

Research Article

Determinants of Cervical Cancer Awareness, Screening Knowledge, and Preventive Practices among Reproductive-Age Women in Bangladesh: A Hospital-Based Cross-Sectional Study

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ABSTRACT

In the next paper, the socio-demographic profile and level of knowledge will be discussed as far as cervical cancer is concerned in relation to the reproductive-age women who attend the OPDs of the Dhaka medical college hospital. It was a descriptive cross-sectional study that utilized the measures of awareness, perception of risk factors, symptoms, screening procedures and HPV vaccination. The results indicate that the majority of respondents had the age between 20-39 years old, were married and had different backgrounds in terms of education and income. Even though 69.48 per cent heard about cervical cancer, 69.48 per cent were not well-informed with only 31.82 per cent having information on the interventions that can screen cervical cancer and 32.47 per cent having information on HPV vaccination. In all, forty five point one nine percent or 55.19% of the respondents were poor in knowledge with only twelve point three four or 12.34 percent having excellent knowledge. It was discovered that knowledge was significantly connected with the level of education and place of residence where women in cities as well as those who are highly educated were more knowledgeable. This study revealed that the gap in knowledge of preventive measures and disparity of access to health information are huge. It highlights the critical role of specific awareness campaigns, enhanced health education and enhanced screening efforts to decrease cervical cancer in Bangladesh.

Keywords: Cervical Cancer, Socio-Demographic Factors, Reproductive-Age Women, Knowledge Assessment, Health Awareness.

INTRODUCTION

One of most common types of cancer, which are most preventable amongst all women the world over is cervical cancer. Chronic infection with highly-risk forms of the Human Papillomavirus (HPV) is the primary cause of it and it is a critical health issue of communities, particularly in low to middle and income countries (Ginsburg et al., 2016). Although cervical cancer is a condition that women are highly likely to be affected, women are mostly affected with a high morbidity and mortality and as such the poor level of awareness, combined with access to preventive services and rapid diagnosis are likely factors that contribute to the disease (Fongang et al., 2022; Lyimo & Beran, 2012; Zibako et al.,

2021). Cervical cancer is a reproductive age cancer amongst women in Bangladesh and it is one of the most common cancers. Despite national efforts, which are being used to provide screening procedures such as Visual Inspection with Acetic Acid (VIA) and HPV vaccination, there is low utilization (Khoja et al., 2024; Nazrul et al., 2024). The socio economic differences, cultural values, ignorance and lack of information dissemination are some of the reasons women are not undertaking screening and preventive measures. Knowledge of risk factors of cervical cancer, symptoms (essential in the early stage) and screening tests and preventive action are important to prevent early development and effective treatment (Mantula

et al., 2024; Rai et al., 2023). The most important aspect is the consideration of the determinants of cervical cancer and knowledge of screening activities and prevention methods among women of propagating age since the parameters outlined will be utilized to design effective preventive strategies based on the interventions in the population health level (Assefa et al., 2022; Habtu et al., 2017). Therefore, the cross-sectional study which will be conducted in this hospital will evaluate the level of awareness, knowledge, and preventive practices linked with cervical cancer and will identify the factors that influence them in women coming to healthcare centers in Bangladesh (Islam et al., 2018).

LITERATURE REVIEW

Inadequate literacy levels on human papillomavirus, as well as a poor adoption rate of screening is another issue posing risks to the health of the population in the specified area despite the availed presence of prevention measures (Islam et al., 2025; Nazrul et al., 2024). Even though the studies revealed that the population is very willing to accept varying vaccinations, it leaves a gap (so badly needed) in the general awareness and transferable knowledge on the premise of underlying causation and screening requirements (Islam et al., 2018). In addition, this type of empirical data suggests that while many women possess baseline knowledge, it does not necessarily result in a long-lasting preventive practice, which suggests the presence of more socio-economic and cultural barriers (Khatun et al., 2025). The absence of healthcare facilities and overall awareness of the importance of early diagnosis is also likely to further exacerbate such disparities, especially in the categories of the marginalized groups (Siddique et al., 2025). To eliminate these barriers, one will have to examine in detail socio-demographic factors, such as the education level and urban-rural healthcare inequalities that significantly influence the health literacy of people (Begum et al., 2024). To address these loopholes, specific health promotion programs have to be conceived and executed taking into consideration the local sociocultural settings and mobilize political will to provide resources to them adequately ((12878551) et al., 2025; Khan et al., 2025). Therefore, it is essential to combine educational efforts based on the community with a systematic health counselling to correct the prevalent knowledge gaps that fuel the

increasing prevalence of cervical cancer in the area (Alam et al., 2022). Also, the findings show that the current barriers of stigma and infrastructure have to be overcome with the help of a multidisciplinary approach that would cover both policy-level and community-level interventions (Penchala et al., 2025).

Secondly, intersectoral partnership of medical facilities, national health departments, and nongovernmental organizations needs to be strengthened to promote the sustainability and equity in cervical cancer prevention coverage (Rahman et al., 2025). Also, it should involve the educational spheres along with multimedia awareness campaigns to prevent the distribution of the most significant information regarding the risk factors and warning signs among the younger audience (Kindi et al., 2024). The outreaches should also aim at making the discussion of reproductive health topics a normal aspect so that to overcome the cultural taboos that have the tendency to hinder women to receive timely preventive care (Elshami et al., 2024). Furthermore, the community-based intervention (including recruitment of the services of local health workers to support the use of self-sampling and HPV among the reproductive-age women in Bangladesh) has been proved to be effective in raising the uptake and can be adjusted as well to the requirements of the women living in Bangladesh during reproductive age (Khoja et al., 2024). In addition, it is possible to deal with gender-related barriers using self-sampling approaches since this type of sampling allows women greater privacy and convenience and can be more emotionally comfortable to encourage more acceptance of screening (Ginsburg et al., 2023). Such new approaches to diagnosis need to be supported by powerful training of medical professionals to enable treating patients with respect and free of judgment, which is crucial to achieving long-term compliance (Moukam et al., 2021). In addition, community and religious leaders need to actively be involved in order to promote local confidence and legitimize screening activities in conservative social settings (Petersen et al., 2022). Moreover, it has not invested in the supply chain management and standardized quality warning systems to make sure that the high demand that such levels of awareness prompted can be followed-ups by quality and efficient clinical follow-up services (Yusuf, 2024). In a bid to ensure that maximum outcomes are achieved,

national health policies should be harmonized with the aim of ensuring the implementation of comprehensive cancer registries, which are currently inadequate to track the progress and put resources into perspective (Atnafu et al., 2024; Rajkowski et al., 2024).

The population-based cancer registries that would be the gold standard in tracking incidence and outcomes would form the granular data needed to audit the provision of healthcare services and identify any gaps in providing the cervical cancer ecosystem (Nessa et al., 2024). Also, the first place of diagnosis will not become an issue, as national registries will be used to help track patients over time, and patients with them will also be provided a necessary follow-up (Chua et al., 2022). Such an omnipresent electronic monitoring system is necessary since existing data show that the existing nationwide programs have failed to go beyond the coverage rate of 11.42 percent due to the constraints previously placed on using the cases to monitor those (Nessa et al., 2024). To overcome these systemic bottlenecks, Bangladesh may make use of primary health facilities within the society, union and Upazila levels to decentralize screening services to align with the bigger goals to attain Universal Health Coverage in the entire country (Khoja et al., 2024). Inclusion of these services in the primary care system is and will always remain a successful venture and how the healthcare providers in the system are able to respond to the screening system and later connection to the advanced care is what defines the success. Besides, it is crucial to make sure that these main facilities have proper equipment with diagnostic technologies and standardized evidence-based guidelines to address the existing gaps in the readiness of the services that dictate the stagnation at the national level (Rakhshanda et al., 2021).

Further simplification of the data collection instrument, such as strong digital information systems, such as the District Health Information System, can help to perform real-time surveillance on the screening coverage levels and results of positivity (Nessa et al., 2024). A spin-off of these digital platforms with wider health information systems (HIT) creates dynamic feedback systems, which can be useful in supporting real-time policy requests and enhance modeling contributions to predict population health needs more effectively (Zhong et al., 2025). Expanding on these digital frameworks, standardized

evaluation metrics, e.g. obtained based on the 2023 guidelines by the Centers of Disease Control and Prevention, are going to be key factors to evaluate the effectiveness and sustainability of the available screening programs (Islam et al., 2025). Other than this, the centralized and personalized level electronic databases should be consolidated to advance to a terminal level screening registry that could monitor the entire clinical spectrum of the disease, at the stage of the initial diagnosis, as well as the stage of finality upon the setting up of the treatment (Zhang et al., 2023). Lastly, homogenization of detection and treatment of all the suspected pre-cancerous lesions during the first encounter will be the most beneficial in terms of loss-to-follow-up but will enable better execution of the program, in general (Nessa et al., 2020). These attempts towards maximizing access to care should be supported by lasting government investment and political desire which have been crucial in effectively scaling evidence based screening modalities in various environments (Holme et al., 2017). An effective approach to integrate these domestic aims with the experience of the current programs and effectively comprehend how scientific evidence can be integrated with the national political priorities would lie in the international consultation (Sivaram et al., 2018). The necessity of creating additional resource allocation and capacity building depends on creating multi-stakeholder collaboration, which would contribute to the organization of local health-based interventions amid the overall notches in infrastructure (Sriram, 2024). These frameworks can also be utilized to drive the digital interoperability to support patient expanse and clinical following in other domains with current frameworks such as the DHIS2 Tracker (Denny et al., 2024).

In addition, the accountability required to tackle the service delivery problem in real-time can also be designed by organizing monthly review meetings between the officials at the state level and the community providers (Madsen et al., 2020). These streamlined feedback mechanisms are reflective of established regional strategies, in which regular reviews help to evaluate barriers to the treatment process and the screening indicators that are directly transferred to policy changes (Holme et al., 2020; Mwenda et al., 2022). By enabling local providers to track and report the right indicators by using these monitoring

data, a state of affairs develops where they can be vital elements in considering new solutions to gaps in service delivery (Ouedraogo et al., 2018). Moreover, the careful consideration of intermediate clinical outcomes as a percentage decrease of the positivity rate will also be used as a gauge of credentials distance of a provider and field based-supervision effectiveness (Parham et al., 2015). Moreover, it is possible that the anticipated introduction of mobile, battery-powered diagnostic means, including thermal ablation devices, may further simplify the treatment process, as it will not have to use the centralized infrastructures to provide the second-tier treatment (Shin et al., 2021). Combined with the training of community health workers can count on task-shifting techniques can significantly decrease the necessity to go to special hospitals, and make the delivery of care more decentralized (Spearman et al., 2023). Programs can encourage sustainability of institutional determination and determination to concentrate on a diversified group of stakeholders, both at the designing phase and execution phase; so that such decentralized services are a component of comprehensive primary health system (Ana et al., 2022). This system of governance that is democratic plays an important role in overcoming the maze of social norms and historical institutions issues that tend to frustrate large-scale health programs (Bardosh, 2018). Moreover, further bridging the gap between the private sector and the public health sector can be achieved with the help of digital enablers, including call centers and adherence monitoring that is based on mobile to ensure that the information that emerges in cases is organized in a systematic way (Reid et al., 2019).

METHODOLOGY

A descriptive cross-sectional research was used in this study to evaluate the level of knowledge and awareness of cervical cancer among reproductive age women who were used in out-patient departments (Gynecology, Surgery, and Medicine) at Dhaka College hospital, Bangladesh. The research was carried out February 2024- May 2024. The target population was that of women between the ages of 15-49 who visited the targeted OPDs during the study time. The standard formula $n = \frac{Z^2pk}{d^2}$ was replaced to find out a sample of 154 participants at a 95 percent level of confidence, 5 percent, margin of error

and guessing prevalence rate of 11.3 percent. They were picked to take part based on their availability and on the basis of their level of eligibility after combining non-probability convenience sampling and systematic random sampling (Anokye et al., 2018; Nassè, 2019; Shago et al., 2025). The inclusion criteria were women of child bearing age and attending the chosen OPDs and give informed consent. We did not include women who were in a critical condition, were so mentally or physically impaired that they could not answer or did not want to take part in the study (Guntoory et al., 2017; Kocaöz et al., 2019).

The data were collected through the help of a structured questionnaire which was made in accordance with reviewing the literature and expert recommendations (Bakhtiari et al., 2020; Baral et al., 2021). The socio-demographic characteristics formed the basis of the questionnaire, knowledge regarding cervical cancer and independence in regards to screening techniques and awareness of cervical cancer prevention techniques (Drowok et al., 2021). A pilot test was done on 10 respondents on a scale of validity and reliability with adjustments made accordingly. Data collection was through face-to-face interviews (Rimande-Joel & Ekenedo, 2019). The investigator read the questionnaire to the illiterate respondents, to prevent bias and inaccuracy in questionnaire. The most rigid ethical aspects, such as the informed consent, confidentiality, the anonymity, and the free participation, were considered (Akbari et al., 2024; Hailu et al., 2011).

Discussion and Analysis

The present study tested the level of knowledge and awareness of cervical cancer on the sample population of 154 reproductive age women having appointments in the outpatient department of the Dhaka Medical College Hospital. The findings show the situation of heterogeneous, still low knowledge level, and awareness is surely developed at the impact of socio-demographic influences (Hossain et al., 2025). On the whole, the research proves that some of the basic incompleteness of the information concerning prevention, screening, and risk factors of cervical cancer does exist although the knowledge of the disease per se might be quite perfect (Puzio et al., 2016).

The socio-demographic profile of respondents shows that the largest age group was 20-29 years (34.42%), followed by 30-39 years

(29.87%), 40-49 years (24.68%), and under 20 years (11.04%). It shows that most of the respondents were young and middle-aged women, which are one of the main groups of reproductive individuals with preventive measures to cervical cancer (Pandey & Karmacharya, 2017). The proportions of 66.88 and 33.12 were married and unmarried respectively. Residential: 49.35% and 36.36% of the population resided in the urban and rural regions respectively and 14.29% lived in slums. The level of education was also

different as 29.87% had graduate level education and above, 5.84% had no formal education whatsoever. The highest percentage (37.01) was also shared on income of the households with the majority of below BDT 20,000-50,000 monthly. These characteristics are important since they directly influence the health information access, access to healthcare services and preventive behavior (Das et al., 2017; Hasan et al., 2022; Hossain et al., 2024).

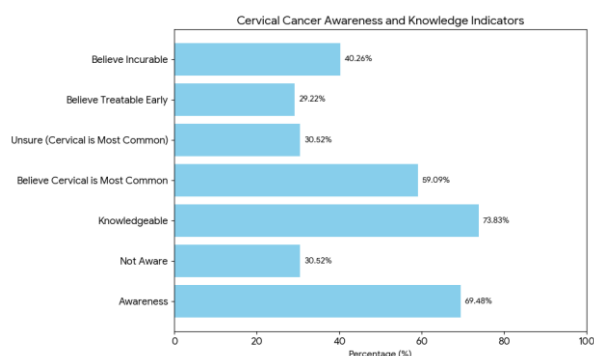


Figure 1: Cervical Cancer Awareness and Knowledge Indicators

The figures indicate that majority of the respondents (69.48 percent) were aware of cervical cancer, as compared to 30.52 percent. This shows that though there is overall awareness of most people in the participants, a substantial proportion still possesses only the most basic of knowledge (Getahun et al., 2013). The knowledge on cervical cancer among those who learned about the disease was low though 73.83% of the sampled respondents were knowledgeable about cervical cancer. The proportion of those who believed the cervical to be the most common cancer in women was 59.09 with 30.52

unsure. This uncertainty can be the deficiency in awareness and the misinformation that can be provided as to the prevalence and severity of cancer. They also believed that cervical cancer is treatable when diagnosed at an early stage at the rate of 29.22% and that only 40.26% believed that it was incurable and the rest had no idea. It is among the fundamental ones since it proves that there is no awareness of one of the most significant messages in terms of social health- the earlier that the diagnosis the more chances there are to survive and get any treatment (Dedey et al., 2024; Forbes et al., 2013).

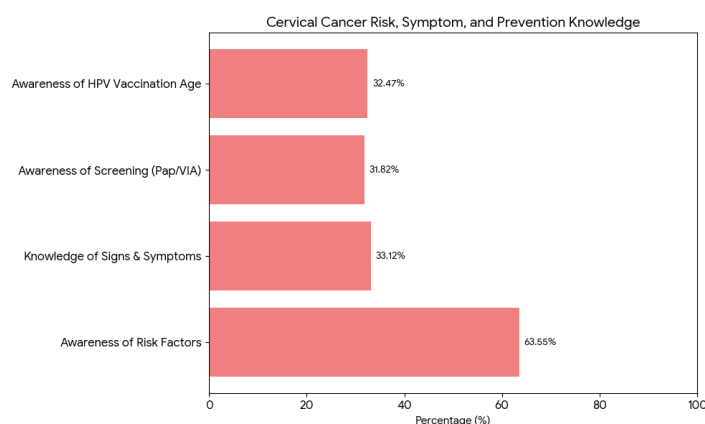


Figure 2: CCR, symptom, and prevention knowledge

The ignorance of the risk factors, symptoms and screening was also a factor. Though 63.55% of the respondents were conscious of the risk factors, only 33.12% of them were knowledgeable about the signs and symptoms of cervical cancer. In the same way, the awareness regarding screening test (like Pap smear screen or VIA test) was very low (31.82%). The level of awareness on the issue of HPV vaccination was also poor since only 32.47% knew what age bracket they preferred to be vaccinated. The implication of such kind of results is that even though there is general knowledge in place, some sort of biomedical knowledge is necessary to halt behavior and it is deficient (Yarici & Mammadov, 2023). The gap is of particular interest as vaccination and regular screening have proven cervical cancer as largely preventable whilst preventative levels of knowledge among the target population are low (Dsouza et al., 2022).

One of the interesting observations is the ambivalent attitude to the preventative use

and medical approach towards healthcare (Nyambe et al., 2019). Only 32.47 percent thought that they can easily obtain treatment or that physicians are easily available to them and 37.01 percent of them do not agree. In a similar manner, only 31.82% said that they would go to check-ups when they were experiencing symptoms. This implies that health-seeking factor suffers limitations that may be influenced by the financial status and level of awareness, and even cultural values and limitations within the healthcare system (Lim et al., 2019). Furthermore, 39.61 percent reportedly got counseling regarding cervical cancer via government or NGOs and 33.77 percent reportedly obtained sparked awareness in their community. It implies that the community can be limited with regard to outreach to it in respect of health and health education is not readily available (Obol et al., 2021).

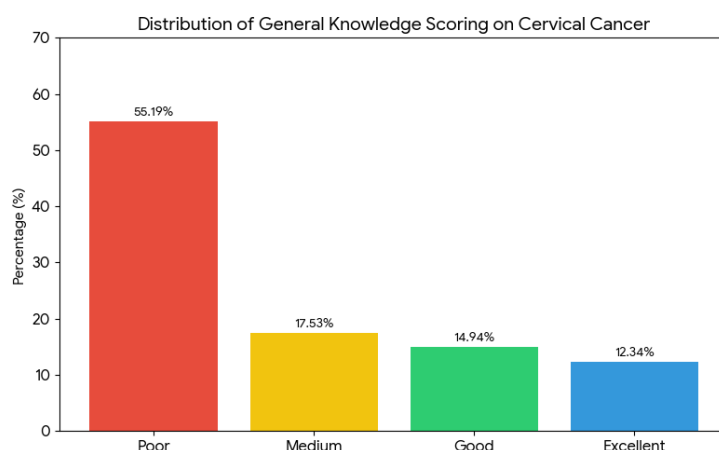


Figure 3: Distribution of General Knowledge Scoring on Cervical Cancer

The general knowledge scoring has an alarming trend. Most respondents viewed the poor knowledge (55.19%), medium (17.53) good (14.94) and excellent knowledge (only 12.34) to belong. This spread is a telling repudiation of the fact that more than half of the populace is out of cervical cancer knowledge. Since the proportion of the respondents who have already attained good or excellent level of knowledge is quite small that indicates a definite gap in the health aspect of the population, which should be overcome as soon as possible (Alam et al., 2022; Rijal & Dawadi, 2024). These findings can be related to the lack of knowledge identified in certain fields like screening,

immunization and symptom identification (Ibrahim et al., 2024).

There are also interesting tendencies in regards to the exposure of socio-demographic variables to knowledge level. With all factors analyzed, education and residence turned out to be of special importance though age, marital status; religion, residence, education, occupation and income were also important (Salem et al., 2022; Tóth & Šebová, 2024). Education had a positive correlation with the level of knowledge with higher education showing better and good knowledge compared to other individuals who never received formal education or attained primary. Similarly, the population of urban place happened to be more enlightened as compared to the rural

and slum population (Hasan et al., 2022; Suhail et al., 2025). These shows how there are disparities in access to health information and health services. Urban population is usually more exposed to the media campaigns, medical practitioners and educational opportunities and this leads to the level of awareness to rise. Another possible trend was the age since the respondents who were in the age bracket of 30-49 years had a little higher levels of knowledge though this was only slightly as compared to the younger women (Fongang et al., 2022; Rimande-Joel & Ekenedo, 2019). This can be due to the fact that they can be more susceptible to healthcare services even though they are pregnant, giving birth or even during visitations of reproductive health (Dagnew et al., 2021). The trends were also the same in the income and occupation with the better-income groups being more aware, perhaps due to a more likely access to healthcare and educational services (Nuamah et al., 2019).

These results are in line with those of the previous researches done in low and middle income countries that all find low levels of cervical cancer knowledge and screening awareness. South Asian and African studies also revealed that overall knowledge about the disease of cervical cancer is not so good, specifics of screening, HPV vaccinations and early detection are also poor (Li et al., 2023; Osei et al., 2021). The present research promotes such a worldwide tendency and contributes to the idea that special interventions have to be offered to such medical facilities. Behavioral and cultural barriers also are indicated in the findings (Mwaka et al., 2013). Good proportions of women have not experienced symptoms or even they are not aware about the advantages of early detection. Embodied stigma of reproductive health in a culture is likely to make open discourse and action based on awareness-seeking disheartening (Sawhney et al., 2023). Moreover, pseudoscience related to the incurability and approach to the etiology of cervical cancer may lead to fear, delayed access to care or rejection of screening care. Such barriers are especially of particular interest to those regions that lack reproductive health education (lots of it), and conservative (Elshami et al., 2024; Mantula et al., 2024).

On a broader level, the study combines to confirm the notion that though most of the respondents were aware of cervical cancer, rather than them having a better

understanding of the disease and their prevention, they have inadequate prevention awareness (Hanga et al., 2026). Social-demographic disparity in specific female population in lower level of education, in rural community and in low income earners further magnifies this disparity (Ray & Ray, 2022). The lack of knowledge (55.19) percentage shows a need to have an effective educational program, intervention at community level and inclusion of education on cervical cancer in basic health care services (Tafere et al., 2020). The need to also improve the communication process between the provider and the patients is also stated since it was also found out that the most important informer to most of the respondents is a doctor (Habtu et al., 2017). Finally, the knowledge and awareness gaps among the reproductive age women on cervical cancer are very severe in terms of their existence in the Dhaka Medical College Hospital OPDs as per the survey. Some of the socio-demographic factors that play a major part in these gaps are education and residence. Although screening awareness and HPV vaccine prevention awareness is not high, there is nearly no information on preventive measures (Lipi et al., 2018). This highlights the human nature of the required special interventions in the health sector to increase awareness, motivate to detect early and ultimately (Alsous et al., 2021; Kindi et al., 2024).

CONCLUSION

Finally, the disparity of knowledge and awareness of cervical cancer among reproductive age women the OPDs in Dhaka Medical College Hospital is also very high, as found out in the research. Although, most of the respondents have heard about cervical cancer, most of them lack depth knowledge on factors that increase the risk of cervical cancer, the symptoms, and screening and prevention options such as HPV vaccinations (Ampofo et al., 2020; Osei et al., 2021). A majority of the respondents (more than half) were weak in general knowledge in signifying a prime health issue within one of the most relevant groups in cervical cancer prevention programs. The findings also reveal that it is a vivid difference in socio-demographic factors with higher education levels and urban location being associated with a high awareness and knowledge level (Rashid et al., 2016). Women who had less education, low income as well as rural or slum origins were

sorely positioned to access correct health information. This difference implies that, there are more structural barriers which are more prominent in the delivery of healthcare, health education and health awareness (Shatilwe et al., 2021). In addition, the rigid beliefs of incurability and lack of understanding of the significance of early diagnosis highlights the need to implement the stronger health communication actions. Late health seeking behavior can also be caused by cultural beliefs and lack of outreach programs (Fang et al., 2025). In general, the research suggests that the oral health urgency is to introduce some communication interventions, community-based interventions and practices in order to advance awareness and further screening education and incorporate the information about cervical cancer into the primary access to and medical care (Khoja et al., 2024). Enhanced efforts on the interventions could greatly help in early disease detection, decreasing the disease burden and increasing reproductive health outcomes of women in Bangladesh.

REFERENCES

1. (12878551), T. I., (11150378), Md. A. S. K., (11558838), M. D. H. H., (20148265), N.-E.-S. M., (20148262), F. N. E., (19500953), U. K. M., (10852380), M. A. H., & (11558844), M. H. N. (2025). English version of the questionnaire. *Figshare*. <https://doi.org/10.1371/journal.pone.0325712.s001>
2. Akbari, P., Nemati, S., Nahvijou, A., Bolourinejad, P., Forbes, L., & Zendehele, K. (2024). Survey of awareness and beliefs about cancer (ABC) in Tehran Province, Iran. *BMC Cancer*, 24(1), 579-579. <https://doi.org/10.1186/s12885-024-12211-y>
3. Alam, N. E., Islam, Md. S., Rayyan, F., Ifa, H. N., Khabir, M. I. ul, Chowdhury, K., & Mohiuddin, A. K. M. (2022). Lack of knowledge is the leading key for the growing cervical cancer incidents in Bangladesh: A population based, cross-sectional study. *PLOS Global Public Health*, 2(1). <https://doi.org/10.1371/journal.pgph.0000149>
4. Alam, N. E., Islam, Md. S., Rayyan, F., Ifa, H. N., Khabir, M. I. ul, Chowdhury, K., & Mohiuddin, A. K. M. (2022). Lack of knowledge is the leading key for the growing cervical cancer incidents in Bangladesh: A population based, cross-sectional study. *PLOS Global Public Health*, 2(1). <https://doi.org/10.1371/journal.pgph.0000149>
5. Alsous, M., Ali, A., Al-Azzam, S., Jalil, M. A., Al-Obaidi, H., Al-abbadi, E. I., Hussain, Z. K., & Jirjees, F. (2021). Knowledge and awareness about human papillomavirus infection and its vaccination among women in Arab communities. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-020-80834-9>
6. Ampofo, A. G., Adumatta, A. D., Owusu, E., & Awuviry-Newton, K. (2020). A cross-sectional study of barriers to cervical cancer screening uptake in Ghana: An application of the health belief model. *PLoS ONE*, 15(4). <https://doi.org/10.1371/journal.pone.0231459>
7. Ana, C.-W., Chris, A., Linda, K., Garry, A., Michael, M., Fabio, Z., & Ole, O. (2022). Proceedings of the 14th Annual Conference on the Science of Dissemination and Implementation in Health. *Implementation Science*, 17, 35-35. <https://doi.org/10.1186/s13012-022-01210-x>
8. Anokye, R., Acheampong, E., Gyamfi, N., Budu-Ainooson, A., & Kyei, E. A. (2018). Knowledge of mental health legislation in Ghana: a case of the use of certificate of urgency in mental health care. *International Journal of Mental Health Systems*, 12(1), 37-37. <https://doi.org/10.1186/s13033-018-0215-1>
9. Assefa, T., Arefaynie, M., Mebratu, W., Mohammed, A., Addisu, E., & Kebede, N. (2022). Determinants of cervical cancer screening utilization among women attending health facilities of Dessie town, Northeast Ethiopia. *BMC Cancer*, 22(1). <https://doi.org/10.1186/s12885-022-10447-0>
10. Atnafu, D. D., Khatri, R. B., & Assefa, Y. (2024). Drivers of cervical cancer prevention and management in sub-Saharan Africa: a qualitative synthesis of mixed studies. *Health Research Policy and Systems*, 22(1), 21-21. <https://doi.org/10.1186/s12961-023-01094-3>

11. Bakhtiari, A., pourali, M., & Omidvar, S. (2020). Nutrition assessment and geriatric associated conditions among community dwelling Iranian elderly people. *BMC Geriatrics*, 20(1), 278-278. <https://doi.org/10.1186/s12877-020-01668-8>
12. Baral, M. A., Chhetri, B. K., & Bhandari, P. (2021). Abuse of older adults before moving to old age homes in Pokhara Lekhnath Metropolitan City, Nepal: A cross-sectional study. *PLoS ONE*, 16(5). <https://doi.org/10.1371/journal.pone.0250639>
13. Bardosh, K. (2018). Towards a science of global health delivery: A socio-anthropological framework to improve the effectiveness of neglected tropical disease interventions. *PLoS Neglected Tropical Diseases*, 12(7). <https://doi.org/10.1371/journal.pntd.0006537>
14. Begum, I. A., Rafi, S.-I., Iftekhar, Z., Khan, M. R., Banik, S. K., Plabon, S. B., Islam, R., & Rizwan, A. A. M. (2024). Impact of socio-demographic factors on knowledge of cervical cancer among women in rural Bangladesh: A cross-sectional study. *International Journal of Science and Research Archive*, 12(2), 247-254. <https://doi.org/10.30574/ijrsra.2024.12.2.1202>
15. Chua, B., Neo, P., Yan, V., Lim, L. M., Ng, J., & Wee, H. L. (2022). Health care provider's experience and perspective of cervical cancer screening in Singapore: A qualitative study. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.853453>
16. Dagnew, B., Teshale, A. B., Dagne, H., Diress, M., Tesema, G. A., Dewau, R., Molla, M. D., & Yeshaw, Y. (2021). Individual and community-level determinants of knowledge of ovulatory cycle among women of childbearing age in Ethiopia: A multilevel analysis based on 2016 Ethiopian Demographic and Health Survey. *PLoS ONE*, 16(9). <https://doi.org/10.1371/journal.pone.0254094>
17. Das, S., Mia, M. N., Hanifi, S. M. A., Hoque, S., & Bhuiya, A. (2017). Health literacy in a community with low levels of education: findings from Chakaria, a rural area of Bangladesh. *BMC Public Health*, 17(1), 203-203. <https://doi.org/10.1186/s12889-017-4097-y>
18. Dedey, F., Nsaful, J., Nartey, E. T., Labi, J., Adu-Aryee, N. A., Kuti, C., & Clegg-Lamprey, J.-N. (2024). Assessing the impact of cervical cancer education in two high schools in Ghana. *BMC Cancer*, 24(1). <https://doi.org/10.1186/s12885-024-13134-4>
19. Denny, L., Kataria, I., Huang, L., & Schmeler, K. M. (2024). Cervical cancer kills 300,000 people a year – here's how to speed up its elimination. *Nature*, 626(7997), 30-32. <https://doi.org/10.1038/d41586-024-00241-2>
20. Drokow, E. K., Effah, C. Y., Agboyibor, C., Sasu, E., Amponsem-Boateng, C., Akpabla, G. S., Ahmed, H. A. W., & Sun, K. (2021). The Impact of Video-Based Educational Interventions on Cervical Cancer, Pap Smear and HPV Vaccines. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.681319>
21. Dsouza, J. P., Broucke, S. V. den, Pattanshetty, S., & D'Hoore, W. (2022). A comparison of behavioural models explaining cervical cancer screening uptake. *BMC Women's Health*, 22(1). <https://doi.org/10.1186/s12905-022-01801-2>
22. Elshami, M., Abukmail, H., Thalji, M., Al-Slaibi, I., Alser, M., Radaydeh, A., Alfuqaha, A., Khader, S., Khatib, L., Fannoun, N., Ahmad, B., Kassab, L., Khrishi, H., Elhussaini, D., Abed, N., Nammari, A., Abdallah, T., Alqudwa, Z., Idais, S., ... Böttcher, B. (2024). Myths and common misbeliefs about cervical cancer causation among Palestinian women: a national cross-sectional study. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-17733-5>
23. Elshami, M., Abukmail, H., Thalji, M., Al-Slaibi, I., Alser, M., Radaydeh, A., Alfuqaha, A., Khader, S., Khatib, L., Fannoun, N., Ahmad, B., Kassab, L., Khrishi, H., Elhussaini, D., Abed, N., Nammari, A., Abdallah, T., Alqudwa, Z., Idais, S., ... Böttcher, B. (2024). Myths and common misbeliefs about cervical cancer causation among Palestinian women: a national cross-sectional study. *BMC Public Health*,

- 24(1). <https://doi.org/10.1186/s12889-024-17733-5>
24. Fang, J., Cheng, Y., Liu, Y., & Yang, Q. (2025). How delays in seeking medical care for cervical cancer patients are affected by their health-seeking behaviour: a qualitative study. *BMC Public Health*, 25(1), 2881-2881. <https://doi.org/10.1186/s12889-025-23783-0>
25. Fongang, C. L., Nya, Y.-B. F., George, E.-O., Njajou, O. T., & Ngowe, N. M. (2022). Perception on cervical cancer and enhancing strategies to screening uptake among women in Bamenda, Cameroon: A qualitative method. *Journal of Public Health and Epidemiology*, 14(4), 149-159. <https://doi.org/10.5897/jphe2022.1410>
26. Forbes, L., Simon, A. E., Warburton, F., Boniface, D., Brain, K., Dessaix, A., Donnelly, D., Haynes, K., Hvidberg, L., Lagerlund, M., Lockwood, G., Tishelman, C., Vedsted, P., Vigmostad, M. N., Ramirez, A. J., & Wardle, J. (2013). Differences in cancer awareness and beliefs between Australia, Canada, Denmark, Norway, Sweden and the UK (the International Cancer Benchmarking Partnership): do they contribute to differences in cancer survival? *British Journal of Cancer*, 108(2), 292-300. <https://doi.org/10.1038/bjc.2012.542>
27. Getahun, F., Mazengia, F., Abuhay, M., & Birhanu, Z. (2013). Comprehensive knowledge about cervical cancer is low among women in Northwest Ethiopia. *BMC Cancer*, 13(1). <https://doi.org/10.1186/1471-2407-13-2>
28. Ginsburg, O., Bray, F., Coleman, M. P., Vanderpuye, V., Eniu, A., Kotha, S. R., Sarker, M., Huong, T. T., Allemani, C., Dvaladze, A., Gralow, J. R., Yeates, K., Taylor, C., Oomman, N., Krishnan, S., Sullivan, R., Kombe, D., Blas, M. M., Parham, G. P., ... Conteh, L. (2016). The global burden of women's cancers: a grand challenge in global health [Review of *The global burden of women's cancers: a grand challenge in global health*]. *The Lancet*, 389(10071), 847-860. Elsevier BV. [https://doi.org/10.1016/s0140-6736\(16\)31392-7](https://doi.org/10.1016/s0140-6736(16)31392-7)
29. Ginsburg, O., Vanderpuye, V., Beddoe, A. M., Bhoo-Pathy, N., Bray, F., Caduff, C., Florez, N., Fadhil, I., Hammad, N., Heidari, S., Kataria, I., Kumar, S., Liebermann, E., Moodley, J., Mutebi, M., Mukherji, D., Nugent, R., So, W. K. W., Soto-Pérez-de-Celis, E., ... Soerjomataram, I. (2023). Women, power, and cancer: a Lancet Commission [Review of *Women, power, and cancer: a Lancet Commission*]. *The Lancet*, 402(10417), 2113-2166. Elsevier BV. [https://doi.org/10.1016/s0140-6736\(23\)01701-4](https://doi.org/10.1016/s0140-6736(23)01701-4)
30. Guntoory, I., Tamaraba, N. R., Nambaru, L. R., & Kalavakuri, A. S. (2017). Prevalence and sociodemographic correlates of vaginal discharge among married women of reproductive age group at a teaching hospital. *International Journal of Reproduction Contraception Obstetrics and Gynecology*, 6(11), 4840-4840. <https://doi.org/10.18203/2320-1770.ijrcog20174691>
31. Habtu, Y., Ayanto, S. Y., & Ersado, T. L. (2017). Knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Hadiya zone, Southern Ethiopia: Community-based cross-sectional study. *PLoS ONE*, 12(7). <https://doi.org/10.1371/journal.pone.0181415>
32. Hailu, M., Gebremariam, A., Alemseged, F., & Deribe, K. (2011). Birth Preparedness and Complication Readiness among Pregnant Women in Southern Ethiopia. *PLoS ONE*, 6(6). <https://doi.org/10.1371/journal.pone.0021432>
33. Hanga, A. H., Amin, S., Iqbal, A., Shah, A., & Rafiq, H. (2026). Between Belief and Biology: Cervical Cancer's Occurrence and Health Literacy among India's Muslim Women. *Asian Pacific Journal of Cancer Prevention*, 27(1), 219-226. <https://doi.org/10.31557/apjcp.2026.27.1.219>
34. Hasan, Md. Z., Ahmed, M. W., Mehdi, G. G., Khan, J., Islam, Z. U., Chowdhury, M. E., & Ahmed, S. (2022). Factors affecting the healthcare utilization from Shasthyo Suroksha Karmasuchi scheme among the below-poverty-line population in one subdistrict in Bangladesh: a cross sectional study. *BMC Health Services*

- Research, 22(1).
<https://doi.org/10.1186/s12913-022-08254-1>
35. Hasan, Md. Z., Hasan, A. M. R., Rabbani, M. G., Selim, M., & Mahmood, S. S. (2022). Knowledge, attitude, and practice of Bangladeshi urban slum dwellers towards COVID-19 transmission-prevention: A cross-sectional study. *PLOS Global Public Health*, 2(9).
<https://doi.org/10.1371/journal.pgph.0001017>
36. Holme, F., Galindo, F., Martínez-Granera, O. B., Rodríguez, J. M. B., Almendarez, J., Slavkovsky, R., Bansil, P., Thomson, K. A., Jerónimo, J., & Sanjosé, S. de. (2020). HPV-based cervical cancer screening in Nicaragua: from testing to treatment. *BMC Public Health*, 20(1).
<https://doi.org/10.1186/s12889-020-08601-z>
37. Holme, F., Kapambwe, S., Nessa, A., Basu, P., Murillo, R., & Jerónimo, J. (2017). Scaling up proven innovative cervical cancer screening strategies: Challenges and opportunities in implementation at the population level in low- and lower-middle-income countries. *International Journal of Gynecology & Obstetrics*, 138, 63-68.
<https://doi.org/10.1002/ijgo.12185>
38. Hossain, M. S., Trisha, S. K., Hasan, M. N., Akhter, W., & Karim-Kos, H. E. (2024). Understanding Delays in Breast Cancer Diagnosis: Insights from Bangladesh. In *Research Square*.
<https://doi.org/10.21203/rs.3.rs-5283035/v1>
39. Hossain, S., Khaled, M. K. H., Mahmudul, M. H., Alamgir, M., Babu, M. S., Shifat, S. H. S., & Mithy, S. A. (2025). Evaluating Sexual and Reproductive Health of Reproductive Age women in Dhaka City. In *Research Square*.
<https://doi.org/10.21203/rs.3.rs-7444171/v1>
40. Ibrahim, M., Khalife, L., Ghanem, Y. D., Baz, G. S., & Cherfane, M. (2024). Gap in knowledge of health benefits and risks of combined oral contraceptives among Lebanese women. *BMC Public Health*, 24(1).
<https://doi.org/10.1186/s12889-023-17439-0>
41. Islam, J. Y., Khatun, F., Alam, A., Sultana, F., Bhuiyan, A., Alam, N., Reichenbach, L., Marions, L., Rahman, M., & Nahar, Q. (2018). Knowledge of cervical cancer and HPV vaccine in Bangladeshi women: a population based, cross-sectional study. *BMC Women s Health*, 18(1), 15-15.
<https://doi.org/10.1186/s12905-018-0510-7>
42. Islam, J. Y., Khatun, F., Alam, A., Sultana, F., Bhuiyan, A., Alam, N., Reichenbach, L., Marions, L., Rahman, M., & Nahar, Q. (2018). Knowledge of cervical cancer and HPV vaccine in Bangladeshi women: a population based, cross-sectional study. *BMC Women s Health*, 18(1), 15-15.
<https://doi.org/10.1186/s12905-018-0510-7>
43. Islam, M. F., Nessa, A., Zaki, Q. A., Ashrafi, S. A. A., Qayum, Md. O., Hassan, M. R., & Shirin, T. (2025). Evaluation of the National cervical cancer surveillance program in Bangladesh: Performance, strengths, and opportunities for improvement. *PLOS Global Public Health*, 5(5).
<https://doi.org/10.1371/journal.pgph.0004595>
44. Islam, T., Khan, Md. A. S., Hawlader, M. D. H., Meem, N.-E.-S., Eva, F. N., Monisha, U. K., Hossain, M. A., & Nabi, M. H. (2025). Awareness about cervical cancer and its socio-economic determinants among adults in Bangladesh: Results from a nationwide cross-sectional study. *PLoS ONE*, 20(6).
<https://doi.org/10.1371/journal.pone.0325712>
45. Khan, F. R., Mazhar, S. B., & Itua, I. (2025). Knowledge, Attitudes and Practices of Cervical Cancer Screening among Women Attending Gynecology Clinics at Tertiary Care Hospitals in the Capital City of Pakistan: A Cross-Sectional Survey. *Asian Pacific Journal of Cancer Prevention*, 26(8), 2819-2825.
<https://doi.org/10.31557/apjcp.2025.26.8.2819>
46. Khatun, F., Hosen, I., Lipi, L. S., Hossen, P., & Omi, F. R. (2025). Cervical Cancer Prevention Knowledge and Practices Among Reproductive-Age Women. *Al-Sihah The Public Health Science Journal*, 33-45.
<https://doi.org/10.24252/al-sihah.v17i1.56092>
47. Khoja, L., Torres, H. G., Hak, L., Aljebori, M., Phung, M. T., Sakleh, A.,

- Stiffler, M. J., Tariq, M., & Pearce, C. L. (2024). Cervical cancer screening and vaccination acceptability and attitudes among Arab American women in Southeastern Michigan: a qualitative study. *Scientific Reports*, 14(1), 13624-13624. <https://doi.org/10.1038/s41598-024-64462-1>
48. Khoja, L., Torres, H. G., Hak, L., Aljebori, M., Phung, M. T., Sakleh, A., Stiffler, M. J., Tariq, M., & Pearce, C. L. (2024). Cervical cancer screening and vaccination acceptability and attitudes among Arab American women in Southeastern Michigan: a qualitative study. *Scientific Reports*, 14(1), 13624-13624. <https://doi.org/10.1038/s41598-024-64462-1>
49. Khoja, L., Wang, Y., Haque, S. E., Ahsan, H., Islam, T., Munshi, S. U., Hasan, A. K. M. R., Islam, T., Jharna, A. B., & Pearce, C. L. (2024). Understanding of cervical cancer, acceptability of HPV self-collection, and prevalence of HPV in a semi-urban setting in Bangladesh. *PLOS Global Public Health*, 4(4). <https://doi.org/10.1371/journal.pgph.0003157>
50. Khoja, L., Wang, Y., Haque, S. E., Ahsan, H., Islam, T., Munshi, S. U., Hasan, A. K. M. R., Islam, T., Jharna, A. B., & Pearce, C. L. (2024). Understanding of cervical cancer, acceptability of HPV self-collection, and prevalence of HPV in a semi-urban setting in Bangladesh. *PLOS Global Public Health*, 4(4). <https://doi.org/10.1371/journal.pgph.0003157>
51. Kindi, R. M. A., Sumri, H. H. A., Muhdhoori, T. M. A., Mamari, K. A., Kalbani, M. A., & Al-Azri, M. (2024). Knowledge of cervical cancer screening among Omani women attending a university teaching hospital: a cross-sectional study. *BMC Women's Health*, 24(1), 40-40. <https://doi.org/10.1186/s12905-023-02870-7>
52. Kindi, R. M. A., Sumri, H. H. A., Muhdhoori, T. M. A., Mamari, K. A., Kalbani, M. A., & Al-Azri, M. (2024). Knowledge of cervical cancer screening among Omani women attending a university teaching hospital: a cross-sectional study. *BMC Women's Health*, 24(1), 40-40. <https://doi.org/10.1186/s12905-023-02870-7>
53. Kocaöz, S., Çırpan, R., & Değirmencioğlu, A. Z. (2019). The prevalence and impacts heavy menstrual bleeding on anemia, fatigue and quality of life in women of reproductive age. *Pakistan Journal of Medical Sciences*, 35(2), 365-370. <https://doi.org/10.12669/pjms.35.2.644>
54. Li, Z., Chen, S., Mahjabeen, I., & Shafique, R. (2023). Nurses and doctors 's awareness and knowledge towards treatment and care of cervical cancer patients: a cross-sectional study. *BMC Nursing*, 22(1), 389-389. <https://doi.org/10.1186/s12912-023-01522-3>
55. Lim, M. T., Lim, Y. M. F., Tong, S. F., & Sivasampu, S. (2019). Age, sex and primary care setting differences in patients' perception of community healthcare seeking behaviour towards health services. *PLoS ONE*, 14(10). <https://doi.org/10.1371/journal.pone.0224260>
56. Lipi, L. B., Kutubi, A., Rahman, M. M., Shaha, N., Haque, N., & Ara, I. (2018). Knowledge and awareness about cervical Cancer and its Prevention among Women Attending at Out patient Department of Dhaka Medical College Hospital. *Journal of Shaheed Suhrawardy Medical College*, 10(1), 36-41. <https://doi.org/10.3329/jssmc.v10i1.38902>
57. Lyimo, F. S., & Beran, T. (2012). Demographic, knowledge, attitudinal, and accessibility factors associated with uptake of cervical cancer screening among women in a rural district of Tanzania: Three public policy implications. *BMC Public Health*, 12(1). <https://doi.org/10.1186/1471-2458-12-22>
58. Madsen, E., Varghese, B., Krishnan, S., & Porterfield, D. (2020). Advancing Cervical Cancer Prevention in India: Implementation Science Priorities. *UNC Libraries*. <https://doi.org/10.17615/z7sz-5k23>
59. Mantula, F., Toefy, Y., & Sewram, V. (2024). Barriers to cervical cancer screening in Africa: a systematic review. *BMC Public Health*, 24(1), 525-

525. <https://doi.org/10.1186/s12889-024-17842-1>
60. Moukam, A. M. D., Owono, M. S. E., Kenfack, B., Vassilakos, P., Petignat, P., Sormani, J., & Schmidt, N. (2021). "Cervical cancer screening: awareness is not enough". Understanding barriers to screening among women in West Cameroon—a qualitative study using focus groups. *Reproductive Health*, 18(1). <https://doi.org/10.1186/s12978-021-01186-9>
61. Mwaka, A. D., Wabinga, H. R., & Mayanja-Kizza, H. (2013). Mind the gaps: a qualitative study of perceptions of healthcare professionals on challenges and proposed remedies for cervical cancer help-seeking in post conflict northern Uganda. *BMC Family Practice*, 14(1). <https://doi.org/10.1186/1471-2296-14-193>
62. Mwenda, V., Mburu, W., Bor, J., Nyangasi, M., Arbyn, M., Weyers, S., Tummers, P., & Temmerman, M. (2022). Cervical cancer programme, Kenya, 2011-2020: lessons to guide elimination as a public health problem. *Ecancermedicalscience*, 16. <https://doi.org/10.3332/ecancer.2022.1442>
63. Nassè, T. B. (2019). Internal equity and customer relationship management in developing countries: A quantitative and a comparative study of three private companies in Burkina Faso. *AFRICAN JOURNAL OF BUSINESS MANAGEMENT*, 13(1), 37-47. <https://doi.org/10.5897/ajbm2018.8663>
64. Nazrul, N., Fouw, M. de, Beltman, J., Zeeuw, J. de, Schans, J. van der, Koot, J., Rasul, K. G., Kulsum, M. U., Ahmed, M. S., Rahman, A., Rahman, A., Islam, K. M. B., Nessa, A., Campbell, C., & Stekelenburg, J. (2024). Understanding cervical cancer awareness in hard-to-reach areas of Bangladesh: A cross-sectional study involving women and household decisionmakers. *PubMed Central*, 19(8). <https://doi.org/10.1371/journal.pone.0304396>
65. Nazrul, N., Fouw, M. de, Beltman, J., Zeeuw, J. de, Schans, J. van der, Koot, J., Rasul, K. G., Kulsum, M. U., Ahmed, M. S., Rahman, A., Rahman, A., Islam, K. M. B., Nessa, A., Campbell, C., & Stekelenburg, J. (2024). Understanding cervical cancer awareness in hard-to-reach areas of Bangladesh: A cross-sectional study involving women and household decisionmakers. *PubMed Central*, 19(8). <https://doi.org/10.1371/journal.pone.0304396>
66. Nessa, A., Azad, A. K., U, S. Md. N., Khan, M. A. H., Zaman, S., & Khan, A. S. (2024). Cervical Cancer Screening Data from the Case-based National Electronic Registry in Bangladesh. In *Research Square*. <https://doi.org/10.21203/rs.3.rs-4672043/v1>
67. Nessa, A., Chowdhury, S. B., Fatima, P., Kamal, M., Sharif, M. R., & Azad, A. K. (2020). Cervical Cancer Screening Program in Bangladesh. *Bangladesh Journal of Obstetrics & Gynaecology*, 33(1), 63-73. <https://doi.org/10.3329/bjog.v33i1.43550>
68. Nessa, A., Hossain, Md. S., Uddin, S. M. N., Islam, Md. R., Khan, M. A. H., & Azad, A. K. (2024). Electronic aggregated data collection on cervical cancer screening in Bangladesh since 2014: what the data tells us? *BMC Public Health*, 24(1), 270-270. <https://doi.org/10.1186/s12889-023-17545-z>
69. Nessa, A., Islam, T., Noor-E-Ferdousi, N.-E.-F., Sultana, A., Khan, K. H., & Rashid, H. ur. (2024). Staging and Management of Cervical Cancer at the Colposcopy Clinic of Bangabandhu Sheikh Sheikh Mujib Medical University (BSMMU), Bangladesh. *South Asian Journal of Cancer*, 13(1), 17-26. <https://doi.org/10.1055/s-0043-1776288>
70. Nuamah, G. B., Agyei-Baffour, P., Mensah, K. A., Boateng, D., Quansah, D. Y., Dobin, D., & Addai-Donkor, K. (2019). Access and utilization of maternal healthcare in a rural district in the forest belt of Ghana. *BMC Pregnancy and Childbirth*, 19(1), 6-6. <https://doi.org/10.1186/s12884-018-2159-5>
71. Nyambe, A., Kampen, J. K., Baboo, S. K., & Hal, G. V. (2019). Knowledge, attitudes and practices of cervical cancer prevention among Zambian women and men. *BMC Public Health*, 19(1). <https://doi.org/10.1186/s12889-019-6874-2>

72. Obol, J. H., Lin, S., Obwolo, M. J., Harrison, R., & Richmond, R. (2021). Provision of cervical cancer prevention services in Northern Uganda: a survey of health workers from rural health centres. *BMC Health Services Research*, 21(1), 794-794. <https://doi.org/10.1186/s12913-021-06795-5>
73. Osei, E. A., Appiah, S., Gaogli, J., & Oti-Boadi, E. (2021). Knowledge on cervical cancer screening and vaccination among females at Oyibi Community. *BMC Women s Health*, 21(1), 148-148. <https://doi.org/10.1186/s12905-021-01296-3>
74. Ouédraogo, Y., Furlane, G., Frühauf, T., Badolo, O., Bonkougou, M., Pleah, T., Lankoandé, J., Bicaba, I., & Bazant, E. (2018). Expanding the Single-Visit Approach for Cervical Cancer Prevention: Successes and Lessons From Burkina Faso. *Global Health Science and Practice*, 6(2), 288-298. <https://doi.org/10.9745/ghsp-d-17-00326>
75. Pandey, R. A., & Karmacharya, E. (2017). Cervical cancer screening behavior and associated factors among women of Ugrachandi Nala, Kavre, Nepal. *European Journal of Medical Research*, 22(1), 32-32. <https://doi.org/10.1186/s40001-017-0274-9>
76. Parham, G. P., Mwanahamuntu, M., Kapambwe, S., Muwonge, R., Bateman, A., Blevins, M., Chibwesa, C. J., Pfaendler, K. S., Mudenda, V., Shibemba, A., Chisele, S., Mkumba, G., Vwalika, B., Hicks, M. L., Vermund, S. H., Benjamin, H., Stringer, J. S. A., Sankaranarayanan, R., & Sahasrabuddhe, V. V. (2015). Population-Level Scale-Up of Cervical Cancer Prevention Services in a Low-Resource Setting: Development, Implementation, and Evaluation of the Cervical Cancer Prevention Program in Zambia. *PLoS ONE*, 10(4). <https://doi.org/10.1371/journal.pone.0122169>
77. Penchala, N., Ganagama, N., Shrushti, G., & Gowtham, V. (2025). Knowledge, Attitude, and Practices (KAP) Towards Cervical Cancer and Its Screening Among Women Attending a Tertiary Care Hospital. *International Journal of Pharmaceuticals and Health Care Research*, 13(1), 117-122. <https://doi.org/10.61096/ijphr.v13.iss1.2025.117-122>
78. Petersen, Z., Jaca, A., Ginindza, T. G., Maseko, G., Takatshana, S., Ndlovu, P., Zondi, N., Zungu, N., Varghese, C., Hunting, G., Parham, G. P., Simelela, P. N., & Moyo, S. (2022). Barriers to uptake of cervical cancer screening services in low-and-middle-income countries: a systematic review [Review of *Barriers to uptake of cervical cancer screening services in low-and-middle-income countries: a systematic review*]. *BMC Women s Health*, 22(1). BioMed Central. <https://doi.org/10.1186/s12905-022-02043-y>
79. Puzio, A., Kułak, K., Repa, M., Ruszczyk, J., & Skórzyńska-Dziduszko, K. (2016). The impact of demographic factors on the level of knowledge about primary and secondary prevention of cervical cancer among patients in Lublin voivodeship. *Family Medicine & Primary Care Review*, 3, 336-339. <https://doi.org/10.5114/fmpcr/63354>
80. Rahman, Md. M., Sharif, A. B., Uddin, B. Md. M., Bari, S., Khan, S. I., Jerin, I. A., Rahman, F., & Orthi, S. U. (2025). Knowledge, attitude and practice related to cervical cancer prevention among medical students in Bangladesh: a cross-sectional study. *Discover Education*, 4(1). <https://doi.org/10.1007/s44217-025-00675-4>
81. Rai, R., Sehgal, R., Singhal, S., Suri, V., Shivkumar, P., Balasubramani, L., Rajaram, S., Shamsunder, S., Bagga, R., Vashist, S., Meena, J., Mishra, A., Chawla, L., Kumari, S., Mani, K., & Bhatla, N. (2023). Cervical Cancer Screening Coverage at Tertiary Care Institutes Across India. *Asian Pacific Journal of Cancer Prevention*, 24(12), 4269-4275. <https://doi.org/10.31557/apjcp.2023.24.12.4269>
82. Rajkhowa, P., Mathew, M., Fadra, R., Saha, S., Rakshitha, K., Narayanan, P., & Brand, H. (2024). A scoping review of evidence on routine cervical cancer screening in South Asia: investigating factors affecting adoption and implementation [Review of *A scoping review of evidence on routine cervical cancer screening in South Asia: investigating factors affecting*

- adoption and implementation]. *Cancer Causes & Control*. Springer Science+Business Media. <https://doi.org/10.1007/s10552-024-01923-y>
83. Rakhshanda, S., Dalal, K., Chowdhury, H. A., Mayaboti, C. A., Paromita, P., Rahman, A., Hussain, A. H. M. E., & Mashreky, S. R. (2021). Assessing service availability and readiness to manage cervical cancer in Bangladesh. *BMC Cancer*, 21(1), 670-670. <https://doi.org/10.1186/s12885-021-08387-2>
84. Rashid, S., Labani, S., & Das, B. C. (2016). Knowledge, Awareness and Attitude on HPV, HPV Vaccine and Cervical Cancer among the College Students in India. *PLoS ONE*, 11(11). <https://doi.org/10.1371/journal.pone.0166713>
85. Ray, P. B., & Ray, A. (2022). Female cancer awareness and screening: evaluation from tertiary hospital in Eastern India. *International Journal of Reproduction Contraception Obstetrics and Gynecology*, 11(3), 781-781. <https://doi.org/10.18203/2320-1770.ijrcog20220556>
86. Reid, M., Arinaminpathy, N., Bloom, A., Bloom, B. R., Boehme, C., Chaisson, R. E., Chin, D. P., Churchyard, G., Cox, H., Diñu, L., Dybul, M., Farrar, J., Fauci, A. S., Fekadu, E., Fujiwara, P. I., Hallett, T. B., Hanson, C., Harrington, M., Herbert, N., ... Goosby, E. (2019). Building a tuberculosis-free world: The Lancet Commission on tuberculosis. *LSHTM Research Online (London School of Hygiene and Tropical Medicine)*, 393(10178), 1331-1384. [https://doi.org/10.1016/s0140-6736\(19\)30024-8](https://doi.org/10.1016/s0140-6736(19)30024-8)
87. Rijal, B. M., & Dawadi, P. (2024). Knowledge, attitudes and associated factors regarding cervical cancer and its screening practice among women of central Nepal. *PubMed Central*, 10(14). <https://doi.org/10.1016/j.heliyon.2024.e34886>
88. Rimande-Joel, R., & Ekenedo, G. O. (2019). Knowledge, Belief and Practice of Cervical Cancer Screening and Prevention among Women of Taraba, North-East Nigeria. *Asian Pacific Journal of Cancer Prevention*, 20(11), 3291-3298. <https://doi.org/10.31557/apjcp.2019.20.11.3291>
89. Salem, M. R., Hegazy, N., Mohammed, A. A. T., Hassan, E. M., Abdou, M. M. S., & Zein, M. M. (2022). Climate change-related knowledge and attitudes among a sample of the general population in Egypt. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.1047301>
90. Sawhney, R., Nathani, P., Patil, P., Bhandarkar, P., Veetil, D. K., Venghateri, J. B., Roy, N., & Gadgil, A. (2023). Recognising socio-cultural barriers while seeking early detection services for breast cancer: a study from a Universal Health Coverage setting in India. *BMC Cancer*, 23(1), 881-881. <https://doi.org/10.1186/s12885-023-11359-3>
91. Shago, A. B., Bushisso, E. W., & Olamo, T. G. (2025). Investigating university English as a foreign language instructors' implementations in teaching integral listening with speaking. *PLoS ONE*, 20(8). <https://doi.org/10.1371/journal.pone.0327029>
92. Shatilwe, J. T., Kuupiel, D., & Mashamba-Thompson, T. P. (2021). Evidence on access to healthcare information by women of reproductive age in low- and middle-income countries: Scoping review. *PLoS ONE*, 16(6). <https://doi.org/10.1371/journal.pone.0251633>
93. Suhail, Z., Hussain, M., Hasan, S., Huda, A. S. N., Raza, T., & Javaid, A. (2025). The Impact of Education on Knowledge and Use of Contraceptive Methods: A Comparative Analysis of Educated and Under educated Populations. *Pakistan Journal of Health Sciences*, 254-259. <https://doi.org/10.54393/pjhs.v6i1.2124>
94. Tafere, Y., Jemere, T., Desalegn, T., & Melak, A. (2020). Women's Knowledge and Attitude towards Cervical Cancer Preventive Measures and associated factors In South Gondar Zone, Amhara Region, North Central Ethiopia: A Cross-Sectional Study. In *Research Square*. <https://doi.org/10.21203/rs.3.rs-130171/v1>

95. Tóth, V., & Šebová, M. (2024). Examining climate change awareness and climate-friendly activities of urban residents: A case study in Košice. *E+M Ekonomie a Management*, 27(1), 24-39. <https://doi.org/10.15240/tul/001/2024-1-002>
96. Yarıcı, F., & Mammadov, B. (2023). An analysis of the knowledge of adults aged between 18 and 45 on HPV along with their attitudes and beliefs about HPV vaccine: the Cyprus case. *BMC Women's Health*, 23(1). <https://doi.org/10.1186/s12905-023-02217-2>
97. Zibako, P., Tsikai, N., Manyame, S., & Ginindza, T. G. (2021). Knowledge, attitude and practice towards cervical cancer prevention among mothers of girls aged between 9 and 14 years: a cross sectional survey in Zimbabwe. *BMC Women's Health*, 21(1). <https://doi.org/10.1186/s12905-021-01575-z>
98. Shin, M., Gui, L., Mugo, N., García, P., Rao, D. W., Bayer, C. J., Eckert, L. O., Pinder, L. F., Wasserheit, J. N., & Barnabas, R. V. (2021). A Framework for Cervical Cancer Elimination in Low-and-Middle-Income Countries: A Scoping Review and Roadmap for Interventions and Research Priorities. *Frontiers in Public Health*, 9, 670032-670032. <https://doi.org/10.3389/fpubh.2021.670032>
99. Siddique, A. B., Sultana, C. J., Roy, C., Rahman, T., Hkatun, Mst. J., Haider, Md. S., Akter, S., Carmack, C., & Kundu, L. R. (2025). Assessment of Knowledge, Attitudes, and Practices Concerning Cervical Cancer Among Women of Early Reproductive Age in Bangladesh: A Cross-Sectional Study. *Health Science Reports*, 8(9). <https://doi.org/10.1002/hsr2.71276>
100. Sivaram, S., Majumdar, G., Perin, D. M. P., Nessa, A., Broeders, M. J. M., Lynge, E., Saraiya, M., Segnan, N., Sankaranarayanan, R., Rajaraman, P., Trimble, E. L., Taplin, S. H., Rath, G., & Mehrotra, R. (2018). Population-based cancer screening programmes in low-income and middle-income countries: regional consultation of the International Cancer Screening Network in India. *The Lancet Oncology*, 19(2). [https://doi.org/10.1016/s1470-2045\(18\)30003-2](https://doi.org/10.1016/s1470-2045(18)30003-2)
101. Spearman, C. W., Andersson, M., Bright, B., Davwar, P., Desalegn, H., Guingané, A. N., Johannessen, A., Kabagambe, K., Lemoine, M., Matthews, P. C., Ndow, G., Riches, N., Shimakawa, Y., Sombié, R., Stockdale, A., Taljaard, J., Vinikoor, M. J., Wandeler, G., Okeke, E., ... (HEPSANET), on behalf of the H. B. in A. C. N. (2023). A new approach to prevent, diagnose, and treat hepatitis B in Africa. *BMC Global and Public Health*, 1(1), 24-24. <https://doi.org/10.1186/s44263-023-00026-1>
102. Sriram, S. (2024). Supply-Side Barriers in Accessing Human Papillomavirus Screening for Cervical Cancer Prevention in Rural India: Evidence From a Cross-Sectional Study. *Cureus*, 16(11). <https://doi.org/10.7759/cureus.73145>
103. Yusuf, M. (2024). Perspectives on Cervical Cancer: Insights into Screening Methodology and Challenges. *Cancer Screening and Prevention*, 3(1), 47-55. <https://doi.org/10.14218/csp.2023.00041>
104. Zhang, L., Mosquera, I., Lucas, E., Rol, M. L., Carvalho, A. L., Basu, P., collaborators, C., Sadowski, D., Natasha, B., Budd, A. C., Nessa, A., Brabander, I. D., Haelens, A., Pringels, S., Tairo, J., Hofvind, S., Burrión, J. B., Valerianova, Z., Tinmouth, J., ... Layne, M. A. (2023). CanScreen5, a global repository for breast, cervical and colorectal cancer screening programs. *Nature Medicine*, 29(5), 1135-1145. <https://doi.org/10.1038/s41591-023-02315-6>
105. Zhong, P., Zhang, L., & Zhao, F. (2025). Modeling cervical cancer elimination: a pathway to inform policy decisions. *Cancer Biology and Medicine*, 22(9), 1002-1009. <https://doi.org/10.20892/j.issn.2095-3941.2025.0387>