Brief school-based interventions and behavioural outcomes for substance-using adolescents†

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Background
Adolescent substance use is a major problem, in and of itself and because it acts as a risk factor for other problem behaviours. As substance use during adolescence can lead to adverse and often long-term health and social consequences, it is important to intervene early on in order to prevent progression to more severe problems. Brief interventions have been shown to reduce problematic substance use among adolescents and are especially useful for individuals who have moderately risky patterns of substance use. Such interventions can be conducted in school settings. This review set out to evaluate the effectiveness of brief school-based interventions for adolescent substance use.

Objectives
To evaluate the effectiveness of brief school-based interventions on reducing substance use and other behavioural outcomes among adolescents compared to another intervention or assessment-only conditions.

Search methods
We searched 10 electronic databases and six websites on evidence-based interventions, and the reference lists of included studies and reviews, from 1966 to March 2013. We also contacted authors and organisations to identify any additional studies.

Selection criteria
We included randomised controlled trials that evaluated the effects of brief school-based interventions for substance-using adolescents.

The primary outcomes were reduction or cessation of substance use. The secondary outcomes were engagement in criminal activity and engagement in delinquent or problem behaviours related to substance use.

Data collection and analysis
We used the standard methodological procedures outlined by The Cochrane Collaboration, including the GRADE approach for evaluating the quality of evidence.

Main results
Six studies involving 1139 participants were included in this review.

Overall the quality of evidence was moderate in the information provision comparison, and low or very low in the assessment only comparison. Reasons for downgrading the quality included risk of bias of the included studies, imprecision and inconsistency.

Our findings suggested that compared to information provision only, brief interventions (BIs) did not have a significant effect on any substance use (three studies, 732 participants, standardised mean difference (SMD) −0.06; 95% confidence interval (CI) −0.20 to 0.09) or delinquent-type behaviour outcomes among adolescents (two studies, 531 participants, SMD −0.26; 95% CI −0.54 to 0.02).

When compared to assessment-only controls, BIs had some significant effects on substance use and delinquent-type or problem behaviours, but high levels of heterogeneity existed between studies and it was not always possible to pool the results.

When the comparison was with assessment-only conditions, studies of individual interventions that measured BI effectiveness reported significantly reduced substance use in general and in two studies reduced frequency of alcohol use specifically. When the data were pooled, BIs reduced cannabis frequency (SMD −0.22; 95% CI −0.45 to −0.02) across three studies (n = 407). Cannabis quantity was also reduced by BIs in comparison to assessment only (SMD −0.27; 95% CI −0.54 to 0.02) and delinquent-type behaviour outcomes among adolescents (two studies, 531 participants, SMD −0.26; 95% CI −0.54 to 0.02).

Authors’ conclusions
There was limited quality evidence that brief school-based interventions were more effective in reducing substance use than the assessment-only condition, but were similar to information provision. There is some evidence for the effectiveness of BI in reducing adolescent substance use, particularly cannabis, when compared to assessment only. However, it is premature to make definitive statements about the effectiveness of brief school-based interventions for reducing adolescent substance use. Further high quality studies examining the relative effectiveness of BIs for substance use and other problem behaviours need to be conducted, particularly in low- and middle-income countries.