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Evaluating HIV/AIDS education and prevention models targeting minorities, mobile and migrant populations: A systematic literature review

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Abstract

Abstract. The review concerns educational programs on HIV prevention for migrants. Different strategies were adopted: street outreach services, educational materials, counselling, voluntary peer education, and community events. Interventions included education training, information activities, and developing educational materials to train volunteer or mediators. Socio-economic status regarding racial ethnic and national minorities has been defined one of barriers to access to testing. “Social accounting” is poorly practised. The focus on HIV/AIDS prevention for migrants revealed obstacles to access of public services related to stigma and discriminations. Solutions could be in multilevel approaches, including transcultural mediators, on health education.

Key words: barriers, education, hiv prevention, immigrants, migration, mobility, policy, stigma, transcultural mediators.

Introduction

The aids&mobility europe project 2008-11 aims to improve health literacy, HIV awareness and access to health services by involving young migrants as trained and certified transcultural mediators in delivering health promotion to their own communities.
The project design includes a systematic literature review of published scientific articles on the effectiveness of HIV prevention with similar methodologies and/or target populations. The literature review then serves as a frame of reference for the project’s evaluation and the publication of its results. We conducted it to answer the following questions:

- What are the outcomes of HIV health promotion activities/drug related programs that aim to increase access to counselling, testing and treatment?
- How are these outcomes measured?
- How is effectiveness calculated? How does this compare to economic modelling? Is ‘social accounting’ (Gray R.H., 1987) practiced?
- What are the policy recommendations for sustainability of such programs?

In this article we present the results of the analysis of relevant research papers identified through a systematic database search.

Methods

For the literature search we used a method developed by Monash University (Melbourne, Australia),and applied by the Centre for Clinical Effectiveness at Southern Health (Victoria, Australia) for the development of evidence-based clinical practice guidelines. It limits the amount of material for analysis where adequate, sound research summaries already exist and orders them in a hierarchy that reflects methodological quality based on the likelihood of research design-related as affecting the reported results.

We first went to databases that enabled us to identify systematic reviews, then to evidence-based clinical practice guidelines or health technology assessments, then to individual randomised controlled trials. Where we found adequate, sound summaries of the best available evidence in this way, we did not include individual research trials in the report. Where we did not find adequate summaries, our search strategy became considerably broader and incorporated individual studies These may be more prone to bias, less generalisable, or have other difficulties as identified in our critical appraisal of their methodology.
For this reason, when citing research, we describe the quality of evidence appropriate for each study using the definitions in the Australian National Health & Medical Research Council's (NHMRC) 'Levels of Evidence'[3] guide

Table 1: Levels of evidence

The National Health & Medical Research Council's Levels of Evidence (NHMRC Australia): A Guide to the Development, Implementation and Evaluation of Clinical Practice Guidelines (NHMRC 1998). Level I Evidence obtained from a systematic review or meta-analysis of all relevant randomised controlled trials. Level II Evidence obtained from at least one properly designed randomised controlled trial. Level III -1 Evidence obtained from well-designed pseudo-randomised controlled trials (alternate

[3] National Health and Medical Research Council. **A guide to the development, implementation and evaluation of clinical practice guidelines**. *Commonwealth of Australia, 1999*. Available at http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/cp30.pdf

allocation or some other method).

-2 Evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case control studies or interrupted time series with a control group.

-3 Evidence obtained from comparative studies with historical control, two or more single-arm studies or interrupted time series without a parallel control group.

Level IV Evidence obtained from case series (either post-test or pre-test and post-test),opinions of respected authorities, descriptive studies, reports of expert (i.e. consensus) committees, case studies.

We selected literature that included one or more of the following:

Study Subjects	Migrants, mobile populations and ethnic minorities
Interventions	HIV/AIDS awareness, prevention education and testing activities (e.g. educational sessions conducted by transcultural staff and/or volunteers)
Comparisons	No intervention
Outcomes	Increased rate of participation in programs, increased awareness, improved access to prevention, diagnosis and care

We used these search terms:

HIV/AIDS terms	HIV prevention
Migration terms	immigrants, migration, mobility
Education terms	education, transcultural mediators
Policy terms	barriers, stigma, policy

In addition, we applied the following restrictions:

- English language,
- publication status (published articles, abstracts from relevant conferences)
- date of publication (between 1998 and 2008).

We searched the following databases and websites (Systematic MeSH search):

- MEDLINE access with key words
- Cochrane Library
- PsycINFO
- HSTAT
- Centers for Disease Control and Prevention (CDC) of Atlanta
- Bulletin of the World Health Organization (WHO)
- Bulletin of the New York Academy of Medicine

The literature search was conducted in April 2009.

Results:

We screened 110 papers in total. Of those, we considered 80 as potentially appropriate and evaluated 70 in detail. Five were excluded, leaving sixty-five relevant papers for further analysis. Of these, we evaluated nineteen dealing with cultural, social and structural barriers, twenty-six dealing mainly with HIV counselling and testing, and twenty papers dealing with strategies and policy interventions.

A summary of the ranking process is provided in table format in Annex 1. It is divided into three parts: background, reports and discussion. Each row contains the article citation, the study design and associated level of evidence according to the NHMRC guidelines (1998) as well as a précis of objectives, methods, results and conclusions. References are listed again in the bibliography according to the order of articles in Annex 1.

Table 2 shows the distribution of papers according to the NHMRC's Levels of Evidence. We found no systematic review or meta-analysis. We ranked 15 at level I and 8 papers each at levels II and III. We identified 36 publications as case series (either post-test or pre-test and post-test), opinions of respected authorities, descriptive studies, reports of expert (i.e. consensus) committees or case studies and therefore ranked them at level IV.

Table 2: Distribution of papers across the NHMRC Levels of Evidence

Papers		Evidence level I	Evidence level II	Evidence level III	Evidence level IV
Total screened	110	N/A	N/A	N/A	N/A
Potentially appropriate studies evaluated	80	N/A	N/A	N/A	N/A
Evaluated in detail	70	N/A	N/A	N/A	N/A
Studies excluded	5	N/A	N/A	N/A	N/A
Papers considered for further review:	65	15	8	8	36
• Papers dealing with cultural , social and structural barriers	19	6	2	3	9
• Papers dealing mainly with HIV counselling and testing	26	1	4	3	18
• Papers dealing mainly with strategies and policy interventions	20	6	2	2	10

We are reasonably confident that these articles represent the most important findings published to date based on our inclusion criteria, search and reporting constraints.

Discussion

Several studies describe the effectiveness of HIV-prevention for different risk groups: men who have sex with men (MSM), youth, and injecting drugs users (IDU) (Auerbach 2000, CDC 2001, Fernandez 1998). HIV-prevention programs for mobile populations are reported to use multilevel interventions to reduce stigma (Fakoya 2008, Kouznetsov 2008, Mahajan 2008, Waldo 2000)

We found that HIV prevention and treatment programmes reportedly adopt different strategies to reduce the impact of cultural, social and structural barriers on their effectiveness: street outreach services (Tenner 1998), educational materials (Albarracin 2008), anonymous testing and counselling protocols (Kellerman 2006), voluntary peer education (Kocken 2001, Khumalo-Sakutukwa 2008) or special community events (Simpson 1998).

Several studies based evaluation on pre- and post-test questionnaires (Lazarus 2006, Poudel, 2005) and semi-structured interviews (Pronyk 2002). Projects reported from different European countries (Netherlands:.Kocken 2001, Germany: Salman 2006).adopted the model of transcultural mediation (Mayer 2008) within HIV prevention campaigns .

One randomized controlled study (Albarracìn 2008) assessed the effect of different levels of health information and educationmodel interventions on participation in prevention counselling, one pseudo-randomized study (Kocken 2008) and a case-control study analysed changes in sexual behaviour as an outcome (Chad 2004). One descriptive paper looked at the feasibility of training outreach workers, women's' self-help group leaders and local barbers as low-literacy peer educators and the resulting new HIV diagnoses and referrals and HIV/AIDS knowledge as outcomes (Van Rompay 2008). One case-control study compared HIV-related sexual behaviour among mobile and non-mobile women and men in social venues in Burkina Faso (Khan 2008) and found that mobile women were more likely to report new sexual partnerships and transactional sex.

Mobile voluntary counselling and testing (Forsyth 2002, Morin 2006, Genberg 2008) is the common method for evaluating the efficacy of HIV-programs in Africa. Bateganya et al in 2007 compared randomized controlled trials and non randomized trials on home-based HIV voluntary counselling for the improvement of HIV testing in developing countries. The authors of this review limited their recommendations to the large scale use of home-based testing programmes (which are rarely implemented in Europe).

Different studies analyzed strategies for HIV counselling and testing in migrant populations with and without peer education (Bischofberger 2008, Kocken 2001, Martijn 2004). Another study showed that migrant-based mediator training was able to establish targeted prevention campaigns in a variety of ethnic populations (Salman 2006). The complexities of multilevel interventions limited the interpretation of results of HIV prevention activities. Two papers looked at the impact of medical and psychological support (de Wit 2008, Woods 1998), three papers analysed volunteer mediators' interventions in couples and families (de Guzman

2001, Kerr-Pontes 2004, Mallow 2004), one study analysed social and sexual networks (Rhodes 2006) and two papers looked at institutions and entire communities (Coates 2008, Villacorta 2007).

Eschel (2008) conceptualized socio-economic status (SES) as a factor in comparing racial, ethnic and national minorities and identifies it as one of the barriers to access to testing for migrants). Shedling (2006) also discusses this in a paper on immigrant groups in the New York metropolitan area and Gillespie-Johnson(2008) in a paper on immigrant women of Jamaican origin.

The WHO's recommendations and the European AIDS Clinical Society (EACS) guidelines make reference to HIV and to increasing uptake to hiv test and early care in vulnerable populations (Koenen 2008). The recommendations for health promotion activities aiming to increase access to counselling, testing and treatment are routine HIV-testing in health care settings for persons aged 13-64 years, ensuring appropriate and early access to care and treatment, and facilitating access to social support.

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It is well acknowledged that the efficacy of HIV-prevention is improved by social support. The social impact of such programmes could be measured by accounting for e.g. volunteer support. A review of the efficacy of workplace prevention and policy recommendations in AIDS prevention programmes came to the conclusion that "social accounting" is only poorly practised (Coates 2007). A review of HIV/AIDS policies asks for pressure *on developed and developing country governments, civil society (including business) and global agencies working on HIV/AIDS to make their programmes more accountable to the public (Collins 2008).*

Local strategies (in nationals programs) to reduce HIV transmission and future directions of policy interventions were described in different articles. A systematic review looked at strategies combating stigma on people with HIV-infection (Mahajan 2008). A number of international initiatives that had not achieved good results were described by Szekeres 2008. There are several different examples of implementing measures to improve HIV/AIDS care programmes: collaboration with non-governmental organizations (NGO's) in India (Van Rompay 2008), a combined intervention with microfinance for AIDS and gender equity (IMAGe) in South Africa (Pronk 2006), health care facilities and AIDS-related health information in Hong Kong (Bandyopadhyay 2002) and the Swiss 'Migrants Project' (Haour-Knipe 2000) .

Conclusions

The focus on HIV/AIDS prevention for migrants revealed obstacles to accessing public services. These obstacles are related to cultural traditions, stigma and discrimination.

We were unable to identify any systematic reviews that evaluated the effect of HIV-education programmes that include mediators for minority migrant populations.

Peer education models in HIV-prevention programs appear to be the best intervention model to achieve outcomes such as increases in HIV-testing (Van Rompay 2008 , Kaplan 2002) and intention to use condoms (Kocken 2001, Poudel 2005).

The limitations of the selected articles include:

- There is no standard approach to HIV prevention in migrant populations and ethnic minorities;
- most randomized controlled studies to determine the efficacy of behavioural/social interventions are community-based projects;
- prospective programmes did not account for the impact of the interventions on migrant populations and ethnic minorities.

The analysis of policies and strategies reveals two main motivating factors for HIV/AIDS prevention programmes: to limit the spread of infection and the potential negative economic impact of an outbreak.

Authors suggest to offer programmes in a number of different languages and within the respective communities (Delor 2000, Barten 2007, Kocker 2001, Michele 2006), particularly for mobile populations, to evaluate the true risk in each ethnic group, and to ensure information about HIV/AIDS, access to health services and appropriate health screening.

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