Behavioural interventions for HIV positive prevention in developing countries: a systematic review and meta-analysis

Caitlin E Kennedy,[a] Amy M Medley,[a] Michael D Sweat[b] & Kevin R O'Reilly[c]

Objective To assess the evidence for a differential effect of positive prevention interventions among individuals infected and not infected with human immunodeficiency virus (HIV) in developing countries, and to assess the effectiveness of interventions targeted specifically at people living with HIV.

Methods We conducted a systematic review and meta-analysis of papers on positive prevention behavioural interventions in developing countries published between January 1990 and December 2006. Standardized methods of searching and data abstraction were used. Pooled effect sizes were calculated using random effects models.

Findings Nineteen studies met the inclusion criteria. In meta-analysis, behavioural interventions had a stronger impact on condom use among HIV-positive (HIV+) individuals (odds ratio, OR: 3.61; 95% confidence interval, CI: 2.61–4.99) than among HIV-negative individuals (OR: 1.32; 95% CI: 0.77–2.26). Interventions specifically targeting HIV+ individuals also showed a positive effect on condom use (OR: 7.84; 95% CI: 2.82–21.79), which was particularly strong among HIV-serodiscordant couples (OR: 67.38; 95% CI: 36.17–125.52). Interventions included in this review were limited both in scope (most were HIV counselling and testing interventions) and in target populations (most were conducted among heterosexual adults or HIV-serodiscordant couples).

Conclusion Current evidence suggests that interventions targeting people living with HIV in developing countries increase condom use, especially among HIV-serodiscordant couples. Comprehensive positive prevention interventions targeting diverse populations and covering a range of intervention modalities are needed to keep HIV+ individuals physically and mentally healthy, prevent transmission of HIV infection and increase the agency and involvement of people living with HIV.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Historically, efforts to prevent human immunodeficiency virus (HIV) infection have focused on reducing HIV infection risk among individuals with HIV-negative (HIV−) or unknown serostatus. Initially, this reflected concerns over stigmatization and discrimination associated with interventions targeting HIV-infected (HIV+) individuals and limited availability of HIV testing services.[1] Recently, however, there has been a dramatic scale-up of HIV testing, antiretroviral therapy (ART) availability and associated care worldwide. Consequently, many more people living with HIV now know their serostatus and are living longer and healthier lives.[2]

Today, programme planners recognize that continued reliance on general HIV prevention messages may limit the effectiveness and sophistication of prevention strategies.[3] It may be more efficient to change behaviour among fewer HIV+ individuals than many HIV− individuals.[4] Recent data show that in many sub-Saharan African countries, most new cases of HIV infection occur in HIV-serodiscordant couples, and rates of HIV disclosure and condom use in such couples remain low.[4,5] Focusing attention on HIV-serodiscordant couples may therefore be one of the most effective ways of reducing HIV transmission. Efforts to reduce stigma have alleviated some of the concerns regarding prevention programmes aimed at HIV-infected persons.[4] As a result, HIV prevention activities increasingly target individuals who know that they are HIV+.[6] This strategy is known as positive prevention, although it has also been called prevention for, by or with positives,[1,7–11] and, most recently, positive health, dignity and prevention.[12] There is no clear consensus on what positive prevention entails, but it generally includes activities centred on four main goals: (i) keeping HIV+ individuals physically healthy; (ii) keeping such persons mentally healthy; (iii) preventing further transmission of HIV; and (iv) involving people living with HIV in prevention activities, leadership and advocacy.[4,13] Fig. 1 outlines a conceptual framework that shows how positive prevention goals are related to selected interventions and outcomes. The framework is broad and includes biomedical as well as behavioural interventions. The scope of our review was limited to behavioural interventions, which allowed for a more focused examination of one aspect of positive prevention.

Three previous reviews have examined behavioural interventions targeting people living with HIV.[14–16] However, almost all the included studies had been conducted in the United States of America. There have been no similar reviews of positive prevention interventions in developing country settings. Given the scale-up of HIV testing and treatment in developing countries and the unique social, economic and epidemiologic features of these settings, the purpose of this paper was to assess the efficacy of HIV prevention interventions with HIV+ individuals in developing country settings.

Methods

Objectives

This review is part of a larger series of systematic reviews of HIV-related behavioural interventions in developing coun-

[a] Department of International Health, Johns Hopkins Bloomberg School of Public Health, 615 N Wolfe Street (E5033), Baltimore, MD, 21205-1996, United States of America.

[b] Medical University of South Carolina, Charleston, USA.

[c] Department of HIV and AIDS, World Health Organization, Geneva, Switzerland.

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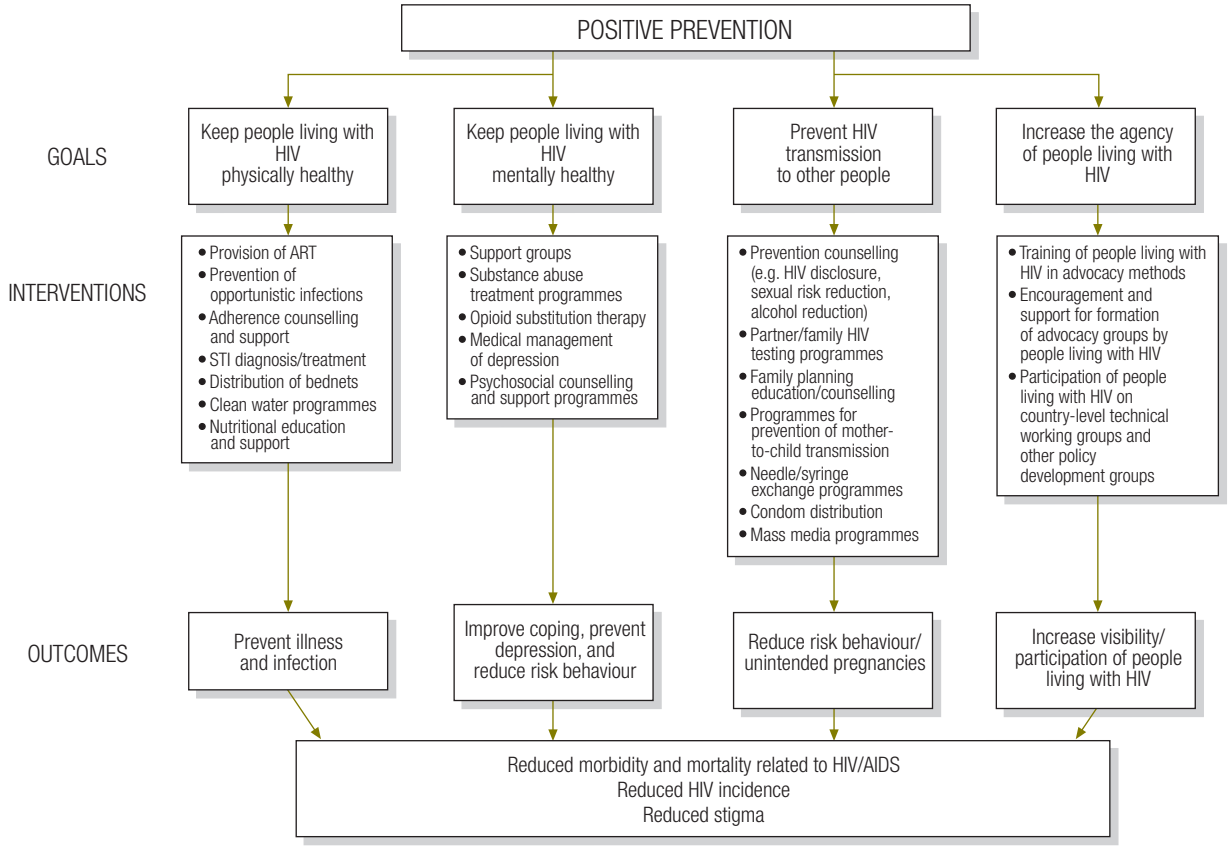
Fig. 1. **Conceptual framework showing goals, selected interventions and outcomes of positive prevention**[a]



AIDS, acquired immunodeficiency syndrome; ART, antiretroviral therapy; HIV, human immunodeficiency virus; STI, sexually transmitted infection.
[a] "Positive prevention" denotes preventive interventions that target HIV+ individuals.

tries. Other interventions reviewed include mass media interventions,[17] psychosocial support,[18] treatment as prevention,[19] voluntary counselling and testing[20] and peer education.[21] We used standardized methods across all reviews and report results according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement.[22]

People living with HIV may be reached by interventions that target a broad audience of both HIV+ and HIV− individuals or by interventions that target them specifically. Our review therefore had two objectives. The first was to assess the evidence for a differential effect of interventions by serostatus. In other words, do interventions that target both HIV+ and HIV− individuals work differently in these two groups? The second was to assess the effectiveness of interventions targeted specifically at HIV+ individuals.

Inclusion criteria

Studies were included in the review if they met the following criteria: (i) an HIV-specific behavioural intervention was implemented; (ii) the intervention was conducted in a developing country, defined on the basis of The World Bank categories of low-income, lower-middle income or upper-middle income economies[23]; (iii) the evaluation design compared post-intervention outcomes using either a pre/post or multi-arm study design (including post-only exposure analysis); (iv) behavioural, psychological, social, care or biological outcome(s) related to HIV prevention were presented; (v) pre-post or multi-arm outcomes of interest were stratified by known or clinically suspected HIV serostatus of the participants (objective 1), or the intervention specifically targeted HIV+ individuals (objective 2); and (vi) the article was published in a peer-reviewed journal between January 1990 and December 2006. No language restrictions were applied; English translations were obtained when necessary. If two articles presented data for the same project and target population, the article with the longest follow-up was retained for analysis.

Search strategy

First, we reviewed all articles included in the larger series of systematic reviews of HIV-related behavioural interventions in developing countries to determine whether they met the criteria for positive prevention. Our review encompassed articles previously published and reviews of interventions currently in progress, including condom social marketing, partner notification, free condom distribution, abstinence-based interventions, comprehensive sex education interventions, needle/syringe programmes, family planning for HIV+ women and behavioural counselling.

Second, we searched electronic databases specifically for positive prevention articles. A standard set of search terms (available at: http://www.jhsph.edu/dept/ih/globalhealthresearch/HIVpositiveprevention.pdf) was generated and entered into five electronic databases, all of which covered the full range of included dates: the United States National Library of Medicine's Gateway system (including Medline), PsycINFO, Sociological Abstracts, Excerpta Medica

Database (EMBASE) and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). Links to medical subject heading terms and explosion of terms were used where available.

Third, we hand-searched the tables of contents of four journals: *AIDS*, *AIDS and Behaviour*, *AIDS Care* and *AIDS Education and Prevention*. We also examined the reference lists of included articles to identify articles we might have missed. This process was iterated until no new articles were found.

Study selection

Initial inclusion/exclusion of studies was based on title and abstract review by a member of the study staff. Remaining citations were then screened by two senior study staff on the basis of the inclusion criteria above. The results were merged for comparison, and discrepancies were discussed to establish consensus. Final inclusion/exclusion of studies was based on a thorough reading of the full-text article.

Data extraction

Each article meeting the inclusion criteria underwent data extraction by two independent reviewers. Data were entered into a systematic coding form that included detailed questions on intervention, study design, methods and outcomes. The two completed coding forms were compared and discrepancies were resolved by a third reviewer.

Rigour score

The rigour of the study design for included articles was assessed by means of an eight-point scale, with one point awarded for each of the following items: (i) prospective cohort; (ii) control or comparison group; (iii) pre-/post-intervention data; (iv) random assignment of participants to the intervention; (v) random selection of subjects for assessment, or assessment of all subjects who participated in the intervention; (vi) follow-up rate of 80% or more; (vii) comparison groups equivalent on socio-demographic measures; and (viii) comparison groups equivalent at baseline on outcome measures.

Meta-analysis

We converted effect size estimates to the common metric of an odds ratio, since all studies compared two groups and reported dichotomous outcomes. We used standard meta-analytic methods to derive standardized effect size estimates[24] and used Comprehensive Meta-Analysis V.2.2 (Biostat, Inc., Englewood, United States of America) to conduct statistical analyses. For each outcome, we entered odds ratios (ORs) directly into the program or calculated ORs from data reported in articles. ORs were pooled using random effects models. We attempted to contact authors when published articles provided insufficient information to make these calculations.

Meta-analysis was conducted for outcomes reported in at least three studies. For both study objectives, the only outcome that met this criterion was male condom use. Condom use was defined in terms of the dichotomous proportion of respondents who either: (i) did or did not use condoms, or (ii) did or did not have unprotected sex. When articles presented multiple measures of condom use (e.g. condom use at last sexual encounter, consistent condom use in the last 3 months, condom use with primary/non-primary partners), we calculated an average effect size across measures within each study and used the average effect size estimate in cross-study meta-analysis. When articles presented multiple follow-up times, we used the comparison with the longest follow-up. We also summarize results for outcomes that were common across two studies, although data from these studies were not meta-analysed: contraceptive use, multiple sex partners and HIV serostatus disclosure.

Results

From over 9000 articles identified in the initial search, 230 were determined to be potentially relevant and 18 ultimately met our inclusion criteria (Fig. 2).[25–42] These 18 articles reported on 19 studies, as one article described both an individual and a couples-based intervention.[32] Of the studies included in the review, 15 were conducted in sub-Saharan African countries, 1 in Asia (China), 1 in South America (Brazil), and 2 (reported in one article) in three countries (Kenya, United Republic of Tanzania and Trinidad and Tobago). Target populations included heterosexual adults in 12 studies; HIV-serodiscordant couples in 5; pregnant women in 1, and commercial sex workers in 1. Most studies ($n = 14$) were conducted in a clinic setting, 2 in participants' homes and 2 in both clinic and home settings. One study did not report the setting. Table 1 and Table 2 (available at: http://www.who.int/bulletin/volumes/88/8/09-068213) provide further information on individual study characteristics and rigour scores. On average, studies received 3.9 out of 8 possible points for study design and rigour. There was no clear association between study rigour and results, most likely owing to multiple sources of heterogeneity across studies (in setting, target population, intervention and comparison groups) and to differences in study quality.

Differential effect of interventions by serostatus

Nine studies addressed our first objective.[25–32] Seven were conducted with heterosexual adults, 1 with pregnant women and 1 with female commercial sex workers. Eight evaluated HIV counselling and testing interventions and 1 evaluated a family planning education programme. Most interventions also included condom distribution. For this objective, 2 outcomes were measured across multiple studies: condom use and contraceptive use.

Condom use

Four studies with a combined study population of 4322 generated 6 discrete effect sizes for condom use among HIV+ and HIV− individuals.[26,27,32] Among HIV+ individuals ($n = 889$), pooled data suggest that interventions had a positive effect on condom use (OR: 3.61; 95% confidence interval, CI: 2.61–4.99) (Fig. 3). The Q statistic of 2.82 showed no statistically significant heterogeneity ($P = 0.73$; $I^2 = 0.000$). Among HIV− individuals from these same studies ($n = 3433$), pooled data show no statistically significant intervention effect on condom use (OR: 1.32; 95% CI: 0.77–2.26) (Fig. 4). The Q statistic of 33.14 showed statistically significant heterogeneity ($P = 0.0001$; $I^2 = 84.92$). Meta-analysis results for HIV+ and HIV− individuals differed significantly ($P = 0.002$).

The 4 studies that stratified condom use outcomes by serostatus were all evaluations of HIV counselling and testing interventions, and all included comparisons of couples versus individual counselling. Therefore, we conducted meta-analysis comparing couples versus individual counselling for both HIV+ and HIV− individuals. Meta-analysis results showed no difference between couples and individual counselling with respect to condom use among either

HIV+ or HIV− individuals (HIV+ pooled effect size: OR: 1.78; 95% CI: 0.48–6.54; $Q = 29.15$; $P = 0.0.0001$; $I^2 = 89.71$; HIV− pooled effect size: OR: 0.63; 95% CI: 0.15–2.62; $Q = 35.09$; $P = 0.0001$; $I^2 = 91.45$). Meta-analysis results for couples versus individual counselling among HIV+ and HIV− individuals were not significantly different ($P = 0.29$).

One study[27] is an outlier (Fig. 4) with an OR below 1, indicating reduced condom use, probably because of the nature of the comparison group. While other studies employed before–after or intervention–control comparisons, this study compared individuals who received couples counselling with those who received individual counselling. Among HIV− individuals, couples counselling resulted in decreased condom use compared with individual counselling, likely because couples where both partners tested negative felt safe foregoing condom use.

Contraceptive use

Two studies[25,26] examined the effect of HIV counselling and testing on contraceptive use, stratified by serostatus. Both studies were conducted by the same research team among women attending antenatal and paediatric clinics in Rwanda. Both showed a limited effect of HIV testing on contraceptive use. In the first study, HIV+ women showed less hormonal contraceptive use over time from baseline to the 12-month follow-up assessment, while HIV− women showed no change in hormonal contraceptive use over time.[25] In the second study, HIV+ women were significantly more likely to be using spermicides than HIV− women.[26]

Interventions targeting HIV+ individuals

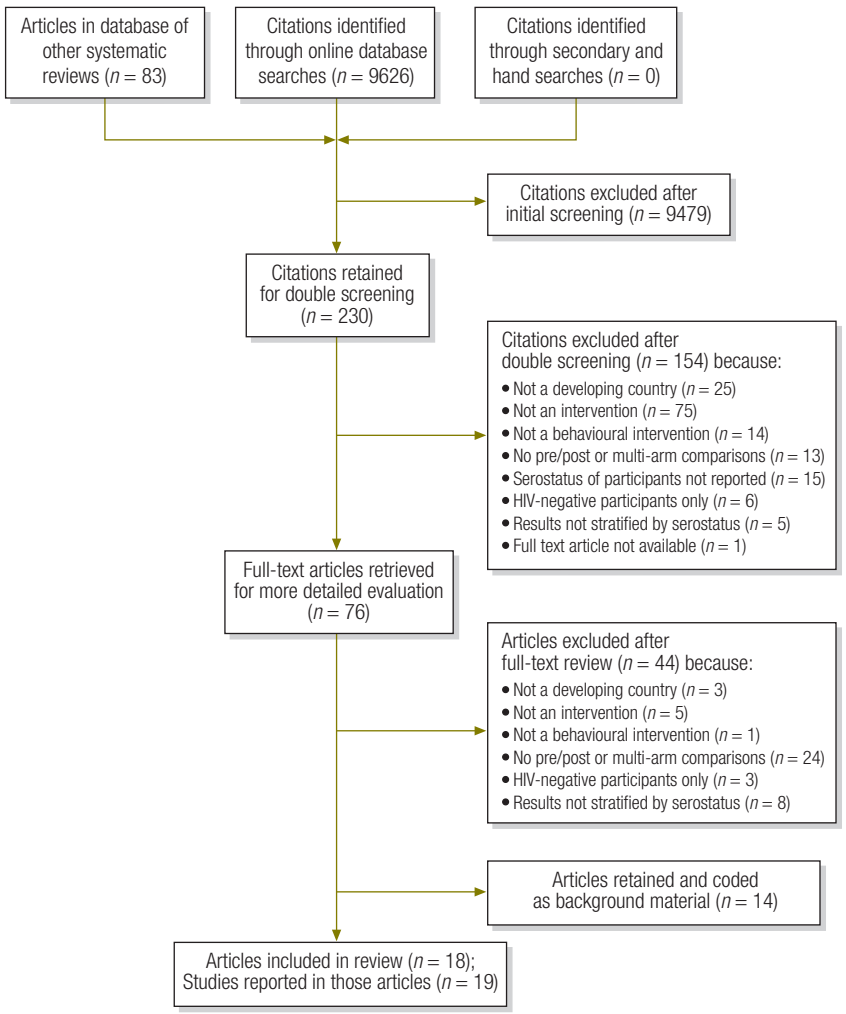
Ten studies addressed our second objective: 5 with HIV+ heterosexual adults and 5 with HIV-serodiscordant couples.[33–42] All of the latter studies evaluated HIV counselling and testing interventions. Studies with HIV+ heterosexual adults all evaluated counselling and group education interventions, although 2 also included HIV care and treatment.[36,40] For this objective, three outcomes were measured across multiple studies: condom use, multiple sex partners and HIV disclosure.

Condom use

Seven studies with a combined study population of 1801 generated seven discrete effect sizes for condom use.[34,36–40,42] Pooled, these data show a strong and significant effect on condom use (OR: 7.84; 95% CI: 2.82–21.79) (Fig. 5). The Q statistic of 141.45 showed statistically significant heterogeneity ($P = 0.0001$; $I^2 = 95.76$).

Condom use results were also stratified by target population. Four studies measured condom use following counselling and group education among HIV+ heterosexual adults.[36–38,40] Pooled data from these studies ($n = 1489$) show a trend towards increased condom use associated with the intervention, but this trend did not reach significance (OR: 2.08; 95% CI: 0.93–4.62; $P = 0.074$). The Q statistic of 40.56 showed statistically significant heterogeneity ($P = 0.0001$; $I^2 = 92.60$). Three studies measured condom use following HIV counselling and testing among HIV-serodiscordant couples.[34,39,42] Pooled data from these studies ($n = 312$) show a very strong and highly significant intervention effect on condom use (OR: 67.38; 95% CI: 36.17–125.52). The Q statistic of 0.96 showed no statistically significant heterogeneity ($P = 0.62$; $I^2 = 0.000$) across these three studies. Meta-analysis results for condom use across these two population groups were significantly different ($P = 0.002$).

Fig. 2. **Disposition of citations during the search and screening process in systematic review of positive prevention[a] interventions in developing countries**

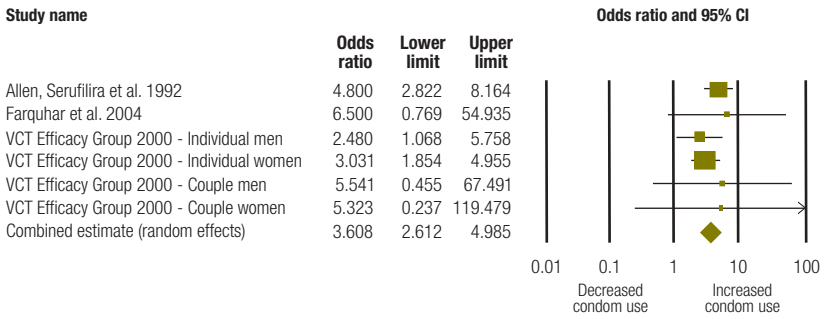


HIV, human immunodeficiency virus.
[a] "Positive prevention" denotes preventive interventions that target HIV+ individuals.

Multiple sex partners

Two studies examined the effect of education and counselling among HIV+ heterosexual adults on the outcome "multiple sex partners", and both suggested a positive although modest intervention effect.[38,40] In Zambia, the percentage of participants reporting sexual activity with non-primary partners decreased from 2% at baseline to 0.04% at 6- and 12-month follow-up assessments (significance not reported).[38] In the United Republic of Tanzania, the

Fig. 3. **Meta-analysis of condom use among HIV positive individuals following a behavioural intervention**



CI, confidence interval; VCT, voluntary counselling and testing.

percent of participants reporting sexual activity with non-primary partners decreased from 31.8% at baseline to 21.4% at the 3-month and 18.2% at the 6-month follow-up assessment (baseline to 3-month follow-up, not significant; baseline to 6-month follow-up, $P = 0.05$).[40]

HIV status disclosure

Two studies examined disclosure of HIV status as an outcome.[40,42] Both evaluated counselling and education interventions with HIV+ heterosexual adults, and both measured disclosure before and after the intervention. Both found a significant increase in HIV status disclosure following the intervention. In the United Republic of Tanzania, HIV status disclosure to anyone increased from 18.8% at baseline to 84.4% at the 12-month follow-up ($P < 0.05$).[40] In China, HIV status disclosure to spouses increased from 3.6% at baseline to 11.9% at follow-up ($P = 0.04$), but rates remained low.[42]

Discussion

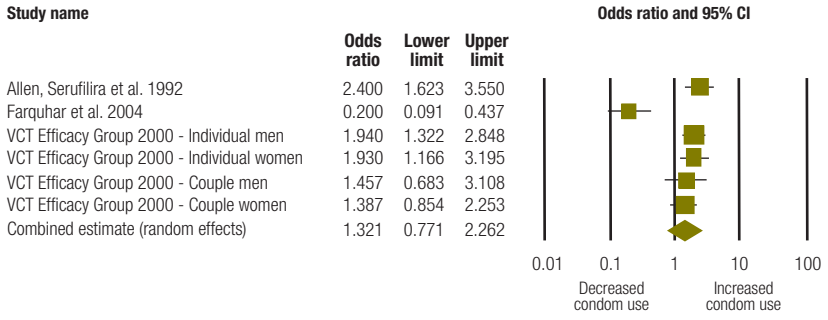
Of the 19 studies included in our review, 9 targeted both HIV+ and HIV− individuals and stratified results by serostatus. Almost all were HIV counselling and testing interventions which can more easily report results by serostatus than other behavioral interventions. Meta-analysis, though based on limited data, suggests that such interventions may have a stronger impact on condom use among HIV+ participants than among HIV− participants. The remaining 10 studies evaluated behavioural interventions specifically targeting people living with HIV, which were evenly divided between HIV counselling and testing for HIV-serodiscordant couples and group counselling and education for HIV+ adults. Combined, these interventions showed a positive effect on condom use, but this effect was strikingly larger among serodiscordant couples. Together, these findings suggest that positive prevention interventions are effective at changing behaviour in developing country settings and should be expanded.

These results are consistent with those found in the broader literature from both developing and developed country settings. Several previous systematic reviews of voluntary HIV counselling and testing also suggest that such interventions have the strongest impact on behaviour change among HIV+ individuals and serodiscordant couples.[20,43–45] Our finding that interventions targeting people living with HIV in developing countries are generally effective is consistent with findings from three previous systematic reviews covering interventions conducted primarily in the United States.[14–16]

The results of this review should be viewed in the light of its limitations. Unlike other systematic reviews of positive prevention interventions based almost entirely in the United States,[14,16] we chose not to limit our inclusion criteria to controlled trials. Instead, we employed broad study design criteria to capture a range of effectiveness data. Given the lack of rigorous trials conducted in developing countries, this strategy allowed us to include more available intervention evaluation data. However, this approach also increases the risk of bias. In particular, self-selection bias and self-reporting bias may have compromised results, as only four studies randomly assigned participants to the intervention, and most outcomes were based on self-reporting. Studies scored an average of only 3.9 out of 8 possible points for study design rigour. Limitations of the available evidence base suggest that future research should use more rigorous designs and measure biological outcomes when appropriate. Nevertheless, although we employed broad study design inclusion criteria, we still required studies to be published in peer-reviewed journals. While our experience has shown that unpublished studies and programme reports tend to be of lower methodological quality, there may be innovative or well designed studies in the grey literature that were not included as evidence in this review.

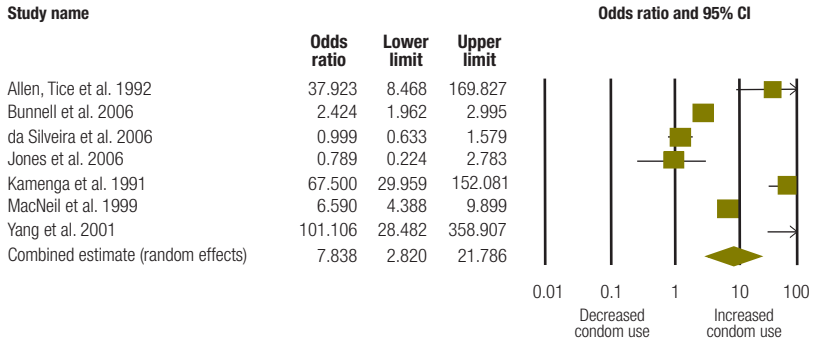
We were also limited by the lack of consistency of outcome measures across studies and were only able to meta-analyse results for condom use, which is only one of many behaviours for the prevention of HIV infection. In addition, our condom use measure does not fully capture the variety of sexual behaviours, such as oral sex and mutual masturbation, which may pose significantly less risk when engaged in without a condom. Although meta-analysis provides a succinct summary of results from diverse studies, the need to standardize outcome measures can obscure nuances in actual levels of risk across studies and respondents.

Fig. 4. **Meta-analysis of condom use among HIV negative individuals following a behavioural intervention**



CI, confidence interval; VCT, voluntary counselling and testing.

Fig. 5. **Meta-analysis of condom use in studies of positive prevention[a] interventions**



CI, confidence interval.

[a] "Positive prevention" denotes preventive interventions that target HIV+ individuals.

The studies included in our review were conducted among a relatively narrow range of target populations. Almost all targeted general adult populations, HIV-serodiscordant couples or general populations of HIV+ adults; only one study was conducted with commercial sex workers. Because we had limited or no data on high-risk populations such as commercial sex workers, injection drug users and men who have sex with men, we were unable to stratify our results by these important populations, and it is unclear to what extent the results can be generalized to them. Further research into positive preventive interventions with such populations is warranted for both ethical and epidemiological reasons. First, they are often at highest risk for both HIV infection and its negative health consequences in both generalized and concentrated HIV epidemics, and they are often underserved by HIV prevention interventions. In addition, sex workers can easily be infected with HIV by clients and then transmit it to their partners, offspring and other clients. Similarly, injection drug users can transmit HIV infection to both sex and drug-sharing partners.

In addition, the 19 studies included in this review represent a relatively narrow range of interventions: 14 HIV counselling and testing interventions and 5 group education and counselling interventions for HIV+ individuals. We found no articles – even in our larger database of 84 articles from previous systematic reviews of HIV behavioural interventions in developing countries – that evaluated interventions such as needle/syringe exchange programmes, condom social marketing, peer education or mass media campaigns or other environmental/structural interventions. In general, the studies in our database either did not target HIV+ individuals or did not assess the serostatus of participants.

Our conceptual model for positive prevention is comprehensive; it covers a broad range of interventions designed to keep people living with HIV physically and mentally healthy, prevent HIV transmission to other people and increase the involvement of HIV+ individuals in prevention activities. Previous World Health Organization (WHO) guidelines for essential prevention and care interventions for HIV+ individuals in resource-limited settings have been similarly comprehensive, although focused on interventions in the health sector.[13] While recognizing that not all interventions will be needed or equally appropriate in all countries, the WHO guidelines recommend 13 biomedical and behavioural interventions seen as low in cost and of particular importance for people living with HIV.[13] The behavioural interventions identified in this review did not cover the full spectrum of possible behavioural interventions for the prevention of HIV infection, and they were rarely linked with biomedical interventions such as the provision of ART.More comprehensive programming will be necessary to reduce the spread of HIV and achieve the WHO/Joint United Nations Programme on HIV/AIDS (UNAIDS) goal of universal access to comprehensive HIV prevention, treatment , care and support for people living with HIV by 2010.[13]

Behavioural and biomedical interventions for HIV+ prevention can be conducted either as part of routine HIV care and treatment in medical settings or in community-based settings. As ART treatment for HIV+ individuals becomes increasingly available in developing countries, routine medical visits will provide one practical setting for prevention among such individuals, as they have consistent contact with providers. However, in most developing country settings, ART is not initiated until a patient's CD4+ lymphocyte count drops below 200 cells/μl.[46] A large number of HIV+ individuals do not meet this criterion and therefore have minimal interaction with the health system during the infection's long latency period. Community-based interventions are needed to reach HIV+ individuals in developing countries who know their serostatus but are not regularly accessing medical care. Such interventions also offer the opportunity for involvement and leadership by people living with HIV. Although current interventions are promising they have the potential to be much more effective if designed and led by people living with HIV themselves. This review included interventions conducted in community settings, but few such interventions were identified; the lack of existing literature in this area limits the usefulness of the review findings. Finally, although great strides have been made in increasing access to HIV testing, the majority of people living with HIV in developing countries remain untested and unaware of their serostatus. Interventions must continue to encourage HIV testing and counselling, especially within couples, as HIV serodiscordance is common[4] and rates of HIV status disclosure to sexual partners are low.[5]

In conclusion, behavioural interventions targeting HIV+ individuals in developing countries appear to be effective, especially among HIV-serodiscordant couples. These findings have several public health implications. First, the global expansion of HIV testing and treatment programmes provides a mechanism for both identifying such individuals and providing HIV prevention messages and services targeted towards them. Efforts should be made to integrate HIV prevention messages and services into HIV care and treatment settings as well as HIV testing and counselling programmes. Moreover, because many HIV+ individuals have limited contact with health care settings, community-based programmes should also provide HIV prevention messages and services to them. Community and clinic-based programmes should be linked to provide comprehensive care to people living with HIV. Comprehensive positive prevention programmes should

focus not only on preventing transmission of HIV but also on maintaining the physical and mental health and the dignity of the individual. Although this review focused on behavioural interventions, a full set of behavioural and biomedical interventions should be implemented to stem the spread of HIV and improve the health and quality of life of HIV+ individuals in developing countries. ■

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الملخص

فعالية التدخلات السلوكية الوقائية الإيجابية الخاصة بفيروس العوز المناعي البشري (فيروس الإيدز) في البلدان النامية: مراجعة منهجية وتحليل تلوي

الغرض تقييم البيّنات الخاصة بفروق تأثير التدخلات الوقائية الإيجابية بين المصابين وغير المصابين بفيروس الإيدز في البلدان النامية، وتقييم فعالية التدخلات التي استهدفت المعايشين لفيروس الإيدز.

الطريقة أجرى الباحثون مراجعة منهجية وتحليلاً تلوياً للبحوث الخاصة بالتدخلات السلوكية الوقائية الإيجابية في البلدان النامية والتي نُشرت خلال الفترة من كانون الثاني/يناير 1990 وكانون الأول/ديسمبر 2006. واستخدم الباحثون طرقاً معيارية للبحث واستخلاص المعطيات، وحسبوا أحجام التأثير الجماعي باستخدام نماذج التأثيرات المعشاة.

الموجودات تلاءمت تسع عشرة دراسة مع خصائص الإدراج في المراجعة. وفي التحليل التلوي كان للتدخلات السلوكية تأثير أقوى على استخدام العازل الذكري بين الإيجابيين لفيروس الإيدز (نسبة الأرجحية: 3.61؛ وفاصلة الثقة 95%: 2.61 – 4.99) مقارنة بالسلبيين لفيروس الإيدز (نسبة الأرجحية: 1.32؛ فاصلة الثقة 95%: 0.77 – 2.26). كما أظهرت التدخلات التي استهدفت على وجه الخصوص الإيجابيين للفيروس تأثيراً إيجابياً على استخدام العازل الذكري (نسبة الأرجحية 7.84؛ فاصلة الثقة 95% 2.82 – 21.79)، وكان التأثير أقوى على وجه الخصوص بين الزوجين المختلفين في الحالة المصلية (نسبة الأرجحية: 67.38؛ فاصلة الثقة 95%: 36.17 – 125.52). وكانت التدخلات المدرجة في هذه المراجعة محصورة النطاق (أكثرها كانت التدخلات الخاصة بمشورة واختبار فيروس الإيدز) ومحصورة في الفئات السكانية المستهدفة (أكثرها أجريت بين البالغين المشتهين للجنس المغاير أو الأزواج المختلفين في الحالة المصلية).

الاستنتاج تشير البيّنات الحالية إلى أن التدخلات التي تستهدف المعايشين لفيروس الإيدز في البلدان النامية أدت إلى زيادة استخدام العازل الذكري، ولاسيما بين الأزواج المختلفين في الحالة المصلية. وهناك حاجة إلى التدخلات الوقائية الإيجابية الشاملة التي تستهدف مختلف الفئات السكانية وتغطي مجالاً من الأنماط الوقائية للحفاظ على الصحة البدنية والنفسية للإيجابيين لفيروس الإيدز، ومنع انتقال العدوى بالفيروس، وزيادة نشاط ومشاركة المعايشين للفيروس.

Résumé

Interventions comportementales pour la prévention du VIH dans les pays en développement : révision systématique et méta-analyse

Objectif Évaluer les éléments probatoires d'un effet différentiel des interventions de prévention efficaces chez les sujets infectés et non infectés par le virus de l'immunodéficience humaine (VIH) dans les pays en développement, et évaluer l'efficacité des interventions s'adressant de manière spécifique aux personnes vivant avec le VIH.

Méthodes Nous avons conduit une révision systématique et une méta-analyse des articles scientifiques sur les interventions comportementales de prévention efficaces dans les pays en développement publiés entre janvier 1990 et décembre 2006. Des méthodes standardisées de recherche et d'abstraction de données ont été utilisées. La taille des effets globalisés a été calculée en utilisant des modèles à effets aléatoires.

Résultats Dix-neuf études présentaient les critères d'inclusion. D'après la méta-analyse, les interventions comportementales ont eu une plus forte incidence sur l'utilisation du préservatif chez les individus séropositifs (VIH+) (rapport de cotes, RC: 3,61 ; intervalle de confiance à 95 %, IC: 2,61-4,99) que chez les individus séronégatifs (RC: 1,32; IC à 95 %: 0,77-2,26). Les interventions ciblant spécifiquement les individus VIH+ ont également montré un effet positif sur l'utilisation du préservatif (RC: 7,84; IC à 95 %: 2,82- 21,79), particulièrement élevé parmi les couples sérodifférents (RC: 67,38; IC à 95 %: 36,17-125,52). Les interventions comprises dans cette analyse étaient limitées à la fois dans leur but (la plupart étaient des interventions de conseil et de dépistage du VIH) et dans leurs populations cibles (la plupart ont été réalisées auprès d'adultes hétérosexuels ou de couples sérodifférents).

Conclusion Les preuves dont nous disposons actuellement suggèrent que les interventions ciblant les personnes vivant avec le VIH dans les pays en développement augmentent l'utilisation du préservatif, notamment chez les couples sérodifférents. Des interventions de prévention positives complètes, ciblant des populations diverses et couvrant un éventail de modalités d'intervention, sont nécessaires pour maintenir les individus VIH+ en bonne santé physique et mentale, prévenir la transmission de l'infection à VIH et augmenter l'action et l'implication des personnes vivant avec le VIH.

Conclusión Los datos actuales sugieren que las intervenciones dirigidas a las personas que conviven con el VIH en los países en desarrollo incrementan el uso del preservativo, especialmente entre parejas serodiscordantes al VIH. Las intervenciones exhaustivas de prevención positiva dirigidas a distintas poblaciones y que abarcan varios tipos de intervenciones son necesarias para mantener la salud física y psíquica de las personas VIH+, prevenir la transmisión de la infección por el VIH y aumentar la capacidad de actuación y de implicación de las personas que conviven con el VIH.

Resumen

Intervenciones conductuales para la prevención del VIH en los países desarrollados: revisión sistemática y metanálisis

Objetivo Evaluar los datos relacionados con el efecto diferencial de las intervenciones favorables en prevención entre individuos infectados y no infectados por el virus de la inmunodeficiencia humana (VIH) en los países en desarrollo y evaluar la eficacia de las intervenciones dirigidas específicamente a las personas que conviven con el VIH.

Métodos Se llevó a cabo una revisión sistemática y un metanálisis de artículos sobre intervenciones conductuales para la prevención positiva en países en desarrollo, publicados entre enero de 1990 y diciembre de 2006. Se emplearon métodos estandarizados de búsqueda y de extracción de datos. Las magnitudes de los efectos agrupados se calcularon mediante la utilización de modelos de efectos aleatorios.

Resultados Diecinueve estudios cumplían los criterios de inclusión. Por lo que respecta al metanálisis, las intervenciones conductuales tuvieron un mayor impacto sobre el uso del preservativo entre los individuos VIH-positivos (VIH+) (oportunidad relativa, OR: 3,61; intervalo de confianza del 95%, CI: 2,61 - 4,99) que entre los individuos VIH-negativos (OR: 1,32; CI del 95%: 0,77 - 2,26). Las intervenciones específicas dirigidas a los individuos VIH+ también tuvieron un efecto positivo en el uso del preservativo (OR: 7,84; CI del 95%: 2,82 - 21,79) y, en especial, entre las parejas serodiscordantes al VIH (OR: 67,38; CI del 95%: 36,17 - 125,52). Las intervenciones incluidas en esta revisión estuvieron limitadas tanto por el alcance de las mismas (la mayoría eran intervenciones de asesoramiento y pruebas del VIH) como por las poblaciones diana (la mayoría se llevaron a cabo entre adultos heterosexuales o parejas discordantes al VIH).

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