Disparity between Awareness and Uptake of Cervical Cancer Prevention Services among Zambian Women

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BACKGROUND

Cervical cancer poses a significant public health challenge in Zambia, accounting for the highest cancer-related mortality among women. The country reports an alarming incidence rate of 65.5 per 100,000 women and a mortality rate of 43.4 deaths per 100,000 women. Annually, approximately 3,161 new cases and 1,904 deaths are recorded, ranking Zambia among the countries with the highest cervical cancer burden globally. The persistence of this crisis highlights a critical gap in translating policy into public health practice.

Notably, in 2022, Zambia recorded around 1,900 cervical cancer- related deaths, with an estimated mortality rate of 49.4 per 100,000 women. Despite the availability of free cervical cancer screening, HPV vaccination, treatment of premalignant lesions, and surgery for early-stage disease, the disease burden remains high. This study aimed to investigate the disparity between awareness and utilization of cervical cancer prevention services among Zambian women with consistent access to smartphones, the internet, digital health campaigns, and prevention services.

METHODS

This cross-sectional survey spanned six months, from January 25 to June 30, 2025. The study population was Zambian women aged 18 years and older, with internet access, specifically targeting those most exposed to and able to engage with Ministry of Health CaCx prevention campaigns promoted via digital platforms including social media.

Participant recruitment employed snowball sampling via social media platforms, specifically Facebook and WhatsApp, to reach the desired demographic of digitally connected and educated individuals.

The sample size was calculated based on the estimated prevalence of cervical cancer awareness among women in Zambia. Assuming a 5% margin of error and 80% power, a minimum sample size of 384 participants was required. Data collection utilized a structured questionnaire administered through Google Forms, yielding a sample size of 501 participants, which exceeded the minimum required, thereby enhancing precision.

The survey assessed participants' general knowledge of cervical cancer as a health burden, their understanding of specific risk factors, and their personal utilization rates of cervical cancer screening and HPV vaccination services.

RESULTS

Category	Frequency	Percentage
Age		
18-24	63	12.60%
25-34	122	24.40%
35-44	244	48.70%
45-54	53	10.60%
55 or older	19	3.80%
Education		
Primary school	1	0.20%
Secondary school	22	4.40%
College/University	463	92.40%

Figure 1:Demographics : More than 90 percent of respondants had tertiary education highlihting that even among educated women,cervical cancer prevention, screening and ealry hospital presentation are still a challenge

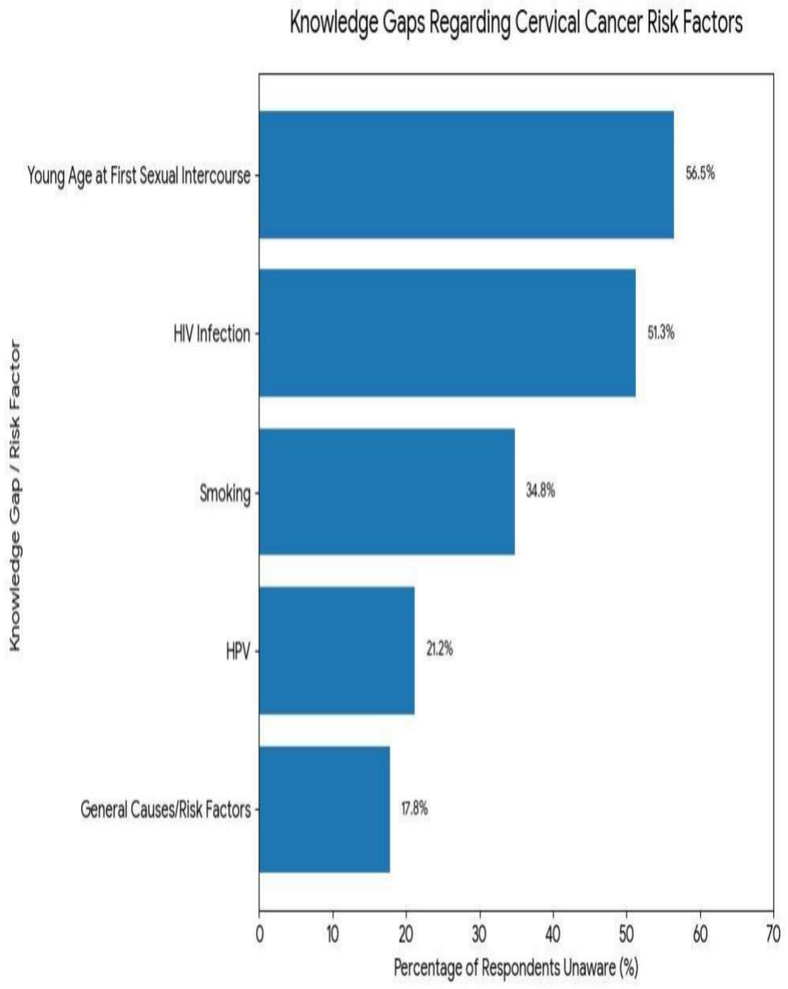

Figure 2:Knowledge gap on risk factors. 98.2% of respondents knew about cervical cancer, but many were unaware of key risk factors: 56.5% (young age at first sex), 51.3% (HIV), 34.8% (smoking), and 21.2% (HPV). Targeted health education is needed to address these knowledge gaps.

Preventive measure	% of respondants unaware
HPV vaccine	**25.1**
Safe sex practices	**34.7**
Male partner circumcision	**36.3**

Figure 3:Knowledge gap on preventive measures. A good number were unaware that HPV vaccination (25.1%), safe sex practices(34.7%) are preventive measures, and 36.3% were unaware of the preventive benefits of male partner circumcision.

Screening or Vaccination Gap	Percentage of Respondents (%)
Never Asked to Consider Screening	81.8
Unaware of Correct Vaccination Age	63.3
Unaware Males Should Be Vaccinated	56.3
Never Screened	50.1
Missed Last Follow-up Screening	32.4
Missed >1 Follow-up Screening	18.4

Figure 4: Gaps in cervical cancer and HPV vaccination practices. 81.8% had never asked to consider screening, and over half had never been screened. Among those screened, 32.4% missed their last follow-up, and 18.4% missed more than one. 77.1% didn't know that cervical cancer can be cured if caught at an early stage.

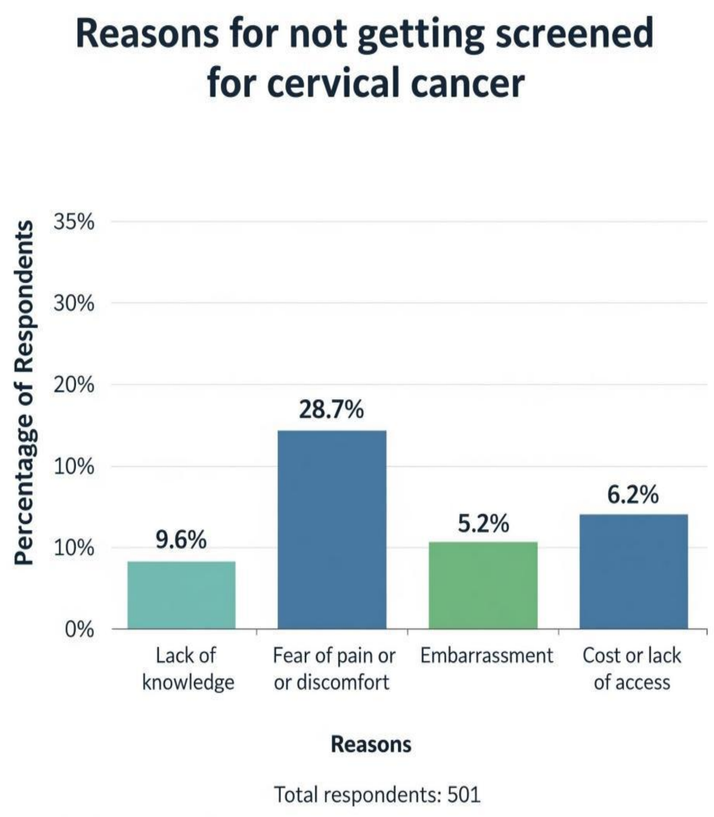

Figure 5: Reasons given by more than 50% of the respondents who have never screened for cervical cancer

CONCLUSION

The study found that being educated and having access to free cervical cancer services does not translate into substantial uptake of the services . Deeper issues like lack of healthcare provider recommendations, cultural barriers, and misconceptions (e.g., 77.1% believe cervical cancer is incurable even if detected early) hinder uptake. The study suggests targeted sesitization on social media and healthcare provider training to address these gaps and promote screening and vaccination. Access to information isn't enough; systemic and behavioral barriers need to be addressed to improve cervical cancer prevention and treatment outcomes..

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