School-linked sexual health services for young people (SSHYP): a survey and systematic review concerning current models, effectiveness, cost-effectiveness and research opportunities


CRD summary
The authors reviewed the effectiveness of school-based or school-linked sexual health services for 11 to 18 year olds. They found no evidence of increased sexual activity and the services may have reduced unwanted conceptions and sexually transmitted infections in males. The quality of evidence was poor and of limited relevance to the UK. These conclusions are likely to be reliable.

Authors' objectives
To review the evidence on the effectiveness of school-based sexual health services and school-linked sexual health services. Reviews were also undertaken of qualitative studies of people's views about these services and quantitative and qualitative evidence regarding barriers and facilitators to use of the services. Only the review of effectiveness is appraised here.

Searching
MEDLINE, CINHAL, EMBASE, AMED, ASSIA, IBSS, ERIC, PsycINFO, The Cochrane Library, Science Citation Index and Social Science Citation Index were searched from 1985 to January 2008 without language restrictions. Search terms were provided. Several sources of UK unpublished and grey literature were searched: Social Care Institute of Excellence Research Register, NRR, ReFeR, Index to Theses and HMIC.

Study selection
Studies that evaluated school-based or school-linked sexual health services were eligible for inclusion provided they were delivered to individual children and young people between 11 and 18 years old who attended on a voluntary basis. Classroom or other group interventions and programmes such as abstinence programmes were excluded. Any comparator was eligible. The outcomes of interest were sexually transmitted disease and conception/pregnancy rates, rates of sexual activity, regretted sexual activity and use of contraception.

With the exception of one UK and one Brazil project, the included studies evaluated interventions in USA. In most of the US-based studies, sexual health services were provided in the context of school-based health centres. Most services were provided by a multi-professional team with medical input. Some studies evaluated services run by school nurses. Other services (including the UK Bodyzone Project, a school-based drop-in clinic) were provided by a multi-professional team without medical input. There were several condom availability projects that were unstaffed or delivered by volunteers or teaching staff. The age of young people using the services and overall rates of sexual activity reported by participants who did not receive the intervention varied considerably among studies.

The first 100 titles and abstracts were screened independently by two reviewers and a satisfactory inter-rater reliability score was achieved. The remaining records were screened by a single reviewer and were checked by a second reviewer if the first reviewer could not make a decision. The same method was used for screening the full papers.

Assessment of study quality
No quality assessment was undertaken. Studies were classified within a hierarchy of study designs: controlled before-and-after studies; quasi-controlled before-and-after studies; controlled quasi before-and-after studies; uncontrolled before-and-after studies; controlled case studies; and controlled cross-sectional studies. Controlled before-and-after studies were classed as higher quality. All other study designs were classed as lower quality.

The authors did not state how many reviewers were involved in categorising study design.
Data extraction
Comparative statistics were extracted only if they had already been calculated by the original investigators. Descriptive statistics were extracted. Data extraction was undertaken by two researchers; it was unclear whether data were extracted in duplicate.

Methods of synthesis
A narrative synthesis stratified by outcome was undertaken by one reviewer and checked by a second reviewer.

Results of the review
Thirty papers that evaluated 26 sexual health projects were included; there may have been overlap between papers in the projects evaluated. There were six controlled before-and-after studies (classed as higher-quality studies). The other studies were classed as lower-quality study designs.

Impact on rates of sexual activity
Nine studies reported recent sexual activity rates. Evidence from six better-quality studies and one poorer-quality study suggested that provision of school-based and school-linked sexual health services was not associated with an increase in sexual activity or (based on one better-quality study) a lowering of the age of first sexual intercourse. Based on one better-quality study there may have been a reduction in the proportion of students who reported high numbers of sexual partners.

Use of services by sexually active students
Data were available from nine studies on this outcome. There was wide variation in use of school-based condom availability schemes. Uptake was higher when condoms were available free of charge from baskets than from paid vending machines. Evidence on school-based health centres was limited to males who obtained condoms and females who obtained oral contraceptives, but not use of the wider range of sexual health services. Use of services to obtain contraception tended to be higher where contraceptives were provided on-site than where vouchers were provided to be redeemed elsewhere.

Contraceptive use
Data were available from 15 studies on this outcome. There was no good-quality evidence of a consistent association between increased contraceptive use and availability of sexual health services in school-based or school-linked clinics or health centres. There was no good-quality evidence of an statistically significant association between condom availability schemes and increased condom use.

Pregnancy
Seventeen studies reported data on this outcome. There was no high-quality evidence on the impact on the number of unwanted conceptions. There was evidence from one better-quality study of a reduction in live births to teenage mothers.

Sexually transmitted infections
Five studies reported this outcome. Evidence from a single poorer-quality study suggested that school-based screening and treatment for chlamydia and gonorrhoea may have been associated with reduced prevalence of chlamydia in males.

Authors' conclusions
Evidence for school-based and school-linked sexual health services was limited and uneven and relied largely on studies in USA. There was no evidence to suggest that these services contributed to earlier or higher levels of sexual activity. There was some evidence of positive benefits on teenage conceptions and sexually transmitted infections in males. There was an absence of methodologically rigorous studies.

CRD commentary
The review had explicitly stated inclusion criteria. Several relevant databases were searched for studies and these included potential sources of UK grey and unpublished literature. This was appropriate, as the main focus of the review was to identify studies relevant to the UK setting. Although acceptable methods were used to ensure reliability between reviewers in study selection and data extraction, the authors may not have been so robust as to carry out the processes in duplicate or use checking by a second reviewer. However, the synthesis was checked by a second reviewer and this minimised the risk of bias. Although robustness of the studies was discussed in detail, no formal quality assessment was undertaken.
A narrative synthesis was appropriate due to the diversity of the studies and the limited comparative data available. Where available, outcome data were presented clearly for each outcome and this enabled verification of the narrative synthesis.

The authors’ conclusions reflect the evidence presented in the report and are likely to be reliable.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice based on the systematic review of effectiveness.

**Research:** The authors stated that further research was required to determine whether provision of school-based or school-linked sexual health services in UK affected pregnancy rates and sexually transmitted infection rates.

**Funding**
National Institute for Health Research (NIHR) Health Technology Assessment Programme (project number 06/69/03).

**Bibliographic details**

**PubMedID**
20561461

**DOI**
10.3310/hta14300

**Original Paper URL**
http://www.hpa.org.uk/execsumm/summ1430.htm

**Other URL**
Link to record on HTA database: http://www.crd.york.ac.uk/crdweb/ShowRecord.asp?AccessionNumber=32008100351& UserID=0

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Adolescent; Adolescent Health Services /economics; Age Factors; Child; Cost-Benefit Analysis; Female; Great Britain; Health Education; Health Knowledge, Attitudes, Practice; Health Services Research; Health Surveys; Humans; Male; Models, Economic; Program Development; Reproductive Health Services /economics; School Health Services /economics; Sexual Behavior; Surveys and Questionnaires

**AccessionNumber**
12010005051

**Date bibliographic record published**
15/09/2010

**Date abstract record published**
09/11/2011

**Record Status**
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract
contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.