



Beliefs about the causes of cervical cancer in Botswana: implications for nursing

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Background: Cervical cancer is the most common cause of cancer mortality and morbidity for women in Botswana. Yet, little is known about what women believe to be the causes of the disease.

Aim: This paper presents data on factors women in Botswana believe are responsible for the high incidence of cervical cancer in their country. Data were part of a larger study that explored knowledge and perceptions about cervical cancer and Pap smear screening from the perspectives of the clients and the healthcare providers.

Methods: The study that generated the data included 30 women of all socio-economic levels, recruited by network sampling. The women's ages ranged from 31 to 54 years. Demographic data were analysed descriptively. Individualized interview data were content-analysed.

Findings: The identified causes of cervical cancer were classified as cervical irritants and non-irritants. The most commonly cited cervical irritants were vaginally inserted chemical agents and traditional medicine.

Discussions: Participants identified vaginally inserted chemical substances and traditional medicines as possible explanations for the high incidence of cervical cancer in Botswana. They reported that women used these substances for sexual and hygienic purposes. Although these factors are believed to be the causes of cervical cancer and have not yet been medically acknowledged, verbal reports suggest that their use is problematic.

Conclusion: There is a need for health education and for further research to affirm women's beliefs about the harmful effects of intravaginal agents.

Keywords: Botswana, Cervical Cancer, Cervical Irritants, Sexual Taboos, Traditional Medicine

Introduction

Cervical cancer remains the major public health problem for women in Botswana and is the leading cause of cancer mortality for women (Botswana National Cancer Registry 2007; Central Statistics Office 2007). The incidence of cervical cancer in Botswana is steadily rising. A review of Public Pathology Laboratory records from 1978 to 1982 showed that cervical cancer accounted for 26.7% of the 703 cancer cases in Botswana (Botswana National Cancer Registry 2005). Records from 1986 to

2004 indicate that cervical cancer accounted for 30.7% of all recorded malignancies in Botswana (Botswana National Cancer Registry 2007). These findings indicate that programmes are needed to reduce the incidence of cervical cancer in Botswana as well as in other vulnerable populations around the world. Worldwide, cervical cancer is the second most common cancer among women and the leading cause of cancer death in developing countries due to inadequate use of the screening services. In developing countries, it is the most common cancer for women due to inadequate use of screening services (World Health Organization 2005).

Despite these facts, very little is known about what women in Botswana believe regarding the causes of cervical cancer. Beliefs

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about the causes of illness may differ among individuals and are influenced by one's culture, socio-economic status, level of education and personal experience with the disease. Botswana women may hold beliefs about the causes of cervical cancer; these beliefs are unique to their country and culture. Such beliefs may significantly impact on the women's decision to take preventive action against cancer of the cervix. The literature suggests that beliefs about cancer may influence an individual's participation in cancer preventive services (Womeodu & Bailey 1996). Knowledge of local beliefs regarding the causes of cervical cancer can assist health providers in determining appropriate and relevant ways of informing the public about the disease.

This paper presents data on Botswana women's beliefs regarding the causes of cervical cancer that are specific to Botswana. These data were obtained as part of a larger study (McFarland 2003), which explored knowledge and perceptions about cervical cancer and Pap smear tests from the perspectives of the clients and providers using the Health Belief Model. Clients were defined as women who were having or had possibility of having Pap smear tests. Providers were nurses, physicians and others who provided Pap smear tests in government health facilities in Botswana. In that study, women were documented to have inadequate knowledge about the causes of cervical cancer that have been scientifically established and are documented in medical literature. These scientifically established causes of cervical cancer included early sexual intercourse, multiple sexual partners, sexually transmitted diseases (STD), cigarette smoking and hormonal contraception. The research methods that generated the data were presented, followed by the findings of the study.

Methods

Sample and recruitment

The sample for the study consisted of 30 women aged 30 years and above and residing in Gaborone, the capital of Botswana. Gaborone was chosen as one of the two areas in Botswana where Pap smears were available to the public in government health facilities. The women were from all socio-economic levels, including ten who identified themselves as low-income, ten as middle-income and ten as high-income. Participation in the study was limited to black Botswana women by birth and descent to avoid influence from foreign belief systems. Women who had hysterectomy and a history of cervical cancer were excluded from the study as their responses may negatively influence the study findings.

The mean age of the participants was 44.6 years (ranging from 31 to 54). The majority of the participants were married (43.3%, $n = 13$), followed by those who were single (30.0%, $n = 9$), were divorced/separated (20.0%, $n = 6$) and were widowed (6.7%,

$n = 2$). The majority of the participants had university education (43.3%, $n = 13$), followed by those with primary education (30.0%, $n = 9$) and secondary education (23.3%, $n = 7$). Only one participant had never been to school (3.3%). All of the participants were employed. They were categorized under unskilled (23.3%, $n = 7$), skilled (20.0%, $n = 6$), managerial (26.7%, $n = 8$) and professional workers (30.0%, $n = 9$).

Unskilled workers included women who do manual or domestic work in people's homes and in government and non-government institutions. Skilled workers were predominantly office workers, which included secretaries and typists. Women in managerial positions held high- and mid-level jobs both in government and non-government institutions. Professionals were mostly schoolteachers and women from various professions.

Sample recruitment was done through network sampling. Network sampling takes advantage of social networks and the fact that friends tend to hold similar characteristics (Burns & Grove 1997). Participants who were initially recruited into the study by the researcher were used to recruit other women who were interested in participating in the study. These initially recruited women were from all socio-economic levels. Additional participants were recruited by the researcher where they were available.

Protection of human subjects

Protection of human subjects was ensured by obtaining permission for conducting research from the relevant authorities in the USA, where the study was proposed, and in Botswana, where the data were collected in 1999. Permission was also obtained from the participants, who were given letters of consent developed by the researcher in English and Setswana (the language of Botswana). The researcher read these letters for women who could not read or write in either of the two languages.

The letters of informed consent explained that participation was voluntary and that the participants could withdraw from the study at any time without consequence. The participants were also informed that confidentiality and anonymity of the responses would be ensured through the use of coded numbers rather than their names, and by reporting the findings as group data rather than as individual data.

Data collection

Data from the participants were collected using demographic data questionnaires and individualized semi-structured interview guides developed by the researcher. Data collection materials were pilot-tested on women who were similar to the study sample, then modified as needed. Demographic questionnaires elicited questions about age, education, marital status, employment and screening history. The semi-structured interviews

asked open-ended questions such as, 'What do you know about cancer of the cervix?', 'What causes it?', 'What do you know about the Pap smear test?' and 'Have you ever had a Pap smear test?' Probes such as 'Tell me more about cervical cancer in Botswana' elicited further elaboration on the issues related to the causes of cervical cancer that were specific to Botswana.

After obtaining permission from the relevant authorities, participants who were able to read and write English completed the demographic questionnaires. The researcher completed the demographic questionnaires for participants who could not read or write English. The interviews were audiotaped with the participants' consent and were done at the times and places of their choice, which included homes, offices and social places. All interviews were conducted by the researcher in either English or Setswana, depending on the preference of the participant.

Data analysis

The interview data were transcribed verbatim by the researcher. The interviews that were conducted in Setswana were individually translated into English by the researcher. Another individual fluent in both Setswana and English compared the accuracy of the translation against the audiotapes.

The demographic data were summarized using descriptive statistics. The interview data were content analysed. Content analysis involves using consistent codes to designate segments of the data that contain similar material and counting the frequencies of those codes (Morgan 1993). First, the researcher read each transcript several times to get a sense of the entire interview. The phrases used by the participants to respond to the interviews were coded on the margins of the transcript to identify emerging themes. Through cutting and pasting segments of 'like' data, themes pertaining to the causes of cervical cancer specific to Botswana were sorted out according to two major categories coded as cervical irritants and non-irritants. Next, these categories were further recoded to identify various aspects of cervical irritants and non-irritants. Descriptive grids described by Wise et al. (1992) were developed for each subcategory to facilitate display of the data and comparison of the responses across the interviews. The coded responses for each subcategory were then summed to indicate their frequencies. Finally, another individual skilled in content analysis verified the inter-reliability of the codes.

Establishing rigour

Rigour or trustworthiness of the findings was established using the criteria proposed by Guba & Lincoln (1989). These criteria include credibility, transferability, dependability and confirmability.

Credibility

Credibility demonstrates that the research was conducted in such a way that the results are valid. Credibility of the findings of this study was achieved through a thorough description of the research process and by confirming the data with the participants at the end of each interview session. This process provides participants an opportunity to correct errors in the data collected during an interview.

Transferability

Transferability involves the ability to generalize the findings to the population from which the sample was drawn. Although transferability in a qualitative study is limited somewhat by a small non-probability sample, certain approaches were taken to increase generalizability of the findings to women in Gaborone and to women in urban areas in Botswana where Pap smear tests are offered. These approaches included sampling several different networks of women with various incomes from different parts of the city and ensuring that various socio-economic groups were equally represented.

Dependability

Lincoln & Guba (1985) refer to dependability as an inquiry that provides its audience with evidence that if the study was to be replicated with the same respondents, in a similar context, similar findings would be revealed. Dependability in this study was confirmed through keeping field notes and transcribing the interview data verbatim. This verbatim transcription was done to make sure that the participants' responses were not misrepresented. Dependability was also achieved through having a second person, who was fluent in both Setswana and English, confirm the translation and transcription.

Confirmability

Confirmability, which refers to objectivity of the researcher, entails showing how interpretations were made. Confirmability was established through reading of the data several times to confirm the relationship between responses, categories and the entire text. Examples of how data were coded and categorized were also provided as a way to establish confirmability.

Findings

Although participants in this study had inadequate knowledge of cervical cancer and the scientifically established causes of the disease, they reported other factors that they believed might be responsible for the high incidence of cervical cancer in Botswana. These causes of cervical cancer have not yet been scientifically established or documented in the medical literature and were classified by the researcher as cervical irritants and non-irritants.

Table 1 Cervical irritants reported by respondents (*n* = 30)

	Number (%)
Chemical agents	19 (63.3)
Traditional medicine	17 (56.7)
Intrauterine devices	14 (46.7)
Intravaginal washing	8 (26.7)
Excessive/rough sexual activity	5 (16.7)
Traditional sitz baths	3 (10.0)
Vaginal suppositories	2 (6.7)
Toilet paper	2 (6.7)

Each of the respondents identified more than one factor.

Cervical irritants are substances that come directly in contact with the cervix and are likely to irritate it. Non-irritants were substances that do not necessarily come into contact with the cervix, or if they do, they are not likely to irritate it.

Cervical irritants

Cervical irritants included vaginally inserted chemical agents, inserted traditional medicine, intravaginal washing, intrauterine devices [IUDs (loops)], excessive or rough sexual activity, traditional sitz baths, vaginal suppositories and toilet paper used as tampons. These cervical irritants and the frequency with which they were reported by the participants are summarized in Table 1.

Chemical agents

Nineteen participants (63.3%) reported that some women use chemical agents such as detergents and antiseptics to wash inside the vaginal canal. The participants rightly believed that these chemical substances are very strong and that they are likely to erode the cervix and may lead to cervical cancer. Participants reported that women who use these chemical agents do so for a variety of purposes including, vaginal cleanliness, dryness, tightness and prevention of STDs. Among the substances that were commonly reported by the women were alum (commonly known in Botswana as Alone), Dettol and Savlon. These substances are commonly purchased from the chemist or drugstore. The intended use of alum is as a drying agent. It is generally used to shrink swollen tonsils and dry the mouth. It was believed that it could also contract and dry the vaginal area.

The participants reported that some women in Botswana believe they should be dry vaginally for sexual activity to be pleasurable to men. Thus, they use these agents to increase men's sexual pleasure. As one woman commented, 'They (other women) wash with things that should make them dry because

they believe that a woman should be dry inside so that a man should enjoy sex.' Participants reported that although these agents are used to please men sexually, they also have unintended and unpleasant results such as burns and over-contraction of the vaginal muscles. For example, one client said, 'I was once told that a woman used alum to contract her private parts. That burnt her skin and it started peeling. She got cooked.' Most women, however, were disgusted with the use of dangerous chemicals to please men.

Dettol and Savlon are generally for cleaning and disinfecting wounds. Participants reported that women use these agents to disinfect themselves because they are prone to STDs due to the infidelity of their sexual partners. One explained, 'By so doing you are trying to kill germs your partner may have introduced. Germs may or may not have entered your body but you know you don't trust him because you are prone to STDs. You are trying to protect yourself without realizing that you are killing yourself.'

The participants also reported that women use Dettol and Savlon for general cleanliness because they believe in being clean, as one woman commented, 'According to the African tradition, we believe that we have to wash "that part". Maybe we are doing it excessively because some health books indicate that we don't have to be disturbing certain things.' (It should be noted that Botswana in general are modest people. They never call the male or female genitalia by name unless they are angry and swearing, which is also considered embarrassing and rude in their culture.)

Traditional medicine

Seventeen women (56.7%) reported that they were aware that some women insert traditional medicine intravaginally. These respondents stated that traditional medicines were used as 'love potions' to make women more sexually pleasing to men. The following comments were made to explain the use of traditional medicine by certain women in Botswana: 'This is to add sugar or to be sexy' and 'This is done for one to be more palatable to men.'

The participants believed that vaginally inserted traditional medicines could lead to cancer of the cervix because 'these medicines are very strong'. The most popularly mentioned traditional medicine was 'moroto wa tshwene', which means 'urine of a baboon' in Setswana. Women reported that 'urine of a baboon' is used to guarantee eternal endearment and to make sure that the man does not get distracted by other women. They explained that the term 'urine of a baboon' is based on the belief that a baboon by its nature, always returns to the same spot when it has the urge to urinate. The women reported that 'urine of a baboon' is commonly purchased from the streets.

Participants expressed, however, that 'urine of a baboon' is new in Botswana and that it was recently introduced to women in Botswana from some foreign country. They further expressed

concern that Botswana women were adopting these practices due to peer influences or out of fear that they might lose their men to other women. One woman explained, 'This is because sometimes you live with a man and he has no time for you.'

Participants specifically stated that they believed 'urine of a baboon' is responsible for the high incidence of cervical cancer in Botswana. One woman added, 'I once heard a woman crying. She told me that someone made her buy "urine of a baboon" from foreigners and that gave her cancer of the womb.' Participants reported that these medicines are sometimes in powder form and they expressed fear that powder is very dangerous because 'it can eat you inside'. Participants reported that the so-called 'love potions' can contract 'your private part to a very small size to the extent where you may even cry with pain when you engage in sexual activity with a man'. All the participants stated, however, that they had never used these 'love potions' but had heard about them from people who sell them or from discussions with other women. They generally disapproved the use of these agents.

The use of vaginally inserted substances by some women was corroborated by the providers' data (not yet published). The providers reported that some women came to the health facilities with eroded cervixes, suggestive of insertions of corrosive substances. They further expressed the belief that 'urine of a baboon', in particular, might be linked to cervical cancer in Botswana.

IUDs

Fourteen women (46.7%) believed that IUDs (or loops as they are commonly referred to in Botswana) could cause cervical cancer by irritating the cervix. Comments such as the following were made to illustrate this belief: 'The strings of a loop could irritate the cells of the cervix. This might lead to erosion and ultimately to cancer of the cervix.' Other women reported that an IUD is usually left in place for as long as 5 years and that 'When it is left that long, it can leave a scar that does not heal.' Clients said that they had not been informed by anyone that an IUD could lead to cancer of the cervix, but they, nonetheless, held this belief.

Intravaginal washing

Eight of the 30 respondents (26.7%) reported that there is a belief among some Botswana women that for them to feel that they are clean and dry, they must have used their fingers to wash inside the private part. These participants explained that 'some women wash excessively to the point that they expose themselves to infection because they believe in being clean and dry'. Participants reported that they were informed either by health-care providers or by other women that inserting fingers inside the birth canal when they wash might lead to 'cancer of the womb'. They reported that health-care providers advised them not to

use their fingers when they wash inside 'this area'. They further explained that health-care providers believed that washing in that manner could cause cancer of the cervix through 'introducing germs or irritating the mouth of the womb'.

Most women, however, did not see any problem with this hygienic practice. They elaborated that even if health-care providers advised against the practice, 'we do it anyway'. One woman added, 'At the hospitals they explain to us that we should not insert our fingers when we wash. But it is through our stubbornness that we do not do what they say.' To most women, washing inside by using fingers is the only way they feel clean. One woman commented, 'For me, to convince myself that I have washed, I must have done it by using my finger underneath.' One woman added, 'I find washing without inserting my finger very difficult especially after sleeping with a man because I need to feel that I am clean.' The providers also confirmed the women's reports and stated that women who insert fingers when they wash the inside of their private parts are given individualized education to reduce the risk of infection.

Excessive or rough sexual activity

Five subjects (16.7%) expressed that too much friction during sexual activity could irritate the cervix and eventually lead to cancer of the cervix. One woman stated, 'I heard that if your partner is oversexed, that excessive sexual activity could lead to cancer of the cervix.' Another woman said, 'Some men are harsh and you may find that they have injured you internally.'

Traditional sitz baths

Traditional sitz baths were mentioned by three women (10%) as having the likelihood of causing cancer of the cervix. The women explained that some Botswana have a tradition whereby a newly delivered woman is made to sit on a cold bath of herbal mixtures consisting of ground barks of various trees. They reported that this practice is done to reduce the size of the birth canal after delivery. Participants expressed the belief that such mixtures could cause cancer of the cervix because 'you don't know how concentrated they are. You also don't know how long you should sit in the mixture.' Respondents further expressed concern that during the period the woman is made to sit on the mixture, the 'womb' is still open and some particles from the barks may enter the body and cause problems.

Vaginal suppositories

Two women (6.7%) reported that cervical cancer could arise from vaginal suppositories that are used to treat vaginal infections, mycostatin in particular, if used repeatedly. One woman stated, 'I suspect that pills that we insert several times such as mycostatin, can erode the cervix if you use them excessively

because of repeated vaginal infections.' Similarly, another woman said, 'The things that I suppose could cause cervical cancer are pills that are inserted this side (pointing to the perineal area). They could irritate the cervix.'

Toilet paper

An interesting finding was the belief that toilet paper could cause cervical cancer if inserted vaginally. Two of the 30 women (6.7%) reported that some women have the tendency to use toilet paper as tampons or panty liners during menstruation. These women said that toilet paper is dusty and that 'This dust can go inside and lead to cancer of the cervix because powder travels up.' Women's use of toilet paper as tampons was also corroborated by health-care providers during their interviews. The health-care providers explained that such women are counselled to avoid using toilet paper as tampon because it could irritate the cervix.

Non-irritants

Among the non-irritants cited were heredity and a diet that is 'super-refined', with each factor being identified by five subjects (16.7%), mismanagement of labour by four women (13.7%), fibroids by two women (6.7%) and poor personal hygiene by one woman (3.7%). However, the most interesting finding was the breaking sexual taboos described below.

Breaking sexual taboos

Only one participant (3.7%) reported that cervical cancer can result from having slept with 'a man who might have slept with a woman whose husband had died recently (known as moswagadi in Botswana) or with a girl who had a miscarriage recently'.

Discussion

Participants in this study identified chemical substances and traditional medicines as possible explanations for the high incidence of cervical cancer in Botswana. According to the participants, these substances are important for women to be sexually appealing to men. Furthermore, the study revealed that women used detergents or antiseptic solutions for general cleanliness and for prevention of sexually transmitted infections.

These findings are similar to other findings in the region. For example, a study in South Africa revealed that certain women used traditional agents, antiseptics and household detergents for vaginal tightness, dryness and hygiene to increase men's sexual pleasure. These agents were also used to prevent sexually transmitted infections (Morar et al. 2003).

According to McGroarty (2007), men, in cultures where vaginal drying and tightening for dry sex is practised, have expressed that they find dry sex more pleasurable and have also

reported that they dislike vaginal fluids as they believe them to be unclean. In a study done in Zimbabwe, for example, some men said they prefer a woman who is tighter and dry vaginally because they perceive intravaginal dryness as an indication of feminine cleanliness (Ray et al. 1996). Perhaps men in Botswana hold similar sexual values and beliefs as evidenced by the women's continued use of harmful vaginal insertions to please men sexually despite verbalized concerns by users. These findings have implications for further exploration of women's motivation for using these agents as well as men's sexual values.

Participants reported further that vaginally inserted chemical agents were highly corrosive. Although the hazards of these substances have not yet been fully explored in Botswana, this study suggests that their use is problematic. For example, a statement such as 'A woman used alum to wash her private parts and got cooked' suggests that these chemical substances are highly irritating and can lead to the development of cervical cancer. Similar findings have been reported elsewhere. According to a study conducted in Zaire, for example, of the seven women who inserted agents for vaginal dryness, only one had an intact vaginal mucosa, while the rest had vaginal inflammation resembling a chemical burn or allergic reaction (Kun 1998).

Participants in this study further expressed that medical potions have led to cancer of the cervix among those who used them. Although no scientific evidence is available to support the verbal reports, the study suggests that a problem exists and requires further scientific exploration.

Furthermore, data from the providers suggests that some women who come to certain health facilities with cervical erosions use these substances intravaginally. Participants reported that they believe many women used these substances but none acknowledged personal use. Perhaps they felt that personal use of such agents was too intimate to disclose to another person. Another explanation could be that the incidence of using these substances is lower than what was reported by both the clients and providers.

The study finding also revealed that cervical cancer can arise from breaking sexual taboos. According to Staugard (1985), Haram (1991) and MacDonald (1996), in the Setswana tradition, recent death of a spouse and miscarriage are some of the periods during which partners should abstain from sexual relationship. There is a strong belief that during these periods, the person's blood is polluted or bad. Breaking these sexual taboos by engaging in sexual activity during these periods is strongly believed to cause illness through the exchange of polluted blood. Despite the fact that this factor was identified by only one participant, it is a popular belief of disease causation among most Botswana.

Conclusions

This study has implications for health education and research. The use of chemical agents and traditional medicine vaginally to increase men's sexual pleasures is believed to be a common practice by some women in Botswana. These intravaginal chemicals and traditional medical insertions have been associated with adverse health effects such as vaginal burns and over-tightness of the vaginal muscles.

Women in this study identified vaginal hygiene as very important to them. Inserting fingers to clean intravaginally was identified as an important part of their hygienic practice. It is embedded in the women's personal beliefs about vaginal cleanliness. As such, it may be a difficult practice to change, as evidenced by Botswana women's response, 'even if health-care providers say we should not do it, we do it any way'. Health-care providers need to strengthen their efforts to influence behaviour changes related to these hygienic practices.

In this study, intravaginal cleansing is associated with health risks such as vaginal burns and over-tightness of the vaginal muscles. Yet, women continue to wash inside despite the harmful effects of the practice. It is critical for nurses to intensify health education regarding the harmful effects of intravaginal substances. This is particularly important given the current situation of HIV in Botswana. There is also a need to determine the carcinogenic effects of chemical and traditional medicines used intravaginally by women in Botswana. The findings suggest that the agents used could lead to cervical cancer.

The study was limited by a small sample, the use of non-probability sampling and exclusion of women from other parts of Botswana. Further research with a larger sample including women from various geographical areas is needed.

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References

- Botswana National Cancer Registry (2005) *A Review of Public Pathology Laboratory Records – 1978–1982*. Epidemiology and Disease Control Unit.
- Burns, N. & Grove, S.K. (1997) *The Practice of Nursing Research: Conduct, Critique, and Utilization*, 3rd edn. W. B. Saunders Company, Philadelphia, PA.
- Central Statistics Office (2007) *Health Statistic Report*. Department of Printing and Publishing, Gaborone.
- Guba, E.G. & Lincoln, Y.S. (1989) *Fourth Generation Evaluation*. Sage, Newbury Park, CA.
- Haram, L.V. (1991) Tswana medicine in interaction with biomedicine. *Social Science & Medicine*, 33 (2), 167–175.
- Kun, K.E. (1998) Vaginal drying agents and HIV transmission. *International Family Planning Perspectives*, 24 (2), 93–94. Available at: <http://www.rho.org/html/hthps-b-02.html> (accessed 2 November 2007).
- Lincoln, Y.S. & Guba, E.G. (1985) *Naturalistic Inquiry*. Sage, New Bury Park, CA.
- MacDonald, D.S. (1996) Notes on the socio-economic and cultural factors influencing the transmission of HIV in Botswana. *Social Science & Medicine*, 42 (9), 1325–1333.
- McFarland, D.M. (2003) Cervical cancer and Pap smear screening in Botswana: knowledge and perceptions. *International Nursing Review*, 50 (3), 167–175.
- McGroarty, K. (2007) *Harmful Traditional Vaginal Practices Worldwide: An Overview and Lessons Learned*. Available at: http://www.rho.org/html/hthps_overview.html#drysex (accessed 31 October 2007).
- Morar, N.S., Ramjee, G., Gouws, E. & Wilkinson, D. (2003) Vaginal douching and vaginal substance use among sex workers in KwaZulu-Natal, South Africa. *South African Journal of Science*, 99 (7/8), 371–374. Available at: <http://www.kababstractsplus.org/google/abstrct.asp?AcNo=20033203133> (accessed 31 October 2007).
- Morgan, D.L. (1993) Qualitative content analysis: a guide to paths not taken. *Qualitative Health Research*, 3 (1), 112–121.
- Ray, S., Gumbo, N. & Mbivzo, M. (1996) Local voices: what some Harare men say about preparing for sex. *Reproductive Health Matters*, 7, 34–45. Available at: <http://www.rho.org/html/hthps-b-02.html> (accessed 2 November 2007).
- Staugard, E. (1985) *Traditional Healers*. Ipelegeng Publishers, Gaborone.
- Wise, C., Plowfield, L.N., Kahn, D.L. & Steeves, R.H. (1992) Using a grid for interpreting and presenting qualitative data. *Western Journal of Nursing Research*, 14 (6), 796–800.
- Womeodu, R.J. & Bailey, J.E. (1996) Barriers to cancer screening. *Medical Clinics of North America*, 80 (1), 115–133.
- World Health Organization (2005) *Cervical Cancer Screening in Developing Countries. A report of WHO Consultation*. World Health Organization, Geneva.

