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Research paper

Sudanese women living in Victoria, Australia: health-information-seeking behaviours and the availability, effectiveness and appropriateness of HIV/AIDS information

Rhiannon Palmer BA BSc
Final Year Medical Student, Department of Medicine (RMH/WH), University of Melbourne, Victoria, Australia

Chris Lemoh BM MB BS Dip Clin Epidemiol FRACP
PhD Student, Department of Medicine (RMH/WH), University of Melbourne, and Centre for Clinical Research Excellence in Infectious Diseases (CCREID), Melbourne, Australia

Rachel Tham BD Surg M Pub Health M Health Sci Dip Conserv and Land Manag
Research Fellow, School of Rural Health, Faculty of Medicine, Nursing and Health Sciences, Monash University, Victoria, Australia

Shiraz Hakim BSc
Department of Medicine (RMH/WH), University of Melbourne, Victoria, Australia

Beverley-Ann Biggs BA MB BS PhD ChB FRACP FRCP FACTH
Associate Professor, Department of Medicine (RMH/WH), University of Melbourne, and Centre for Clinical Research Excellence in Infectious Diseases (CCREID), Melbourne, Australia

What is known on this subject

- African-born Australians represent 1% of the Australian population, but account for 25% of heterosexually acquired HIV.
- Between 1996 and 2001, Sudanese migrants represented Australia's fastest growing African minority group.
- Women represent 59% of people living with HIV in Sudan.

What this paper adds

- There is a view within Victoria's Sudanese community that their vulnerability to HIV is increased by a lack of access to education about and awareness of HIV, which they attribute to socio-cultural barriers to information seeking, inadequate types of information sources, timing of information dissemination, and lack of culturally appropriate information.
- Verbal and visual sources of information are favoured means for the dissemination of culturally appropriate and meaningful HIV/AIDS messages to Victoria's Sudanese community.
- Consideration of target audiences is a major determinant in reaching the Sudanese community when disseminating sensitive information, as men and women, young and old, must be addressed separately.

ABSTRACT

The aim of this study was to understand the perceptions of Sudanese women regarding their potential vulnerability to HIV infection and their preferred sources of HIV-related information. The study was designed in consultation with members of the Sudanese community in Victoria, Australia. Semi-structured interviews were undertaken with 11 Sudanese-born women who had migrated from Sudan and who were resident in Victoria. Thematic analysis revealed several key points:

- The women considered that an important factor increasing their vulnerability to HIV infection was lack of access to education and awareness.
- The women believed that this lack of access was largely due to socio-cultural barriers to information seeking, inadequate types of information sources, timing of information dissemination, and lack of culturally appropriate information.
- The women suggested that HIV information would be most effectively disseminated to their communities by providing members who were already held in high regard by Victoria's Sudanese community with culturally appropriate and accurate information.

Verbal and visual sources of information were identified as the preferred media. There was a particular preference for information sessions and educational seminars. The nature of the vulnerabilities to HIV infection perceived by these Sudanese-born women living in Victoria, their active participation in this study, and the widespread positive response of the city's Sudanese community, suggest a culturally appropriate HIV public health education campaign would be welcomed if it was to be implemented with the involvement of the community.

The lack of HIV awareness that was identified in this study suggests that there is an increasing need to implement adequate and appropriately targeted HIV education and harm reduction strategies.

Keywords: HIV infection, migration, minority groups, refugees, vulnerable populations, women's health

Introduction

Although HIV/AIDS can affect anyone, regardless of gender, age, sexual orientation or race, it is largely sexually transmitted. This has led many people to associate HIV/AIDS with behaviours which they consider to be socially unacceptable, such as promiscuous sexual activity, homosexuality and injecting drug use (Herek and Glunt, 1988; Hasnain, 2005). This has resulted not only in the ostracism of, and discrimination against, affected individuals, but also in the creation of many barriers to the implementation of effective community-based prevention programmes.

At the end of 2006 there were approximately 15 670 HIV-positive people living in Australia, with an estimated prevalence of 0.00076% (McDonald, 2006). The majority (69%) of these infections were due to transmission among men who have homosexual relationships, while 20% were attributable to heterosexual contact (McDonald, 2006). African-born Australians represent 1% of the Australian population (Australian Bureau of Statistics, 2007), yet they account for 25% of heterosexually acquired HIV – approximately 5% of HIV cases overall (McDonald, 2006). International surveillance reports from Western Europe and North America show that the proportion of heterosexual immigrants among diagnosed HIV cases is higher than that in the general population (Soskolne and Shtarkshall, 2002; Minnesota Department of Health, 2005; EuroHIV, 2006). However, there is difficulty in determining whether HIV was contracted prior to or after migration. HIV prevention efforts for migrant communities may therefore have a role in reducing exposure to HIV after migration. People who migrate to Australia are screened for HIV, and most, but not all, of those found to be infected are refused a visa. However, the majority of people who enter Australia for short-term or long-term temporary stays are not tested for HIV (Department of Immigration and Multicultural Affairs, 2007; Lack *et al*, 2007). People may enter Australia under a number of different visa categories, including Worker, Migrant, Spouse, Visitor, Student and Refugee. Australia's offshore humanitarian programme has two categories. One is for refugees and the other is the Special Humanitarian Program. Refugee visas are awarded to people who are subject to persecution in their home country and are in need of resettlement. Refugee visas are called UNCHR visas when the applicants have been identified by the United Nations High Commissioner for Refugees, and are referred to the Australian Government (Department of Immigration and Multicultural Affairs, 2009).

The relationship between migration and HIV is attracting increasing attention as global population mobility increases. There is a growing body of research concerning the influence of the migration process on

vulnerability to HIV infection, the perception of mobile populations as vectors of HIV is the popular view (Soskolne and Shtarkshall, 2002), and restrictions on the movement of HIV-positive people by various countries, including Australia (Lack *et al*, 2007). Furthermore, in most settings, migrant populations are more likely to be socially marginalised, with restricted access to economic assets, information and services (Gupta *et al*, 2008).

Between 1996 and 2001, Sudanese migrants represented Australia's fastest growing African minority group (Department of Immigration and Multicultural Affairs, 2005). The principal reasons for migration were related to the ongoing civil war and severe drought that caused more than 1.6 million people to flee Sudan (Tanaka, 2005). More than half of the Humanitarian Entrants from Sudan accepted in Australia in 2003–2004 (6147 out of 11 802), a large proportion of whom settled in Victoria, were from southern Sudan (Dutertre and McNally, 2006). Although most of Sudan's population are Arabic speaking and Muslim, many of those originating from the south of the country are Christian or animist, and speak a variety of languages, including Barre, Dinka and Nuer, as well as Arabic dialects.

The prevalence of HIV in adults in Sudan in 2008 was estimated to be 1.4%, with women representing 59% of those living with HIV (UNAIDS, 2008). However, due to the protracted war and the lack of reliable epidemiological data, there are concerns that these estimates may not accurately reflect the current state of the HIV epidemic that is occurring in Sudan (World Health Organization, 2008). The high proportion of women among people diagnosed and living with HIV in Sudan is typical of the HIV epidemic globally, where more than 50% of the adults living with HIV are women (UNAIDS, 2005).

Research over the past decade has revealed that gender roles and relationships directly and indirectly influence the level of an individual's risk and vulnerability to HIV infection. Whereas sex defines the biological distinction between women and men, gender is a social construct that differentiates the power, roles, responsibilities and obligations of women from those of men in society (Gupta, 2000). Gender roles involve socio-cultural norms with regard to femininity and masculinity, and the unequal power relationships between women and men arising from these norms may combine with biological and physiological factors to compound the individual risk of infection. Furthermore, it has been argued that gender norms have contributed to creating a culture of silence and shame that surrounds sexuality and power imbalance between women and men, by curtailing women's sexual rights and autonomy, encouraging irresponsible and risky behaviour among men, and restricting women's access to and use of economic resources (World Health Organization, 2003).

The term *culture* as it is used in this paper is defined as 'a set of socially acquired ideas, beliefs and values carried by a population of individuals' (Richerson and Boyd, 2008), and culture is therefore viewed by the researchers as a shared experience that is dynamic, socially constructed and subject to change with time. It is essential for health educators to be able to identify and describe cultures and/or subcultures within a given population in order to provide programmes and materials that are culturally appropriate (Kreuter *et al*, 2003). The notion of HIV education, as used in this paper, is grounded in these concepts. It refers to the provision of medical and scientific information about the HIV virus, modes of transmission and risk factors for exposure, and available medical interventions for those infected with the virus, in an attempt to raise understanding and awareness, with the aim of reducing individual and societal risk, stigma and infection.

There is no research-based information about vulnerability to HIV infection among Sudanese migrants living in Victoria. It is also unclear how information about potential exposure in Sudan can be extrapolated to the Australian setting. In particular, it is unclear how Sudanese people in Victoria obtain information about health-related issues or how they perceive and value those sources. Researchers, policy makers and public health professionals need to improve their knowledge about the sources of HIV/AIDS information that are accessed by African communities living in Victoria, if they are to improve the effectiveness of public health interventions which aim to prevent HIV transmission in these groups.

In order to address these gaps in current Australian public health knowledge, this exploratory qualitative study had the following aims:

- to describe the beliefs and attitudes of Sudanese women with regard to HIV, including their perceived vulnerability to exposure to infection
- to understand the factors that influence these beliefs
- to describe the health-information-seeking behaviours of Sudanese women living in Victoria
- to ascertain their views about the most effective means by which accurate, relevant and culturally appropriate HIV prevention information could be provided to Victoria's Sudanese communities.

Methods

The biomedical perspective on health and illness focuses on the physical and psychological consequences of illness using a disease model (HIV infection and AIDS), and seeks to find a biological basis for illness (infection by HIV). However, the social and environmental

circumstances need to be considered in relation to the vulnerabilities, consequences and avoidance of infection by HIV. This approach is consistent with the philosophy of social epidemiology, in which the classic host–pathogen–environment triangle is expanded to include the social and political external environment of the human host, as well as the host's internal psychological state. The medical model to which this is allied is the biopsychosocial model (Engel, 1977; Schwartz and Wiggins, 1986). This approach has regained favour in recent years, but is in fact a legacy of Virchow and others who have encompassed biology, social sciences and politics in their vision of public health and epidemiology since the 19th century (Mackenbach, 2009). In this case, where behaviour modification is one strategy for reducing exposure to HIV, knowledge and understanding of HIV transmission and its prevention are important, and are best explored in the first instance by using qualitative methods.

Study design

The study protocol was developed through discussion with key members of Sudanese and other African community organisations and bi-cultural research assistants, all of whom contributed to the project design and shared perspectives on interpretation. The involvement of community organisations was considered to be vital when researching the sensitive topic of HIV/AIDS, and was a means of enabling community members to discuss ethical and methodological issues with the research team on a more equal footing than would have been the case if they had been approached as individuals. The research assistants were nominated and supported by several African community-based organisations, some of which were Sudanese; several were in fact members of the executive committees of such organisations. One of the research assistants (SH) is a co-author of this paper.

Data collection

Semi-structured interviews asking open-ended questions were conducted with the aim of obtaining descriptive information. Interviews were conducted by two of the authors (RP and RT) in English for all participants who felt that their proficiency was adequate. Another author (SH) conducted the interviews in Arabic or the dialect of Arabic spoken in Southern Sudan with those participants who preferred to use these languages. Before commencing the interview, the interviewer discussed with the women the content of the interview and the purpose of the project, using a plain language information sheet written in English as the basis for the discussion. The participants were assured that privacy and confidentiality would be protected, that they would not suffer any harm as a result of participation, and that they could withdraw their consent at any time, even after data collection, without penalty. They were assured that information collected prior to their withdrawal would not be used either in the research or for other purposes. This discussion was held in the same language as the interview. Those women who were willing to participate in the study were asked to read and sign the consent form, which was written in English. For those women who preferred to use a language other than English it was explained that the content of the consent form was the same as that previously discussed.

Given the sex-related topics discussed in the interviews, it was hoped that, by having female researchers, the women would feel comfortable discussing sensitive topics. Including in the research team a member of the Sudanese community networks through which recruitment was undertaken was also seen as a factor that could have a positive effect on the interviews by increasing the women's trust in the project. However, it was also recognised that women who held views contrary to the social norm within their community group might not have been willing to express them to, or through, a member of that same cultural group.

All interviews were recorded using a digital voice recorder and were then transcribed. Interviews conducted in a language other than English were transcribed and translated into English by SH.

Data analysis

The interview framework used by the interviewers is illustrated in Box 1. This shows the themes and questions that were used to guide the interviews, ensuring that the main aims of the research were addressed and that there was continuity between the interviews. Thematic analysis was used, and open coding helped to identify emergent themes. The qualitative analysis software package HyperResearch™ Version 2.6 (ResearchWare Inc, MA, USA) was used to code the data.

Ethical concerns

Several ethical issues were identified relating to the purpose of the study, which were addressed in the study design.

- The possible impact of the study on Victoria's Sudanese communities of being portrayed as a group associated with HIV/AIDS and therefore potentially considered a threat to the broader community was addressed by focusing the study on the exploration of the vulnerability of African migrant communities to HIV infection, and the relative lack

Box 1 Framework used for the semi-structured questions

1 Biographical details
   a. Ethnicity
   b. Age
   c. First language, other languages, English
   d. Level of education attained
   e. Home town – rural or city
2 Migration details
   f. Reason for and route of migration
   g. Why Australia?
   h. Visa type
   i. Knowledge about Australia prior to arrival
   j. Knowledge about the migration health check
   k. Challenges on arrival in Australia, including the language barrier
   l. Role of Sudanese communities in Victoria in adjusting to living in Australia
   m. Generational issues
3 Sudanese culture
   n. Family structure
   o. Gender issues
   p. Education
   q. Religious/cultural tensions
4 Health information
   r. Accessing health information in Sudan
   s. Accessing health information in Australia
   t. Suitable and useful sources of health information
   u. Barriers to accessing health information
5 HIV
   v. Knowledge about HIV/AIDS in Sudan
   w. Knowledge about HIV/AIDS in Australia
   x. Suitability/acceptance of HIV prevention campaigns, including condom use

of HIV prevention efforts for these communities. The view of the researchers was that these communities were a part of the state's population and should be included, in their own right, in HIV prevention strategies.

- The impact of the study on the Sudanese women interviewees, in particular the possibility of being perceived by their community as being associated with HIV and therefore at risk of stigmatisation, was addressed by approaching them in their roles as prominent or active members of community-based organisations, who were able to provide valuable information for the benefit of their communities.
- It was recognised that using one author's social networks for recruitment could compromise the ability of potential participants to freely decline to participate in the study. That author (SH) took part in the planning of the study, in which this aspect was discussed. She endeavoured to ensure that all participants were willing to participate and felt no obligation to do so.
- Due to the politicisation of religion in Sudan's ongoing civil conflict, there was initial concern that religious differences within Victoria's Sudanese community might be provoked or compounded by the research. For this reason, as well as the primary reason of seeking a diversity of perspectives, an attempt was made to include Christian and Muslim participants, and to include participants from a number of cultural and linguistic backgrounds.

The Human Research Ethics Committee of Melbourne Health approved the conduct of the study.

Sample

A total of 11 first-generation female immigrants from Sudan, resident in Melbourne, Victoria, were purposively recruited utilising convenience and snowball sampling. Using family and social connections, one of the authors (SH) contacted the women, who came from a number of distinct organisations, religious groups and geographical locations. All of the women who were invited to participate in the study accepted, and none opted out of the study at any stage. Recruitment of the women was undertaken with the aim of reflecting a range of age, religion, place of origin, and migration experience.

The ages of the women who were interviewed were in the range 23–47 years. All but one of them were married. Six of the women had children, and the number of children ranged from one to four. All of the women had completed their high-school education, and eight had finished tertiary studies. Arabic was the first language of eight of the women, while two spoke Barre and one spoke Dinka. Six of the women felt that they were fluent in English, and only two felt that they were not at all proficient in English. Three of the women identified themselves as Muslim, while the remaining eight identified themselves as Christian. Their migration experiences also varied. Transit countries included Egypt, Uganda, Kenya, United Arab Emirates and Saudi Arabia, with length of time in transit ranging from 1.5 to 10 years. For two of the women, the majority of their migration experiences were in refugee camps in Uganda and Kenya. The visa categories under which the women in this study entered Australia included Refugee, UNHCR, Spouse and Student. The women had also spent a variable length of time in Australia, ranging from 1 to 13 years.

Findings

The major themes are discussed below with illustrative extracts from the data. The identification of biographical information has been kept to a minimum. Pseudonyms have been used to maintain the women's anonymity.

Socio-cultural influences on knowledge of, beliefs about, and awareness of HIV

Nazeer was a 36-year-old Muslim woman from eastern Sudan who worked as a journalist until her family was forced to flee. She expressed the opinion that moral judgements regarding the mode of HIV transmission impede open discussion and sharing of information within the Sudanese community:

> 'In my country lots of people ... they think about it [HIV/AIDS] in the wrong way. They think the disease has come from the sexual way. ... But in my country we can't talk about sexual things. This is one of the reasons people hide their information ... people [are] ashamed.'
>
> (Nazeer)

Notions of the 'wrong way' and concepts of 'shame' relate to taboos in Sudanese society. The most important of these is sex before marriage, but others include the use of alcohol or drugs, and HIV/AIDS. Facets of Sudanese culture such as respect for elders and gendered roles were also identified by participants as key determinants of social structure and behaviour, and as a means of ensuring adherence to social norms. These findings are consistent with those reported in the broader literature on informal social control, particularly with regard to gender and its use in patriarchal societies (Umberson, 1992).

According to the participants, one potential risk for women was the freedom extended to men compared with women in Sudanese culture. The women explained that it was not acceptable for them to 'go out', and therefore the behaviour of men made women vulnerable. Furthermore, the reputation of women was more at risk than that of men if they engaged in sex before or outside marriage. The majority of the women also expressed the view that women's control over condom use was unacceptable, even within a marriage. These ideas are common to many societies around the world, where the dominant ideology of femininity not only dictates that a 'good woman' is ignorant about sex and passive in sexual interactions, making it difficult to negotiate safer sex, but also emphasises uncompromising loyalty and fidelity on the woman's part in partnerships (UNAIDS, 2003). Allaa, a 31-year-old Muslim woman who had completed tertiary education, described her own understanding of Sudanese women's attitudes towards condom use as follows:

> 'I don't think there is a Sudanese woman she can ask [to use a condom]. Because sex is usually in the marriage, before marriage you can't do that, and if you ask your husband, I don't think so.'
>
> (Allaa)

From the interviews, it became apparent that the sexualised discourse around HIV/AIDS had led to the belief among many Sudanese that, if they adhered to moral codes of conduct, people could not become infected by HIV. The women suggested that this had in turn resulted in the belief that people with HIV were immoral, and that 'good' members of society did not need to know or worry about contracting the disease. The threat of shame, isolation and ostracism for an HIV-positive person, or those associated with HIV by the Sudanese community, had also generated a profound sense of fear. Fayza was a 34-year-old Muslim woman who had worked as a veterinarian in Sudan. Following her migration to Australia, however, she worked as a volunteer translator for HIV patients. She was acutely aware of the stigma associated with HIV, how it was perceived, and how members of the Sudanese community often dealt with it:

> '... if you start to think about this thing [HIV], it's gonna happen to you, so you don't think about it.'
>
> (Fayza)

Of course, this relationship between morality, mortality and morbidity with regard to HIV is not a new idea. A number of researchers have argued that using morality, in the guise of the *Abstinence, Be faithful or use a Condom* slogan, has proved to be irrelevant and ineffective in the global effort to curb the escalating HIV/AIDS pandemic (Mirembe, 2004; Lauer, 2006).

The women agreed that these fears and beliefs represented significant socio-cultural barriers to discussing HIV and raising awareness among Sudanese communities. However, the women's natural curiosity became apparent during the interview process as they became more at ease with the interviewer and felt that they were not limited by social or cultural constraints. They wanted to know about HIV and other sexually transmitted infections. They asked about HIV/AIDS and whether it was 'here in Australia', how it was transmitted, the symptoms of HIV infection, how long a person could live with HIV/AIDS, and how long it would take for the virus to appear in the blood. There was also a general understanding of mother-to-child transmission, but the women wanted to know whether all children born from infected mothers would become infected with HIV.

The impacts and influences of migration on beliefs, behaviours and information acquisition

Despite being fairly recent arrivals in Victoria, Sudanese migrants have been proactive in establishing organisations which provide not only the means of social networking but also a supportive environment in which they can inform each other about their experiences of life in the new society. As Mgen, a 41-year-old Christian woman, explained:

> 'We established Sudanese Women of the West particularly to help Sudanese women who are newly arrived to cope with the life and the environment ... to empower is one of the aims of the group, to work together and know the culture.'
>
> (Mgen)

The settlement process was a significant issue raised by all women as a difficult time in their migration experience. Migrants, and particularly refugees, encounter many problems on arrival, including language difficulties and information overload. They sometimes lack prior knowledge of Australia, and have to cope with a plethora of settlement issues, forcing them to place housing, employment and schooling ahead of health concerns. The type of visa with which migrants enter Australia is also a factor that shapes the migration experience, as it governs eligibility for many publicly funded services, including healthcare. Shirihan, a 39-year-old Muslim woman, came to Australia 13 years ago, and at the time of this study was working as a settlement support worker for African refugees arriving in western Victoria. She felt that she was very aware of the issues that the Sudanese community faces during the migration process. This was particularly important in relation to the timing of HIV information dissemination, as she felt that people would have a better comprehension of such information after the first year of settlement:

> 'It happens when people arrive in Australia, first they get a lot of information about health and education and about different things about living here, but it's too much information and after you settle in and you have a lot of difficulties you need to know more and it happens sometimes that you can't get this information again.'
>
> (Shirihan)

All of the women also expressed concern that the acculturation of Sudanese adolescents into Australian culture not only threatened the family unit, but also challenged the Sudanese way of controlling and protecting their young people. They felt that this acculturation resulted in Sudanese young people engaging in more risky behaviour than Australian youths of the same age. As Sesilia and Modi described it:

> 'They get mixed up, they get mixed up, especially the teenagers from 13 years up because they've already come from Africa, they're grown up, so it's very hard. They find Australian culture and just hopped in like that, but they're supposed to go it slowly, even they [Australian youths] are not doing these things that they are doing, they've gone beyond even Australian culture.'
>
> (Sesilia)

> 'They are not under our control any more. And that is how the teenagers mistreat their freedom which is here, they don't use their freedom with respect.'
>
> (Modi)

Knowledge about HIV/AIDS in Sudan and in Australia

A number of themes emerged from the interviews with regard to the women's knowledge, attitudes and beliefs about HIV in Sudan and Australia (see Box 2). Routes of transmission and exposure, and the environmental and social context of exposure, were the two major themes, from which a number of sub-themes were identified. Awareness of the routes of transmission and exposure varied, and included the following:

- sexual risks: '*HIV-positive people have been infected by sexual things*'
- healthcare-associated bloodborne exposure: '*transmission via blood transfusions, medical instruments,*

Box 2 Themes demonstrating the knowledge, attitudes and beliefs of Sudanese women about HIV

Knowledge, attitudes and beliefs about HIV in Sudan

Routes of transmission/exposure

- Sexual exposure
- Healthcare-associated bloodborne exposure
- Non-healthcare-associated bloodborne exposure
- Casual contact
- Airborne transmission
- Knowledge about HIV

Environmental and social context of exposure

- Environmental risks of HIV transmission
- Social influences on HIV transmission

Knowledge, attitudes and beliefs about HIV in Australia

Routes of transmission/exposure

- Sexual exposure
- Healthcare-associated bloodborne exposure
- Non-healthcare-associated bloodborne exposure
- Casual contact

Environmental and social context of exposure

- Environmental influences on HIV transmission

surgery, and at the dentist because precautions in hospitals in Sudan are very poor'

- non-healthcare-associated bloodborne exposure: '*spread by sharing razor blades*'
- casual contact: '*spread by sharing a hairbrush, shaking hands or being near an infected person.*'

The environmental risks of HIV transmission in Sudan were suggested by statements alluding to the movement of soldiers as a means of spreading disease, while statements about people '*engaging in increased risk behaviour in response to the strict Islamist government in Sudan*', and to the effect that '*corruption has greatly affected the financial capacity of the Sudanese health system*', demonstrated an awareness of the social influences on HIV transmission.

Many of the women suggested that Sudanese people did not know enough about HIV in Australia. The women themselves knew that in Australia transmission was '*via sex and drugs*', but that it was '*safe to get a blood transfusion in Australia because the blood is tested here.*' There were some concerns regarding non-healthcare-associated bloodborne exposure (as one woman suggested that '*drunk people might attack you with a syringe*') and of casual exposures in public places. Thus it was reported as being '*good to take precautions in public places, such as public toilets.*'

Due to the compulsory pre-migration screening, many of the women felt that Sudanese people believed that they were not at risk of HIV infection, having the misperception that HIV was not a problem in Australia:

> '... I don't think [people feel threatened by AIDS in Australia] yes, because all the people to enter Australia they have to do the test for AIDS, and once they're here they're safe.'
>
> (Nazeer)

> 'That's right, in Sudan they worry and they are careful but here, they are far away and they can't get it here ... most of the community here they are not aware that HIV is within the people within the community here because before coming to Australia they do have this medical check-up.'
>
> (Mgen)

Despite the women's beliefs and understanding of HIV, they all felt that their own knowledge and that of the Sudanese people in general was inadequate. Even though many of the women had tertiary-level education, they were still heavily influenced by their cultural beliefs and attitudes towards HIV. They felt that the lack of education for women in the Sudanese community placed them at risk and reduced their ability both to protect their children and to educate their community.

Disseminating information about HIV

> 'Focus groups, information seminars [are the best way], but you have to include the fun part of this, because it is such a scary topic to push on people ... it can send people away from it. ... Especially, it also has to be done in groups; you have to be very careful choosing the criteria, age, gender, and all that.'
>
> (Shirihan)

Although it is important to acknowledge that Victoria's Sudanese community is far from homogenous, there was a general consensus regarding the best ways to disseminate sensitive information (see Box 3). The women described the preferred sources of information for the Sudanese community as being verbal and visual. They considered that the best people to provide verbal information included doctors, community nurses, service providers or female relatives. However, the preferred source of verbal information was information sessions facilitated by a respected member of the Sudanese community, in their own language, as described by Fayza and Shirihan:

> 'Ask one of the community people, the old people here in Australia.'
>
> (Fayza)

> '... empowering people from the community, those who are established here, or those who are able to do it, you know, to be involved and support the promotion.'
>
> (Shirihan)

The visual sources suggested by the women included movies, performances or speakers that would engage and appeal to the community's curiosity by including Sudanese cultural images, stories, sayings and songs. These were considered preferable because they would allow speakers to directly engage the target audience, making it interesting and interactive for the community, while providing the opportunity to ask questions and clarify misunderstandings. For educated women, information sources such as books, the Internet and the media (including television, magazines and newspapers) were also identified as being useful. However, for the community as a whole, these sources were believed to be problematic because of issues of language, literacy, credibility, accessibility, and cultural appropriateness. For the information to have any meaning, the women were adamant that it should be targeted at carefully selected audiences, gender being the most important criterion:

> 'Gather men and women together and start talking about this issue [HIV], no they don't like it. They [Sudanese women] cannot even concentrate on what you are saying. So if you approach ... men separate and women separate, they can understand the information given to them, and

Box 3 Preferred and problematic sources for dissemination of information to Victoria's Sudanese communities according to women participants

Preferred sources of information
Verbal sources
- Doctors, community nurses, service providers
- Female relatives or close, trustworthy friends, but issues of secrecy and exposure are important
- Information sessions
  - facilitated by a community leader
  - in own language (important for engaging the target audience)
  - important to have a speaker who is knowledgeable and who can answer questions, because open dialogue is important for clarification of uncertainty or misunderstanding
  - important to select the audience on the basis of culturally appropriate categories

Visual sources
- Movies
- Performances/speakers: need to be interesting and appeal to the communities' curiosity by including Sudanese cultural images, stories, sayings, etc.

Problematic sources of information
Television
- Language barrier
- Often not culturally appropriate

Print
- Literacy and terminology
- Many Sudanese people are not interested in reading
- Concerns about credibility

Radio
- Sudanese radio in Victoria is very limited and not available at convenient times
- Does not reach the whole community
- Radio sessions are too short to cover educational issues; funding shortages

Internet
- Need to have access and know how to use it
- Issues of credibility

they can ask about more clarification if they are with a group of women and the speaker is a woman too.'

(Fayza)

All of the women considered it culturally inappropriate and unacceptable to discuss sexual health matters, including HIV prevention, with adolescents, as they believed that this would be viewed by the community as encouraging promiscuous behaviour. The researchers were of the opinion that this finding was linked to concern among the Sudanese women about how best to protect Sudanese young people in a society where their traditional methods of control were either not available or no longer effective. This suggests that further research is needed to determine ways in which adolescent education can be provided in a manner that would be considered appropriate to Sudanese parents, elders and young people themselves.

Discussion

At present both the incidence and prevalence of HIV/AIDS in Australia are low, but with an increasing immigrant population, particularly from high-prevalence countries with an HIV prevalence estimated at more than 1% (McDonald, 2005), there is a pressing need to gain more understanding of the risk factors specific for each population. This study explored these issues through in-depth interviews with 11 Sudanese-born women with differing demographic characteristics living in Victoria. It identified a number of culturally determined vulnerabilities for the transmission of HIV in Victoria's Sudanese communities, and found that culturally appropriate education in the formof verbal and visual information would be an acceptable means of reducing vulnerability in this population.

Soskolne and Shtarkshall (2002) argued that current interventions to address the structural and contextual factors inherent in the association between migration and HIV are limited and fail to take cultural components into account. The findings presented here support this argument. The structural factors of the immigration process were described as having significant consequences for the Sudanese community, particularly with reference to accessing health services and being willing to acquire health information. However, from the perspective of these Sudanese women, the most influential factor in shaping Sudanese beliefs about and attitudes towards HIV, and therefore their risk factors, was their culture.

Through their stories about Sudan, and in response to questions about HIV, the women depicted Sudanese culture as essentially founded on firmly established moral codes in which the sexualised nature of HIV equated to notions of shame and badness. This generated the idea among those who were interviewed that moral people were immune to HIV, and therefore did not need or want to know about it. Similar findings have been reported among migrant Sudanese communities in countries around the world, including Ethiopia (Holt *et al*, 2003), the USA (Foley, 2005), Israel (Soskolne and Shtarkshall, 2002) and New Zealand (Worth *et al*, 2003). This perception is compounded by the belief that only people with negative HIV tests can migrate to Australia and that, once there, they are no longer at risk of HIV.

It has been argued that, in response to the growing global AIDS epidemic, the influence and impact of gender roles and relationships on the course of HIV/AIDS cannot be underestimated (UNAIDS, 1998). The findings of the present study provide further evidence for the pervasive nature of the relationship between HIV and gender, as the women revealed the ways in which they felt that their gender, as defined by Sudanese culture, placed them at risk of HIV. As women, they identified the socio-cultural consequences of being seen to be seeking sexual knowledge and attempting to enforce sexual behaviours such as condom use within marriage. Furthermore, they felt that they were being put at risk by the social acceptance of male sexual promiscuity. However, the construction of femininity and masculinity through social interaction is dynamic and subject to change. Therefore modifications in the construction of gender identities may serve as models for promoting more equitable gender relationships and safer sex (UNAIDS, 2005).

These findings reveal what the Sudanese women felt that they and their community needed to know about HIV, and how best to disseminate this information in culturally meaningful and appropriate ways. The feasibility and practical relevance of their suggestions are supported by a study that describes the key features of such an approach and the reasons for its success. These include open and public discussion about HIV, led by prominent members of the community, active involvement of community members in AIDS control activities, building on existing social values, and integrating cultural meaning into the dissemination of AIDS messages (Albright and Kawooya, 2004). New Zealand's HIV/AIDS health promotion campaign for refugee communities adopts a similar approach (Worth *et al*, 2003). In this instance, the promotion activities were based on the Tuelimishane ('Let's learn together') model that was developed in partnership with African refugee communities. This requires an in-depth knowledge of the refugee experience and the cultural and psychological difficulties of resettlement. The Tuelimishane model involves three phases, namely community consultation and collaboration, train-the-trainer workshops, and the implementation of regional HIV/AIDS health promotion activities (Worth *et al*, 2003). The receptiveness of the women participants in our study, and the active involvement of Victoria's Sudanese community in support of the project, suggest that a similar model, incorporating the findings presented here, could also be successful for the city's Sudanese communities.

Limitations of the study

Interpretation of the findings of this exploratory qualitative study is subject to a number of limitations. Although the methods of purposive recruitment and thematic analysis do not allow the attitudes and beliefs presented here to be generalised to the wider population of Sudanese immigrant communities in Victoria, their views provide insight into the range of social and systemic factors that influence the perceived risk of HIV exposure and access to information about HIV prevention for these communities. The depth of the enquiry gives credence to the findings and their importance in guiding future research. In order to explore the validity of these findings, it is imperative that future research addresses the beliefs and attitudes of a broader representation of the community, with a particular focus on young people and Sudanese men, in order to achieve a balanced approach to the provision of HIV education for Victoria's Sudanese communities. This is an important consideration, given that the community education model that was favoured by many of the participants would empower them and their respective organisations, which could be perceived as a threat by male members of the communities concerned unless they were actively included in the process.

Conclusion

For Sudanese women living in Victoria, the main risk factors for HIV acquisition were perceived as being culturally determined, and were linked to lack of knowledge about the condition. In order to address the cultural influences on beliefs and attitudes, the Sudanese women and probably the Australian Sudanese community as a whole must first become aware that knowledge of HIV in Australia is relevant to them. Only then will relevant information and education have an impact on their beliefs, and subsequently on their behaviour. Awareness of the importance of education about HIV could be achieved by empowering respected Sudanese individuals with accurate information and messages that have cultural meaning. Verbal and visual sources of information may be the most effective media for dissemination. Composition of target audiences is also a major consideration in reaching the community, as men and women, young and old, must be addressed separately. Overall, the findings presented here demonstrate the need to gain a greater understanding of the multiple influences on the health of immigrant populations in Australia, for the improvement of their well-being, as part of the larger Australian population to which they belong.

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CONFLICTS OF INTEREST

None.

ADDRESS FOR CORRESPONDENCE

Rhiannon Palmer, International Health, Department of Medicine, University of Melbourne, 4th Floor Clinical Sciences Building, The Royal Melbourne Hospital, Parkville, Vic 3050, Australia. Tel: +61 3 8344 3257; fax: +61 3 9347 1863; email: rhiannonpalmer@hotmail.com

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