COCHRANE CORNER

# Interventions for preventing unintended pregnancies among adolescents

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South Africa (SA) has an increasingly high rate of unintended pregnancies among adolescents, which are coupled with poor contraception knowledge. We highlight a systematic review that evaluated the effects of prevention interventions for unintended adolescent pregnancies, and provide implications for practice that are relevant to the SA context. The findings suggest the need for multifaceted interventions that are aligned with adolescent sexual and reproductive health best practices to address the unmet contraception knowledge gap, as well as unintended pregnancies among adolescents.

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Pregnancy during adolescence is considered both an antecedent and consequence of school dropout in South Africa (SA).[1] Pregnancy during adolescence has implications that may result in detrimental health, educational, social and economic outcomes.[2] Many SA adolescents find themselves in an environment with a growing burden of HIV, where sexual and reproductive health needs are influenced by the numerous social determinants of health, such as poverty. The SA National Adolescent Sexual and Reproductive Health and Rights Framework Strategy[3] recommends the strengthening of interventions for adolescents, thus aiming to reduce the incidence of sexually transmitted infections and HIV, as well as unplanned and unintended pregnancies. Many interventions aimed at addressing unintended adolescent pregnancies have been evaluated, with varying evidence regarding what works best.[4]

## Intervention and methods

We highlight a systematic review evaluating the effects of interventions to prevent unintended adolescent pregnancies.[5]

Educational and contraceptive-promoting interventions are included, which are intended to increase knowledge and change attitudes regarding the associated risk of unintended pregnancies. Interventions promoting correct and consistent use of contraceptives and delaying sexual debut were also included. The primary outcome of the review was unintended pregnancy, with sexual debut and condom use at last sex among the secondary outcomes. Table 1 outlines the eligible population, intervention, comparison and outcome (PICO).

The authors conducted a comprehensive search, without any language restrictions, using the Cochrane Central Register of Controlled Trials, MEDLINE, Embase, Dissertations Abstracts Online, Grey Literature Network, HealthStar, PsycINFO, CINAHL, POPline, LILACS, Social Science Citation Index, Science Citation Index, and Specialist Health Promotion Register – until November 2015. Researchers in the field of adolescent sexual and reproductive health (SRH) were contacted with regard to unpublished or ongoing trials. All records were assessed independently by two review authors to determine eligibility. The authors used a standard data form to extract relevant details, including methodological quality assessed using the Cochrane risk-of-bias tool.[6] All outcomes were analysed using Review Manager (RevMan). Overall certainty was assessed with Grading of Recommendations, Assessment, Development and Evaluations (GRADE).

## Results

The review included 53 randomised controlled trials, with a total of 105 368 participants, including 4 studies from low- and middle-income countries and the remaining studies from high-income countries. A large proportion of the studies were conducted in schools, and interventions were categorised as: (*i*) educational; (*ii*) contraceptive promoting; or (*iii*) multicomponent, consisting of educational and contraceptive-promoting interventions.

Multicomponent interventions probably reduced the risk of unintended pregnancy in the intervention group compared with the control group by 34% (risk ratio (RR) 0.66; 95% confidence interval (CI) 0.50 - 0.87; 4 studies; 1 905 participants; moderate certainty). There was little or no difference reported between the control and intervention groups for sexual debut and condom use at last sex in multicomponent interventions. The effects of only educational interventions on unintended pregnancy were not measured. There was low-certainty evidence that educational interventions may result in little or no difference in sexual debut. However, there may be an increase in self-reported condom use at last sex (RR 1.18; 95% CI 1.06 - 1.32; 2 studies; 1 431 participants; low certainty). Contraceptive-promoting interventions alone probably have little or no effect on the risk of unintended pregnancy (RR 1.01; 95% CI 0.81 - 1.26; 2 studies; 3 440 participants; moderate certainty) or condom use at last sex (RR 0.95; 95% CI 0.87 - 1.04; 2 studies; 3 091 participants; high certainty). The findings are summarised in Table 2.

**Table 1. Review of the population, intervention, comparator and outcome (PICO) elements**

| | |
|---|---|
| **Population** | **Male and female adolescents, 10 - 19 years of age** |
| Intervention | Educational interventions: health and/or counselling component |
| | Contraceptive-promoting interventions |
| | Contraceptive education with (or without) contraceptive supply |
| | Multicomponent interventions (referred to as multiple interventions in the review) |
| | Combination of educational and contraceptive-promoting interventions |
| Comparator | None/standard curriculum |
| Outcome | Primary outcome |
| | Unintended pregnancy |
| | Secondary outcomes |
| | Knowledge and attitudes regarding risk of unintended pregnancies, initiation of sexual intercourse, use of birth-control methods, abortion, childbirth or sexually transmitted infections |
| Study design | Randomised controlled trials (individual or cluster) |

**Table 2. GRADE summary of findings for effects of intervention compared with no intervention/standard curriculum***

| | | Anticipated absolute effects | | | | |
|---|---|---|---|---|---|---|
| **Intervention** | **Outcome** | **With no intervention/ standard curriculum** | **With specified intervention (95% CI)** | **RR (95% CI)** | **Participants, *n* (studies, *n*)** | **Quality of evidence (GRADE)** |
| Multiple interventions (cluster RCTs) | Unintended pregnancy | 67/1 000 | 33/1 000 (15 - 73) | 0.50 (0.23 - 1.09) | 3 149 (5) | Low |
| | Sexual debut | 253/1 000 | 21/1 000 (172 - 263) | 0.84 (0.68 - 1.04) | 8 608 (7) | Very low |
| | Condom use at last sex | 585/1 000 | 591/1 000 (544 - 637) | 1.01 (0.93 - 1.09) | 2 620 (4) | Moderate |
| Multiple interventions (individual RCTs) | Unintended pregnancy | 116/1 000 | 76/1 000 (58 - 101) | 0.66 (0.50 - 0.87) | 1 905 (4) | Moderate |
| | Sexual debut | 410/1 000 | 406/1 000 (304 - 542) | 0.99 (0.74 - 1.32) | 1 769 (4) | Moderate |
| | Condom use at last sex | 840/1 000 | 840/1 000 (798 - 891) | 1.00 (0.95 - 1.06) | 796 (3) | Moderate |
| Educational interventions (cluster RCTs) | Sexual debut | 227/1 000 | 215/1 000 (161 - 288) | 0.95 (0.71 - 1.27) | 672 (2) | Low |
| | Condom use at last sex | 261/1 000 | 308/1 000 (277 - 345) | 1.18 (1.06 - 1.32) | 1 431 (2) | Low |
| Contraceptive-promoting interventions (individual RCTs) | Unintended pregnancy | 83/1 000 | 84/1 000 (67 - 105) | 1.01 (0.81 - 1.26) | 3 440 (2) | Moderate |
| | Condom use at last sex | 367/1 000 | 348/1 000 (319 - 381) | 0.95 (0.87 - 1.04) | 3 091 (2) | High |

GRADE = Grading of Recommendations, Assessment, Development and Evaluations (working group grades of evidence: high quality = confident that the true effect lies close to that of the estimate of the effect; moderate quality = moderately confident in the effect estimate, the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different; low quality = the true effect may be substantially different from the estimate of the effect; very low quality = very little confidence in the effect estimate – the true effect is likely to be substantially different from the estimate of the effect); CI = confidence interval; RR = risk ratio; RCT = randomised controlled trial.
*Population: male and female adolescents 10 - 19 years of age; setting: all settings; intervention: educational, contraceptive-promoting or multiple interventions; comparison: no additional activity/intervention to existing conventional population-wide activities.

## Conclusions

The authors conclude that multicomponent interventions, including educational and contraceptive-promoting components, had the potential to reduce unintended pregnancies among adolescents.

### Implications for policy and practice in South Africa

Pregnancy during adolescence can have a devastating effect on health and wellbeing, lasting into adulthood, and undermining the health and wellbeing of the next generation. It is a major contributor to maternal and child mortality, and leads to dropping out of school, lower educational achievement, other negative socioeconomic effects, and intergenerational cycles of ill-health and poverty.[7-9] To ensure targeted action and to track progress in achieving adolescent health, a *Lancet* commission on adolescent health and wellbeing proposed 12 headline indicators encompassing health needs, health risks and social determinants of health. In recognition of the impact of adolescent pregnancy, one of these headline indicators is 'met need for contraception'.[10]

In SA, adolescent women aged 15 - 19 years have a poorer knowledge regarding contraception, a higher unmet need for contraception and a higher prevalence of unintended pregnancies than adults.[11] The *SA Demographic and Health Survey 2016* found that 16% of adolescent girls 15 - 19 years of age had begun bearing children.[12] The systematic review in this article can inform SA initiatives to meet adolescents' needs for contraception and prevent unintended pregnancies.[5] The review confirms that to prevent unintended pregnancies, it is not enough to provide health promotion in schools and other settings to increase adolescents'

motivation to access contraceptive services. The review provides evidence that to make a difference, initiatives need to be multifaceted, a finding which is aligned to best practice for promoting SRH.[13] Effective strategies include a combination of interventions to generate demand for adolescent SRH services, and interventions to improve the supply and accessibility of high-quality adolescent-responsive SRH services. In SA, a school is one of the appropriate platforms for demand generation interventions, because the system is tasked with providing comprehensive SRH education by means of the life-orientation curriculum.[14] Yet, school-based educational initiatives may not adequately address SRH challenges faced by young people[15] and may ignore adolescent girls' and young women's narratives of sexuality,[16] thus perpetuating stigmatisation of adolescent sexuality. In designing effective strategies, it is important to recognise and address the structural constraints adolescents face in accessing contraceptives from health services. Issues such as stigmatisation of adolescent sexuality, their use of SRH services and lack of support from parents and health workers act as barriers to youth-friendly SRH services.[17] The early, pioneering SA National Adolescent Friendly Clinic Initiative (NAFCI) is an example of a multifaceted intervention to promote adolescent SRH.[18] The long-term impact attributed to NAFCI is a lower likelihood of teen childbearing, enabling adolescents to complete more years of schooling and earn higher wages when they are young adults.[19] This exemplifies the potential for achieving 'triple dividend' with effective interventions to prevent unintended pregnancy during adolescence: better health and wellbeing during adolescence and adulthood, which will benefit the next generation.[20]

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