



Title **The Effectiveness and Cost Effectiveness of Behavioral Interventions for the Prevention of Sexually Transmitted Infections in Young People Aged 13–19: A Systematic Review and Economic Evaluation**

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Aim

To assess the effectiveness and cost effectiveness of behavioral interventions to prevent sexually transmitted infections (STIs) in young people.

Conclusions and results

A descriptive map of 136 studies meeting the inclusion criteria was produced. The results illustrated the predominance of North American trials of educational interventions in schools. Discussion with the project's advisory group enabled the prioritization of a policy-relevant subset of studies for systematic review. For inclusion, studies had to: 1) be a randomized controlled trial (RCT); 2) evaluate a behavioral intervention including factual information on STIs and skills development for negotiation of safer sex; 3) be delivered in a school; and 4) report a sexual behavioral outcome. In total, 15 RCTs met the inclusion criteria for systematic review. Most were conducted in the US, with only two in the UK. Of the 15 RCTs, 12 were judged to be methodologically sound and were included in the analysis of effectiveness. Few statistically significant differences were found between behavioral interventions and the comparators in terms of sexual behavior outcomes. A meta-analysis of condom use showed no overall statistically significant difference between study groups. However, significant differences favored the behavioral intervention for improving knowledge and some types of self-efficacy. None of the studies reported infection rates. Nine of the 12 methodologically sound RCTs conducted a process evaluation. Analysis of process evaluation data found that interventions were not always implemented as intended. Variation in implementation was affected by whether or not there was a supportive school culture, flexible school administration, and enthusiasm and expertise from teachers and peers in delivering interactive sexual health sessions, eg, role plays. Secondly, not all young people found the interventions as engaging or as acceptable as they might have done. Provider qualities (enthusiasm, credibility, and expertise in content and in managing classrooms) influenced whether or

not young people found the interventions acceptable and engaging. In a cohort of 1000 boys and 1000 girls aged 15 years, the economic model estimated that the behavioral interventions would avert 2 STI cases and save 0.35 QALY. The incremental cost effectiveness of the teacher-led and peer-led interventions was 20 223 pounds sterling (GBP) and GBP 80 782 per QALY gained respectively (compared to standard, non-skills-based, sex education). See Executive Summary link at www.hta.ac.uk/project/I666.asp.

Recommendations

See Executive Summary link at www.hta.ac.uk/project/I666.asp.

Methods

See Executive Summary link at www.hta.ac.uk/project/I666.asp.

Further research/reviews required

Further research could include long-term follow-up to assess the adoption and maintenance of safer sexual behavior into adulthood and evaluation of the impact of booster sessions. All trials should involve rigorous process evaluation to assess factors contributing to success or failure, and economic evaluation to assess cost effectiveness. Other markers of risk reduction (eg, STI testing) should be measured. Data are needed for economic evaluation of the group aged <16 years.