

LEARNING/TEACHING

Exploring the Evidence-Practice Gap: A Workshop Report on Mixed and Participatory Training for HIV Prevention in Southern Africa

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ABSTRACT **Background:** *The gap between what is known and what is done about public health (the evidence-practice gap) needs addressing. One solution may be through mixed and participatory training in accessing and appraising research.*

Approach: *Residential workshops trained policy-makers, practitioners and researchers from seven southern-African countries in evidence-based decision-making for HIV prevention. They included training in accessing, critiquing and summarizing research, whilst remaining responsive to the priorities of the participants.*

Reflections: *Drawing on the participants' feedback and our observations, we reflected on how these workshops may have addressed the evidence-practice gap. We identified three areas: access to research, understanding of research and the relevance of research. The workshops enabled a small group of people to access relevant research in a timely manner. However, more needs to be done to disseminate research findings appropriately as any long-term impact will be affected by the political and economic context in which participants work. We are confident that the participants went away with increased understanding of the purposes and processes of research, but for research to make a difference, the research community needs to emphasise more the publication of research findings written for potential users. The workshops were most successful in influencing researchers to consider bridging the evidence-practice gap by producing more relevant research, applicable to policy-makers and practitioners.*

Conclusion: *This intensive intervention has the potential to reduce the evidence-practice gap for HIV prevention in southern Africa by training non-researchers to engage with research, whilst providing an opportunity for researchers to engage with policy-makers and practitioners.*

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Background

This paper provides a reflective description of mixed and participatory training in evidence-based decision-making to bridge the evidence-practice gap for HIV prevention in southern Africa.¹ We provide the background to this approach and our reasons for adopting it in this setting. We then describe the design and content of the training and reflect on the extent to which it helped to bridge the evidence-practice gap.

The Evidence-Practice Gap

Large scale problems in public health call for innovation (Campbell & Cornish, 2003): changes in services to address new needs; service providers with better access to, and understanding of, research evidence about addressing those needs; and fundamentally, up-to-date evidence relevant to health problems. These innovations offer different approaches to closing the gap between what is known (i.e. about a problem and how to deal with it) and what is done (i.e. how services are currently addressing the problem) – the “evidence-practice gap”.

Much of the literature about the evidence-practice gap focuses on managing change, and falls under the remit of Getting Research Into Policy and Practice (GRIPP) programmes (Haines & Donald, 2001). GRIPP techniques include: developing educational materials for practitioners; organising conferences where researchers and practitioners can share their different perspectives; undertaking consensus development with researchers and practitioners; lobbying local opinion leaders to adopt research-based practice; using research-informed reminders to prompt changes in practice; and multifaceted interventions that use a range of techniques (Grimshaw *et al.*, 2001). Most of these techniques assume that the research evidence involved is relevant, reliable and provides a clear indication of how services could be improved. One technique that does not make this assumption involves developing evidence-based guidelines, for which appraising the relevance and reliability of the research evidence is part and parcel of the process (Shekelle *et al.*, 1999).

The critical appraisal of research evidence is traditionally undertaken by professional researchers with skills in research synthesis. An alternative approach involves giving policy-makers and practitioners the evidence and the skills to assess its relevance and reliability (Colquhoun & Bunday, 1981; Oliver *et al.*, 1998; Oliver *et al.*, 2001a). This approach helps to address a general reluctance on the part of policy-makers and practitioners to adopt evidence-based policy and practice. For example, health promotion specialists often rely

¹The workshop report (Stewart, 2001) and training manual (Ellison *et al.*, 2001) are available at <http://hivsa.ioe.ac.uk/hivsa/>.

on the opinions of a small circle of professionals rather than on published information about the effectiveness of health promotion (Shadish & Epstein, 1987; Bonell, 1996; Oliver *et al.*, 2001b). Even where training has improved service providers' and commissioners' skills, putting these into practice tends to be constrained by a lack of time and resources, such as access to relevant and reliable evidence in the workplace (Oliver *et al.*, 2001b). Health promotion specialists have even expressed antipathy towards sources of reliable evidence of effectiveness. They perceive them to be narrow and lacking relevance to the social, emotional and functional aspects of people's lives. This perception is a fundamental barrier to getting evidence into practice. Involving practitioners and potential service users in guiding research itself is one possible solution (Oliver, 2001).

Bridging the Gap

Mixed and participatory research and training² is one approach for involving practitioners (and practitioners' perspectives) in turning research into practice. The participatory approach seeks to bring together professionals with the views and experiences of other constituencies (such as communities, service users, policy-makers and service commissioners) (de Koning & Martin, 1996); to facilitate critical thinking for developing shared solutions (Acharaya & Verma, 1996). Mixed-working can help to cross boundaries between different constituencies, enable them to share perspectives, experiences and ideas (Tomcsanyi, 2000) and potentially establish new and shared understanding (Pirrie *et al.*, 1998).

Evidence-based decision-making provides many examples of training and research that are mixed and participatory. Different groups are brought together, encouraged to engage with research and offered training in critically appraising research. Indeed, evidence-based decision-making may itself provide a solution to the evidence-practice gap for major public health issues, offering a model in which research evidence is located, filtered and synthesized transparently and systematically, using an agreed framework to consistently identify relevant and effective interventions.

HIV/AIDS in Southern Africa

The HIV/AIDS pandemic is one public health crisis for which solutions are urgently sought. There are estimated to be 26.6 million people living with HIV/AIDS in sub-Saharan Africa and millions more affected by the disease (UNAIDS, 2003). This has far reaching implications for family life, health, education and the economy and political stability throughout the region. In 2003 alone, US\$ 4.7 billion was made available by the international community for HIV/AIDS-related development work (World Bank, 2003). Research has mushroomed with over 40 journals now dedicated to HIV/AIDS.

²Mixed training includes people from different sectors, roles or professions. Participatory training involves recipients in its design, content, methods or evaluation.

As we have seen, critical appraisal skills workshops for policy-makers and practitioners have sought to address the evidence-gap in terms of educating potential users of research. Mixed and participatory training in evidence-based decision-making can also provide an opportunity to explore the evidence-gap from different perspectives. HIV/AIDS is a particularly appropriate topic for such an exploratory approach because of the urgency and scale of the problem.

The HIVSA workshops – Design and Content

Aims

The HIV in Southern Africa project (HIVSA) focused on decision-making and educational interventions for HIV prevention in southern Africa. It aimed to:

- design participatory workshops to support evidence-informed decision-making;
- develop a web-based register for published and unpublished evidence of educational interventions for HIV prevention drawn from studies based in southern Africa; and
- use the register to review this evidence systematically.

Participants

Participants from seven southern African countries,³ in two separate groups, brought varied skills and experience to the workshops, including teaching, nursing, research and management. (Table 1). The groups were selected to include policy-makers (6), practitioners (10) and researchers (10) from both the public *and* private sectors, working for HIV prevention within health *and* education. They attended three week-long residential workshops in Johannesburg during 2001. The workshop facilitators were four researchers based in London, three of whom had experience of living and working in southern Africa.

Workshop design

The workshops focused on each of the key processes involved in evidence-informed decision-making (Table 2). Whilst the broad content for each workshop was predetermined, the precise details of each day were under constant revision in order to respond to the needs and priorities of the participants. Workshop methods included: short didactic sessions; individual and pair tasks; small-group activities; and whole-group discussions. Over the three workshops, the participants designed and completed systematic syntheses of appraised research evidence to inform decisions they faced in their work. We held feedback sessions at the end of each day and provided daily and weekly evaluation and feedback forms. Facilitators discussed feedback from partici-

³Zambia, Zimbabwe, South Africa, Tanzania, Swaziland, Lesotho and Mozambique.

Table 1. Background characteristics of the HIVSA workshop participants ($n = 26$)*Group 1*

A community-based HIV educator; working for an NGO; no experience of research

A community-based HIV educator; working for an NGO; no experience of research

A community-based HIV educator; working for an international NGO; no research training

An HIV educator (adults); with nursing qualifications; no research training or experience

A project manager for an international NGO; with some research experience

A policy maker in education; educated to masters level; with some research experience.

A university-based researcher; with research training but limited experience

A university-based researcher; trained HIV/AIDS educator; with research training.

A project manager for an NGO; with research training and experience.

A researcher educated to masters level; experience of delivering HIV education; in a policy-advisory role

A university-based researcher; initially trained as a nurse; with research training and experience.

A university-based researcher; advisor to the government

An experienced HIV prevention practitioner and researcher; an advisor to the government

Group 2

Manager of an NGO providing HIV education; no research experience

An HIV educator and project manager; working for the Church; no research training

Manager of an NGO; qualified to masters level; limited research training and experience

A manager working for the government; trained as a nurse; some research experience

A government advisor; qualified to masters level; some research experience

Manager of an NGO providing HIV education; some research training but limited experience

A consultant providing HIV education; some research training but limited experience

A researcher working for an NGO; evaluating prevention programmes; trained counsellor

Advisor to an NGO in the provision of HIV education; training and experience in research

A researcher working for an NGO; co-ordinating programme evaluations

A university-based researcher; with research qualifications and experience

A university-based researcher; with research training and experience

A university-based health promotion researcher; educated to masters level

pants each evening, and the training materials for the next day were developed and refined accordingly.

Reflection

To reflect on these workshops, we returned to an analysis of participants' feedback forms (Stewart, 2001) and our personal observations (RS co-

Table 2. The design of the HIVSA workshop matched the steps in preparing a systematic review

Workshop 1 focused on:

- disentangling the decision-making process;
- identifying areas of uncertainty;
- selecting the most appropriate type(s) of evidence for addressing different sources of uncertainty;
- identifying key topics relevant to participants' work; and designing time-efficient search strategies for accessing written evidence to address these topics.

Following Workshop 1, participants and facilitators searched for and collected written evidence for consideration during Workshop 2.

Workshop 2 focused on:

- developing criteria for identifying relevant and high-quality evidence to explore participants' topics of interest;
- sifting through the collected literature applying these criteria; and
- developing a framework for extracting key information from sifted evidence.

Following Workshop 2, participants and facilitators practiced these skills by applying the framework to the collected evidence. The data collected from this process was entered onto the HIVSA register of evidence by the facilitators.

Workshop 3 focused on:

- developing refined/discrete practice-based research synthesis questions in small groups;
 - analysing data available on the HIVSA register of evidence to address these questions;
 - producing structured summaries of the most relevant studies; and
 - using these summaries to create syntheses of relevant and high-quality evidence to help each group answer its question.
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ordinated the workshops, GE, MW, JT and RS delivered training; SO and GB contributed to the workshop design). Through discussion, we refined these reflections, challenging one another to ensure we achieved a balanced consensus. Without structured before and after data from participants, and in the absence of a comparison group, we have reflected on the changes we observed rather than attempting to ascertain the effectiveness of the workshops.

How the HIVSA workshops addressed the evidence-practice gap.

We identified three areas in which we believe the HIVSA workshops may have helped to bridge the evidence-practice gap: access to research; understanding research; and the relevance and application of research to practice.

Access to Research. The HIVSA workshops aimed to improve participants' awareness of the research evidence available and address their concerns that

accessing this research was time-consuming and required extra resources and specialist skills. Success in this regard was varied. We provided training in where to look for research and how to do so efficiently, using electronic databases, hand-searching and contacting experts. For some participants, searching the internet was a new experience, and those with only basic information technology (IT) skills needed additional support. Indeed, some participants were unable to master electronic searching in the time available, although they quickly gained valuable e-mail and internet skills. Those, who mastered online electronic searching, were surprised by the number of studies available.

The workshops also provided training in identifying relevant and reliable (i.e. high-quality) research. The participants embraced the concept of accepting only the most relevant research and appreciated the time this would save. In this respect, the workshops benefited from the expertise of the policy-makers and practitioners when identifying research that was relevant. However, those without prior research training found determining the quality of research much more difficult than identifying its relevance. By teaching participants to access systematic reviews of high-quality research, we went some way towards addressing this difficulty. All the participants welcomed the time saved by accessing the research summaries these reviews contained rather than the original research reports.

At the start of the workshops, participants voiced a concern about the availability of published southern African literature on HIV prevention. This was confirmed by the results of the electronic searches they undertook. In response, we encouraged the participants to identify and collect copies of published *and* unpublished literature describing relevant research from their home countries. The resulting collection of 280 pieces of literature on HIV prevention, including academic and professional articles located by electronic searching, was then made available to participants during the subsequent workshops.

Researchers, policy-makers and practitioners all highlighted their lack of communication with each other as a barrier to the accessibility of research. Whilst we may not have been able to *directly* influence the wider community, the workshops enabled the development of informal networks amongst the policy-makers, practitioners and researchers who attended. Several participants have maintained links with workshop facilitators since the workshops ended. These networks across southern Africa were further facilitated by the increased use of email resulting from IT skills developed during the workshops.

Summary. On reflection, the HIVSA workshops improved the skills and confidence of a small group of people in accessing relevant research in a timely and discerning manner. Given the restrictions of the political and economic context within which the participants work, we recognise that this may have a limited impact on the accessibility of research in general. Those whose access to research was most improved were those who had relatively unproblematic access to the internet and libraries. Clearly, more needs to be done by the

research community itself to translate findings into forms that are accessible to the end users of research: making better use of journals presenting research for policy makers and practitioners; publishing best practice guidelines; and making greater use of open-access web-based dissemination. Likewise, ensuring that policy-makers and practitioners have the skills and resources required to access research evidence is necessary to facilitate the uptake of research that has been appropriately translated.

Understanding Research. The workshops were designed to increase participants' understanding of, and familiarity with, research and related skills for producing evidence-based summaries that were easier to comprehend and apply.

Initially we observed that some workshop participants appeared frustrated with research and were unclear about its importance. Instead they wanted immediate answers to the situations they faced in their work. For example, one participant asked for a "cookbook" to guide his HIV prevention programme. Whilst underlining the importance of applying good quality research to practice, the workshops highlighted that: research has both strengths *and* limitations; good research takes time; appropriate research methodologies need to be rigorously applied; and research needs to be thoroughly and transparently reported. Following the workshops, through feedback sessions and workshop evaluation forms, all participants acknowledged the value of research and expressed a greater understanding of the processes involved. However, some participants, working under the pressure of the HIV pandemic and needing immediate answers to practical problems, remained frustrated with the research process.

The training in research methods was designed to give the participants the confidence and the familiarity with research terminology to communicate with researchers and challenge expert opinion. Over the course of the workshops, we observed substantial changes in the contributions made to research-related discussions by participants who had not, hitherto, been "research-literate". For example, following the first workshop, one participant reported challenging a speaker at an international conference as to what evidence supported their assertions.

Participants often expressed frustration about the way research findings tended to exclude a non-research audience, particularly through the use of technical language. We provided examples of research syntheses written especially for non-research audiences and encouraged participants to write similar syntheses of the evidence from southern Africa. In the process, participants from research backgrounds, as well as the workshop facilitators, developed a greater awareness of how to present research findings for policy-makers and practitioners. To help overcome the apprehension participants described when faced by a lengthy research report, we developed a short checklist of five questions during the workshops to help them assess the relevance and quality of the research quickly. Whilst this "mini appraisal tool" was less rigorous and comprehensive than those used by researchers,

participants felt this was a more practical tool and was more likely to be used by policy-makers and practitioners.

Summary. We are confident that the participants left with increased knowledge and understanding of the purposes of research and the processes used to generate different types of research evidence. However, as before, workshop participants highlighted the need for the research community to value and emphasize the publication of findings for non-researchers and to make these more accessible. Our mixed participatory workshops provided a context in which policy-makers, practitioners and researchers had dedicated opportunities for relating to one another and developing a better understanding of one another's perspectives. Admittedly, these opportunities were the result of three week-long residential workshops, and we acknowledge that such an intensive intervention, however worthwhile, requires considerable investment.

Relevance and Application of Research to Practice. Policy-makers and practitioners at the HIVSA workshops observed that the scope of available research on HIV is often too narrow to be relevant to their work. Indeed they even questioned the foundation of the HIVSA project with its focus on educational interventions for HIV prevention. Instead, they stressed the importance of integrating prevention, care and treatment across health, social care and education.

Through electronic searching, participants were able to explore a much larger amount of the research available. We also provided dedicated research training to help participants identify and discard irrelevant research and research that was poorly reported or too difficult to understand. The participants subsequently acknowledged that there was more research available than they had previously thought. Some participants remained sceptical about the relevance of research from outside southern Africa, because the social context was so different from their own. Others were unsure about research that adopted a quantitative biomedical approach, preferring instead those analyses that were grounded in the everyday experiences of practitioners and service users with first-hand knowledge of real-life contexts. Despite these reservations participants came to realize that they could draw some lessons from all research, even that which, at first, seemed irrelevant.

Meanwhile, from the perspective of the facilitators and participants who were researchers, the workshops provided a forum for increasing our collective awareness of priorities for policy and practice needs and for increasing the rigour of research. The workshop structure also provided an opportunity for policy-makers and practitioners to emphasise the key issues they faced in their work. This was highlighted when the facilitators attempted to paraphrase the questions these participants developed for their research syntheses. The participants insisted on debating the wording until it correctly reflected their priorities rather than the facilitators' expectations.

Summary. With regards to the relevance and applicability of research, the workshops seemed to have been more successful in influencing the researchers to try and bridge the evidence-practice gap. In particular, we observed a shift in the attitudes of researchers as they recognised that if their research was to be useful, it needed to answer questions that are important to policy-makers and practitioners. The latter seemed empowered to question the relevance of research and to articulate and emphasise those questions that were most pertinent to them. Communication and mutual understanding between these three communities of practice are clearly important to ensure that researchers, striving to provide accessible and relevant evidence, are familiar with the needs of policy-makers and practitioners. Further effort is also needed to ensure that the funding agencies that commission research, and the journal editors who disseminate research findings, also make this shift.

Conclusion

Although these workshops appeared to reduce the evidence-practice gap for HIV prevention amongst the participants, it was a particularly intensive intervention available to only a select few. Access to the internet and research libraries presents additional structural barriers to policy-makers, practitioners *and* researchers within these countries. However, the workshops provided an opportunity for researchers to engage with policy-makers and practitioners and to identify how research, and the dissemination of research, might be made more relevant to potential users. These findings, and the opportunities they

Table 3. Key recommendations for trainers and training facilitators striving to bridge the evidence-practice gap

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- Provide participants with access to the internet and guidance in accessing online research databases and, where necessary, training in the use of email and searching the world wide web.
 - Encourage the use of published summaries of critically appraised and/or synthesised research to save time in accessing research – particularly summaries written for non-research audiences.
 - Ask training participants to help identify and collect examples of published and unpublished local literature.
 - Include mixed groups of participants to foster greater understanding between policy-makers, practitioners and researchers.
 - Encourage practitioners and policy-makers to share their priorities with researchers.
 - Acknowledge both the strengths and weaknesses of research evidence.
 - Provide training in research methods to empower all participants to critically engage with research and researchers.
 - Be realistic about what is practical for busy practitioners to achieve.
 - Do not assume you know the key issues faced by your participants.
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opened up for participants, were a direct result of the mixed, participatory design of the workshops. There are therefore a number of tentative recommendations that might be made on the basis of our reflection on these workshops, summarized in Table 3.

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