The effectiveness of adolescent reproductive health interventions in developing countries: a review of the evidence

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Speizer I S, Magnani R J, Colvin C E

CRD summary

This review assessed adolescent reproductive health interventions in developing countries. The authors concluded that most interventions appeared to have a positive effect on knowledge and attitudes, but the effect on behaviour was less consistent. The authors' conclusions are likely to be reliable.

Authors' objectives

To assess the effectiveness of adolescent reproductive health (RH) interventions in developing countries.

Searching

POPLINE, MEDLINE, ERIC and databases of international health or development organisations (e.g. the World Health Organization, the World Bank and the U.S. Agency for International Development) were searched. In addition, copies of evaluation studies in developing countries were sought from individuals and organisations working in the field of adolescent RH. Studies published in English, Spanish and French were eligible.

Study selection: study designs

Experimental, quasi-experimental studies and studies in which change could be attributed to the intervention were eligible for inclusion. These were classified as level 1 studies. Studies of other designs not meeting these standards for inferring causality were also included if they reported changes in RH outcomes post-intervention, or statistical associations between exposure to the intervention and outcomes. These were classified as level 2 studies.
Study selection: specific interventions

The inclusion criteria were not specified in terms of interventions, but it was clear that studies of adolescent RH interventions in developing countries were included. The review assessed interventions of the following setting or type:

- school-based programmes (education on HIV, AIDS and sexually transmitted infections, general RH education, integrated school and clinic for HIV and general education);
- mass media programmes (media only and media with social marketing);
- community-based programmes (youth development, peer educators and educational programmes);
- workplace programmes; and
- health facility-based programmes (youth-friendly services and youth centre).

Study selection: participants

Studies of adolescents (aged 10 to 19 years) and young adults (aged 20 to 24 years) were eligible for inclusion. Studies that targeted people outside of these age limits were only included if they presented results separately for adolescents and young adults.

Study selection: outcomes

The inclusion criteria were not specified in terms of outcomes. Most of the studies in the review assessed self-reported sexual and health-seeking behaviour (details of the outcomes assessed in the individual studies were presented in the paper). The review focused on assessing knowledge and attitudes, delayed sex, number of partners, contraceptive use and service use.

Study selection: how were decisions on the relevance of primary studies made?

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Validity assessment

Studies were graded as level 1 or level 2 using a hierarchy of study design (see Study Designs of Evaluations Included in the Review). The authors did not state how many reviewers performed the validity assessment.

Data extraction

The authors did not state how the data were extracted for the review, or how many reviewers performed the
data extraction. The extracted data included study location, sample size and characteristics at baseline, details of the intervention, study design, the methods used to measure outcomes, date of follow-up and results.

**Methods of synthesis: how were the studies combined?**

The studies were grouped with respect to programme setting and programme goal and a narrative synthesis was undertaken. The number of programmes showing a significant impact relative to the number of programmes examined was tabulated for each outcome.

**Methods of synthesis: how were differences between studies investigated?**

Differences between the studies were discussed in the paper.

**Results of the review**

Forty-one level 1 studies were included.

School-based interventions were assessed in 10 randomised controlled trials (RCTs; n=9,393), 1 post-test only with a comparison group (n=838), 7 panel studies with comparison groups (n=12,594) and 4 repeat cross-sectional studies with comparison groups (n=7,640).

Mass media interventions were assessed in 5 repeat cross-sectional studies with comparison groups (n=4,850 at baseline and n=6,238 at follow-up) and 1 repeat cross-sectional study without a comparison group (n=947 at baseline and n=1,575 at follow-up).

Community-based interventions were assessed in 1 RCT (n=720), 3 repeat cross-sectional studies with comparison groups (n=9,478) and 1 post-test only with a comparison group (n=1,693).

Workplace interventions were assessed in 3 panel studies with comparison groups (n=1,838) and 1 post-test only without a comparison group (n=2,417).

Health facility-based interventions were assessed in 3 repeat cross-sectional studies with comparison groups (2,083 people in the only study reporting the sample size) and 1 panel study with a comparison group (sample size not reported).

Unless specifically stated, all studies mentioned below are level 1 studies.

School-based programmes (22 level 1 studies).

All programmes: programmes varied widely in terms of the syllabus, content and format of delivery. The proportion of all studies reporting a significant positive impact was: 17 of 21 studies assessing knowledge and attitudes; 4 of 11 studies assessing delayed sex; 3 of 6 studies assessing the number of partners; 6 of 10 studies assessing contraceptive use; and 1 of 3 studies assessing service use.

Mass media programmes (6 quasi-experimental studies): 5 of 6 studies assessing knowledge and attitudes found a positive effect on knowledge and attitudes. Three of 4 studies that included social marketing found a positive effect on knowledge and attitudes. The studies found mixed results for behaviour outcomes.
Community-based programmes (5 studies including 1 RCT, 1 post-test study with comparison group and 3 repeated cross-sectional studies): the studies found that community-based programmes improved knowledge about sexually transmitted infections, knowledge and attitudes, educational level, employment, service use and delayed sex.

Workplace programmes (4 studies): all 4 studies found a positive effect on knowledge and attitudes. The 2 studies assessing contraceptive use found increased use with the programme.

Health-facility based programmes. Youth-friendly services (3 studies): the studies found that the programmes improved knowledge and increased service use and contraceptive use.

Authors' conclusions

Most interventions appeared to have a positive effect on knowledge and attitudes, but the effect on behaviour was less consistent.

CRD commentary

The review question was clear in terms of the study design and age of the participants. The inclusion criteria were not explicitly defined in terms of the intervention or outcomes. Several relevant sources were searched and attempts were made to minimise publication and language bias. However, full details of the search strategy were not reported: the dates searched, terms used and a full list of databases searched were not stated. The methods used to select the studies and extract the data were not described, so it is not known whether any efforts were made to reduce errors and bias. The number of potentially eligible level 2 studies was not reported. The validity assessment was limited to a consideration of some aspects of study design.

A narrative synthesis was appropriate given the differences among the studies. Some reasons for these differences between the studies were discussed in the paper. The authors' conclusions appear to be reliable.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that there is a need for further rigorous assessment of adolescent RH interventions.

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