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PUBLIC HEALTH & PRIMARY CARE | RESEARCH ARTICLE

Attitudes, knowledge and perceptions towards cervical cancer messages among female university students

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Abstract: This study focused on investigating awareness, attitudes and behavior among female university students towards cervical cancer messages. The study emanates from the view that limited effective communication contributes to the rise in cervical cancer prevalence. Thus the study objectives sought to investigate the communication behavior of young adults' towards cervical cancer, to understand female students recognition of cervical cancer as a problem, to identify the gain and loss frames related to cervical cancer, cervical cancer communication behavior and to identify the factors that influence behavioral intentions towards cervical cancer services. The key findings show that the participants preferred to receive and access cervical cancer information from doctors although they were mainly receiving information through radio. The study also identified the constraints respondents face in responding to cervical cancer campaign calls-to action which included; stigma, lack of knowledge and access to services as well as lack of recommendation from doctors.

Subjects: Risk Communication; Health & Society; Health Conditions; Public Health Policy and Practice

Keywords: cancer communication; public health; risk communication; cervical cancer



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PUBLIC INTEREST STATEMENT

Cervical cancer ranks as the most frequent cancer among women of reproductive age in Uganda, and the most frequent cancer among women between 15 and 44 years of age. Prevention, early detection and treatment are vital in addressing the cervical cancer problem and public health communication could play a big role in this. Media for example television, radio, newspapers, billboards, magazines play a vital role in forming meanings of health beliefs. Effective cervical cancer prevention communication requires identification of behaviors, attitudes and increasing awareness of a given population; this study sought to identify the level of awareness, attitudes and behavior among female university students towards cervical cancer messages to be able to provide strategic information that could be used by health communication practitioners in developing and designing cervical cancer information targeting female university students as a specific target group.

1. Introduction

Cervical cancer is a major problem in Uganda and communication can be used to contribute to its reduction through increasing knowledge and awareness. Cervical cancer remains a major public health problem in developing countries, especially in Africa where an estimated 53,000 women die of the disease every year (PATH, 2010). Projections show that by 2025, about 6,400 new cervical cancer cases and 4,300 deaths will occur annually, (WHO/ICO Information Centre, 2012). This disease not only affects the lives and health of women, but also their families, children and the communities. The purpose of this study was to fully understand female university students' awareness, attitudes and behavior towards cervical cancer messages. This study intended to contribute insights to increase cervical cancer communication which will in turn increase access of cervical cancer services thereby contributing to the reduction of the disease. The study also intended to contribute information that could be used towards designing suitable information education and communication materials to inform and educate female university students on cervical preventive, detection, and diagnosis and treatment measures to enhance effective cancer communication.

1.1. Cervical cancer knowledge

Whereas most female university students undermine their risk of contracting various sexually transmitted diseases, cervical cancer is a common sexually transmitted disease among female university students (Hoque, 2010). A study conducted to assess the knowledge and health beliefs towards cervical cancer among female university students showed that students had low knowledge about the recommended screening age and very low awareness of the link between sexual activity and cervical cancer including the influence on the number of partners. Only 10% had heard about cervical cancer and cervical cancer screening. Vail-Smith and White (1992) concluded that a lack of knowledge coupled with misconceptions about susceptibility impacted on college students' attitudes and behaviors regarding cervical cancer prevention. However, being aware does not necessarily correspond to a correct understanding of the disease (Donati et al., 2012) thus the need of addressing young female attitudes towards cervical cancer.

1.2. Attitudes towards cervical cancer risk

A study conducted to investigate the attitudes and beliefs towards cervical cancer among college students found that more than 68% perceived that young women were susceptible to cervical cancer while 52% believed that they themselves were at risk of cervical cancer. 73% believed that cervical cancer was a very serious disease that would make a woman's life difficult, (Abotchie & Shokar, 2009). Cervical cancer awareness, attitudes and behavior could be affected by marital status, age, shame, lower socioeconomic status, limited education, lack of access and fear of cervical cancer diagnosis; (Agurto, 2001; Jepson et al., 2000; Lewis, 2004). For example, an exploratory study that was conducted in Uganda revealed that cervical cancer being a condition that affects women's sexual and reproductive health was likely to be shrouded in silence since these are issues that are socially and culturally perceived to be private and cannot be openly discussed in public (Katahoire et al., 2008). Therefore, women found difficulty in accessing information even when they experienced cervical cancer symptoms.

1.3. Behavior towards cervical cancer and cervical screening

Under this study, both communication behavior and behavior towards cervical cancer calls to action was reviewed. In a study conducted by Abotchie and Shokar (2009), the findings showed that about a third of the respondents reported ever having heard a mass media discussion on cervical cancer while a fifth had at least once listened to a discussion on cervical cancer at a church or other social gathering. A very low percentage received screening cues from the environment by way of knowing peers who had screened or from a health worker to get cervical cancer screening recommendations. In his study, Kayange (2005) found that the vast majority of women interviewed had heard of cervical cancer (92.7%) and the screening program (88.7%). Exposure to different channels of communication was good, with radio being the most popular channel (94.6%). At least two-thirds of women were aware of each of eight risk factors and roughly half (46%) knew the correct treatment option for women with positive results offer of an outpatient procedure the same day, Mutyaba, Mmiro, and

Weiderpass (2006), Mutyaba, Faxelid, Mirembe, and Weiderpass (2007) found that a combination of economic and male partner influences, knowledge, cultural beliefs and health service factors interacted with presence of an organized screening program in influencing a woman's decision to participate in cervical cancer screening in Uganda. Using the tenets of the situational theory of publics, the theory of reasoned and the framing theory the study sought to explore the objectives below;

- To investigate whether female university students recognize cervical cancer as a problem.
- To investigate cervical cancer communication behavior among female university students.
- To identify the most salient cervical cancer frames as constructed by female university students.
- To identify the perceived constraints towards utilizing cervical cancer services.

2. Materials and methods

2.1. Participants

The study sample comprised of a total of 90 respondents; 79 female students and 11 male students of Makerere University aged 20–35 years. This age group was selected for this study because this population sub-group with the highest incidence of HPV sequentially, this population is at risk of developing cervical cancer (Dunne et al., 2007). From a health communication perspective, this sample was vital in generating new knowledge that will be used to design cervical cancer prevention and early messages. The study participants were enrolled students at Makerere University at the time of the study. The researcher had a moral obligation to consider the rights of the participants who provided knowledge to this study (Streubert & Carpenter, 2003). Ethical considerations were an important aspect of the study because of the sensitive nature of the study. The ethical measures in this study include; informed consent, confidentiality, anonymity, privacy and right to withdraw from the study.

2.2. Semi-structured interviews

Semi-structured interviews were derived from 53 participants. The semi-structured in depth interviews were carried out on one-on-one discussions basis using a set of prepared questions. The questions were clearly stated and semi-structured in nature. This made the process of hearing, adjusting and linking ideas together based on the answers given earlier. Time was unrestricted to ensure that all issues are covered. All interviews were audio tape recorded. Each interview was directly typed into Microsoft Word.

3. Focus group discussions

4 focus group discussions were conducted with a total of 37 respondents; 2 female only groups with 10 respondents in one and 9 respondents in another, 1 mixed with 12 participants 5 of whom were male, and 1 male only group with 6 participants.

3.1. Procedure

Data was collected from ($N = 90$) Makerere University female students. The interpretation and analysis of the data was based on aims of the study, the research questions and the theories which provided the theoretical framework of the study as discussed in chapter one. 53 participants participated in the in-depth interviews while 37 participants participated in one of the 4 focus group discussions. All participants were current students at Makerere University at the time of the study.

4. Results

4.1. Recognising cervical cancer as problem

The researcher identified the most salient audience frames among female university students towards cervical cancer and these included; death, loss and fear. Almost all participants associated with death. Participants saw cervical cancer as inevitably fatal and symbolizing death. Most

participants suggested that despite the fact that advanced cervical cancer treatment exists, cancer ultimately causes death. Some participants who had not gone for cervical cancer screening cited fear. Fear was described as negative information received such as fear of results. Lack of information about the procedure created fear among the participants. Women also generally feared sexually transmitted diseases/infections such as syphilis and HIV/AIDS but students feared cervical cancer most. Loss emerged as a major theme when students expressed their perceptions about cervical cancer. Many of the respondents discussed cervical cancer in relation to death. Students also talked about the loss of the ability to have children.

4.2. Cervical cancer communication

Participants were asked about sources from which they accessed cervical cancer information and which sources from which they prefer to receive more information from. Participants suggested that there was not enough information about cervical cancer in the media to raise concern for cervical cancer. Majority of the respondents observed that one way to communicate cervical cancer as an important issue and to increase the public's perceived risk was to hear more about it on media. Radio, television, internet and friends respectively ranked as the main sources of cervical cancer information. Radio ranked highly because respondents found it most easily accessible. Majority of the respondents who access cervical information through radio used phone radios. Television also ranked highly and respondents attributed this to the many health programs that have been accessed through this platform as well as the audio visual characteristics of television. Newspapers were cited as having news stories about cervical cancer. Internet and social media is also increasingly becoming an important avenue for creating awareness and increasing knowledge about issues. Particularly among the respondent this ranked highly because they spend quite some time using the internet. However the concern with internet is that there is a lot of inaccurate information available. The participants were also asked to identify their preferred media for receiving and accessing cervical cancer information. Most respondents indicated that they intend to access cervical cancer information from a health professional based on the idea that they more knowledgeable and informed about cervical cancer issues.

4.3. Salient cervical cancer frames

The researcher identified the most salient audience frames among female university students towards cervical cancer and these included; death, loss and fear. Almost all participants associated with death. Participants saw cervical cancer as inevitably fatal and symbolizing death. Most participants suggested that despite the fact that advanced cervical cancer treatment exists, cancer ultimately causes death. Some participants who had not gone for cervical cancer screening cited fear. Fear was described as negative information received such as fear of results. Lack of information about the procedure created fear among the participants. Women also generally feared sexually transmitted diseases/infections such as syphilis and HIV/AIDS but students feared cervical cancer most. Loss emerged as a major theme when students expressed their perceptions about cervical cancer. Many of the respondents discussed cervical cancer in relation to death. Students also talked about the loss of the ability to have children.

4.4. Perceived constraints

The researcher sought to establish the constraining factors towards cervical cancer campaign calls-to-action. The findings suggest that there was a lack of perceived risk of suffering from cervical cancer whereby many respondents thought that their behaviors did not put them at risk due to limited cervical cancer information. Few respondents did suggest that frequently having cervical cancer screening and having one sexual partner would help prevent cervical cancer. Few respondents discussed that cervical cancer does not necessarily concern them as students because they feel this disease affects women of an older age group. Respondents indicated that they had not gone for cervical cancer screening because they did not know where to go for the screening. Some respondents cited concerns of high costs of cervical cancer. Some respondents identified stigma as a constraint to cervical cancer screening. Stigma limited respondents' possibilities of talking about cervical cancer with their friends and family. Previous studies have found that stigma has proven detrimental

to preventing health risks because publics do not seek necessary information or communicate about preventing risks (Smith, Ferrara, & Witte, 2007). Respondents suggested that they had not accessed cervical cancer screening because of fear of results, some cited that they were simply lazy and spending most of their time studying while others suggested that they did not think they were infected so they did not think it was necessary to go for screening. Respondents indicated that they would want to first know the procedure used for screening before they were screened. These respondents expressed concerns about the procedure being very painful so they did not see any reason they should expose themselves to such pain and yet they felt healthy. Health provider's involvement in cervical cancer is very important in influencing behavior and compliance of cervical cancer calls-to-action. Some respondents identified a need for doctors to deliver information in such a way that it becomes a routine part of healthcare. These findings suggest that doctors need to be informed about cervical cancer to give that information to their patients. Despite the fact that both males and females acknowledged to get more involved in cervical cancer such as discussing cervical cancer issues with their mothers, sisters and girlfriends, majority of the males argued that females are more responsible for knowing more about the disease. Apart from the medical students, majority of the male respondents were hearing about cervical cancer for the first time and did not know that males are carriers of the Human Papilloma Virus.

5. Discussion

5.1. *Recognising cervical cancer as a problem*

In assessing the awareness, attitudes and behavior of female university students towards cervical cancer messages, the researcher assessed recognition of cervical cancer as a problem. Cervical cancer recognition as a problem was low among the respondents. Most of the respondents did not identify cervical cancer as a problem. Most of the research participants acknowledged that they had not heard anything about cervical cancer. This study concurs with previous studies that noted breast cancer receiving much more attention in terms of marketing and media coverage than other types of cancer as it showed in interview responses. In a study conducted by Wu, Black, Freeman, and Markides (2001), the findings showed that women did not screen for cervical cancer because they had more awareness of breast cancer threat because breast cancer promotion greatly overshadowed cervical cancer promotion. The current study showed that majority of participants knew little about cervical cancer because they had not seen cervical cancer messages thus did not recognize it as a problem.

5.2. *Cervical cancer communication behavior*

Participants were asked sources from which they accessed cervical cancer information and which sources from which they prefer to receive more information. Participants felt that there was not enough information about cervical cancer in the media to raise concern for cervical cancer. Majority of the respondents observed that one way to communicate cervical cancer as an important issue and increase the public's perceived risk was to hear more about it on media. These findings confirm previous arguments of source credibility theorists who argue that expert sources impart greater influence under conditions of; high involvement, when the health message advocates adopting a personal health action (Cacioppo, Harkins, & Petty, 1981; Hovland, Janis, & Kelley, 1953) or when audiences are exposed to a mixed message environment about the topic such that there is uncertainty about the issue (Sundar, Xu, & Oeldorf-Hirsch, 2009). This information is important for health communication specialists to develop messages that can be used through the preferred media channels. This study confirms previous research that highlighted the importance of interpersonal communication (Major, 1998). The findings also show that radio and television are important channels to reach young female adults; however, newspapers may not be effective since most participants suggested that they did not use or prefer to use newspapers for accessing cervical cancer information. Internet/online sources other than social media were used.

5.3. Salient cervical cancer frames

The framing theory guided identification of the most salient cervical cancer frames to assess the impact of frames on how female university students respond to cervical cancer campaigns. All most all participants associated with death. Participants saw cervical cancer as inevitably fatal and symbolizing death. Most participants suggested that despite the fact that advanced cervical cancer treatment exist cancer ultimately causes death. Some participants who had not gone for cervical cancer screening cited fear. Fear was described on negative information received such as fear of results. Lack of information about the procedure created fear among the participants. Women also generally feared sexually transmitted. Loss emerged as a major theme when students expressed their perceptions about cervical cancer. Many of the respondents discussed cervical cancer in relation to death. Students also talked about the loss of the ability to have children.

5.4. Perceived constraints

The constraints to complying with cervical cancer calls-to-action that include lack of knowledge, limited access, stigma, personal beliefs, safety concerns and lack of recommendation by health providers. The findings suggest that there was a lack of perceived risk of suffering from cervical cancer whereby many respondents thought that their behaviors did not put them at risk. Few respondents did suggest that frequently having cervical cancer screening and having one sexual partner would help prevent cervical cancer. Few respondents discussed that cervical cancer does not necessarily concern them as students because they feel this disease affects women of an older age group. For example a study conducted to investigate the stigma caused by Human Papilloma Virus found out that people who tested positive were in most cases under the impression that they were being punished and lost self-esteem (Nack, 2000). Respondents indicated that they had not accessed cervical cancer screening because they did not know where to go for the screening because they did not know where to go for the test. Some respondents cited concerns of high costs of cervical cancer screening services.

6. Conclusion

Given that there is no test to detect Human Papilloma Virus and no vaccine for men, health communicators should communicate carefully so as not to cause public alarm. Also, framing cervical cancer as a sexually transmitted infection will enhance education efforts and improve audience responses to cervical cancer campaigns. Frequent communication of survival statistics and resources for patients and families as well as focusing on what organisations can do about cervical cancer might be more effective than reframing. Continued studying of communication and health behaviors related to health issues could help better understand various responses to public health communication campaigns.

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Competing interests

The author declare no competing interest.

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References

Abotchie, P. N., & Shokar, N. K. (2009). Cervical cancer screening among college students in Ghana: Knowledge and health beliefs. *International Journal of Gynecological*

Cancer: Official Journal of the International Gynecological Cancer Society, 19(3), 412–416.

<https://doi.org/10.1111/IGC.0b013e3181a1d6de>

Agurto, I. (2001). *Bridging distances: Preventive services and women's concerns. Program on non-communicable diseases. Division of disease prevention and control.* Washington, DC: Pan American Health Organization.

Cacioppo, J. T., Harkins, S. G., & Petty, R. E. (1981). Attitude, cognitive response and behavior. In R. E. Petty, T. M. Ostrom, & T. C. Brock (Eds.), *Cognitive responses in persuasion* (pp. 31–77). Hillsdale, NJ: Erlbaum.

Donati, S., Giambi, C., Declich, S., Salmaso, S., Fila, A., Atti, M. L. C., & Franchi, D. (2012). Knowledge, attitude and practice in primary and secondary cervical cancer prevention among young adult Italian women. *Vaccine*, 30(12), 2075–2082. <https://doi.org/10.1016/j.vaccine.2012.01.057>

Dunne, E. F., Unger, E. R., Sternberg, M., McQuillan, G., Swan, D. C., Patel, S. S., & Markowitz, L. E. (2007). Prevalence of HPV infection among females in the United States. *JAMA*, 297(8), 813–819.

<https://doi.org/10.1001/jama.297.8.813>

Hoque, M. (2010). Cervical cancer awareness and preventive behaviour among female university students in South

- Africa. *Asian Pacific Journal of Cancer Prevention*, 11, 127–130.
- Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion; psychological studies of opinion change*. New Haven, CT: Yale University Press.
- Jepson, R., Clegg, A., Forbes, C., Lewis, R., Sowden, A., & Kleijnen, J. (2000). *The determinants of screening uptake and interventions for increasing uptake: A systematic review. Health Technology Assessment*, 4, 1–147
- Katahoire, A. R., Jitta, J., Arube-Wani, J., Kivumbi, G., Murokora, D., Siu, G., ... Lyazi, I. (2008). *Formative research report: An assessment of the readiness for introduction of a cervical cancer vaccine in Uganda*. Kampala: Child Health and Development Center of Makerere University.
- Kayange, P. (2005). Fighting against cervical cancer: The case of Malawi. *Malawi Medical Journal*, 17(2), 43–44.
- Lewis, M. (2004). *A situational analysis of cervical cancer in Latin America and the Caribbean*. Washington, DC: Pan American Health Organization.
- Major, A. (1998). The utility of situational theory of publics for assessing public response to a disaster prediction. *Public Relations Review*, 24(4), 489–508.
[https://doi.org/10.1016/S0363-8111\(99\)80113-1](https://doi.org/10.1016/S0363-8111(99)80113-1)
- Mutyaba, T., Faxelid, E., Mirembe, F., & Weiderpass, E. (2007). Influences on uptake of reproductive health services on Nsangi community of Uganda and their implications for cervical cancer screening. *Reproductive Health*, 4, 1585.
<https://doi.org/10.1186/1742-4755-4-4>
- Mutyaba, T., Mmiro, F. A., & Weiderpass, E. (2006). Knowledge, attitudes and practices on cancer screening among the medical workers of Mulago hospital. *BMC Medical Education*, 6, 1585.
<https://doi.org/10.1186/1472-6920-6-13>
- Nack, A. (2000). Damaged goods: The sexual self-transformations of women with chronic STDs. *Deviant Behavior: An Interdisciplinary Journal*, 21, 95–121.
<https://doi.org/10.1080/016396200266298>
- PATH. (2010, September 14–15). *Report of an African regional meeting on cervical cancer. Improved Cervical Cancer Prevention: Planning Now for a Better Future*. Kampala, Uganda, Seattle: Author.
- Smith, R. A., Ferrara, M., & Witte, K. (2007). Social sides of health risks: Stigma and collective efficacy. *Health Communication*, 21(1), 55–64.
<https://doi.org/10.1080/10410230701283389>
- Streubert, H., & Carpenter, D. (2003). *Qualitative research in nursing: Advancing the humanistic imperative* (3rd ed.). Philadelphia, PA: Lippincott, Williams & Wilkins.
- Sundar, S. S., Xu, Q., & Oeldorf-Hirsch, A. (2009, April). Authority vs. peer: How interface cues influence users. In *Proceedings of the 27th International Conference Extended Abstracts on Human Factors in Computing Systems (CHI'09)* (Vol. 27, pp. 4231–4236). New York City, NY: ACM.
- Vail-Smith, K., & White, D. (1992). Risk level, knowledge, and preventive behavior for human papillomaviruses among sexually active college women. *Journal of American College Health*, 40, 227–230.
<https://doi.org/10.1080/07448481.1992.9936284>
- WHO/ICO Information Centre. (2012). *Human Papilloma Virus and cervical cancer*. Retrieved July, 2016, from <http://www.who.int/hpvcentre/en/>
- Wu, Z. H., Black, S. A., Freeman, J. L., & Markides, K. S. (2001). Older Mexican-American women and cancer screening: Progress toward targets for healthy people 2000. *Ethnicity & disease*, 11(4), 645–651.



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