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A peer-education model to increase sexual health knowledge in refugees from West Africa

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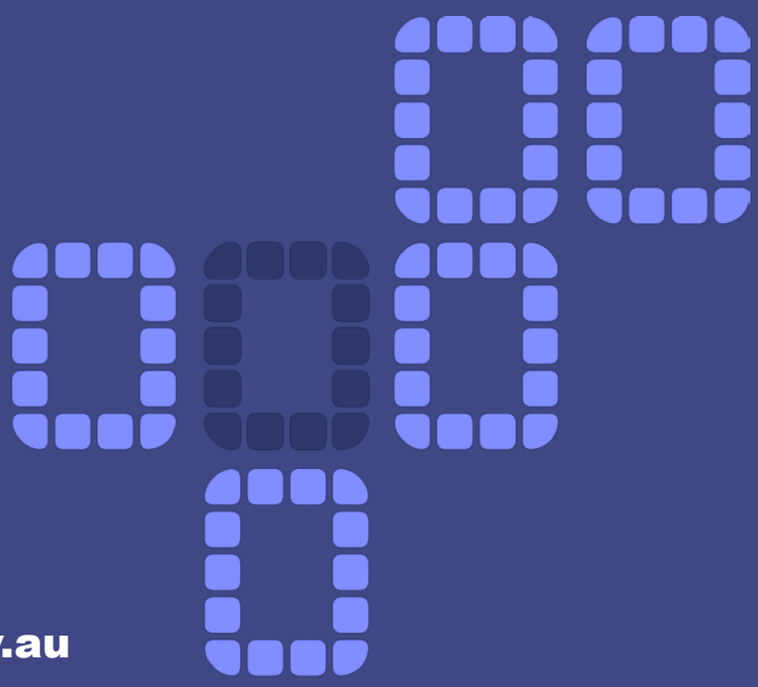

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REPORT

A peer-education model to increase sexual health knowledge in refugees from West Africa

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Executive Summary

Most African people have heard of HIV/AIDS, but there is still widespread misunderstanding about how HIV is spread, the consequences of infection, and how to protect against infection. The most vulnerable groups are poorly educated women, those from rural backgrounds, and women who are economically dependent on men. The aim of this project was to determine whether peer education could be employed to increase knowledge about HIV and attitudes towards condom use in West African refugees who had settled in Perth, Western Australia, within the past five years.

In 2006, our research group completed a study of health knowledge and beliefs in West African and Australian women, matched for age and educational background. The key findings for West African women were:

1. misconceptions about the spread and methods of protecting against sexually transmitted infections and HIV
2. a negative attitude toward condom use
3. psychological and social barriers to seeking medical and psychological assistance for a range of common medical and psychological problems
4. mean body mass index in the overweight range
5. barriers to exercise and misconceptions about the nutritional value of certain foods

In 2007 we extended this research by implementing a training programme for health knowledge in West African women, focusing on the deficits in health knowledge identified in the 2006 survey. We developed community-tailored training manuals and ran 10 weekly training sessions for a small group of West African women and men (ten facilitators), who then ran workshops and practical exercises on topics covered in the training sessions within their community. The community workshops ran weekly for four weeks. We evaluated changes in health knowledge in the 65 West Africans who participated in the intervention. Our specific objective was to evaluate knowledge gained after the delivery of modules on sexual health issues, cardiovascular health, and coping with stress in the West African community. The success of the intervention was evaluated in terms of knowledge about risk factors, modes of transmission, and methods of protecting against sexually transmitted infections and HIV, attitudes toward condom use, cardiovascular health (knowledge of healthy eating principles and barriers to exercise), and psychological and social barriers to seeking medical and psychological assistance. Questionnaires that were piloted in our 2006 survey were administered before and after the intervention. We found significant increases in the participants' knowledge of sexually transmitted infections and HIV, how these infections are spread, how to protect against infection, and positive attitudes towards condom use. Knowledge of stress and depression, diet and nutrition, and benefits of exercise also increased.

These findings indicate that the peer-education approach was successful in assisting a new and emerging community to work effectively on sexual health topics generally considered 'taboo' or too sensitive to discuss. Through the peer-education approach, the community facilitators were given a sense of ownership of health promotion issues, illness prevention strategies and treatment procedures, which assisted them to disseminate this enhanced knowledge to fellow members of their community. This approach may facilitate transmission of information within culturally diverse communities on stigma-loaded issues that impact on sexual health behaviours.

Introduction

Immigrants have a greater risk for poor health than other members of their host country (Kelaher, Williams, & Manderson, 1999). Immigrant African women, in particular, are at high risk for chronic disease and premature death (Gates & McDonald, 1997). This is believed to be caused by low education levels, poverty, and poor nutrition (Kabira, Gachukia, & Matiangi, 1997). West African migrants to Western Australia have also been found to lack knowledge of HIV transmission and protection, and possess negative attitudes towards condom use (Drummond, Mizan, Burgoyne, & Wright, 2007). They are also more overweight, have less accurate knowledge of the nutritional value of some foods, and perceive more barriers to exercise and health services than their Australian counterparts. These deficits and perceptions also put this community at risk for health problems, particularly HIV, cardiovascular disease, and mental health issues. As the number of settlers from African countries continues to be amongst the highest for Western Australia, this is an important issue (Australian Government. Department of Immigration and Citizenship, 2007).

The high risk for poor health and deficits in knowledge of the West African community in Western Australia highlight the importance of health promotion for this population. However, resistance to change traditional values and beliefs, distrust of authorities, and barriers to open communication about sexuality make this a difficult task (Harmsena, Meeuwesenb, van Wieringenc, Bernsena, & Bruijnzeelsd, 2003; James, 2002; Menses & Yarbro, 2007). It may be easy to distribute information to the community, but it is likely that the information will not be assimilated into the belief structure or influence health behaviours (Majumdar & Roberts, 1998). To overcome these effects, it has been suggested that health information is delivered by members of the group rather than outsiders (Horizons, 1999).

This approach, where peers deliver health information, has been termed “peer education,” or “train-the-trainer.” The educators are referred to as peer educators, paraprofessionals, community health advisors, or lay health advisors (Kocken, Voorham, Brandsma, & Swart, 2001). In the Netherlands, peer education is one of the main strategies used for health promotion with migrant communities (Voorham & Visser, 2003). Currently, there is a worldwide trend moving from traditional health education to peer education for HIV prevention, particularly in resource-poor countries (Auerbach & Coates, 2000; UNAIDS, 1999). The cost-effectiveness of this method makes it particularly appealing as it is usually conducted by volunteer community members (James, 2002). This has the advantage of reaching more people for the same cost. Peer education also has the advantage of being able to educate the hard to reach as the educators know where to recruit their peers (Parkin & McKeganey, 2000; Reijneveld, Westhoff, & Hopman-Rock, 2003).

Theory

Peer education asserts that members of a group can elicit behaviour change among their peers (UNAIDS, 1999). In particular, it is believed to overcome the barriers that exist between minority groups and more traditional educational approaches (Majumdar & Roberts, 1998). Peers know what health messages will be acceptable and how best to disseminate the information (Kocken et al., 2001). They are also perceived as a more trustworthy source than outside educators (Kelly et al., 2006). Given this, information from a peer educator is more likely to be accepted than from an outsider. Many advocates of peer education claim that the horizontal process of peers educating each other is key to behaviour change (UNAIDS, 1999).

Peer educators can also create behaviour change by serving as positive role models (Glanz, Marger, & Meehan, 1986). This is based on Social Cognitive Theory, which states that people learn through observation of others (Bandura, 1986). Furthermore, peer educators may create behaviour change at the community level by changing social norms (Bond, Valente, & Kendall, 1999; Horizons, 1999).

The Diffusion of Innovation Theory states that a community's norms can be influenced by "opinion leaders" disseminating information (Rogers, 1995 or 1962). Peer educators may take on the role of opinion leaders by running seminars and becoming prominent figures on health in the community (Horizons, 1999; UNAIDS, 1999). According to the Theory of Reasoned Action, people's behaviours are influenced by the norms of their community (Fishbein & Ajzen, 1975). Hence, changes in norms should create changes in behaviour.

Theories of participatory education and empowerment have also been applied to peer education (Freire, 1972; UNAIDS, 1999; Williams & Labonte, 2007). According to these theories, it is powerlessness, caused by social and economic conditions, that increases the risk of poor health. By empowering people through participation, the risk for poor health is reduced. Peer education does this by involving the community in the education process as both learners and facilitators (Campbell & Mzaidurne, 2001; Williams & Labonte, 2007). Community members are empowered with health knowledge as this is placed in their hands, rather than that of experts (Campbell & Mzaidurne, 2001). Many theories have been applied to how peer education produces behaviour change. Whilst they make intuitive sense, they have received little empirical testing.

Past Studies

For peer educators to disseminate useful information, be positive role models, and alter health norms, adequate training must be provided. A study in disadvantaged areas of Belfast found that, after training, peer educators' knowledge of health issues increased and their levels of substance abuse decreased (McAleavy, McCrystal, & Kelly, 1996). Another study reported a 21.6% increase in sexual and reproductive health knowledge in peer educators after a 40 hour training course (Mevsim, Guldal, Ozcakar, & Saygin, 2008). Most of this knowledge was sustained throughout the next six months with only a 1.8% drop. This provides evidence that peer educators can effectively retain health knowledge and use it to change their own behaviours. Peer educators have also reported increases in confidence to run seminars and apply their health knowledge (James, 2002; O'Hara Murdock et al., 2003). Hence, peer educators have the potential to act as role models and disseminate useful information to their peers.

Reproductive health. Peer education programs have been used to promote reproductive health (Menses & Yarbro, 2007; Warrick, Wood, Meister, & de Zapien, 1992). In a worldwide program promoting breast health, nurses were educated on breast cancer prevention, and assimilated this information with the cultural beliefs of their home country to create a culturally sensitive program (Menses & Yarbro, 2007). The 32 nurses then educated over 900 health care providers throughout the world. The project was regarded as a success as many health care providers were educated in breast care, but no measures of knowledge or behaviour changes were taken. Nonetheless, this study shows that the peer education model can be applied to reproductive health. A study on perinatal peer education for low-income Hispanic migrants in America found self-reported gains in knowledge and easier maternal labours as a result of the new information given to participants (Warrick et al., 1992). The women also approached the facilitators for advice outside of the training sessions. This suggested that the facilitators were able to take on the role of opinion leaders and help change the communities norms and, hence, behaviours.

Sexual health. Peer education approaches have been widely used to target HIV/AIDS in resource-poor countries, particularly in Africa. For example, a program targeting sex workers in Tanzania had peer educators distribute condoms and both written and verbal HIV/AIDS information through informal channels (Laukamm-Josten et al., 2000). As a result, misconceptions about HIV transmission decreased, attitudes towards HIV/AIDS became more positive, and reported condom use increased. Condom use decreased again over the following 24 month period, but it did not reach baseline level. This suggests that there was a change in the community's norms as the behaviour change

was maintained. More formal, peer run seminars in workplaces for women in Botswana have also been successful (Norr, Norr, McElmurry, Tlou, & Moeti, 2004). Compared to the control group, the intervention group had significantly higher post-seminar knowledge of HIV transmission and prevention, more positive attitudes to people living with HIV/AIDS and condom use, and reported safer sex behaviours. Like the educators in the perinatal health promotion study, the peer educators came to be viewed as consultants on health in the community, and perhaps became opinion leaders.

The peer-led seminars in Botswanan workplaces continued for more than five years after the research funding ended (Norr et al., 2004). Peer-led seminars continuing after funding cessation was also reported by O'Hara Murdock and colleagues (O'Hara Murdock et al., 2003). This demonstrates enthusiasm in the community for peer-led HIV/AIDS health promotion and suggests that the information was being widely dispersed and accepted. It also shows the cost effectiveness of the intervention as education continued for many years. In fact, in Chad, peer education has been found to be one of the most cost-effective HIV interventions compared to mass media campaigns, anti-retroviral therapy for HIV-infected pregnant women, and voluntary counselling and testing (Hutton, Wyss, & N'Diekhor, 2003).

Peer education has also been used in HIV/AIDS prevention for minority and migrant groups in Western-culture countries. In a health promotion study targeting the Roma ethnic minority in Europe, peer educators were able to create discussion about HIV/AIDS and safer sex practices in the community (Kelly et al., 2006). Similarly, a review of sex work harm reduction programs, where the sex workers were often migrants, found that peer educators acted as counsellors for other sex workers (Rekart, 2006). This suggests that norms were being challenged and changed. These studies also found increased knowledge and positive attitudes amongst participants on HIV/AIDS. In one study, knowledge was increased compared to a control group after 3 months of the program, and had increased further after 12 months (Kelly et al., 2006). Reductions in self reported unprotected sex have also been documented together with lower rates of sexually transmitted infections compared to control groups, suggesting accuracy of the self-report (Kelly et al., 2006; Rekart, 2006). Hence, changes in norms may have caused behaviour changes. Positive effects on HIV/AIDS knowledge, attitudes, and condom self-efficacy have also been found for immigrant groups in the Netherlands (Kocken et al., 2001) and Canada (Majumdar & Roberts, 1998).

Migrant and minority participants attending HIV/AIDS prevention peer education seminars have reported finding the sessions worthwhile (Majumdar & Roberts, 1998). Reasons given for this included having the sessions conducted in their first language and feeling that the materials and resources were sensitive to their feelings. This suggests that the peer approach can communicate information in a culturally acceptable way and is perceived as trustworthy. Programs have attempted to be sensitive to cultural beliefs by ensuring immigrants' sexual habits are not talked about explicitly (Kocken et al., 2001), and even altering reproductive system anatomy diagrams to fit cultural beliefs (Majumdar & Roberts, 1998). As cultural sensitivity is believed to be central to the success of peer education programs, many allow the peer educators to choose how the education sessions are run (e.g., Kelly et al., 2006; Majumdar & Roberts, 1998).

Mental health. The train-the-trainer approach has also been used for mental health promotion. In India, after the tsunami in 2004, community-level workers and teachers were trained in mental health support approaches, and delivered this information to their peers, i.e., other teachers and workers from their community (Becker, 2007). Although mental health outcomes were not assessed, this intervention was regarded as a success as it enabled mental health support to be provided to many people who would otherwise have had no access. This study suggests that mental health can also be promoted using the peer education model. Peer education has also been used to train health care providers to disseminate dementia knowledge to other health care providers in their rural

communities (Connell, Holmes, Voelkl, & Bakalar, 2002). Learners rated the education sessions as useful and reported that their knowledge on dementia increased. Unfortunately, however, mental health promotion studies using peer education are lacking. To our knowledge, there are no studies of peer-led mental health education among lay, minority populations. However, some cardiovascular health promotion programs have included a stress management component as this is a risk factor for cardiovascular disease.

Cardiovascular health. Peer-led cardiovascular health sessions for senior citizens have led to significant increases in stress management and cardiovascular health knowledge (Glanz et al., 1986; Rose, 1992). Increases in self-efficacy for changing unhealthy behaviours, and actual behaviour changes have also been reported (Glanz et al., 1986; Rose, 1992). In migrant and minority communities, knowledge, self-efficacy, and health behaviour improvements have also been found. A study on a deaf population, with deaf peer educators, found an increase in self-efficacy related to the modifiable cardiovascular disease risk factors of nutrition, psychological well-being, physical activity, and responsible health practices (Jones, Renger, & Kang, 2007). A program for the Latino minority in America had peer educators recruit families to attend seminars (Balcazar, Alvarado, Hollen, Gonzalez-Cruz, & Pedregon, 2005). As a result, cardiovascular health behaviours were significantly improved in participants. Participants reported that they were satisfied with the program, which suggested that it was culturally appropriate. The families also reported sharing the information that they learnt with friends and neighbours; hence, the knowledge spread beyond the peer educators and participants. Again, as the information was spread by peers, it is likely that it was accepted.

Conclusion

Peer education is believed to elicit behaviour change in communities through the dissemination of information in a culturally acceptable manner (Kocken et al., 2001). It may lead to direct effects on behaviour from the acceptance of new information or from observing role models (Glanz et al., 1986; UNAIDS, 1999). Indirectly, behaviour change may be created by altering community norms (Bond et al., 1999; Horizons, 1999). Participant satisfaction with peer education programs suggests that they can be culturally appropriate, and that the information can be accepted (Majumdar & Roberts, 1998). Further, evidence of behaviour change in HIV/AIDS prevention programs shows that this approach can successfully promote sexual health (e.g. Kelly et al., 2006; Rekart, 2006). The success of peer led HIV prevention programs in Africa and with migrant groups in Canada (Majumdar & Roberts, 1998), the Netherlands (Kocken et al., 2001), and Bulgaria (Kelly et al., 2006), suggests that this method is appropriate for West African migrants in Australia also. Whether the approach is suitable for cardiovascular and mental health promotion in this population is uncertain as evidence for the effectiveness of peer education programs in these areas is sparse. However, what has been found suggests that peer education will be effective in these areas. Peer education is promising as a low-cost and effective health promotion method, particularly for migrant groups.

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Change in sexual health knowledge after peer education

Women in sub-Saharan countries are considered to be one of the most vulnerable populations in the world for HIV (Burgoyne and Drummond, 2008). Although awareness of HIV/AIDS is now almost universal in sub-Saharan countries, there is still widespread misunderstanding about how HIV is spread, how to protect against infection, and the consequences of infection. Factors such as poverty, low access to education and health information, economic dependence, and inequality in marriage and sexual relations heighten the risk of contracting HIV and other sexually transmitted infections.

Over the past 5 years, Australia has seen an increase in settlement of refugees, particularly from Africa (Fact Sheet 60, Department of Immigration and Citizenship, Australian Government, http://www.dimia.gov.au/media/fact-sheets/60refugee.htm). Between 2001 and 2005, the West Australian Department of Health was notified of 55 new cases of women with HIV (The Epidemiology of Notifiable Sexually Transmitted Infections and Blood-Borne Viruses in Western Australia 2006; www.public.health.wa.gov.au/3/574/1/epidemiology_of.pm). Of these, 16 (29%) reported that they had acquired HIV in sub-Saharan Africa. This poses a health risk not only for the immigrant community but also for the broader Australian population. Therefore, the aim of this study was to increase knowledge of risk factors for sexually transmitted infections within the West African community in Perth.

As noted in the Literature Review, peer education appears to be a promising health promotion strategy that acknowledges cultural sensitivities and facilitates the dissemination of information in a culturally appropriate way. Workshops were delivered on a range of health promotion targets (becoming physically active, a healthy diet, reproductive and peri-natal health, sexual health, and coping with stress and depression). This strategy was employed at the request of the West African community and to assist recruitment by covering a broad range of interests. Health-related knowledge in each of these areas was assessed before and after the workshops (Appendix B). However, as the focus of this report is on sexual health promotion, only the findings related to sexual health knowledge are discussed below.

Methods

Facilitators

Seven women and three men regarded as leaders within the West African community were recruited as facilitators. Five of the women had participated as survey administrators in the 2006 study (Drummond et al., 2007; Drummond et al., 2008). The three men and two additional women were recruited by members of the West African Women's Group based on their interest in the project and their standing within the community.

Participants

The facilitators recruited 14 West African men and 51 West African women aged between 16 and 67 years (mean age + S.D., 32 + 12 years) to participate in the workshops. They originated from Sierra Leone or Liberia and most had lived in refugee camps before immigrating to Western Australia 3 months to seven years ago (mean 2.4 + 2.0 years). Each participant provided informed consent for the procedures, which were approved by the Murdoch University Human Research Ethics Committee, and were paid $200 for their participation. They had attended school for 0 – 16 years (mean 8.5 + 4.6 years). Nine participants had a trade certificate and another four had a university qualification.

Facilitator training

The facilitators attended seven weekly 3-hour workshops covering various aspect of physical, sexual and mental health. The seven female facilitators also attended three additional workshops on reproductive health and peri-natal care. The sexual health workshops were run separately for men and women. A major aim of these meetings was to ensure that the material to be discussed in workshops was presented in a culturally-suitable way. In addition, the facilitators attended several meetings that focused on the process of training – the benefits of preparation, how to run group discussions and to encourage participation – and provided an opportunity for additional discussion of workshop material and for training rehearsals.

Community workshops

Each facilitator recruited 4 – 8 friends or relatives to attend the community workshops. The facilitators worked together in pairs or in groups of three to present the workshop material to groups of 10 – 15 participants. The material covered in training was presented over three consecutive weeks in workshops covering cardiovascular health (diet, nutrition and exercise), mental health (coping with stress and depression) and sexual health (risk factors, common myths and protection against sexually transmitted infections, methods of contraception, and attitudes toward condom use). In addition, women attended an additional workshop on reproductive health and peri-natal care. The workshops were also monitored by members of the training team.

The facilitators reviewed the questionnaire to ensure that the wording of questions was culture-appropriate, and were trained in questionnaire administration. Each facilitator administered the questionnaire to their participants before the commencement of the workshop series, and again at the conclusion of the workshops. Each question was read out to the participant and the answer was recorded onto a standard form (Appendix A). The questionnaire was administered by interview because of low levels of literacy in some members of the West African migrant community and was delivered in English, which is the national language of Sierra Leone and Liberia. Knowledge about HIV transmission and awareness of self-protective behaviours are thought to be important prerequisites of safe sexual practices. Nevertheless, negative attitudes about condom use may result in HIV risk-taking behaviours. Therefore, respondents were questioned not only about modes of HIV transmission but also about what can be done to protect oneself against infection, the effectiveness of condoms in protecting against HIV and other sexually transmitted infections, and attitudes toward condom use. Items concerned with known modes of transmission of HIV (e.g., by sharing a needle or by having oral sex with someone who has HIV); myths about how HIV is spread (e.g., by spirits or supernatural forces, or by sharing kitchen utensils with someone who has HIV); incorrect beliefs about protective factors (e.g., taking antibiotics or a vaccine); the effectiveness of condoms in protecting against infections such as HIV; and attitudes toward condom use (e.g., condoms spoil sex, or partners dislike condoms) were drawn from various sources (Simbayi et al., 2005; Carey and Schroder, 2002; Hoff et al., 2003). Response categories were “true”, “false” or “unsure”.

Data analysis

For the purpose of statistical analysis, responses were dichotomized into “true” and “false or unsure” categories, thus meeting basic criteria for interval data. Differences from before to after the intervention were investigated in multivariate analyses of variance on sets of variables concerned with (i) HIV knowledge; and (ii) attitudes toward condom use.

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Results

The pre-intervention questionnaire was completed by 65 participants, but seven (11%) did not attend any of the workshops. The other 58 participants attended all four workshops or were given individual instruction from the facilitators on material that they had missed.

The findings are presented below in Tables 1 – 7. The numbers of participants varies across the Tables because of occasional missing data.

Table 1

Knowledge of sexually transmitted infections (N = 48)

	Percent Correct		
	Before	After	F ratio
You can tell if a person has an STI just by looking at them	71 ± 7	98 ± 2	17.46***
Sexually transmitted infections are annoying but they don't have any serious effects on a person's health	65 ± 7	92 ± 4	17.46***
Syphilis is a sexually transmitted infection	85 ± 5	100 ± 0	8.02**
HIV/AIDS is a blood borne virus	83 ± 5	94 ± 4	2.34
Hepatitis B and C are both blood borne viruses	62 ± 7	90 ± 4	12.28***
Some sexually transmitted infections can cause problems with fertility (difficulties having children)	92 ± 4	98 ± 2	1.83
Sexually transmitted infections can cause increased risk for HIV/AIDS	79 ± 6	81 ± 6	.07
People who have been infected with HIV quickly show signs of being infected	58 ± 7	79 ± 6	7.04*
Taking a test for HIV one week after having sex will tell a person if she or he has HIV	33 ± 7	56 ± 7	8.18**

Multivariate $F(9,39) = 5.04$, $p<0.001$

F ratio statistically significant (*$p<0.05$; **$p<0.01$; ***$p<0.001$)

As shown in Table 1, participants were more knowledgeable about sexually transmitted infections after peer education. In particular, most were now aware that you cannot tell whether a person has an STI just by looking at them, and that people who have been infected with HIV usually do not show immediate signs of being infected. They were also aware that STIs can have serious health effects. Encouragingly, most were aware before the intervention that some sexually transmitted infections can cause fertility problems, and that sexually transmitted infections can cause increased risk for HIV/AIDS.

Table 2

Knowledge of STI transmission (N = 53)

	Percent Correct		
	Before	**After**	**F ratio**
It is not possible to get a sexually transmitted infection through skin-to-skin genital contact	58 ± 7	75 ± 6	4.08*
Men can give STIs and HIV/AIDS to women	96 ± 3	100 ± 0	2.04
Men can give STIs and HIV/AIDS to men	83 ± 5	94 ± 3	3.79
Women can give STIs and HIV/AIDS to men	96 ± 3	100 ± 0	2.04
Women can give STIs and HIV/AIDS to women	77 ± 6	87 ± 5	1.96
A pregnant woman can give HIV/AIDS to her baby	96 ± 3	98 ± 2	1.00
A person can get HIV by sharing an injection needle with someone who has HIV	100 ± 0	98 ± 2	1.00
People who have been infected with HIV quickly show signs of being infected	58 ± 7	79 ± 6	7.04*
Taking a test for HIV one week after having sex will tell a person if she or he has HIV	33 ± 7	56 ± 7	8.18**

Multivariate $F(7,46) = 1.49$, not significant

F ratio statistically significant (*$p<0.05$)

Most participants were aware of the usual modes of STI transmission before the workshops, and knowledge did not change after peer education (Table 2). The only exception was an increased awareness that STIs could be spread through skin-to-skin genital contact.

Table 3

Myths about STI and HIV transmission (N = 49)

	Percent Correct		
	Before	**After**	**F ratio**
Sexually transmitted infections can only be spread when symptoms are present	55 ± 7	74 ± 6	4.57*
You can get HIV/AIDS by touching someone with HIV/AIDS	78 ± 6	96 ± 3	6.99*
You can get HIV from mosquito bites	49 ± 7	84 ± 5	16.55***
You can get HIV by sharing kitchen utensils	53 ± 7	78 ± 6	8.27**
You can get HIV from toilets	61 ± 7	94 ± 4	23.27***
You can get HIV from swimming pools	67 ± 7	92 ± 4	15.57***
Coughing and sneezing spread HIV	65 ± 7	92 ± 4	12.22***
People can get HIV by kissing	63 ± 7	86 ± 5	9.46**
HIV/AIDS is caused by spirits or supernatural forces	67 ± 7	80 ± 6	2.31

Multivariate $F(9,40) = 3.11$, $p<0.01$

F ratio statistically significant (*$p<0.05$; **$p<0.01$; ***$p<0.001$)

Although most participants recognised true modes of HIV transmission (Table 2), there was also widespread misunderstanding about risks posed by touching someone with HIV/AIDS, mosquito bites, sharing kitchen utensils, toilets, swimming pools, coughing, sneezing and kissing (Table 3). Most of these fears decreased after peer education. Before the intervention, one-third of participants thought that HIV/AIDS is caused by spirits or supernatural forces. Although the trend did not achieve statistical significance, this decreased to one-fifth after peer education.

Table 4

Myths about protection against HIV (N = 54)

	Percent Correct		
	Before	**After**	**F ratio**
Taking the contraceptive pill will protect a woman against STIs and HIV	70 ± 6	83 ± 5	3.98
There is a cure for HIV/AIDS	68 ± 6	93 ± 4	13.97***
Showering or washing one's private parts after sex keeps a person from getting HIV	74 ± 6	91 ± 4	8.37**
There is a vaccine that can stop adults from getting HIV	67 ± 6	93 ± 4	13.39***
A woman cannot get HIV if she has sex during her monthly period	78 ± 6	96 ± 3	9.67**
A person will not get HIV if he or she is taking antibiotics	87 ± 5	96 ± 3	3.75
A person can get rid of HIV/AIDS by having sex with a virgin	76 ± 6	83 ± 5	1.15

Multivariate $F(7,47) = 4.71$, $p<0.001$

F ratio statistically significant (**$p<0.01$; ***$p<0.001$)

Before the workshops, one-quarter to one-third of participants believed various myths about protection from HIV (Table 4). The prevalence of these erroneous beliefs decreased after peer education. Although only a minority of participants believed that a person can get rid of HIV/AIDS by having sex with a virgin, this belief remained largely unchanged after the workshops.

Table 5

Knowledge of condom use (N = 52)

	Percent Correct		
	Before	**After**	**F ratio**
Using a condom will not protect a person against sexually transmitted infections (STIs) and AIDS/HIV	58 ± 7	83 ± 5	9.34**
Using condoms some of the time is just as good as using condoms all of the time	60 ± 7	77 ± 6	4.56*
Of all the different types of contraception, only condoms provide protection against most STIs and HIV	73 ± 6	92 ± 4	9.73**
Sex without a condom increases the risk of getting a sexually transmitted infection	88 ± 4	100 ± 0	6.65*
Putting on a condom after genital contact has occurred between a man and a woman (i.e. just before ejaculation) increases the risk of getting a sexually transmitted infection	65 ± 7	94 ± 3	15.04***
You don't need to use condoms unless you have a lot of sexual partners	50 ± 7	79 ± 6	8.94**

Multivariate $F(6,46) = 5.77$, $p<0.001$

F ratio statistically significant (*$p<0.05$; **$p<0.01$; ***$p<0.001$)

Knowledge about the benefits and limitations of condom use increased significantly after peer education (Table 5). In particular, every participant recognised that sex without a condom increases the risk of getting a sexually transmitted infection; and most realised that condoms should be used regularly before sexual contact.

Table 6

Attitudes toward condom use (N = 55)

	Percent Correct		
	Before	**After**	**F ratio**
Condoms are easy to get	87 ± 4	98 ± 2	4.81*
Condoms spoil sex	29 ± 6	16 ± 5	3.97
Condoms are unnatural	67 ± 6	56 ± 7	1.83
Partners dislike condoms	71 ± 6	69 ± 6	.05
Buying condoms is embarrassing or shameful	65 ± 6	33 ± 6	17.57***
Most people who carry condoms are just looking for sex	42 ± 7	14 ± 5	11.68***
It is difficult to bring up the topic of using condoms	54 ± 7	53 ± 7	.03

Multivariate $F(7,48) = 5.38$, $p<0.001$

F ratio statistically significant (*$p<0.05$; ***$p<0.001$)

Despite enhanced knowledge about the benefits of condom use after peer education (Table 5), negative attitudes towards condom use persisted for many participants (Table 6). Indeed, the majority of participants still believed that condoms are unnatural, partners dislike using condoms and it is difficult to bring up the topic of using condoms. Nevertheless, only a third of participants thought that buying condoms is embarrassing or shameful after peer education, and most no longer believed that people who carry condoms are just looking for sex.

Table 7

Responses to being asked to use a condom (N = 57)

	Percent Correct		
	Before	**After**	**F ratio**
If your partner suggested using a condom you would feel:			
Like he or she cared about me	32 ± 6	56 ± 7	7.84**
Relieved	3 ± 2	9 ± 4	1.83
Insulted	37 ± 6	28 ± 6	2.04
Like he or she was suspicious or concerned about my past sexual behaviour	47 ± 7	56 ± 7	.75
Suspicious or concerned about their past sexual behaviour	26 ± 6	46 ± 7	5.69*
That he or she was being responsible	30 ± 6	35 ± 6	.69

Multivariate $F(6,51) = 3.05$, $p<0.05$

F ratio statistically significant (*$p<0.05$; **$p<0.01$)

In general, responses to being asked to use a condom changed only slightly after peer education (Table 7). Nevertheless, a majority of participants reported that their partner would show that they cared about the participant by suggesting using a condom. Curiously, the proportion of participants who that that they would be suspicious or concerned about their partner's past sexual behaviour increased significantly after peer education, perhaps reflecting their own greater understanding and their partner's assumed understanding about when condoms should be used.

Conclusions

The peer education approach employed in the present study was successful in increasing knowledge about STIs and HIV. In our previous study, knowledge about these sexual health issues was lower in West African women than in a matched sample of Australian women, particularly in West African women with little or no education (Drummond et al., 2007; Drummond et al., 2008). Thus, the peer education approach may help to disseminate knowledge about sensitive issues in a culturally-appropriate manner in minority communities.

Our observation of the workshops indicated that the facilitators took their role seriously, prepared discussion material before each workshop, encouraged group participation and discussion, and brought the discussion back to the topics under consideration where necessary. They appeared to benefit from the workshop outlines and materials (Appendices C-H) which were followed closely.

After the workshops, participants had increased knowledge about modes of HIV transmission and how to decrease exposure to sources of infection. Knowledge about the effectiveness of condoms in protecting against HIV and other sexually transmitted infections also increased. Nevertheless, as in similar studies (e.g., Sacco et al., 1991), many participants still held negative attitudes toward condom use. This centred around concerns that partners dislike condoms, that it is difficult to bring up the topic of using condoms, and around mutual suspicions of infidelity if condom use was suggested. These entrenched attitudes need to be targeted in future sexual health promotion campaigns, particularly if they are held by sexually active people with multiple partners. On the positive side, beliefs that buying condoms is embarrassing or shameful, and that most people who carry condoms are just looking for sex, decreased after peer education. Thus, it seems likely that hearing these messages from their peers was more powerful than media campaigns promoting safe sex.

As noted in the Literature Review, the peer education approach is a cheap and effective way to disseminate knowledge about sexual health in minority groups and non-Western cultures in a culturally-acceptable way (Laukamm-Josten et al., 2000; Hutton et al., 2003; O'Hara Murdock et al., 2003; Norr et al., 2004; Kelly et al., 2006). The present findings indicate that this methodology is also an effective means of sexual health promotion for people who had migrated to Australia recently from refugee camps in Africa. Thus, this approach may also be effective for other new and emerging communities.

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Appendix A: Survey Instrument

TRAIN THE TRAINER PROGRAMME FOR HEALTH PROMOTION IN THE WEST AFRICAN COMMUNITY

PRE-EVALUATION QUESTIONNAIRE

Please note that each participant must sign the participant consent form and complete the pre-evaluation questionnaire prior to the first workshop.

DEMOGRAPHIC INFORMATION

Age: _____ years Height: _____cm Weight: _____ kg

1. What is your family position?

Married: • De-Facto: • Divorced: • Single: • Widowed: •

2. How many people live in your home? _____

3. What suburb do you live in? _____

4. What is your current accommodation?

Rent • Share • Own • Mortgage •

HomesWest • With parents or relatives •

5. Are you:

Working Full Time • Working Part Time • Volunteer •

Unemployed • Pensioner • Home Duties •

Student •

6. Is your employment: Casual • Permanent •

7. How many years of primary school do you have? _____

How many years of high school do you have? _____

Did you attend an education institution beyond high school? _____

What completed educational qualifications do you have? _____

8. How many years have you lived in Australia? _____

9. How many years did you spend living in the countryside in Africa? _____

How many years did you spend living in towns or cities in Africa? _____

How many years did you spend living in a refugee camp in Africa? _____

10. Do you speak English at home? Yes • No •

11. Which country were you born in? _____

12. What is your religion? _____

Module 1: Exercise, Diet/Nutrition and Healthy Weight

Please answer each question as “True”, “False” or “Unsure”.

i) EXERCISE

Do you think exercise helps?

1. To keep you healthy and fit.

True [ ] False [ ] Unsure [ ]

2. To look good.

True [ ] False [ ] Unsure [ ]

3. To relax, forget about your worries.

True [ ] False [ ] Unsure [ ]

4. Regular exercise can make bones stronger so that they do not break easily.

True [ ] False [ ] Unsure [ ]

5. You can exercise even when you are old.

True [ ] False [ ] Unsure [ ]

6. You need a lot of expensive equipment for exercise.

True [ ] False [ ] Unsure [ ]

7. Regular exercise can help reduce your risk of having a blocked or burst blood vessel in your brain (a stroke).

True [ ] False [ ] Unsure [ ]

8. Regular exercise can help prevent heart disease.

True [ ] False [ ] Unsure [ ]

9. Sport is only for fit young people.

True [ ] False [ ] Unsure [ ]

10. Too much exercise can be dangerous if you are not used to it.

True [ ] False [ ] Unsure [ ]

11. Regular exercise is important if you want to lose weight.

True [ ] False [ ] Unsure [ ]

12. A short walk every day is better than no exercise at all.

True [ ] False [ ] Unsure [ ]

13. People with heart disease should not exercise.

True [ ] False [ ] Unsure [ ]

14. Exercise decreases your metabolism (i.e. decreases the rate that your body burns fat)

True [ ] False [ ] Unsure [ ]

15. Exercise increases good cholesterol and lowers bad cholesterol.

True [ ] False [ ] Unsure [ ]

16. Stretching increases flexibility and blood circulation.

True [ ] False [ ] Unsure [ ]

17. Aerobic exercise uses mainly large muscle groups in the body.

True [ ] False [ ] Unsure [ ]

18. Regular exercise is associated with reduced aches and pains during pregnancy.

True [ ] False [ ] Unsure [ ]

19. Women can benefit from weight / strength training.

True [ ] False [ ] Unsure [ ]

20. A balanced exercise program should include aerobic, stretching and weight / strength exercises.

True [ ] False [ ] Unsure [ ]

21. You should gradually aim to work-up to 30 to 60 minutes of exercise per day.

True [ ] False [ ] Unsure [ ]

22. How can you motivate yourself and others to exercise regularly?

_____
_____
_____
_____
_____
_____
_____

2) DIET & NUTRITION

Please answer each question as “True”, “False” or “Unsure”.

Do you think that?

1. What you eat can determine whether you get heart disease, diabetes or cancer.

True [ ] False [ ] Unsure [ ]

2. There are so many recommendations about what is healthy to eat; it’s hard to know what to believe.

True [ ] False [ ] Unsure [ ]

3. I know that what I eat and drink now are healthy, so there is no reason for me to make a change.

True [ ] False [ ] Unsure [ ]

4. Some people are born fat and some thin; there is not much you can do to change this.

True [ ] False [ ] Unsure [ ]

5. When shopping for food it is important to consider whether the food I choose to buy is healthy or not healthy.

True [ ] False [ ] Unsure [ ]

6. Eating saturated fat (from animals, palm oil) increases the risk of blood vessels in your heart becoming blocked (heart disease).

True [ ] False [ ] Unsure [ ]

7. Eating salt increases the risk of high blood pressure.

True [ ] False [ ] Unsure [ ]

8. Drinking black or green tea decreases the risk of bowel cancer (the bowel is a general term for the long muscular tube that starts at the bottom of the stomach and ends at the anus).

True [ ] False [ ] Unsure [ ]

Do you think you can get sick if:

1. You do not eat healthy food.

True [ ] False [ ] Unsure [ ]

2. You do not prepare your food well.

True [ ] False [ ] Unsure [ ]

3. You do not eat a balanced diet.

True [ ] False [ ] Unsure [ ]

4. You do not take care of yourself.

True [ ] False [ ] Unsure [ ]

Please answer each question by placing a tick in the appropriate box.

Do you think health experts recommend that people should be eating more, the same amount, or less of these foods?

1. Vegetables

- More
- Same
- Less
- Unsure

2. Sugary foods

- More
- Same
- Less
- Unsure

3. Fatty foods such as hamburgers and chips

- More
- Same
- Less
- Unsure

4. High fibre foods such as wholemeal bread, nuts and beans

- More
- Same
- Less
- Unsure

5. Fruit

- More
- Same
- Less
- Unsure

6. Salty foods

- More
- Same
- Less
- Unsure

7. Oily fish (e.g. Herring, Salmon, Sardines, Pilchards, Trout, Fresh Tuna, Mackerel, Sprats, Swordfish and Kippers).

- More
- Same
- Less
- Unsure

9. Fried foods

- More
- Same
- Less
- Unsure

10. Fat such as palm oil, olive oil, butter and margarine

- More
- Same
- Less
- Unsure

11. Full fat milk, cream, butter or cheese.

- More
- Same
- Less
- Unsure

HEALTHY WEIGHT

Please answer each question as “True”, “False” or “Unsure”.

1. The ideal body fat range for women is higher than for men.

True [ ] False [ ] Unsure [ ]

2. Body fat is made up of excess calories.

True [ ] False [ ] Unsure [ ]

3. Body fat distributed around the hips and buttocks is associated with serious health risks in women.

True [ ] False [ ] Unsure [ ]

4. To lose weight you must burn more calories than the total amount of calories consumed.

True [ ] False [ ] Unsure [ ]

5. Prior to any weight loss program you must seek medical advice if you have a family history of heart disease, you’re overweight or obese, or you’re pregnant.

True [ ] False [ ] Unsure [ ]

6. A healthy person’s body is made up of 50 to 65% of water.

True [ ] False [ ] Unsure [ ]

7. For men body fat distributed around the waist is associated with greater health risks.

True [ ] False [ ] Unsure [ ]

8. Weight-loss reduces the risk for health problems.

True [ ] False [ ] Unsure [ ]

9. Eating foods high in saturated fat is healthy.

True [ ] False [ ] Unsure [ ]

10. A measure of waist circumference for women is around the belly button.

True [ ] False [ ] Unsure [ ]

11. A healthy weight range is best achieved through physical activity and a diet that is low in fat and sugar.

True [ ] False [ ] Unsure [ ]

12. Health experts recommend eating 6 small meals throughout the day.

True [ ] False [ ] Unsure [ ]

Module 2: Stress and Depression Questionnaire

STRESS

1. Stress is the same for everybody.

True [ ] False [ ] Unsure [ ]

2. Short-term stress is associated with many health problems.

True [ ] False [ ] Unsure [ ]

3. Stress is always bad for you.

True [ ] False [ ] Unsure [ ]

4. Only some people experience stress.

True [ ] False [ ] Unsure [ ]

5. Only major symptoms of stress require attention.

True [ ] False [ ] Unsure [ ]

6. Stress is when resources are insufficient to meet perceived demands.

True [ ] False [ ] Unsure [ ]

7. Symptoms of stress can include irritability, headaches, anxiety, anger, and muscular tension.

True [ ] False [ ] Unsure [ ]

8. Relaxation strategies are an effective way to relieve stress.

True [ ] False [ ] Unsure [ ]

9. Unhealthy strategies for managing stress include excessive smoking, alcohol and drug use.

True [ ] False [ ] Unsure [ ]

10. Negative self-talk can cause and maintain stress.

True [ ] False [ ] Unsure [ ]

11. Persistent or chronic stress can lead to many health problems.

True [ ] False [ ] Unsure [ ]

12. Physical activity is ineffective to reduce stress.

True [ ] False [ ] Unsure [ ]

13. Stress is everywhere, so you can't do anything about it.

True [ ] False [ ] Unsure [ ]

14. When is it advisable to seek professional help for stress?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

1) DEPRESSION

1. Depression is a normal part of old age.

True [ ] False [ ] Unsure [ ]

2. Depression is associated with suicide.

True [ ] False [ ] Unsure [ ]

3. Children are too young to experience depression.

True [ ] False [ ] Unsure [ ]

4. Depression is caused by a chemical imbalance in the brain.

True [ ] False [ ] Unsure [ ]

5. Not all antidepressant medications are effective for everyone.

True [ ] False [ ] Unsure [ ]

6. Men are more likely than women to experience depression.

True [ ] False [ ] Unsure [ ]

7. Depression is associated with heart disease.

True [ ] False [ ] Unsure [ ]

8. Feeling sad is the same as clinical depression.

True [ ] False [ ] Unsure [ ]

9. People will depression can just “snap out it” if they tried hard enough.

True [ ] False [ ] Unsure [ ]

10. Only people with weak personalities get depression.

True [ ] False [ ] Unsure [ ]

11. Most people will experience depression at some time in their life.

True [ ] False [ ] Unsure [ ]

12. Symptoms of depression are the same for everyone.

True [ ] False [ ] Unsure [ ]

13. Depression changes the person’s behaviour, emotions and thinking.

True [ ] False [ ] Unsure [ ]

14. Lack of pleasure from previously enjoyed activities is a sign of depression.

True [ ] False [ ] Unsure [ ]

15. A person with a family history of depression may be at an increased risk for depression.

True [ ] False [ ] Unsure [ ]

16. Feelings of hopelessness and persistent sadness are associated with depression.

True [ ] False [ ] Unsure [ ]

17. Women and men experience depression in the same way.

True [ ] False [ ] Unsure [ ]

18. Depression in the elderly is more likely if they are taking multiple medications for health problems.

True [ ] False [ ] Unsure [ ]

19. Depression in men usually presents as anger, irritability and discouragement.

True [ ] False [ ] Unsure [ ]

20. Antidepressant medications can help balance the chemicals in the brain.

True [ ] False [ ] Unsure [ ]

21. Once a depressed person begins to feel good, they can discontinue their medication.

True [ ] False [ ] Unsure [ ]

22. More men die from suicide than women.

True [ ] False [ ] Unsure [ ]

Module 3: Contraception, and STI's, HIV/AIDS

Please answer each of the questions as "True", "False" or "Unsure".

2) CONTRACEPTION

Do you think that?

1. The main purpose of contraception is to prevent pregnancy.

   True [ ] False [ ] Unsure [ ]

2. Using a condom will not protect a person against sexually transmitted infections (STIs) and AIDS/HIV.

   True [ ] False [ ] Unsure [ ]

3. Taking the contraceptive pill will protect a woman against STIs and HIV.

   True [ ] False [ ] Unsure [ ]

4. Using condoms some of the time is just as good as using condoms all of the time.

   True [ ] False [ ] Unsure [ ]

5. Out of all the different types of contraception, only condoms provide protection against most STIs and HIV.

   True [ ] False [ ] Unsure [ ]

6. Sex without a condom increases the risk of getting a sexually transmitted infection.

   True [ ] False [ ] Unsure [ ]

7. Putting on a condom after genital contact has occurred between a man and a woman (i.e. just before ejaculation) increases the risk of getting a sexually transmitted infection.

   True [ ] False [ ] Unsure [ ]

8. Sexually transmitted infections can only be spread when symptoms are present.

   True [ ] False [ ] Unsure [ ]

9. You can tell if a person has an STI just by looking at them.

   True [ ] False [ ] Unsure [ ]

10. Sexually transmitted infections are annoying but they don't have any serious effects on a person's health.

    True [ ] False [ ] Unsure [ ]

11. Syphilis is a sexually transmitted infection.

True [ ] False [ ] Unsure [ ]

12. It is not possible to get a sexually transmitted infection through skin-to-skin genital contact.

True [ ] False [ ] Unsure [ ]

13. HIV/AIDS is a blood borne virus.

True [ ] False [ ] Unsure [ ]

14. Hepatitis B and C are both blood borne viruses.

True [ ] False [ ] Unsure [ ]

STIs, HIV/AIDS

Do you think that?

1. Some sexually transmitted infections can cause problems with fertility (difficulties having children).

True [ ] False [ ] Unsure [ ]

2. Sexually transmitted infections can cause increased risk for HIV/AIDS.

True [ ] False [ ] Unsure [ ]

3. Men can give STIs and HIV/AIDS to women.

True [ ] False [ ] Unsure [ ]

4. Men can give STIs and HIV/AIDS to men.

True [ ] False [ ] Unsure [ ]

5. Women can give STIs and HIV/AIDS to men.

True [ ] False [ ] Unsure [ ]

6. Women can give STIs and HIV/AIDS to women.

True [ ] False [ ] Unsure [ ]

7. A pregnant woman can give HIV/AIDS to her baby.

True [ ] False [ ] Unsure [ ]

8. You can get HIV/AIDS by touching someone with HIV/AIDS.

True [ ] False [ ] Unsure [ ]

9. There is a cure for HIV/AIDS.

True [ ] False [ ] Unsure [ ]

10. You can get HIV from mosquito bites.

True [ ] False [ ] Unsure [ ]

11. You can get HIV by sharing kitchen utensils.

True [ ] False [ ] Unsure [ ]

12. You can get HIV from toilets.

True [ ] False [ ] Unsure [ ]

13. You can get HIV from swimming pools.

True [ ] False [ ] Unsure [ ]

14. Coughing and sneezing spread HIV.

True [ ] False [ ] Unsure [ ]

15. A person can get HIV by sharing an injection needle with someone who has HIV.

True [ ] False [ ] Unsure [ ]

16. Showering or washing one's private parts after sex keeps a person from getting HIV.

True [ ] False [ ] Unsure [ ]

17. People who have been infected with HIV quickly show signs of being infected.

True [ ] False [ ] Unsure [ ]

18. There is a vaccine that can stop adults from getting HIV.

True [ ] False [ ] Unsure [ ]

19. People can get HIV by kissing.

True [ ] False [ ] Unsure [ ]

20. A woman cannot get HIV if she has sex during her monthly period.

True [ ] False [ ] Unsure [ ]

21. A person will not get HIV if he or she is taking antibiotics.

True [ ] False [ ] Unsure [ ]

22. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.

True [ ] False [ ] Unsure [ ]

23. HIV/AIDS is caused by spirits or supernatural forces.

True [ ] False [ ] Unsure [ ]

24. A person can get rid of HIV/AIDS by having sex with a virgin.

True [ ] False [ ] Unsure [ ]

PROTECTION OF SEXUAL HEALTH

Do you think that?

1. Condoms are easy to get.

   True [ ] False [ ] Unsure [ ]

2. Condoms spoil sex.

   True [ ] False [ ] Unsure [ ]

3. Condoms are unnatural.

   True [ ] False [ ] Unsure [ ]

4. Partners dislike condoms.

   True [ ] False [ ] Unsure [ ]

5. You don’t need to use condoms unless you have a lot of sexual partners.

   True [ ] False [ ] Unsure [ ]

6. Buying condoms is embarrassing or shameful.

   True [ ] False [ ] Unsure [ ]

7. Most people who carry condoms are just looking for sex.

   True [ ] False [ ] Unsure [ ]

8. It is difficult to bring up the topic of using condoms.

   True [ ] False [ ] Unsure [ ]

Please place a tick in one or more of the boxes.

If your husband or partner suggested using a condom you would feel:

- Like he cared about me
- Relieved
- Insulted
- Like he was suspicious or concerned about my past sexual behaviour
- Suspicious or concerned about their past sexual behaviour
- That he was being responsible.

Article II.Module 4: Reproductive Health and Perinatal Care

Attention facilitators: Only the female participants are required to complete this section.

(a) REPRODUCTIVE BODY PARTS

Please answer each of the questions as “True”, “False” or “Unsure”.

Do you think that?

1. To be considered normal, a woman’s menstrual cycle must be 28 days in length.

   True [ ] False [ ] Unsure [ ]

2. The first day of the menstrual cycle starts when bleeding begins.

   True [ ] False [ ] Unsure [ ]

3. In a woman’s reproductive system, the cervix releases eggs each month.

   True [ ] False [ ] Unsure [ ]

4. In a woman’s reproductive system, the cervix and the vagina are names for the same body part.

   True [ ] False [ ] Unsure [ ]

(i) Pap Smears

5. A Pap smear involves having a simple blood test.

   True [ ] False [ ] Unsure [ ]

6. A Pap smear checks if the cervix is healthy.

   True [ ] False [ ] Unsure [ ]

7. All women who have ever had a physical relationship with someone should have a Pap smear.

   True [ ] False [ ] Unsure [ ]

8. You do not need to have a Pap smear If you have not been in a physical relationship with anyone for a long time.

   True [ ] False [ ] Unsure [ ]

9. You should have a Pap smear every 2 years.

True [ ] False [ ] Unsure [ ]

(ii) Breast Care

10. If you are still having periods, your breasts may feel different at different times of the month.

True [ ] False [ ] Unsure [ ]

11. The risk of breast cancer decreases with age.

True [ ] False [ ] Unsure [ ]

12. It is important for women to regularly check for changes in their breasts.

True [ ] False [ ] Unsure [ ]

13. A mammogram involves having the breast area x-rayed.

True [ ] False [ ] Unsure [ ]

14. Women of all ages need to have regular mammograms.

True [ ] False [ ] Unsure [ ]

(iii) Circle how you feel

15. Right now, I feel _____ to talk to women from my community about the female reproductive system.

Very Comfortable Comfortable Uncomfortable Very Uncomfortable

16. Right now, I feel _____ to talk to women from my community about Pap smears.

Very Comfortable Comfortable Uncomfortable Very Uncomfortable

17. Right now, I feel _____ to talk to women from my community about breast care.

Very Comfortable Comfortable Uncomfortable Very Uncomfortable

PREGNANCY & CHILDBIRTH

Do you think that?

1. Feeling emotionally down can happen because of pregnancy and after childbirth.

   True [ ] False [ ] Unsure [ ]

2. Many women need higher level of social support during pregnancy and after childbirth.

   True [ ] False [ ] Unsure [ ]

3. When discussing the pregnancy and childbirth procedures with doctors or nurses it is appropriate to ask questions and tell them if we disagree with what they wish us to do.

   True [ ] False [ ] Unsure [ ]

4. After giving birth, a new mother may feel deeply sad and this can go on for a few weeks or a few months.

   True [ ] False [ ] Unsure [ ]

5. It is difficult to bring up the topic of not being able to cope with a new baby with a partner.

   True [ ] False [ ] Unsure [ ]

6. It is difficult to bring up the topic of not being able to cope with a new baby with close friends.

   True [ ] False [ ] Unsure [ ]

7. If a mother feels emotionally unwell after childbirth this may affect her attachment and bonding with the new baby.

   True [ ] False [ ] Unsure [ ]

8. A woman may become emotionally unwell during pregnancy and/or after childbirth for no reason at all.

   True [ ] False [ ] Unsure [ ]

10. Taking medication to help the woman who is constantly sad during pregnancy or after childbirth is safe for the unborn baby or when breastfeeding, as long as it is monitored by the doctor.

    True [ ] False [ ] Unsure [ ]

11. The health and well being of the family may be affected if the woman is not able to cope with the pregnancy or the new baby.

True [ ] False [ ] Unsure [ ]

THANK YOU FOR YOUR PARTICIPATION

Please place a tick in one or more of the boxes. Who would you approach for help if you thought you had?

	A sexually transmitted infection	Heart disease or high blood pressure	Chronic tiredness, lack of energy, pain or headaches	Ongoing stress or feeling that you could not cope
A medical practitioner (GP)				
A hospital clinic				
A psychologist or counselor				
A social worker or welfare worker				
A member of a self-help group				
A family member or a friend				
A traditional healer				
A religious leader				
A community elder				
Someone else (specify)				
No one				

Please place a tick in one or more of the boxes. What would stop you from seeking help for the following types of problem?

	A sexually transmitted infection	Heart disease or high blood pressure	Chronic tiredness, lack of energy, pain or headaches	Ongoing stress or feeling that you could not cope
Feeling you can cope with this type of problem alone				
Thinking this type of problem gets better by itself				
Feeling embarrassed or ashamed to talk to anyone about it				
Thinking you wouldn't know where to go or who to talk to				
Feeling afraid of what your family or friends might think				
Thinking you might lose your job				
Thinking there is no time				
Thinking you don't have enough money				
Feeling afraid of the treatment or taking medication				
Thinking it takes too long				
Feeling afraid of being hospitalized				
Thinking how to get there and how long you have to travel.				
Feeling afraid of being judged by the person you seek help from				
Thinking no one could help you with this type of problem				
Thinking that the person you seek help from will not listen properly to you				
Thinking that the person you seek help from will not understand what you are saying				

THANK YOU FOR YOUR PARTICIPATION

Appendix B: proportion of correct responses for each survey question

Module 1: Exercise, Diet/Nutrition and Healthy Weight

i) EXERCISE

Do you think exercise helps?

To keep you healthy and fit.

Before Training	After Training	t-test
1.00	1.00	.00

2. To look good.

Before Training	After Training	t-test
.95	.98	1.00

3. To relax, forget about your worries.

Before Training	After Training	t-test
.71	.87	2.42*

4. Regular exercise can make bones stronger so that they do not break easily.

Before Training	After Training	t-test
.75	.95	3.04**

5. You can exercise even when you are old.

Before Training	After Training	t-test
.88	1.00	2.80**

6. You need a lot of expensive equipment for exercise.

Before Training	After Training	t-test
.61	.88	4.12***

7. Regular exercise can help reduce your risk of having a blocked or burst blood vessel in your brain (a stroke).

Before Training	After Training	t-test
.69	.95	3.93***

8. Regular exercise can help prevent heart disease.

Before Training	After Training	t-test
.68	.93	3.64***

9. Sport is only for fit young people.

Before Training	After Training	t-test
.61	.89	3.92***

10. Too much exercise can be dangerous if you are not used to it.

Before Training	After Training	t-test
.66	.73	1.00

11. Regular exercise is important if you want to lose weight.

Before Training	After Training	t-test
.96	.98	1.00

12. A short walk every day is better than no exercise at all.

Before Training	After Training	t-test
.88	1.00	2.80**

13. People with heart disease should not exercise.

Before Training	After Training	t-test
.37	.61	2.92**

14. Exercise decreases your metabolism (i.e. decreases the rate that your body burns fat)

Before Training	After Training	t-test
.18	.41	3.04**

15. Exercise increases good cholesterol and lowers bad cholesterol.

Before Training	After Training	t-test
.61	.82	3.03**

16. Stretching increases flexibility and blood circulation.

Before Training	After Training	t-test
.77	.91	2.06*

17. Aerobic exercise uses mainly large muscle groups in the body.

Before Training	After Training	t-test
.56	.79	2.71**

18. Regular exercise is associated with reduced aches and pains during pregnancy.

Before Training	After Training	t-test
.71	.83	2.18*

19. Women can benefit from weight / strength training.

Before Training	After Training	t-test
.68	.88	2.83**

20. A balanced exercise program should include aerobic, stretching and weight / strength exercises.

Before Training	After Training	t-test
.71	.93	2.85**

21. You should gradually aim to work-up to 30 to 60 minutes of exercise per day.

Before Training	After Training	t-test
.79	.98	3.65***

2) DIET & NUTRITION

Please answer each question as “True”, “False” or “Unsure”.

Do you think that?

1. What you eat can determine whether you get heart disease, diabetes or cancer.

Before Training	After Training	t-test
.67	.74	.85

2. There are so many recommendations about what is healthy to eat; it’s hard to know what to believe.

Before Training	After Training	t-test
.19	.25	.65

3. I know that what I eat and drink now are healthy, so there is no reason for me to make a change.

Before Training	After Training	t-test
.42	.61	2.28*

4. Some people are born fat and some thin; there is not much you can do to change this.

Before Training	After Training	t-test
.36	.66	3.44**

5. When shopping for food it is important to consider whether the food I choose to buy is healthy or not healthy.

Before Training	After Training	t-test
.91	.98	2.05*

6. Eating saturated fat (from animals, palm oil) increases the risk of blood vessels in your heart becoming blocked (heart disease).

Before Training	After Training	t-test
.64	.89	3.65***

7. Eating salt increases the risk of high blood pressure.

Before Training	After Training	t-test
.74	.91	2.46*

8. Drinking black or green tea decreases the risk of bowel cancer (the bowel is a general term for the long muscular tube that starts at the bottom of the stomach and ends at the anus).

Before Training	After Training	t-test
.33	.73	5.26***

Do you think you can get sick if:

1. You do not eat healthy food.

Before Training	After Training	t-test
.91	.95	.81

2. You do not prepare your food well.

Before Training	After Training	t-test
.84	.93	1.69

3. You do not eat a balanced diet.

Before Training	After Training	t-test
.79	.91	2.18*

4. You do not take care of yourself.

Before Training	After Training	t-test
.81	.93	2.18*

Please answer each question by placing a tick in the appropriate box.

Do you think health experts recommend that people should be eating more, the same amount, or less of these foods?

1. Vegetables

Before Training	After Training	t-test
.74	.88	2.21*

2. Sugary foods

Before Training	After Training	t-test
.84	.95	2.19*

3. Fatty foods such as hamburgers and chips

Before Training	After Training	t-test
.83	.97	2.66*

4. High fibre foods such as wholemeal bread, nuts and beans

Before Training	After Training	t-test
.37	.51	1.59

5. Fruit

Before Training	After Training	t-test
.84	.89	1.00

6. Salty foods

Before Training	After Training	t-test
.91	.89	.33

7. Oily fish (e.g. Herring, Salmon, Sardines, Pilchards, Trout, Fresh Tuna, Mackerel, Sprats, Swordfish and Kippers).

Before Training	After Training	t-test
.27	.18	1.52

9. Fried foods

Before Training	After Training	t-test
.67	.77	1.29

10. Fat such as palm oil, olive oil, butter and margarine

Before Training	After Training	t-test
.80	.89	1.30

11. Full fat milk, cream, butter or cheese.

Before Training	After Training	t-test
.74	.70	.44

HEALTHY WEIGHT

Please answer each question as “True”, “False” or “Unsure”.

1. The ideal body fat range for women is higher than for men.

Before Training	After Training	t-test
.57	.93	5.14***

2. Body fat is made up of excess calories.

Before Training	After Training	t-test
.61	.91	4.53***

3. Body fat distributed around the hips and buttocks is associated with serious health risks in women.

Before Training	After Training	t-test
.11	.20	1.40

4. To lose weight you must burn more calories than the total amount of calories consumed.

Before Training	After Training	t-test
.75	.93	2.63*

5. Prior to any weight loss program you must seek medical advice if you have a family history of heart disease, you're overweight or obese, or you're pregnant.

Before Training	After Training	t-test
.82	1.00	3.45**

6. A healthy person's body is made up of 50 to 65% of water.

Before Training	After Training	t-test
.67	.91	3.45**

7. For men body fat distributed around the waist is associated with greater health risks.

Before Training	After Training	t-test
.60	.82	2.85**

8. Weight-loss reduces the risk for health problems.

Before Training	After Training	t-test
.77	.88	1.94

9. Eating foods high in saturated fat is healthy.

Before Training	After Training	t-test
.55	.79	2.88**

10. A measure of waist circumference for women is around the belly button.

Before Training	After Training	t-test
.50	.54	.42

11. A healthy weight range is best achieved through physical activity and a diet that is low in fat and sugar.

Before Training	After Training	t-test
.83	.91	1.43

12. Health experts recommend eating 6 small meals throughout the day.

Before Training	After Training	t-test
.47	.72	2.89**

STRESS

1. Stress is the same for everybody.

Before Training	After Training	t-test
.48	.86	5.03***

2. Short-term stress is associated with many health problems.

Before Training	After Training	t-test
.67	.56	1.18

3. Stress is always bad for you.

Before Training	After Training	t-test
.04	.32	4.31***

4. Only some people experience stress.

Before Training	After Training	t-test
.55	.90	4.79***

5. Only major symptoms of stress require attention.

Before Training	After Training	t-test
.43	.66	2.88**

6. Stress is when resources are insufficient to meet perceived demands.

Before Training	After Training	t-test
.56	.67	1.14

7. Symptoms of stress can include irritability, headaches, anxiety, anger, and muscular tension.

Before Training	After Training	t-test
.89	.95	1.35

8. Relaxation strategies are an effective way to relieve stress.

Before Training	After Training	t-test
.74	.91	3.10**

9. Unhealthy strategies for managing stress include excessive smoking, alcohol and drug use.

Before Training	After Training	t-test
.70	.84	1.83

10. Negative self-talk can cause and maintain stress.

Before Training	After Training	t-test
.66	.82	1.92

11. Persistent or chronic stress can lead to many health problems.

Before Training	After Training	t-test
.79	.96	3.10**

12. Physical activity is ineffective to reduce stress.

Before Training	After Training	t-test
.26	.28	.22

13. Stress is everywhere, so you can't do anything about it.

Before Training	After Training	t-test
.38	.69	3.47***

1) DEPRESSION

1. Depression is a normal part of old age.

Before Training	After Training	t-test
.39	.54	1.92

2. Depression is associated with suicide.

Before Training	After Training	t-test
.73	.84	1.52

3. Children are too young to experience depression.

Before Training	After Training	t-test
.30	.81	6.73***

4. Depression is caused by a chemical imbalance in the brain.

Before Training	After Training	t-test
.55	.83	3.78***

5. Not all antidepressant medications are effective for everyone.

Before Training	After Training	t-test
.86	.93	1.27

6. Men are more likely than women to experience depression.

Before Training	After Training	t-test
.50	.46	.39

7. Depression is associated with heart disease.

Before Training	After Training	t-test
.58	.70	1.85

8. Feeling sad is the same as clinical depression.

Before Training	After Training	t-test
.21	.35	1.93

9. People will depression can just “snap out it” if they tried hard enough.

Before Training	After Training	t-test
.21	.34	1.85

10. Only people with weak personalities get depression.

Before Training	After Training	t-test
.55	.88	4.60***

11. Most people will experience depression at some time in their life.

Before Training	After Training	t-test
.86	.88	.33

12. Symptoms of depression are the same for everyone.

Before Training	After Training	t-test
.61	.80	2.83**

13. Depression changes the person’s behaviour, emotions and thinking.

Before Training	After Training	t-test
.95	.98	1.00

14. Lack of pleasure from previously enjoyed activities is a sign of depression.

Before Training	After Training	t-test
.68	.74	.60

15. A person with a family history of depression may be at an increased risk for depression.

Before Training	After Training	t-test
.64	.69	.65

16. Feelings of hopelessness and persistent sadness are associated with depression.

Before Training	After Training	t-test
.79	.98	3.31**

17. Women and men experience depression in the same way.

Before Training	After Training	t-test
.40	.75	4.14***

18. Depression in the elderly is more likely if they are taking multiple medications for health problems.

Before Training	After Training	t-test
.56	.73	1.92

19. Depression in men usually presents as anger, irritability and discouragement.

Before Training	After Training	t-test
.80	.95	2.66*

20. Antidepressant medications can help balance the chemicals in the brain.

Before Training	After Training	t-test
.59	.96	5.74***

21. Once a depressed person begins to feel good, they can discontinue their medication.

Before Training	After Training	t-test
.25	.36	1.43

22. More men die from suicide than women.

Before Training	After Training	t-test
.53	.80	3.42**

Article III. Module 3: Contraception, and STI's, HIV/AIDS

Please answer each of the questions as "True", "False" or "Unsure".

1) CONTRACEPTION

Do you think that?

1. The main purpose of contraception is to prevent pregnancy.

Before Training	After Training	t-test
.80	.62	2.32*

2. Using a condom will not protect a person against sexually transmitted infections (STIs) and AIDS/HIV.

Before Training	After Training	t-test
.60	.84	3.22**

3. Taking the contraceptive pill will protect a woman against STIs and HIV.

Before Training	After Training	t-test
.69	.83	2.21*

4. Using condoms some of the time is just as good as using condoms all of the time.

Before Training	After Training	t-test
.61	.77	2.02*

5. Out of all the different types of contraception, only condoms provide protection against most STIs and HIV.

Before Training	After Training	t-test
.75	.91	2.62*

6. Sex without a condom increases the risk of getting a sexually transmitted infection.

Before Training	After Training	t-test
.90	1.00	2.56*

7. Putting on a condom after genital contact has occurred between a man and a woman (i.e. just before ejaculation) increases the risk of getting a sexually transmitted infection.

Before Training	After Training	t-test
.68	.95	3.83***

8. Sexually transmitted infections can only be spread when symptoms are present.

Before Training	After Training	t-test
.55	.75	2.51*

9. You can tell if a person has an STI just by looking at them.

Before Training	After Training	t-test
.72	.98	4.46***

10. Sexually transmitted infections are annoying but they don't have any serious effects on a person's health.

Before Training	After Training	t-test
.70	.93	4.07***

11. Syphilis is a sexually transmitted infection.

Before Training	After Training	t-test
.84	1.00	3.24**

12. It is not possible to get a sexually transmitted infection through skin-to-skin genital contact.

Before Training	After Training	t-test
.60	.74	1.73

13. HIV/AIDS is a blood borne virus.

Before Training	After Training	t-test
.83	.93	1.40

14. Hepatitis B and C are both blood borne viruses.

Before Training	After Training	t-test
.63	.91	3.86***

Do you think that?

1. Some sexually transmitted infections can cause problems with fertility (difficulties having children).

Before Training	After Training	t-test
.93	.98	1.35

2. Sexually transmitted infections can cause increased risk for HIV/AIDS.

Before Training	After Training	t-test
.80	.82	.26

3. Men can give STIs and HIV/AIDS to women.

Before Training	After Training	t-test
.96	1.00	1.43

4. Men can give STIs and HIV/AIDS to men.

Before Training	After Training	t-test
.82	.95	2.18*

5. Women can give STIs and HIV/AIDS to men.

Before Training	After Training	t-test
.96	1.00	1.43

6. Women can give STIs and HIV/AIDS to women.

Before Training	After Training	t-test
.78	.85	1.07

7. A pregnant woman can give HIV/AIDS to her baby.

Before Training	After Training	t-test
.96	.98	1.00

8. You can get HIV/AIDS by touching someone with HIV/AIDS.

Before Training	After Training	t-test
.79	.95	2.42*

9. There is a cure for HIV/AIDS.

Before Training	After Training	t-test
.70	.91	3.24**

10. You can get HIV from mosquito bites.

Before Training	After Training	t-test
.47	.82	4.38***

11. You can get HIV by sharing kitchen utensils.

Before Training	After Training	t-test
.54	.75	2.70**

12. You can get HIV from toilets.

Before Training	After Training	t-test
.61	.92	4.51***

13. You can get HIV from swimming pools.

Before Training	After Training	t-test
.65	.91	4.47***

14. Coughing and sneezing spread HIV.

Before Training	After Training	t-test
.65	.89	3.64***

15. A person can get HIV by sharing an injection needle with someone who has HIV.

Before Training	After Training	t-test
1.00	.98	1.00

16. Showering or washing one's private parts after sex keeps a person from getting HIV.

Before Training	After Training	t-test
.75	.91	2.89**

17. People who have been infected with HIV quickly show signs of being infected.

Before Training	After Training	t-test
.59	.77	2.63*

18. There is a vaccine that can stop adults from getting HIV.

Before Training	After Training	t-test
.67	.93	3.83***

19. People can get HIV by kissing.

Before Training	After Training	t-test
.64	.85	3.25**

20. A woman cannot get HIV if she has sex during her monthly period.

Before Training	After Training	t-test
.77	.96	3.31**

21. A person will not get HIV if he or she is taking antibiotics.

Before Training	After Training	t-test
.88	.96	1.93

22. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.

Before Training	After Training	t-test
.32	.59	3.61***

23. HIV/AIDS is caused by spirits or supernatural forces.

Before Training	After Training	t-test
.68	.81	1.63

24. A person can get rid of HIV/AIDS by having sex with a virgin.

Before Training	After Training	t-test
.77	.84	1.07

PROTECTION OF SEXUAL HEALTH

Do you think that?

1. Condoms are easy to get.

Before Training	After Training	t-test
.88	.98	2.19*

2. Condoms spoil sex.

Before Training	After Training	t-test
.28	.16	1.99

3. Condoms are unnatural.

Before Training	After Training	t-test
.66	.55	1.35

4. Partners dislike condoms.

Before Training	After Training	t-test
.71	.70	.23

5. You don’t need to use condoms unless you have a lot of sexual partners.

Before Training	After Training	t-test
.51	.80	3.15**

6. Buying condoms is embarrassing or shameful.

Before Training	After Training	t-test
.65	.35	3.77***

7. Most people who carry condoms are just looking for sex.

Before Training	After Training	t-test
.42	.18	3.06**

8. It is difficult to bring up the topic of using condoms.

Before Training	After Training	t-test
.55	.54	.17

If your husband or partner suggested using a condom you would feel:

	Before Training	After Training	t-test
Like he cared about me	.32	.56	2.80**
Relieved	.04	.09	1.35
Insulted	.39	.28	1.42
Like he was suspicious or concerned about my past sexual behaviour	.47	.56	.87
Suspicious or concerned about their past sexual behaviour	.26	.46	2.39*
That he was being responsible	.30	.35	.83

(b) REPRODUCTIVE BODY PARTS

Please answer each of the questions as “True”, “False” or “Unsure”.

Do you think that?

1. To be considered normal, a woman’s menstrual cycle must be 28 days in length.

Before Training	After Training	t-test
.25	.37	1.43

2. The first day of the menstrual cycle starts when bleeding begins.

Before Training	After Training	t-test
.78	.90	2.20*

3. In a woman’s reproductive system, the cervix releases eggs each month.

Before Training	After Training	t-test
.02	.32	4.58***

4. In a woman’s reproductive system, the cervix and the vagina are names for the same body part.

Before Training	After Training	t-test
.20	.65	5.95***

(i) Pap Smears

5. A Pap smear involves having a simple blood test.

Before Training	After Training	t-test
.40	.48	1.27

6. A Pap smear checks if the cervix is healthy.

Before Training	After Training	t-test
.68	.86	2.64*

7. Al women who have ever had a physical relationship with someone should have a Pap smear.

Before Training	After Training	t-test
.63	.76	1.43

8. You do not need to have a Pap smear If you have not been in a physical relationship with anyone for a long time.

Before Training	After Training	t-test
.39	.73	4.61***

9. You should have a Pap smear every 2 years.

Before Training	After Training	t-test
.50	.82	3.86***

(ii) Breast Care

10. If you are still having periods, your breasts may feel different at different times of the month.

Before Training	After Training	t-test
.88	.96	1.66

11. The risk of breast cancer decreases with age.

Before Training	After Training	t-test
.35	.65	3.27**

12. It is important for women to regularly check for changes in their breasts.

Before Training	After Training	t-test
.90	.98	1.66

13. A mammogram involves having the breast area x-rayed.

Before Training	After Training	t-test
.47	.79	4.25***

14. Women of all ages need to have regular mammograms.

Before Training	After Training	t-test
.07	.22	2.46*

(iii) Circle how you feel

15. Right now, I feel _____ to talk to women from my community about the female reproductive system.

	Very Uncomfortable	Uncomfortable	Comfortable	Very Comfortable	Wilcoxon s. r. test
Pre-training	0.05	0.07	0.59	0.29	3.08**
Post-training	0.00	0.02	0.45	0.53	

16. Right now, I feel _____ to talk to women from my community about Pap smears.

	Very Uncomfortable	Uncomfortable	Comfortable	Very Comfortable	Wilcoxon s. r. test
Pre-training	0.07	0.09	0.65	0.19	2.07*
Post-training	0.00	0.04	0.64	0.32	

17. Right now, I feel _____ to talk to women from my community about breast care.

	Very Uncomfortable	Uncomfortable	Comfortable	Very Comfortable	Wilcoxon s. r. test
Pre-training	0.03	0.03	0.63	0.31	2.84**
Post-training	0.00	0.02	0.43	0.55	

PREGNANCY & CHILDBIRTH

Do you think that?

1. Feeling emotionally down can happen because of pregnancy and after childbirth.

Before Training	After Training	t-test
.69	.84	1.85

2. Many women need higher level of social support during pregnancy and after childbirth.

Before Training	After Training	t-test
.92	.96	.81

3. When discussing the pregnancy and childbirth procedures with doctors or nurses it is appropriate to ask questions and tell them if we disagree with what they wish us to do.

Before Training	After Training	t-test
.76	.88	1.77

4. After giving birth, a new mother may feel deeply sad and this can go on for a few weeks or a few months.

Before Training	After Training	t-test
.61	.92	3.84***

5. It is difficult to bring up the topic of not being able to cope with a new baby with a partner.

Before Training	After Training	t-test
.65	.61	.39

6. It is difficult to bring up the topic of not being able to cope with a new baby with close friends.

Before Training	After Training	t-test
.55	.69	1.85

7. If a mother feels emotionally unwell after childbirth this may affect her attachment and bonding with the new baby.

Before Training	After Training	t-test
.82	.96	2.82**

8. A woman may become emotionally unwell during pregnancy and/or after childbirth for no reason at all.

Before Training	After Training	t-test
.63	.82	2.27*

10. Taking medication to help the woman who is constantly sad during pregnancy or after childbirth is safe for the unborn baby or when breastfeeding, as long as it is monitored by the doctor.

Before Training	After Training	t-test
.61	.69	.94

11. The health and well being of the family may be affected if the woman is not able to cope with the pregnancy or the new baby.

Before Training	After Training	t-test
.82	.84	.30

Please place a tick in one or more of the boxes. Who would you approach for help if you thought you had?

	A sexually transmitted infection		Heart disease or high blood pressure		Chronic tiredness, lack of energy, pain or headaches		Ongoing stress or feeling that you could not cope	
	Before	After	Before	After	Before	After	Before	After
A medical practitioner (GP)	.90	.93	.83	.81	.66	.74	.36*	.53
A hospital clinic	.40**	.62	.45	.52	.38	.47	.21	.28
A psychologist or counsellor	.07	.09	.09	.14	.19	.19	.40	.52
A social worker or welfare worker	.03	.05	.05	.10	.14	.17	.29*	.50
A member of a self-help group	.05	.09	.09	.09	.09	.16	.10*	.26
A family member or a friend	.22	.14	.21	.14	.29	.22	.52	.59
A traditional healer	.12*	.03	.09	.09	.10	.19	.05*	.16
A religious leader	.07	.05	.09	.12	.07	.09	.17**	.40
A community elder	.21	.12	.17	.16	.16	.17	.28	.31
Someone else (specify)	.03	.03	.07	.05	.02	.03	.03	.07
No one	.07	.03	.00	.07*	.00	.02	.00	.05

t-test statistically significant: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Please place a tick in one or more of the boxes. What would stop you from seeking help for the following types of problem?

	A sexually transmitted infection		Heart disease or high blood pressure		Chronic tiredness, lack of energy, pain or headaches		Ongoing stress or feeling that you could not cope	
	Before	After	Before	After	Before	After	Before	After
Feeling you can cope with this type of problem alone	.12	.14	.17	.17	.29	.28	.19	.29
Thinking this type of problem gets better by itself	.14	.10	.10	.16	.26	.36	.17	.14
Feeling embarrassed or ashamed to talk to anyone about it	.67	.69	.24	.26	.12	.14	.16	.26
Thinking you wouldn't know where to go or who to talk to	.14	.21	.09	.14	.05	.12	.24	.21
Feeling afraid of what your family or friends might think	.47	.47	.16	.17	.10	.16	.12	.07
Thinking you might lose your job	.22	.33	.21	.26	.16	.24	.10	.22
Thinking there is no time	.05*	.17	.09	.16	.05	.10	.09	.17
Thinking you don't have enough money	.21	.12	.26	.29	.09	.09	.16	.17
Feeling afraid of the treatment or taking medication	.22	.19	.22	.28	.14	.16	.05	.09
Thinking it takes too long	.09	.17	.11	.19	.05	.07	.05	.14
Feeling afraid of being hospitalized	.19	.17	.28	.31	.10	.16	.05	.09

	A sexually transmitted infection		Heart disease or high blood pressure		Chronic tiredness, lack of energy, pain or headaches		Ongoing stress or feeling that you could not cope	
	Before	After	Before	After	Before	After	Before	After
Thinking how to get there and how long you have to travel.	.05	.14	.10*	.24	.09*	.22	.07*	.21
Feeling afraid of being judged by the person you seek help from	.29	.36	.05	.03	.07	.12	.14	.16
Thinking no one could help you with this type of problem	.07	.12	.02	.10	.09	.10	.10**	.16
Thinking that the person you seek help from will not listen properly to you	.09	.17	.02	.10	.10	.10	.09	.29
Thinking that the person you seek help from will not understand what you are saying	.09	.14	.03**	.17	.16	.10	.29	.38

t-test statistically significant: * $p<0.05$; ** $p<0.01$; *** $p<0.001$