Cervical cancer screening among sexually active women aged 18-49 years in Harare

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Cervical cancer is the second most prevalent cancer among women worldwide. In Zimbabwe, cervical cancer is the most frequent cancer among women aged between 15 and 44 years (24.7%). The purpose of the study was to determine the predisposing, enabling and reinforcing factors related to cervical cancer screening among a cross section of 134 sexually active women (18-49 years old) who were systematically selected and interviewed at the Zimbabwe National Family Planning Council (ZNFPC) Spilhaus clinic in Harare. Data analysis was done using SPSS 14. The study revealed that factors significantly associated with Pap smear screening were recommendation by health personnel (p=0.011), being told by someone that they had a Pap smear (p=0.03) and discussing cervical cancer with a significant other (p=0.008). Conversely age, marital status, religion and level of education were not associated with having had a Pap smear. Predisposing factors such as knowledge about Pap smear screening, enabling factors such as availability of screening services and reinforcing factors such as recommendation by health personnel play a pivotal role in determining Pap smear screening. We recommend further studies with rural populations and larger samples.

Key words: Cervical cancer, screening, Pap smear.

INTRODUCTION

Globally, cancer of the cervix is the second most common cancer among women, with an estimated 524 409 new cases and 274 883 deaths in 2008 (International Agency for Research on Cancer (IARC 2008). About 86% of these cases occur in developing countries, representing 13% of female cancers (WHO/ICO 2010). Cervical cancer is the most frequent cancer among women in Zimbabwe with approximately 24.7% of women in the general population being estimated to harbor the cervical Human Papiloma Virus (HPV) infection at any given time (WHO 2010). Chokunonga et al. (2006) reported 2333 cases HPV among Zimbabwean females in 2006 alone with the capital city, Harare recording 1022 cases. Current estimates in the country indicate an incidence of 1855 cases every year. Furthermore cervical cancer has been established as the cause of most cancer mortality in Zimbabwe with 1286 women dying from the disease annually (WHO 2010).

Some studies have revealed that cervical cancer is preventable if pre-cancer is diagnosed and treated as its progression is slower except in HIV positive women (Anorlu, 2008). Pap smears have already been proven to
reduce cervical cancer mortality in developed countries (Denny et al., 2005) and different correlation studies in North America and Europe have demonstrated dramatic reduction in incidence of invasive cancer and cervical cancer mortality with increase in national preventive programs (Matejic et al., 2011). Despite such evidence, provision and uptake of Pap smear tests in developing countries is still nothing to be admired.

Of the 16606 women who visited the Spilhaus clinic for reproductive health care services in 2009 in Zimbabwe, 30% had pap smears whilst in 2010 of the 24484 only 20% were screened signifying a 10% decrease in the screening rates. Despite the availability of screening services at Spilhaus clinic statistics show that few women are being screened for the disease. Recently a study carried out in Zimbabwe on factors influencing cervical cancer screening behavior among Zimbabwean women indicated that 91% of the respondents had never had Pap smear tests, and 81% had no knowledge of cervical cancer screening tests (Mupepi et al., 2011). In light of these findings, the purpose of this study was to determine the predisposing, enabling and reinforcing factors related to cervical cancer screening among sexually active women (18-49 years) who visited the Zimbabwe National Family Planning Council (ZNFPC) Spilhaus clinic in Harare.

METHODS

A non-interventional cross-sectional survey was used to collect quantitative data to explain women’s screening behavior and identify the predisposing, reinforcing and enabling factors which were related to cervical cancer screening among women irrespective of their screening status. Non probability convenience sampling method was used and this saw a sample of 134 consenting women from a total of 136 women who visited the Spilhaus clinic during the time of study and were aged 18-49 years. Participants were interviewed using a questionnaire translated from English into the local Shona language. Associations between groups were assessed using Chi-square with Fisher’s exact test; the level of significance was set at $P < 0.05$.

The PRECEDE- PROCEED model was used as the theoretical framework to conduct the study focusing on Phase 4, the Educational and Organizational Assessment, (Green and Kreuter, 2000). The Educational and Organizational Assessment assisted the researchers to identify the prevalence or intensity of factors of each type while keeping in mind that there are complex interactions among them. We considered as: (i) predisposing factors, those that motivated clients to take up Pap smear tests (e. g., awareness, confidence, values, attitude and beliefs), (ii) enabling factors, those that facilitated clients to have Pap smear tests (e. g., availability of health services, health services facilities and necessary skills), (iii) reinforcing, factors those that resulted in the occurrence (repetitiveness or end) of a behavior due to rewards, incentives or punishments received, influenced by the people surrounding the individual (Green and Kruiter, 2000).

Ethical approval

The Institutional Review Board of the College of Health Sciences at the University of Zimbabwe, the Joint Research Ethics Committee (JREC) reviewed and approved the study protocol and the research was conducted in compliance with the Helsinki Declaration.

RESULTS

A total of 134 women aged between 18-49 years seeking reproductive health services from Spilhaus clinic at Harare hospital were interviewed. 44 (32.5%), of the women were aged between 18 and 25 years, 60 (44.8%) were aged between 26 and 33 years, 22 (16.4%) were aged between 34 and 41 years and 8 (6.3%) were above the age of 41 years, the mean age among the participants was 29 years (S.D: 6.69) and there was no association between age groups and going for Pap smear screening ($p=0.124$). 110 (82.1%) of participants were married and 24 (17.9%) were single. There was no association between marital status and going for Pap smear screening ($p=0.873$). The proportion of women who were employed was 42 (31.3%), unemployed was 65 (48.5%), homemaker/retired was 18 (13.4%) and 8 (6.3%) were students. Similarly there was no association between employment status and going for Pap smear screening ($p=0.125$). 111 (82.8%) of women had secondary level education, with 14 (10.4%) having attended tertiary education and the remaining 9 (6.8%) with primary education. 65 (48.5%) of the women earned a maximum of U.S $100 per month. 106 (79.1%) respondents were Christians and 26 (19.4%) were from the Apostolic sect. Above half the participants 93 (69.3%) reported to be using hormonal contraceptives as the birth control method with 55 (41%) taking oral contraceptives, 20 (14.9%) using injectable (Depo-Provera) and 18 (13.4%) using implants (Jadelle). Only 4 (3%) reported to be using condoms as a family planning method. A small
proportion of 20 (14.9%) of the participants reported that they had never been pregnant before, 24.6% said they had had one pregnancy, 29.1% had been pregnant twice and 31.3% had been pregnant at least three times. Few women admitted to drinking alcohol and smoking, 3.7% and 0.7% respectively. Of the 134 women who were interviewed only 47 of them (35.1%) had gone for Pap smear screening.

A greater proportion (85.1%) of women who had gone for Pap smear screening had also attended school until secondary level and only 6.4% had gone to college/university. There was no association between education level and women who had gone for Pap smear screening (p=0.512). Likewise, there was no association between monthly income and women who had gone for Pap smear screening (p=0.723). Among the women who had gone for Pap smear screening, 23.4% were from the Apostolic sect. There was no association between going for Pap smear screening and religion (p=0.499).

Predisposing factors

Nearly half the women (49.3%) reported not to know anything about cervical cancer. There were misconceptions among some of them that cervical cancer is a disease caused by using traditional medicines i.e. “kupfeka mishonga yechibhoi” (Inserting traditional herbs into the vagina). The other women (9%) said that cervical cancer is a disease that affects the womb and it resulted in a woman getting her womb removed (hysterectomy). Half the women concluded that cervical cancer is a deadly disease that inflicted pain in a woman’s life both physically and emotionally. Women thought cervical cancer could be prevented (76.9%) whilst 23.1% said cervical cancer could not be prevented and associated it with death.

The women had insufficient knowledge about the required Pap smear screening intervals with a fifth (22.3%) saying a woman should have a Pap smear only when they have symptoms, 26.9% saying that a woman should have a Pap smear once in 6 months, 23.9% said that a woman should have a Pap smear once a year and the remaining 26.9% said that they had no idea of when a woman should have a Pap smear. From the results obtained it shows that knowledge about how often a woman should have a Pap smear is positively associated with having had a Pap smear in the past (p=0.011). More than half the women (54.5%) stated that they thought cervical cancer was caused by a virus, 3% reported that it was inherited, 0.7% said they thought it was caused by a curse, 11.9% said it was caused by other things such as dirt in the womb from their partner’s sperms and the dirt that remains in the womb after giving birth and the remaining 29.9% said they did not know what caused cervical cancer. Knowledge about a Pap smear was also positively associated with knowledge about the causes of cervical cancer (p=0.018).

When the women were asked about the symptoms of cervical cancer they mentioned lower abdominal pain, watery and smelly discharge and continuous bleeding as some of the leading symptoms of cervical cancer. Some women mentioned more than one symptom of cervical cancer, stating that a woman would experience multiple physical difficulties if they had the melanoma. On knowledge of Pap smear, 55.2% said they knew what a Pap smear was but 44.8% reported not to know anything about it. 40.5% of those who knew about a Pap smear were currently employed. There was an association between knowledge about a Pap smear and employment status (p=0.033).

Attitudes towards cervical cancer and cervical cancer screening

The majority of women (93.3%) stressed the importance of having a pap smear irrespective of age. Women regarded being married and having children as a risk factor for cervical cancer. Only two of the women (1.5%) mentioned that they would want to have a Pap smear as a preventive measure, to avoid the adverse effects of having cervical cancer.

The majority of women perceived diagnosis with cervical cancer as something that would negatively impact on their lives (48.5%) whilst 26.1% felt they would be affected to a little extent and the remaining 12.7% perceiving no effect at all.

Among the women who had gone for Pap smear screening, 53.2% said if they were diagnosed of cervical cancer it would affect their life very much with 29.8% saying they would be affected to a minimal extent and 10.6 perceiving no effect at all. There was high risk perception among the women with 69.6% saying that having a womb put them at risk. Among the women who had ever gone for Pap smear screening, 78.7% said they were at risk of cervical cancer, however, there was no association between having a Pap smear and risk perception (p=0.229).

When the women were asked if they wanted to be screened in the future for cervical cancer, majority of them (97.8%) said they would want to be screened in the future. A large proportion of the women (92.5%) reported
never to have been infected by an STI, there was therefore no association between going for a Pap smear and ever having an STI (p=0.098). Women felt the need of regular screening irrespective of presence of symptoms (91.8%).

Enabling factors

Most of the women (79.9%) who visited the clinic had no medical aid/insurance and there was no association between having a Pap smear and possessing medical aid/insurance (p=0.824). Women felt a pap smear was affordable due to its importance to their health (80.6%) with the remaining 19.4% feeling that it was unaffordable. The majority of participants (88.1%) who reported to have been screened for cervical cancer in the past said the equipment was readily available when they went for Pap smear screening. Despite the fact that most of the women reported affording a Pap smear, only 35.1% had been screened for cervical cancer. Conversely there was no association between perceived affordability and going for Pap smear screening (p=0.493). There was no association between having had a Pap smear and accessibility of the screening services (p=0.155).

The majority of women stated that distance was not an issue to them when it came to their health. Nearly half the women (48.5%) said they would travel between 10 and 20 km to go to the clinic, 38.1% said they would travel between 5 and 10km, 4.5% said they would travel less than 5km and 9% said they would travel more than 20km. There was no association between ever having a Pap smear and distance to the clinic from home (p=0.611).

Regardless of the fact that the majority of women who were interviewed had never had a Pap smear, most (97%) viewed the services as good from what they had heard from others. A majority of the respondents (93.6%) who had gone for Pap smear screening thought the screening services were good. On description of waiting period, (81.3%) felt it was short, 15.7% felt it was long and 3% felt it was very long. There was no association between ever having a Pap smear and view on the waiting time to be consulted at the clinic (p=0.416).

Reinforcing factors

On knowledge of cervical cancer patients, 73% had close acquaintances that had been diagnosed with cancer whilst the rest (27.1%) did not know of anyone. Some of the women (64.2%) said they had never discussed cervical cancer with anyone and there was a positive association between going for Pap smear screening and ever having discussed cervical cancer with someone (p=0.008). Of the women who had gone for Pap smear screening, 70.2% had been recommended by health personnel to go for Pap smear screening and the remaining 29.8% had not had the recommendation. A positive association was determined between being recommended by a health personnel to have a Pap smear and going for Pap smear screening (p=0.011).

Among the women who had ever gone for Pap smear screening, 40.4% stated having had done so in the last 12 months, 59.6% had gone for screening in the preceding years. A number of the participants indicated that they had heard about cervical cancer in the media (69.4%) and 30.6% said they had never heard about it. Almost half (48.5%) had been told by someone that they had a pap smear test whilst the rest (51.5%) had not been told by anyone. There was a positive association between being told by someone that they had a Pap smear test and going for Pap smear screening (p=0.03). The majority (81.3%) were satisfied with the screening services whilst the rest felt there was room for improvement.

DISCUSSION

The aim of the study was to ascertain predisposing, reinforcing and enabling factors associated with cervical cancer screening among sexually active women aged between 18-49 years who make use of reproductive health services provided at Spilhaus clinic in Harare, Zimbabwe.

There was no association between women age and women going for Pap smear screening meaning that the woman’s age did not determine whether or not she would go for Pap smear screening. This is contrary to the results obtained by Smith et al. (2011) in a study conducted in Australia which revealed that younger women (20-29 years) and older women (above 40 years) were less likely to have Pap smear screening than women in their 30s. The other socio-demographic factors such as current marital status, monthly income, religion, use of alcohol and tobacco were also not associated with going for Pap smear screening in this study. Similarly findings by Smith et al. (2011), Lyimo and Beran (2012) and Wall et al. (2012) revealed that level of education and employment status were correspondingly not associated with the uptake of screening services. Our study revealed that among the participants who had ever gone for Pap smear screening, most of them had reached secondary school level, hence there existed no association between going
Predisposing factors

The study results showed an association between knowledge about a Pap smear and employment status which may affirm that women discussed cervical cancer screening at their places of work or that these women were educated and were more likely to be exposed to a vast array of literature and other forms of media. These results are contrary to those obtained by Hoque (2010) in a study conducted among South African students which revealed that less than a third of the students knew what a Pap smear was.

Women in our study had scant and erroneous knowledge such as attributing cervical cancer to “dirt in the womb” and use of vaginal herbs. These results confirm those obtained by Fort et al. (2011) in a study conducted in Malawi. This means there is lack knowledge about cervical cancer and a need for health education campaigns. The results in the study revealed that the women had insufficient knowledge about the required Pap smear screening interval which is once in 2 years and this affects their health seeking behaviour. The results are analogous to results obtained in a study conducted by Mupepi et al. (2011) in Zimbabwe which revealed that the majority of women lacked knowledge of cervical cancer screening tests and equated being diagnosed with cervical cancer to death. Similar perceptions were echoed by women in Malaysia and Tanzania (Wong et al. 2009; Urasa and Darj 2011). There is a lot of fear among women, particularly in developing countries, regarding cervical cancer and the perceptions that cancer leads to death is deeply rooted in their cognitions and beliefs.

Suspicious of having cervical cancer symptoms which included continuous bleeding, watery and smelly discharge and lower abdominal pain prompted women to go for screening. Related results were also established in Tanzania where most of the women knew about the symptoms of cervical cancer (Urasa and Darj, 2011).

Enabling factors

Contrary to results established by Paolino and Arrossi (2011) and Ibrahim et al. (2011) in Argentina and Sudan respectively, this study did not reveal any association between having a Pap smear and possessing medical aid/insurance since the majority of women reported not to have medical aid/insurance. However, 80.6% of the women indicated that the benefits of having a pap smear outweighed the risk of infection. Nevertheless, there was no association between affordability and ever going for Pap smear screening as only a small proportion of 35.1% had ever gone for Pap smear screening. This could be due to fear of the examination process and misconceptions about the disease. Results from this study are in conflict with those obtained by Hatcher et al. (2011) in rural Appalachia where cervical cancer screening was perceived to be unaffordable without a medical insurance.

Despite the fact that most of the women (91.8%) mentioned that the screening services were accessible to them, there was no association between accessibility and going for Pap smear screening. This could be due to poor knowledge about cervical cancer and screening. This finding is however contrary to findings by Chirwa et al. (2011) in Zambia which found lack of services as an important determinant to lack/low of screening among women in Zambia.

Reinforcing factors

Women rarely discussed cervical cancer with anyone and this could be due to fear of stigmatization as some attributed cervical cancer to having had multiple STIs. Nevertheless there was an association between ever having discussed cervical cancer with someone and going for Pap smear screening (p=0.008). This affirms that discussing cervical cancer with someone may reinforce a woman’s decision to go for Pap smear screening.

The study showed the importance of the role of health practitioners in disseminating information to the women as this had a positive response. The results are analogous with results obtained by Matejic et al. (2011) in Belgrade, Mangoma et al. (2006) in Zimbabwe and Hatcher et al. (2011) in USA.

More than half of the women said they had heard about cervical cancer in the media (69.4%) such as the radio, television and newspapers. The media is therefore seen as a good source of transfer of information as most people listen to the radio, television and read newspapers. These results confirm Mangoma et al. (2006)’s
findings which established that most of the women in two rural districts of Zimbabwe acquired their knowledge about cervical cancer from the media.

Conclusion

Although this study concentrated on a single health facility within an urban area, the results seem to be congruent with other studies from Zimbabwe. From the study conducted it has been established that predisposing factors such as knowledge about Pap smear screening and how often women should go for Pap smear screening, enabling factors such as availability of screening services and reinforcing factors such as recommendation by health personnel to go for Pap smear screening play a pivotal role and are all interlinked in determining whether or not women go for Pap smear screening. Health personnel and information sharing play a major role in influencing women’s health seeking behaviour. We recommend that future studies may utilize larger sample sizes and also draw participants from rural regions of Zimbabwe.

REFERENCES


