohol misuse in University or College students</p> <p>Cochrane review</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Adolescence</p> <p>Adulthood</p> <p>School</p> <p>Computer/Internet</p> <p>USA (19), New Zealand (3)</p>	<p>22 RCTs</p> <p>6 studies had a follow-up of 12 months or more</p>	<p>Alcohol use:</p> <p>Overall, this systematic review suggests that individual and personalised normative interventions over the immediate and medium term appear to reduce alcohol use, misuse and related problems amongst university or college students. The review authors grouped social norms interventions into five subtypes according to delivery mode: (i) mailed feedback, (ii) web feedback, (iii) individual feedback (iv) group face-to-face feedback and (v) a social marketing campaign. Interventions delivered using the web or computer, or in individual</p>

			<p>face-to-face sessions, appeared to reduce alcohol misuse. Significant effects were more apparent for short-term outcomes (up to three months). However, there was some evidence of effect continuing through to medium-term follow-up from four to sixteen months, particularly for web/computer feedback. The evidence was less convincing for group face-to-face sessions. Mailed and group feedback were on the whole no different than with the control intervention. Two large studies showed contradictory results for a social marketing campaign.</p> <p>Detailed results:</p> <ul style="list-style-type: none"> - Peak Blood Alcohol Content (BAC): Significant reduction with Web/computer feedback (WF) (SMD -0.77 95%CI -1.25 to -0.28), two studies, 198 participants. No significant effect of mailed feedback (MF) or individual face-to-face feedback (IFF). - Drinking Frequency: Significant reduction with WF (SMD -0.38 95%CI -0.63 to -0.13), two studies, 243 participants and IFF (SMD -0.39 95% CI -0.66 to -0.12), two studies, 217 participants. No significant effect of MF. - Drinking Quantity: Significant reduction with WF (SMD -0.35 95% CI -0.51 to -0.18), five studies, 556 participants and group face-to-face feedback (GFF) (SMD -0.32 95% CI -0.63 to -0.02) three studies, 173 participants. No significant effect of MF or IFF. - Binge drinking: Significant reduction with WF (SMD -0.47 95% CI -0.92 to -0.03) one study, 80 participants, IFF (SMD -0.25 95% CI -0.49 to -0.02) three studies, 278 participants and GFF (SMD -0.38 95% CI -0.62 to -0.14) four studies, 264 participants. No significant effect for MF. <p>Delivery:</p>
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			The intensity of the intervention differed between trials as did the control intervention, which was no intervention, educational leaflets or an alcohol educational session. Individual face-to-face feedback typically involved social norms feedback as just one aspect of a broader motivational interviewing intervention.
<p>Müller-Riemenschneider 2008</p> <p>Title: Long-Term Effectiveness of Behavioral Interventions to Prevent Smoking among Children and Youth</p> <p>Meta-analysis Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>UK, Australia, USA, Canada, Netherlands, Germany, Ireland, China</p>	<p>14 RCTs (8 included in meta-analysis)</p> <p>A follow-up of 12 months or more was an inclusion criterion; follow-up of included studies ranged from 12 months to 60 months.</p>	<p>Tobacco use: The evidence for school-based programs alone was inconclusive. Nine good/high-quality studies on school-based intervention were available, of which only two reported clearly positive intervention effects. The results of the seven remaining studies were inconclusive or even indicated that the intervention effects had been unfavourable. Differences in smoking rates between intervention groups varied considerably across studies, ranging from -3.8% (i.e., favouring intervention groups) to 5.4% (i.e., favouring control groups). The results of the meta-analysis carried out as part of this review provide no evidence for the long-term effectiveness of school-based interventions. These findings were similar for lifetime, 30-day and regular smoking.</p> <p>Delivery: One study found evidence that culturally adapting the approach and materials of an intervention to the needs of specific population groups was more effective than standardised strategies. The limited number of studies did not allow conclusions with regard to the effectiveness of number of sessions or use of booster sessions.</p>
<p>Pan 2009</p> <p>Title: A Multivariate Approach to a Meta-Analytic Review of the</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p>	<p>20 controlled studies (level of randomisation not reported)</p> <p>14 studies had a follow-up time of</p>	<p>Drug use: This review indicated that the effects of the D.A.R.E. program on drug use were homogeneous but less than small. The</p>

<p>Effectiveness of the D.A.R.E. Program</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Middle childhood Early adolescence</p> <p>School</p> <p>USA</p>	<p>12 months or more</p>	<p>unweighted mean effect size for any drug use was Cohen's $d = 0.05$ (ranging from -0.08 to 0.36) (including tobacco use, alcohol use, marijuana or other illicit drug use). Alcohol use: Please see information on drug use. Tobacco use: Please see information on drug use.</p>
<p>Porath-Waller 2010</p> <p>Title: A Meta-Analytic Review of School-Based Prevention for Cannabis Use</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Adolescence</p> <p>School</p> <p>USA (13), Canada (1), Spain (1)</p>	<p>15 trials (experimental or quasi-experimental design with a control group)</p> <p>Follow-up not reported</p>	<p>Drug use: The results from the set of 15 studies indicated that these school-based programs had a positive impact on reducing students' cannabis use ($d = 0.58$, CI: $0.55, 0.62$, statistically significant) compared to control conditions. There was considerable variability in the magnitude of effect sizes across the set of studies, ranging from -0.50 to 2.90.</p> <p>Delivery: The moderator analysis indicated that programs incorporating elements of several prevention models were significantly more effective than were those based on only a social influence model. Programs that were longer in duration (≥ 15 sessions) and facilitated by individuals other than teachers in an interactive manner also yielded stronger effects. The results also suggested that programs targeting high school students were more effective than were those aimed at middle-school students.</p>
<p>Ranney 2006</p> <p>Title: Tobacco Use: Prevention, Cessation, and Control</p> <p>Systematic review of reviews and primary studies Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>USA (5), the Netherlands (2),</p>	<p>10 RCTs, 2 reviews</p> <p>7 of the primary studies had a follow-up of 12 months or more</p>	<p>Tobacco use: The authors conclude that sufficient evidence was found for short-term effects (less than 2 years) of school-based prevention programs on smoking behaviour. Interventions implemented in a single school year or conducted over multiple school years produced mixed results in 10 school-based studies. Evidence suggested that prevention measures conducted in</p>

	Australia (1), Canada (1), Norway (1), UK (1)		schools have positive short-term effects but insufficient evidence for long-term effects.
<p>Reavley 2010</p> <p>Title: Prevention and early intervention to improve mental health in higher education students: a review</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Adolescence Adulthood</p> <p>School Community Media</p> <p>Countries not reported</p>	<p>Number of studies not reported</p> <p>Follow-up not reported</p>	<p>Alcohol use:</p> <p>The authors conclude that for interventions to prevent or intervene early for alcohol misuse, evidence of effectiveness is strongest for brief motivational interventions and for personalized normative interventions delivered using computers or in individual face-to-face sessions. There is some evidence that cognitive-behavioral/skill-based interventions are effective. However, more and better quality research is needed. Social norms marketing (SNM) campaigns using mass media have mixed evidence of effectiveness. Some environmental interventions may have benefit, but further work is needed. Information-based approaches are not effective.</p>
<p>Roe 2005</p> <p>Title: Drug prevention with vulnerable young people: A review</p> <p>Systematic review</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School</p> <p>USA (8), Canada (1)</p>	<p>9 evaluation studies with control or comparison groups</p> <p>3 studies had a follow-up of 12 months or more</p>	<p>Drug use:</p> <p>In school settings, life-skills training has been found to be effective (at least in the short term). Universal school-based interventions involving life-skills training could have effects on the most high-risk young people, although most of the studies failed to find significant outcomes. Combination of interventions at different levels (universal and targeted) had additional benefits compared with the universal or the targeted initiative by themselves. Therefore, while universal interventions can affect the substance use of high-risk groups of young people, additional targeted components can increase the effectiveness of such universal programmes. Providing appropriate information is effective in altering young people's awareness of the dangers of drugs but does not inevitably change behaviour. The results of this review indicate that</p>

			<p>with vulnerable young people, life-skills training works better than the provision of drug knowledge in changing drug-using behaviour. The results of interventions involving counselling as the central component were mixed.</p> <p>Delivery: The authors conclude that across different settings the 11–13 age range appeared to be a crucial period for intervention with vulnerable young people. They describe this as a time when high-risk young people start to experiment with drugs, which appears to be a few years earlier than the onset of drug use amongst the general population.</p>
<p>Schröder-Günther 2011</p> <p>Title: Primary Tobacco Prevention in China - A Systematic Review</p> <p>Systematic review Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>School</p> <p>China</p>	<p>7 RCTs</p> <p>Only one study had a follow-up of 12 months or more but it measured only knowledge and attitudes; of the studies that measured smoking behaviours, the maximum follow-up was 6 months (in 2 studies)</p>	<p>Tobacco use: The evidence for the effectiveness of smoking prevention interventions in China is weak, partly due to methodological limitations of the studies. Of the five studies that measured smoking behaviour, only two studies found significant differences between intervention and control groups at post-intervention. Two studies conducted a follow-up at 6 months. One found no significant effects, and the other found a significant effect on smoking initiation, but not on the smoking rate. Baseline characteristics of intervention and control group in this study were significantly different, such that no distinct effect of the program could be verified.</p> <p>Delivery: With regard to the wider range of smoking prevention and cessation programmes included in this review, the authors conclude that interventions applying health promotion techniques were more often successful than interventions that were only based on</p>

<p>Skara 2003</p> <p>Title: A review of 25 long-term adolescent tobacco and other drug use prevention program evaluations</p> <p>Systematic review Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA (12), Canada (2), Australia, England, Italy, The Netherlands, Norway</p>	<p>19 studies (11 experimental, 8 quasi-experimental)</p> <p>Only studies with a long-term follow-up of at least 24 months were included in this review (follow-up ranged from 24 to 144 months)</p>	<p>health education.</p> <p>Drug use: This review of long-term tobacco and drug use prevention intervention studies published indicates that school- and community-based programs were effective in preventing or reducing adolescent cigarette, alcohol, and marijuana use across follow-up periods ranging from 2 to 15 years. Seven studies had measured alcohol and/or other drug use. Six studies showed effectiveness in reducing marijuana use at initial follow-ups but not at the final assessment.</p> <p>Alcohol use: Six studies showed effectiveness in reducing alcohol at initial follow-ups, and of these, three studies also found significant differences in alcohol consumption between intervention and control groups at the final assessment.</p> <p>Tobacco use: Of the 19 school-based studies in this review, more than half (10 studies) found significant and sustained reductions on a variety of smoking outcomes over multiple time points. This included one study with a long follow-up of 15 years. One study found no significant differences at the initial 6 month follow-up but at the 48 month follow-up the intervention group reported significantly less use. In 5 studies, intervention and control groups differed significantly at the initial follow-ups, but these differences disappeared by the time of the final assessment. Three studies found no differences between intervention and control groups at any time. This included the study with the longest follow-up (144 months).</p> <p>Delivery: Results indicated that program effects</p>
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			were less likely to decay among studies that delivered booster programming sessions as a supplement to the program curricula.
<p>Soole 2008</p> <p>Title: School-Based Drug Prevention Programs: A Review of What Works</p> <p>Systematic review / Meta-analysis Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>Family School Community Media Multi-setting</p> <p>Countries not specified</p>	<p>58 controlled trials (including RCTs); meta-analysis based on 12 studies</p> <p>Follow-up not reported</p>	<p>Drug use:</p> <p>The authors report that there were a number of significant findings, with four of the six meta-analyses conducted producing significant mean effect sizes. Further, all analyses produced mean effect sizes in the desired direction, suggesting overall program effectiveness. The meta-analyses assessing the impact of school-based drug prevention programs on marijuana use provided significant results both in the short-term (d. = .136, 95% CI = .035-.237, p < .01) and the long-term (d. = .219, 95% CI = .071-.367, p < .01). Overall, these results suggest that, in the short term, around 54% of control participants performed worse than treatment participants, while in the long term around 58% of participants performed worse than treatment participants.</p> <p>Similarly, the meta-analyses assessing the impact of prevention programs on all illicit drug use (i.e. marijuana and other illicit drugs) also provided significant results both in the short-term (d. = .141, 95% CI = .042-.24, p = < .01) and the long-term (d. = .208, 95% CI = .087-.329, p = < .001). In both the marijuana and all drug analyses, results suggest that prevention programs not only have an immediate impact on self-reported drug use, but that this impact persists into the long term. Overall, these results suggest that around 56% of control participants performed worse in terms of short-term illicit drug use than treatment participants, while around 58% of control participants performed worse in terms of long-term drug use compared to treatment participants.</p>

			<p>The authors also explored the self-reported drug use outcomes for other categories of illicit drugs only, including cocaine and amphetamines (but excluding marijuana). The two treatment comparison contrasts contributing to each meta-analysis produced non-significant findings both for short-term and long-term other illicit drug outcomes.</p> <p>Delivery: The authors conclude that interactive programs adopting either social influence or competency enhancement components appear to be the most effective approach to school-based drug prevention. Further, more intensive programs appear to increase program effectiveness, and universal programs that are delivered in the middle school years may be slightly more effective. Generic skills training programs appear to have more impact on reducing or preventing harder drug use than marijuana use, and their effectiveness may be restricted to low-risk youths. The analysis suggests that the inclusion of booster sessions and multifaceted drug prevention programs have little impact on preventing illicit drug use among school-aged children.</p>
<p>Spoth 2008</p> <p>Title: Preventive Interventions Addressing Underage Drinking: State of the Evidence and Steps Toward Public Health Impact</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p> <p>School</p> <p>USA, Australia, Norway, Netherlands (countries not consistently reported)</p>	<p>14 programmes in 26 reports (study designs not reported consistently)</p> <p>12 programmes were followed up at 12 months or more post-baseline; a follow-up period of at least 6 months was an inclusion criterion</p>	<p>Alcohol use: The review findings indicate that school-based prevention interventions can reduce early initiation of alcohol use and progression of use in the young adolescent and adolescent years. Most elementary school interventions have shown effects only on the risk precursor of aggressive behavior and not on alcohol use. Although a few classroom intervention trials have monitored their samples through the middle-school period and demonstrated effects on alcohol use (e.g., Classroom Centered</p>

			<p>Intervention), most studies have not been funded for a sufficient period to demonstrate whether there are direct effects on alcohol use. Numerous interventions exist that have shown effects on the delay of initiation of use during the middle and early high school periods. With regard to the high school years, the review authors found only one intervention (Project Toward No Drug Abuse) that could be classified as "most promising" and one (Athletes Training and Learning to Avoid Steroids) that could be classified as having "mixed or emerging" evidence in reducing the rate of drinking. The latter was limited in that it focused only on high school football players and not on the general population.</p> <p>Mediators: A number of interventions for younger children have shown significant reductions in aggression and disruption (e.g., I Can Problem Solve, Promoting Alternative Thinking Strategies, Second Step, and Good Behavior Game).</p> <p>Delivery: Interventions that have shown effects typically address the following: role-playing that provides practice in the use of new skills, a broad focus on life skills, support to improve emotional regulation, a focus on positive peer relationships and, with youths, provision of accurate norms for alcohol and substance use, plus instruction in peer refusal skills.</p>
<p>Thomas 2006</p> <p>Title: School-based programmes for preventing smoking</p> <p>Cochrane review</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Middle childhood Early adolescence Adolescence</p>	<p>94 RCTs (23 classed as high-quality)</p> <p>Follow-up of six months or more was an inclusion criterion, follow-up period not reported consistently (at least 30 studies had follow-up of 12 months or more)</p>	<p>Tobacco use: Twenty-three high quality studies addressed the issue of whether school programmes to prevent tobacco are more effective than minimal or no intervention. The authors conclude that there is no strong evidence for offering school-based programmes that provide</p>

	<p>Family School Community Multi-setting</p> <p>USA (66), Canada (6), Netherlands (5), Italy (3), Australia (2), Germany (2), Norway (2), UK (2), Finland (1), France (1), Spain (1), India (1), Mexico (1), one multi-country study (Denmark, Finland, the Netherlands, Portugal, Spain, UK)</p>		<p>information only. The high quality study on information-giving alone reported a significant effect of the intervention (odds ratio [OR] 0.61; 95% confidence interval [CI] 0.41 to 0.91). Studies that compared an information curriculum with other models of delivery showed the information curricula to be either less effective or detected no difference. Due to the limited number of rigorous studies, it is difficult to exclude a beneficial effect of information about tobacco alone, but there is little positive evidence available to support this intervention. The majority of studies drew on a social influences models. Although half of the best quality studies regarding this type of approach found short-term effects on children's smoking behaviour, there is conflicting evidence about the effects of such programmes, and the highest quality and longest trial (the Hutchinson Smoking Prevention Project) found no long-term effects from 65 lessons over eight years. There was limited evidence for the effects of interventions that included developing generic social competence, and for those with a multi-modal approach that included community initiatives. Three of the four high quality multi-modal interventions showed a positive significant effect. It is possible that combining social influences models with other components, such as community interventions and generic social competence training may improve effectiveness. However, these interventions have not been subject to the same rigorous evaluation as the social influences approach. In addition, there are few data from direct comparisons to suggest how large an increment might be achieved.</p>
<p>Thomas 2008 Title: Population tobacco control</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence &</p>	<p>84 studies (variety of study designs, mostly econometric analyses and cross-sectional before</p>	<p>Tobacco use: The authors conclude that population-level tobacco control interventions have</p>

<p>interventions and their effects on social inequalities in smoking: systematic review</p> <p>Systematic review Quality: Good</p>	<p>adolescence)</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>School Community Workplace Media US, Canada, New Zealand, Australia, Finland, UK, Sweden, Netherlands, Spain, France, Israel, Hong Kong, South Africa, Taiwan, Province of China</p>	<p>and after studies)</p> <p>Follow-up not consistently reported</p>	<p>the potential to benefit more disadvantaged groups and thereby contribute to reducing health inequalities. Smoking restrictions in schools may be more effective in girls. Concerning access restrictions, restrictions on sales to minors may be more effective in girls and younger children.</p>
<p>West 2004</p> <p>Title: Project D.A.R.E. Outcome Effectiveness Revisited</p> <p>Meta-analysis Quality: Acceptable</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>USA</p>	<p>11 studies with experimental or quasi-experimental design</p> <p>7 studies had a follow-up of 12 months or more</p>	<p>Drug use: This review indicates that the D.A.R.E. programme is ineffective. The overall weighted effect size for the included D.A.R.E. studies was extremely small (correlation coefficient=0.011; Cohen d=0.023; 95% confidence interval=-0.04, 0.08) and nonsignificant (z=0.73, NS). The authors note, however, that the evaluations considered in this review refer to an earlier version of the DARE programme, as evaluations of the revised version were not yet available.</p>
<p>Wiehe 2005</p> <p>Title: A systematic review of school-based smoking prevention trials with long-term follow-up</p> <p>Systematic review Quality: Good</p>	<p>Prevention education based on personal and social skills and social influence (early adolescence & adolescence)</p> <p>Early adolescence Adolescence</p> <p>School</p> <p>USA</p>	<p>8 RCTs</p> <p>All studies had a follow-up period of 12 months or more (inclusion criterion)</p>	<p>Tobacco use: Among the 8 studies included in this review, none of the differences were statistically significant in any individual study except for one (Botvin's Life Skills Program). This study showed statistically significant results, suggesting that school-based intervention effects resulted in decreased monthly smoking prevalence at 12th grade or age 18. The review authors argue that it is possible that the Life Skills Program is effective and others are not because it used a relatively high degree of interaction and</p>

			<p>participation. Because there are a limited number of studies with long-term follow-up data and considerable variation in their intervention methodology, the authors were unable to conclude whether differences in study outcomes are the result of differences in program content, program intensity, program delivery, or the methodological rigor of analysis. The pooled risk difference estimate from the random-effects meta-analysis was 0.61 (95% confidence interval, -4.22 to 3.00). Measures of statistical heterogeneity mirrored evidence of clinical heterogeneity (Q 5,031, p .001), suggesting the summary measure is difficult to interpret due to the large, unexplained between-study variability.</p>
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Policies to keep children in school

<p>Lucas 2008</p> <p>Title: Financial Benefits for Child Health and Well-Being in Low Income or Socially Disadvantaged Families in Developed World Countries</p> <p>Campbell review</p>	<p>Policies to keep children in school</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence</p> <p>Family</p> <p>USA (8), Canada (1)</p>	<p>9 RCTs</p> <p>All studies had a follow-up period of 12 months or more post-randomisation (post-intervention periods not reported)</p>	<p>Drug use: The study did not report any drug use outcomes.</p> <p>Mediators: The authors conclude that the current evidence does not allow to state unequivocally whether financial benefits to poor families delivered as an intervention are effective at improving child health or wellbeing in the short term. No effect was observed on child health, measures of child mental health or emotional state. Non-significant effects favouring the intervention group were seen for child cognitive development and educational achievement, and a non-significant effect favouring controls in rates of teenage pregnancy. The conclusions were limited by the fact that most of the studies had small effects on total household income and that while no conditions were attached to how money was spent, all studies included strict conditions for receipt of payments. The</p>
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			review authors highlight particular concerns in some studies that sanctions and conditions (such as working hours) placed on families may increase family stress.
<p>Petrosino 2012</p> <p>Title: Interventions in Developing Nations for Improving Primary and Secondary School Enrollment of Children: A Systematic Review</p> <p>Campbell review</p>	<p>Policies to keep children in school</p> <p>Middle childhood Early adolescence</p> <p>School</p> <p>Studies were conducted in 27 different nations, with Kenya (12), India (9), Bangladesh (6), Colombia (5) and Jamaica (5) the most common. More than half of studies were conducted in the poorest developing nations.</p>	<p>73 trials (52 RCTs and 21 quasi-experimental studies)</p> <p>57 studies had follow-up periods of 12 months or more</p>	<p>Drug use: The study did not report any drug use outcomes.</p> <p>Mediators: The review indicates that interventions to get children into school and keep them there have, on average, positive effects. The authors note that this is also true of learning outcomes reported within those same studies.</p> <p>Approximately 38 substantively different interventions were tested across the 73 included studies; broadly, Conditional Cash Transfers (N=13), funding or grants to communities (N=5), school breakfasts or lunches (N=5), or remedial education or tutoring (N=5) were the most common. Across all interventions, the average effect size was positive in direction for all outcomes, and was largest for enrollment (d=.18; 95% CI [.13-.24]), attendance (d=.15, 95% CI [.10-.20]), progression (d=.13, 95% CI [.08-.18]), math (d=.16, 95% CI [.10-.23]) and language (d=.18, 95% CI [.12-.25]) outcomes. Examining only outcomes of enrollment and attendance (n=59), studies that focused on new schools and other infrastructure interventions (d=.44, 95% CI [.40-.47]) reported the largest average effects. Collectively, the average treatment effect was positive (d=.18; 95% CI [.13-.24]), and ranged from -.14 to .82. The results were not uniform across every study; there was large variation in programs, participants, settings and designs, and significant heterogeneity was found in the main analyses. Although effects could be considered small, according to</p>

			the review authors they represent 3-9% increases in positive outcomes compared to the control/comparison group in the studies.
Prenatal and infancy visitation			
<p>Kitzman 2010; Olds 2010</p> <p>Title: Enduring Effects of Prenatal and Infancy Home Visiting by Nurses on Children: Follow-up of a Randomized Trial Among Children at Age 12 Years (Kitzman 2010); Enduring Effects of Prenatal and Infancy Home Visiting by Nurses on Maternal Life Course and Government Spending: Follow-up of a Randomized Trial Among Children at Age 12 Years (Olds 2010)</p> <p>RCT Quality: Acceptable</p>	<p>Prenatal and infancy visitation</p> <p>Pre-natal and early childhood</p> <p>Family Health sector</p> <p>USA</p>	<p>Intervention group: 228 (baseline), 191 (last follow-up) (84%)</p> <p>Control group: 515 (baseline), 422 (last follow-up) (82%)</p> <p>Follow-up at 12 years (10 years post-intervention)</p>	<p>Drug use: The authors conclude that the Nurse-Family Partnership (NFP) reduced children's use of substances. By the time the firstborn child was 12 years of age, those visited by nurses, compared with those in the control group, reported fewer days of having used cigarettes, alcohol, and marijuana during the 30-day period before the 12-year interview (0.03 vs 0.18, P=.02). In the 30-day period preceding the 12-year interview, nurse-visited children, compared with controls, were less likely to have used cigarettes, alcohol, or marijuana (odds ratio, 0.31; P=.04), to have used fewer of these substances (incidence ratio, 0.22; P=.02) and to have used these substances for fewer days (incidence ratio, 0.15; P=.02).</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p> <p>Mediators: The authors conclude that the Nurse-Family Partnership (NFP) improved maternal life course and reduced government spending among children through age 12 years. By the time the firstborn child was 12 years old, nurse-visited mothers compared with control subjects reported less role impairment owing to alcohol and other drug use (0.0% vs 2.5%, P = .04), longer partner relationships (59.58 vs 52.67 months, P = .02), and greater sense of mastery (101.04 vs 99.60, P = .005). During this 12-year period, government spent less per year on food stamps, Medicaid, and</p>

			<p>Aid to Families with Dependent Children and Temporary Assistance for Needy Families for nurse-visited than control families (\$8772 vs \$9797, P = .02); this represents \$12 300 in discounted savings compared with a program cost of \$11 511, both expressed in 2006 US dollars. No statistically significant program effects were noted on mothers' marriage, partnership with the child's biological father, intimate partner violence, alcohol and other drug use, arrests, incarceration, psychological distress, or reports of child foster care placements.</p> <p>Other risky behaviours: No statistically significant program effects were found on children's externalizing or total behavioral problems.</p>
School policies and culture			
<p>Fletcher 2008</p> <p>Title: School Effects on Young People's Drug Use: A Systematic Review of Intervention and Observational Studies</p> <p>Systematic review Quality: Good</p>	<p>School policies and culture</p> <p>Early adolescence</p> <p>School</p> <p>USA, Netherlands, Australia, UK, Sweden</p>	<p>13 studies (4 intervention studies, 9 observational studies)</p> <p>All studies had a follow-up of 12 months or more</p>	<p>Drug use: The authors conclude that intervention studies provide some evidence that there is a causal association between, on the one hand, modifying the school environment to increase student participation, improve relationships, promote a positive school ethos, and address disaffection and truancy and, on the other hand, reduce student drug use and other risk behaviors, especially for boys. The Aban Aya study reported that, 4 years after the start of the intervention, there was a 34% reduction in the rate of increase of a combined measure of alcohol, tobacco, and cannabis use for boys in the intervention group compared to the comparison group. Boys at D.A.R.E. plus schools reported a significantly lower rate of "growth" in the use of drugs other than cannabis, and intentions to use these drugs, compared to the comparison group, after 2 years of the</p>

			<p>intervention. The other two interventions did not have a significant effect on drug use.</p> <p>Alcohol use: Three studies reported rates of smoking and drinking separately for young people's drug use. All three suggested that the interventions had a protective effect on these outcomes.</p> <p>Tobacco use: Please see information on drug and alcohol use.</p> <p>Delivery: Intervention studies suggest that action to improve ethos and support student engagement can be effective in reducing drug use. Observational studies also suggest that positive ethos and overall levels of strong school relationships and engagement are associated with lower rates of drug use, and that, at the individual level, negative behaviors and attitudes relating to school are also associated with drug use.</p>
<p>Goldberg 2007</p> <p>Title: Outcomes of a Prospective Trial of Student-Athlete Drug Testing: The Student Athlete Testing Using Random Notification (SATURN) Study</p> <p>Cluster-RCT Quality: Acceptable</p>	<p>Alcohol and drug testing</p> <p>Adolescence</p> <p>School</p> <p>USA</p>	<p>Intervention group: 653 pupils (baseline), 197 (last follow-up) (30%)</p> <p>Control group: 743 (baseline), 249 (last follow-up) (34%)</p> <p>Follow-up over the period of 2 years post-randomisation (4 assessments, precise follow-up times not reported)</p>	<p>Drug use: The study indicates that drug testing is not effective in reducing past-month use. At the end of the initial school year and after two full school years, student-athletes at schools that had implemented a drug and alcohol testing (DAT) policy reported less drug use during the past year ($p < .01$) compared to athletes at the deferred policy schools. Combining past year drug and alcohol use, student-athletes at DAT schools reported less use only in the short term ($p < .05$), but by the end of the second school year there was no significant effect. No DAT deterrent effects were evident for past *month* use during any of four follow-up periods in student self-reports.</p> <p>Alcohol use: Please see information on drug use.</p>

			<p>Other risky behaviours: The authors note that drug testing was accompanied by an increase in some risk factors for future substance use. DAT athletes across all assessments reported less athletic competence ($p < .001$), less belief authorities were opposed to drug use ($p < .01$), and indicated greater risk-taking ($p < .05$). At the final assessment, DAT athletes believed less in testing benefits ($p < .05$) and less that testing was a reason not to use drugs ($p < .01$).</p>
<p>Moreira 2009</p> <p>Title: Social norms interventions to reduce alcohol misuse in University or College students</p> <p>Cochrane review</p>	<p>School policies and culture</p> <p>Adolescence Adulthood</p> <p>School Computer/Internet</p> <p>USA (19), New Zealand (3)</p>	<p>22 RCTs</p> <p>6 studies had a follow-up of 12 months or more</p>	<p>Alcohol use: Overall, this systematic review suggests that individual and personalised normative interventions over the immediate and medium term appear to reduce alcohol use, misuse and related problems amongst university or college students. The review authors grouped social norms interventions into five subtypes according to delivery mode: (i) mailed feedback, (ii) web feedback, (iii) individual feedback (iv) group face-to-face feedback and (v) a social marketing campaign. Interventions delivered using the web or computer, or in individual face-to-face sessions, appeared to reduce alcohol misuse. Significant effects were more apparent for short-term outcomes (up to three months). However, there was some evidence of effect continuing through to medium-term follow-up from four to sixteen months, particularly for web/computer feedback. The evidence was less convincing for group face-to-face sessions. Mailed and group feedback were on the whole no different than with the control intervention. Two large studies showed contradictory results for a social marketing campaign.</p> <p>Detailed results: - Peak Blood Alcohol Content (BAC): Significant reduction with</p>

			<p>Web/computer feedback (WF) (SMD -0.77 95%CI -1.25 to -0.28), two studies, 198 participants. No significant effect of mailed feedback (MF) or individual face-to-face feedback (IFF).</p> <p>- Drinking Frequency: Significant reduction with WF (SMD -0.38 95%CI -0.63 to -0.13), two studies, 243 participants and IFF (SMD -0.39 95% CI -0.66 to -0.12), two studies, 217 participants. No significant effect of MF.</p> <p>- Drinking Quantity: Significant reduction with WF (SMD -0.35 95% CI -0.51 to -0.18), five studies, 556 participants and group face-to-face feedback (GFF) (SMD -0.32 95% CI -0.63 to -0.02) three studies, 173 participants. No significant effect of MF or IFF.</p> <p>- Binge drinking: Significant reduction with WF (SMD -0.47 95% CI -0.92 to -0.03) one study, 80 participants, IFF (SMD -0.25 95% CI -0.49 to -0.02) three studies, 278 participants and GFF (SMD -0.38 95% CI -0.62 to -0.14) four studies, 264 participants. No significant effect for MF.</p> <p>Delivery: The intensity of the intervention differed between trials as did the control intervention, which was no intervention, educational leaflets or an alcohol educational session. Individual face-to-face feedback typically involved social norms feedback as just one aspect of a broader motivational interviewing intervention.</p>
<p>Reavley 2010</p> <p>Title: Prevention and early intervention to improve mental health in higher education students: a review</p> <p>Review of reviews and primary studies</p>	<p>School policies and culture</p> <p>Adolescence Adulthood</p> <p>School Community Media</p>	<p>Number of studies not reported</p> <p>Follow-up not reported</p>	<p>Alcohol use: The authors conclude that for interventions to prevent or intervene early for alcohol misuse, evidence of effectiveness is strongest for brief motivational interventions and for personalized normative interventions delivered using computers or in individual face-to-face sessions. There is</p>

Quality: Acceptable	Countries not reported		some evidence that cognitive-behavioral/skill-based interventions are effective. However, more and better quality research is needed. Social norms marketing (SNM) campaigns using mass media have mixed evidence of effectiveness. Some environmental interventions may have benefit, but further work is needed. Information-based approaches are not effective.
<p>Thomas 2008</p> <p>Title: Population tobacco control interventions and their effects on social inequalities in smoking: systematic review</p> <p>Systematic review</p> <p>Quality: Good</p>	<p>School policies and culture</p> <p>Pre-natal and early childhood</p> <p>Middle childhood</p> <p>Early adolescence</p> <p>Adolescence</p> <p>Adulthood</p> <p>School</p> <p>Community</p> <p>Workplace</p> <p>Media</p> <p>US, Canada, New Zealand, Australia, Finland, UK, Sweden, Netherlands, Spain, France, Israel, Hong Kong, South Africa, Taiwan, Province of China</p>	<p>84 studies (variety of study designs, mostly econometric analyses and cross-sectional before and after studies)</p> <p>Follow-up not consistently reported</p>	<p>Tobacco use:</p> <p>The authors conclude that population-level tobacco control interventions have the potential to benefit more disadvantaged groups and thereby contribute to reducing health inequalities. Smoking restrictions in schools may be more effective in girls. Concerning access restrictions, restrictions on sales to minors may be more effective in girls and younger children.</p>
Sports, leisure and alternative programmes			
<p>Bühler 2008</p> <p>Title: Prevention of substance abuse (EMCDDA Insights Nr 7)</p> <p>Review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Sports, leisure and alternative programmes</p> <p>Age not specified</p> <p>Setting not specified</p> <p>USA</p>	<p>1 review of 10 studies</p> <p>Follow-up not reported</p>	<p>Drug use:</p> <p>The only identified review in this review of reviews is from 1996 and indicated that there is little evidence for the effectiveness of 'alternative approaches' and little evidence indicating which approaches could be effective with which target groups.</p> <p>Delivery:</p> <p>The original review authors conclude from the individual studies: a) that the alternative approach appears to be the most effective with high-risk groups who lack adequate adult supervision and have little opportunity to structure their free time; b) that involving young people in the planning and</p>

			implementation of these alternatives may increase levels of participation and effectiveness; c) that more intensive programmes are more effective; d) that skills training should be a component of such measures; and e) that alternatives as a component of a comprehensive project could serve to establish anti-consumption standards.
<p>Jones 2006</p> <p>Title: A review of community-based interventions to reduce substance misuse among vulnerable and disadvantaged young people</p> <p>Systematic review of reviews and primary studies Quality: Good</p>	<p>Sports, leisure and alternative programmes</p> <p>Age not specified</p> <p>Community</p> <p>USA, Switzerland, other countries not specified</p>	<p>11 studies (9 controlled non-randomised trials, 2 before and after studies)</p> <p>6 studies had a follow-up of 12 months or more</p>	<p>Drug use:</p> <p>There was evidence from five trials of large multi-site evaluations of community based interventions targeting high-risk youth (comprising behavioural skills programmes, informational focused programmes, recreational focused programmes, and affective programmes) conducted in either Switzerland or the USA to suggest that there are no overall effects of these programmes on use of illicit drugs, tobacco or alcohol in the immediate to long term.</p> <p>There is inconsistent evidence from four trials about the effectiveness of community-based youth programmes for young people at-risk of substance use in reducing substance use outcomes; three trials indicate that community-based youth programmes for young people at-risk of substance use can reduce the use of illicit drugs, cannabis, and tobacco in the short to long term. However, one trial suggested that a community-based youth programme increased last month use of a variety of substances, particularly amongst girls.</p> <p>Alcohol use: Please see information on drug use.</p> <p>Tobacco use: Please see information on drug use.</p>
<p>Priest 2008</p> <p>Title: Policy interventions</p>	<p>Sports, leisure and alternative programmes</p>	n/a	<p>Drug use:</p> <p>The authors found no controlled studies evaluating the effectiveness of policy</p>

implemented through sporting organisations for promoting healthy behaviour change Cochrane review	Age not specified Community n/a		interventions used in sporting settings, i.e. organised through sporting organisations to increase healthy behaviours, attitudes, knowledge or the inclusion of health-oriented policies within the organisations. The study designs employed in evaluations of these policies typically have been case studies, thereby limiting our understanding of the effectiveness of such health promoting strategies.
Tobacco policies			
Bühler 2008 Title: Prevention of substance abuse (EMCDDA Insights Nr 7) Review of reviews and primary studies Quality: Acceptable	Tobacco policies Adolescence Adulthood Community Most included reviews originated from the USA.	5 reviews Follow-up not consistently reported	Tobacco use: - Higher tobacco prices reduce the prevalence and quantity of tobacco consumption. - Price elasticity for tobacco (price elasticity): 10 % price increase results in 3.7 % fewer smokers and a 2.3 % decline in consumption volume - Isolated measures to prevent the sale of tobacco to young people under the legal age do not reduce consumption. - A comprehensive long-term ban on the advertising of tobacco products has preventive effects on consumption behaviour.
Callinan 2010 Title: Legislative smoking bans for reducing secondhand smoke exposure, smoking prevalence and tobacco consumption Cochrane review	Tobacco policies Early adolescence Adolescence Adulthood Community Workplace USA (17), Scotland (8), Ireland (5), Italy (4), Spain (3), Norway (3), Finland (2), New Zealand (2), Canada (2), France (1), England (1), the Netherlands (1), Sweden (1)	50 studies (24 cohort follow up pre and post ban, 18 cross-sectional, 13 studies were quasi-experimental including a reference area) For smoking behaviour outcomes, only studies which reported follow up at least six months from the implementation of the ban were included; follow-up data not reported consistently	Tobacco use: The studies examined the effect of clean indoor air legislation implemented in countries, states and regional areas. With regard to smoking behaviours, there is limited evidence about the impact on active smoking. Less than half of the studies considered active smoking and of those that did there was little methodological consistency. Three measures were considered - smoking prevalence rates, measures of tobacco consumption and reported smoking cessation. These studies report either no change or a downward trend. There was no consistent evidence of a reduction in smoking prevalence attributable to the ban.

			With regard to other outcomes, introduction of a legislative smoking ban does lead to a reduction in exposure to passive smoking. Hospitality workers experienced a greater reduction in exposure to second-hand smoke (SHS) after implementing the ban compared to the general population. There was no change in exposure to secondhand smoke in private cars after implementing legislative smoking bans and no change in self-reported SHS exposure in the home. There is some evidence of an improvement in health outcomes, with the strongest evidence relating to admissions for acute coronary syndrome.
<p>Hopkins 2001</p> <p>Title: Reviews of Evidence Regarding Interventions to Reduce Tobacco Use and Exposure to Environmental Tobacco Smoke</p> <p>Community Guide review</p>	<p>Tobacco policies</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community</p> <p>USA</p>	<p>8 studies (single or sequential cross-sectional surveys)</p> <p>Follow-up periods not reported consistently</p>	<p>Tobacco use:</p> <p>According to the Community Guide's rules of evidence, strong scientific evidence demonstrates the effectiveness of increasing the price of tobacco products on reducing tobacco use prevalence and consumption among both adolescents and young adults. The price elasticity of demand estimates in seven of eight studies demonstrate that increases in tobacco product price result in decreases in both the overall prevalence of tobacco product use and the quantity consumed. Increases in product price resulted in reductions in tobacco use in both adolescents and young adults. Tobacco use prevalence among adolescents (13-18 years old): a median decrease of 3.7% in tobacco use for every 10% increase in product price (8 studies); tobacco consumption among adolescents: a median decrease of 2.3% in tobacco consumption for every 10% increase in product price (6 studies).</p>
<p>Lovato 2011</p> <p>Title: Impact of tobacco advertising and promotion on</p>	<p>Tobacco policies</p> <p>Middle childhood Early adolescence</p>	<p>19 longitudinal studies</p> <p>17 studies had follow-up periods of 12 months or greater</p>	<p>Tobacco use:</p> <p>The authors found no trials of the impact of tobacco advertising and promotional activities on people taking</p>

<p>increasing adolescent smoking behaviours</p> <p>Cochrane review</p>	<p>Adolescence</p> <p>Community Media</p> <p>USA (11), Australia (2), England (2), Germany (2), Spain (2)</p>		<p>up smoking. However, there are longitudinal studies following nonsmokers and their exposure or receptivity to advertising and promotion in a variety of ways, including having a favourite advertisement or an index of receptivity based on awareness of advertising and ownership of a promotional item. In 18 of the 19 studies the nonsmoking adolescents who were more aware of tobacco advertising or receptive to it, were more likely to have experimented with cigarettes or become smokers at follow-up. Two studies reported an influence of advertising among girls, but not boys. Based on the strength and specificity of this association, evidence of a dose-response relationship, the consistency of findings across numerous observational studies, temporality of exposure and smoking behaviours observed, as well as the theoretical plausibility regarding the impact of advertising, the review authors conclude that tobacco advertising and promotion increases the likelihood that adolescents will start to smoke.</p>
<p>NCI 2008</p> <p>Title: The Role of the Media in Promoting and Reducing Tobacco Use (Chapter 7: Influence of Tobacco Marketing on Smoking Behavior)</p> <p>Literature review Quality: Acceptable</p>	<p>Tobacco policies</p> <p>Middle childhood Early adolescence Adolescence Adulthood</p> <p>Community Media</p> <p>Cross-sectional studies: USA, Australia, UK, Norway, Germany, Czech Republic, Spain, Turkey, Hong Kong, Japan, Taiwan, Province of China, Bangladesh, Gambia; longitudinal studies: USA, Australia, UK, Spain; econometric studies of advertising bans: more than 11 countries (102 countries in one study)</p>	<p>Relationship between cigarette marketing practices and adolescent smoking behavior: 68 studies (52 cross-sectional, 16 longitudinal); Advertising bans: 5 econometric studies</p> <p>Follow-up not applicable for surveys; where applicable, nearly all studies had a follow-up period of 12 months or more</p>	<p>Tobacco use:</p> <p>The authors conclude that the total weight of evidence demonstrates a causal relationship between tobacco advertising and promotion and increased tobacco use, as manifested by increased smoking initiation and increased per capita tobacco consumption in the population. The vast majority of cross-sectional studies found an association between exposure to cigarette advertising and adolescent smoking behavior, indicating a robust association. Strong and consistent evidence from longitudinal studies indicated that exposure to cigarette advertising influences non-smoking adolescents to initiate smoking and to move toward regular smoking.</p>

			<p>Receptivity to, exposure to, or awareness of tobacco advertising significantly predicted smoking at follow-up. Many of these cross-sectional and longitudinal studies of the influence of marketing exposure measured and analyzed social influences along with tobacco marketing exposure. They generally found that marketing practices influence adolescent smoking even after controlling for peer and parental influences.</p> <p>The studies of tobacco advertising bans in various countries show that comprehensive bans reduce tobacco consumption. Banning advertising in a limited number of media has little or no effect. Limited advertising bans do not reduce the total level of advertising expenditure but simply result in substitution to the remaining non-banned media or to other marketing activities. Banning advertising in most or all available media can reduce tobacco consumption because, in these circumstances, the possibilities for substitution to other media are limited.</p>
<p>Ranney 2006</p> <p>Title: Tobacco Use: Prevention, Cessation, and Control</p> <p>Systematic review of reviews and primary studies</p> <p>Quality: Acceptable</p>	<p>Tobacco policies</p> <p>Early adolescence Adolescence Adulthood</p> <p>Community Media</p> <p>One of the inclusion criteria was that studies were from "Developed countries: United States, Canada, United Kingdom, Western Europe, Australia, and New Zealand"</p>	<p>4 systematic reviews/meta-analyses, 1 cross-sectional study</p> <p>No follow-up in the primary study</p>	<p>Tobacco use:</p> <p>The authors note that previous systematic reviews investigating tobacco prevention among adolescents and young adults reported strong evidence of effectiveness for increasing the unit price of tobacco products and mass media campaigns that run concurrently with other interventions. Evidence of effectiveness was sufficient for restricting tobacco product distribution, regulating the mechanisms of sale, enforcing access-to-minors laws, and merchant education and training when conducted in conjunction with community mobilization. This review found only one primary study on regulating and enforcing youth access laws, which augments evidence from prior reviews but reported only on</p>

			young people's perceptions of ease of access. The authors found no other research to add to existing evidence for population-based interventions.
Richardson 2009 Title: Preventing Smoking in Young People: A Systematic Review of the Impact of Access Interventions Systematic review of reviews and primary studies Quality: Acceptable	Tobacco policies Middle childhood Early adolescence Adolescence Community USA, Australia, New Zealand, UK, Sweden (studies conducted in developing countries were excluded)	20 studies (5 reviews, 14 cross-sectional studies, 1 non-randomised controlled trial) n/a (most included studies were cross-sectional)	Tobacco use: Only two studies addressed the impact of interventions on smoking behaviour. One systematic review addressing the impact of access restrictions on smoking prevalence found no difference in youth smoking in communities with youth access interventions and control communities; all four controlled studies included in that review reported merchant compliance with minimum age restrictions (i.e. asking for identification and not selling to persons underage) of 82% or higher, yet failed to demonstrate decreased smoking by young people. The other study identified in the review was a cross-sectional study which examined the differential effects of cigarette prices, clean indoor air laws, and youth access laws on smoking uptake among US high school students' it found that merchant compliance with youth access laws reduced the probability of youth being in higher stages of smoking uptake ($p < 0.05$). Moreover, it showed that the impact of compliance was greater for those who were in later stages of uptake; at earlier stages of smoking uptake, cigarettes may be more often obtained from friends and other social sources. The review authors conclude that access restrictions may have little impact on young people's smoking behaviour and that the impact of access restrictions on smoking behaviour may depend upon the stage of smoking uptake. Due to the low number of studies, however, it is not possible to draw definitive conclusions. Nearly all of the studies looked at the effect of interventions on illegal sales

			<p>rather than individual smoking behaviour or prevention of uptake. In that regard, interventions that are multi-component in nature and with active and ongoing enforcement are the most successful. Specifically, findings revealed that combined, successive retail inspections, public prosecutions and awareness of minimum age restrictions decrease illegal sales of tobacco. Overall, the authors conclude that when access interventions are applied in a comprehensive manner, they can affect young people's access to tobacco. However, lack of enforcement and the ability of youth to acquire cigarettes from social sources may undermine the effectiveness of these interventions.</p> <p>Delivery: Evidence from four positively reviewed studies showed that site/setting does influence effectiveness of access restriction measures. In particular, the presence of self-service displays and unlocked vending machines may increase young people's ability to access tobacco products. The review also highlights the importance of compliance.</p>
<p>Stead 2005</p> <p>Title: Interventions for preventing tobacco sales to minors</p> <p>Cochrane review</p>	<p>Tobacco policies</p> <p>Early adolescence Adolescence</p> <p>Community</p> <p>USA (22), Australia (8), UK (3), Canada (2)</p>	<p>35 studies (17 pre/post without a comparison group, 9 RCTs, 5 controlled trials, 2 trials partly randomised, 2 time series)</p> <p>Follow-up not consistently reported; 24 studies appear to have had a follow-up of 12 months or more</p>	<p>Tobacco use: Various interventions including warnings and fines for retailers who illegally make sales to underage youth were shown to reduce the proportion of retailers who are willing to sell tobacco during compliance checks. However, it was difficult to demonstrate a clear effect on young smokers' perceptions of how easily they can buy cigarettes, or on their smoking behaviour. Four of seven trials where smoking prevalence was compared against a control area found some evidence of an effect of intervention on youth smoking behaviour. One study found a lower smoking prevalence in those who were</p>

			<p>in 7th grade at baseline, but the effect was not sustained at the end of the 32 month study. There were no significant differences among the other age groups. Few of the communities studied in this review achieved sustained levels of high compliance. This may explain why there is limited evidence for an effect of intervention on youth perception of ease of access to tobacco, and on smoking behaviour.</p> <p>Delivery: Giving retailers information was less effective in reducing illegal sales than active enforcement and/or multicomponent educational strategies. One study showed that merchant participation in voluntary compliance programmes was low. There is evidence that interventions to educate retailers can improve compliance, but the successful interventions used a variety of strategies, including personal visits and mobilising community support. No strategy achieved complete, sustained compliance.</p>
<p>Thomas 2008</p> <p>Title: Population tobacco control interventions and their effects on social inequalities in smoking: systematic review</p> <p>Systematic review Quality: Good</p>	<p>Tobacco policies</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>School Community Workplace Media</p> <p>US, Canada, New Zealand, Australia, Finland, UK, Sweden, Netherlands, Spain, France, Israel, Hong Kong, South Africa, Taiwan, Province of China</p>	<p>84 studies (variety of study designs, mostly econometric analyses and cross-sectional before and after studies)</p> <p>Follow-up not consistently reported</p>	<p>Tobacco use: The authors conclude that population-level tobacco control interventions have the potential to benefit more disadvantaged groups and thereby contribute to reducing health inequalities. Concerning access restrictions, restrictions on sales to minors may be more effective in girls and younger children. With regard to pricing, increasing the price of tobacco products may be more effective in reducing smoking among lower-income adults and those in manual occupations, although there was also some evidence to suggest that adults with higher levels of education may be more price-sensitive. Young people aged under 25 are also affected by price increases, with some evidence that boys and non-</p>

			white young people may be more sensitive to price. All 20 studies restricted to adolescents or college students found that these groups were sensitive to price and concluded that increasing the price of tobacco products would reduce youth smoking. The only study comparing children within different age groups found that those aged 17 or 18-years-old were more sensitive to price increases than those aged between 13 and 16-years-old. Four studies found that boys aged 13-18 were more sensitive to price than girls. All three studies which examined effects by ethnicity found that black or Hispanic adolescents were more affected by price increases than their white counterparts. No studies provided evidence about possible differential effects by parental income, occupation or educational level.
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Workplace interventions

<p>Thomas 2008</p> <p>Title: Population tobacco control interventions and their effects on social inequalities in smoking: systematic review</p> <p>Systematic review Quality: Good</p>	<p>Workplace</p> <p>Pre-natal and early childhood Middle childhood Early adolescence Adolescence Adulthood</p> <p>School Community Workplace Media US, Canada, New Zealand, Australia, Finland, UK, Sweden, Netherlands, Spain, France, Israel, Hong Kong, South Africa, Taiwan, Province of China</p>	<p>84 studies (variety of study designs, mostly econometric analyses and cross-sectional before and after studies)</p> <p>Follow-up not consistently reported</p>	<p>Tobacco use:</p> <p>The authors conclude that population-level tobacco control interventions have the potential to benefit more disadvantaged groups and thereby contribute to reducing health inequalities. In relation to smoking restrictions, no strong evidence of differential effects was found for smoking restrictions in workplaces and public places, although those in higher occupational groups may be more likely to change their attitudes or behaviour.</p>
<p>Webb 2009</p>	<p>Workplace</p>	<p>10 studies (4 RCTs, 2 non-randomised trials, 3 randomized</p>	<p>Alcohol use:</p> <p>The authors conclude that there were</p>

<p>Title: A systematic review of work-place interventions for alcohol-related problems</p> <p>Systematic review Quality: Acceptable</p>	<p>Adulthood Age not specified</p> <p>Workplace USA (8), Australia (1), Sweden (1)</p>	<p>trials with no control groups, 1 time-series evaluation with comparison group)</p> <p>Follow-up not consistently reported</p>	<p>mixed results with regard to intervention effectiveness of work-place alcohol interventions. Only one study reported no statistically significant results. Seven studies reported significant reductions in various self-report measures of alcohol consumption or alcohol-related problems. One study reported significantly reduced consumption for women, but not for men. With regard to binge drinking, one study reported significantly reduced desire to binge drink, and another study reported significant decreases in binge drinking. One study found significantly increased perceptions of 'riskiness' of alcohol consumption, while another reported no significant effects on health beliefs. The literature review revealed few methodologically adequate studies of work-place alcohol interventions.</p> <p>Study designs, types of interventions, measures employed and types of work-places varied considerably, making comparison of results difficult. However, it appears from the evidence that brief interventions, interventions contained within health and life-style checks, psychosocial skills training and peer referral have potential to produce beneficial results.</p>
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