

# A multicomponent psychosocial intervention to reduce substance use by adolescents involved in the criminal justice system: the RISKIT-CJS RCT

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## Scientific summary

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# Scientific summary

## Background

Adolescence is a critical developmental stage when young people make behavioural and lifestyle choices that have the potential to affect their health and well-being into adulthood. Six per cent of youths aged 14 years and 11% of youths aged 15 years report having used cannabis in the last month, with 2% of 14-year-olds and 4% of 15-year-olds reporting use of a class A substance at least once.

Data from the Juvenile Cohort Study [Wilson E. *Youth Justice Interventions – Findings from the Juvenile Cohort Study (JCS)*. London: Ministry of Justice Analytical Series; 2013] show that 32% of young offenders indicate substance use is, at least in part, a reason for them associating in criminal activity. Substance use is defined as the use of alcohol, traditional illicit substances and legal highs, as well as inappropriate use of prescribed medication. Although the relationship between substance use and criminal activity is complex, it is clearly a major issue in the youth offending population.

To date, systematic reviews of interventions for substance-using offenders in criminal justice system (CJS) environments have not identified a clear evidence-based intervention strategy. Systematic reviews have revealed the paucity of good-quality research in the area and a lack of UK-based studies, with no scientifically rigorous studies focusing on young offenders. Importantly, previous research has identified what has been proven not to work, and this includes focusing on negative aspects of risk and risk abstinence. Promising intervention approaches identified include motivational interviewing and cognitive and socioemotional life skills training. In addition, there is emerging recognition of the importance of providing interventions in a structured manner and, with the young people's preference for peer group interventions, the importance of managing the potentially negative effects of labelling and peer influence. The RISKIT-Criminal Justice System (RISKIT-CJS) programme is a structured psychosocial intervention developed from evidence reviews and co-production with young people. Pilot research work among risk-taking adolescents in school settings found that the intervention was acceptable and associated with significant reductions in substance use.

## Objectives

- To conduct a prospective, pragmatic, randomised controlled trial (RCT) to evaluate the clinical effectiveness of the RISKIT-CJS intervention in reducing the frequency of substance use, compared with treatment as usual (TAU), among substance-using adolescents involved in the CJS.
- To evaluate the cost-effectiveness of the RISKIT-CJS intervention compared with TAU.
- To explore participants' and criminal justice staff's experience of the intervention and the acceptability of the methods employed.
- To assess the fidelity with which the intervention was conducted and to explore the role of fidelity, therapeutic alliance and baseline psychological factors on the outcomes observed.

## Methods

The study evaluated the clinical effectiveness of the RISKIT-CJS programme using a prospective, pragmatic RCT. The study was conducted across three settings [i.e. youth offending teams (YOTs), pupil referral units (PRUs) and substance misuse teams] across four geographical areas of England (i.e. South East, London, North West and North East). Embedded within the trial was a comprehensive qualitative

component that explored young people's and stakeholders' perspectives on the acceptability and usefulness of the RISKIT-CJS programme. Young people aged between 13 and 17 years (inclusive) who were eligible and consented were randomised with equal probability to TAU or to TAU augmented with the RISKIT-CJS programme. The RISKIT-CJS programme was a multicomponent psychosocial intervention, which involved two individual sessions, using motivational interviewing approaches, and two group sessions, employing cognitive-behavioural approaches. An initial individual session was followed by two half-day group sessions, delivered over consecutive weeks, followed by a final individual session. The primary end point for the study was at 12 months post randomisation and the primary outcome measure was the frequency of substance use, assessed as per cent days abstinent (PDA) from substances in the past 28 days, derived from the Timeline Followback 28.

## Results

Overall, 693 young people were assessed for eligibility into the trial, of whom 505 were eligible and consented. Among the 188 young people who did not participate, the main reason was declining consent ( $n = 55$ , 29%). Of the 505 participants, 246 (49%) were randomised to the RISKIT-CJS programme and 259 (51%) were randomised to TAU. At the primary end point, 275 (57%) participants were followed up, 130 (55%) in the RISKIT-CJS arm and 145 (59%) in the TAU arm. The most common substance used was cannabis (used by 76% of young people). Of those participants randomised to the RISKIT-CJS programme, 214 (87%) attended the first face-to-face session, but only 98 (40%) attended the first group session. Overall, 104 (42%) participants attended at least one individual session and one group session and 47 (19%) participants attended all sessions. Over the 12 months of the study, the PDA from substance use increased in both groups, with a median increase from 60.7% to 85.7% in the RISKIT-CJS arm and a median increase from 61.8% to 83.9% in the TAU arm. A fractional regression indicated no difference between the groups in terms of PDA from substance use at month 12 (odds ratio 1.14, 95% confidence interval 0.74 to 1.76). A similar finding was confirmed when missing data were imputed and a per-protocol analysis undertaken. No differences were observed between the groups on secondary outcomes of well-being and quality of life. The health economic analysis found that the RISKIT-CJS programme had a probability of being cost-effective of 69% when a commissioner's willingness-to-pay (WTP) threshold was zero. At an established WTP threshold of £20,000–30,000, the probability that the RISKIT-CJS programme was cost-effective reduced to 60–63%.

The qualitative analysis explored the views of young people who took part in the RISKIT-CJS programme and of stakeholders working in the services in which the programme was delivered. It addressed three key areas: (1) strengths and weaknesses, (2) usefulness and acceptability, and (3) implementation. The data covered 59 interviews with young people, 14 focus groups with young people, 23 interviews with professionals and 18 sets of research field notes. Several young people and stakeholders identified strengths of the programme, including the varied content and delivery styles and the opportunity to discuss issues in a safe and non-judgemental environment. Weaknesses of the programme that were identified included the inappropriateness of the programme for some participants, particularly older participants with entrenched substance use and criminal histories. In terms of usefulness, stakeholders tended to agree that the programme was more useful for the younger end of the cohort. Acceptability from the perspective of young people varied by setting, with those in PRUs, where group interventions are relatively common, considering the intervention more acceptable than those in YOTs.

Analysis of fidelity indicated high levels of fidelity in the delivery of motivational behavioural change interventions. The exploratory analysis of prognostic factors that may affect outcome identified three predictors. Higher score on the SOCRATES-7DS (Stages Of Change Readiness And Treatment Eagerness Scale – 7 Dimension) preparatory stage, that is, an indicator of lower motivational state, predicted lower PDA at month 12. Higher self-efficacy, that is, the confidence to resist substance use, particularly as it related to managing unpleasant emotions and physical discomfort, predicted higher PDA at month 12. When the fidelity measures and therapeutic analysis were included in the model for the RISKIT-CJS arm

only, the findings remained similar; however, there was a strong therapist effect, with strong therapeutic alliance predicting higher PDA at month 12.

## Conclusions

The results of the statistical and economic analysis showed no significant differences between the trial arms for any of the primary or secondary outcomes. This finding was consistent when underlying assumptions were varied and missing data imputed. The qualitative findings were more mixed, with those in PRUs finding the intervention the most useful and acceptable and those in YOTs finding the intervention least useful and acceptable.

## Trial registration

The trial is registered as ISRCTN77037777.

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