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Training On Cervical Cancer and HPV Vaccine for 9-13 Years' Adolescent Girls

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ABSTRACT

This community service project aimed to raise awareness about cervical cancer and the importance of the HPV vaccine for 9-13-year-old girls and their parents. The training was designed to address the knowledge gap regarding cervical cancer and HPV vaccine among 9-13-year-old girls and their parents, we can empower them to make informed decisions about vaccination. Before the implementation of training, a community survey was conducted. The findings of the survey helped us to identify gaps in knowledge and attitudes and inform the development of training as an intervention. Through training & distributed training materials the outcome of the community service was achieved. The knowledge of school adolescent girls was evaluated and improved. The uptake of HPV vaccination was increased and all unvaccinated school girls were vaccinated after training. Training participants were empowered to correct any misconceptions within the community. Hopefully, this community service provide input for others to adopt and apply in other similar schools.

INTRODUCTION

Globally, about 1 in 6 deaths is due to cancer and approximately 70% of deaths from cancer occur in low- and middle-income countries. In low- and middle-income countries, including Ethiopia, cervical cancer is the most common cancer affecting reproductive organs and it is the second most frequent cancer among women in Ethiopia (FDRE Ministry of Health, 2015; Woldehawaryat EG, 2023).

Worldwide, approximately 70% of cervical cancers are caused by the two common high-risk types of HPV (16 and 18). Vaccination of HPV has proven to be protective over 70% of invasive cervical cancer (Dorji T, 2021; Simms KT, 2019). According to the Ethiopia Minster of Health update of 2023, cervical cancer causes an estimated 7,445 new cases and 5,338 deaths every year; over 80% of cases are detected at a late stage, predominantly due to lack of information about the problem. Ethiopia Ministry of Health following the WHO global strategy (90-70-90 i.e., reaching the target of 90% HPV vaccination, 70% cervical screening, and 90% cervical cancer treatment by 2030 (FDRE Ministry of Health, 2015; Simms KT, 2019).

Prevention of human papillomavirus (HPV) infection can be achieved by a highly effective prevention strategy using the HPV vaccine. It is crucial to educate and raise awareness among school girls about cervical cancer, HPV infection, and the benefits of HPV vaccination (Simms KT, 2019).

Problem statement

Since December 2018, Ethiopia introduced HPV vaccination as a school-based approach to reach all 14-year-old girls, however, the uptake of HPV vaccination was still challenged (Biyazin T, 2022; FDRE Ministry of Health, 2015). As of June 2023, more than 6.5 & 4.2 million target girls have been vaccinated for the 1st & 2nd dose of HPV respectively (ICO/IARC, 2023).

Delivering HPV vaccine to these target groups requires a systematic approach such as school-based, health facility-based, outreach, or a combination of either structure. Furthermore, the country is going to introduce the

vaccine through the routine immunization program (FDRE Ministry of Health, 2015). Currently, the vaccine is delivered in health facilities and through a school-based approach to reach all 14-year-old girls and the HPV vaccine coverage rate in Ethiopia ranges from 15% (Tesfaye ZT, 2017), to 66.5% (Kassa HN, 2021). Similarly, in a systematic review and meta-analysis conducted in Ethiopia among adolescent schoolgirls, the pooled proportions of good knowledge, positive attitude, and uptake of human papillomavirus vaccine were 55.12%, 45.34%, and 42.05%, respectively (Addisu, 2023).

In addition, many 9-13-year-old girls and their parents lack knowledge about cervical cancer, HPV, and the benefits of the HPV vaccine (Addisu, 2023; Mitiku I, 2016; Tesfaye ZT, 2017). The survey conducted in selected primary schools of Dessie town revealed that the level of awareness of school girls was low. Even, those students who are vaccinated didn't know about the vaccine they received, the importance, and overall about cervical cancer. This limited awareness leads to low vaccination rates and puts these girls at risk of developing cervical cancer in the future. All the above finding recommends increasing adolescent knowledge, positive attitudes, and uptake of HPV vaccination through school-based seminars, health education, and community mobilization.

Therefore, this community service project aimed to raise awareness about cervical cancer and the importance of the HPV vaccine among 9-13-year-old girls and their parents. By raising the awareness of 9-13-year-old girls and their parents, we can empower them to make informed decisions about vaccination.

METHOD

This community service activity addressed three important questions:

- What was the level of awareness of school girls about cervical cancer and related?
- How can we empower school girls?
- What are the challenges for low uptake of HPV vaccination?

Target audience; The direct targets of this community service were adolescent girls aged 9-13 years. In this community service priority was given to selected school grade 6th students. Parents of adolescent girls & boys were indirect targets of this project.

Period; this community service aims to assess the level of awareness of cervical cancer and HPV vaccination and to provide comprehensive knowledge to school girls, the project period was from January 1st, 2024 - to March 29, 2024, including preparation, survey, training material development, and implementation & evaluation phase. The preliminary survey was conducted on March 6/2024. Then, the training was given on March 14/2024 after analyzing the results of the survey.

Location of activities; the community service was conducted in Addisalem Primary School which is located in Dessie City, Ethiopia. Addisalem Primary School is located in Hotie sub-city, and the school is engaged in the provision of primary education for school-aged and adolescents.

In this community service, a combination of several methods were used, such as

1. **Literature Review**; was conducted to gather relevant information and insights on cervical cancer, HPV, and HPV vaccination. And also studies and guidelines from credible sources were analyzed to understand the gap.
2. **Conduct Surveys**: After developing survey tools and questionnaires, the survey was conducted on March 6/2024 in a sample of school girls to assess the knowledge, attitudes, and practices regarding cervical cancer and HPV vaccination. Then, after the training, a post-training survey was conducted to measure the impact of the community service.
3. **Focus Group Discussions**: Focus group discussions were organized with school girls to explore their perceptions, experiences, and barriers related to cervical cancer and its prevention.
4. **Assessments:** In addition to the survey, pre and post-training assessments were given to evaluate the baseline knowledge and to measure the effectiveness of the training program.

Measurement; the level of achievement and success of this community service activities were measured by number of individuals with increased knowledge of HPV infection and cervical cancer, vaccination rates of the target group, and number of distributed educational materials.

Data Collection and Analysis; Survey data were collected by college Lecturers using a self-administered structured questionnaire. Data were coded, entered, and analyzed using SPSS version 20. In addition, focus group transcripts and pre & post-assessment results were analyzed. Important findings were identified for training through generating quantitative and qualitative data analyses.

Ethical Consideration; For any of the survey participants the purpose, benefits, confidentiality, and right to withdraw or stop filling out the questionnaire were described and discussed throughout the process. For the confidentiality and privacy of participants, their names and identification numbers were not recorded on the questionnaire. Informed consent was obtained from participants before data collection. A document of questionnaires was kept in locked cupboards accessible only to principal investigators. The relevant local government education office and school director gave administrative permission.

RESULT AND DISCUSSION

This community service was divided into three phases, categorized as pre-implementation, implementation & post-implementation.

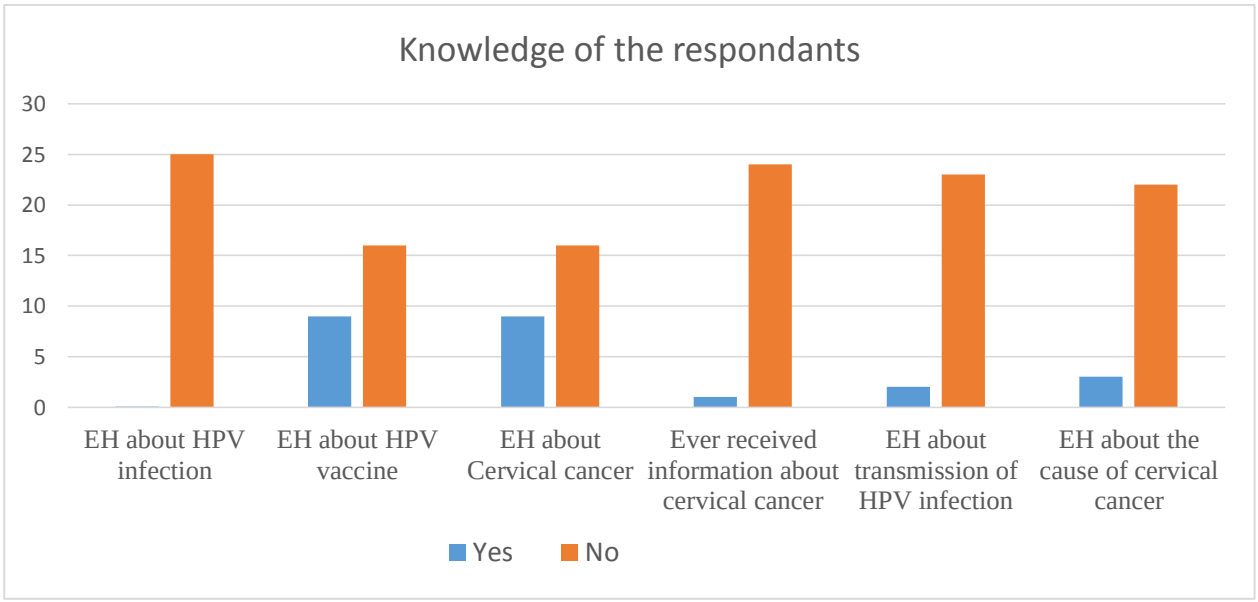
Pre-implementation Phase

During this phase, the community needs assessment survey was conducted. Based on the findings of the survey, the need to provide training was revealed as a community service. The activities which are performed were preparing training materials including stationery, training PPT, and supporting training materials. In addition, printed educational materials like posters, leaflets, and other materials were developed.

Survey Analysis & finding

The survey was conducted in Addisalem primary school. An institutional cross-sectional survey was conducted. In this survey, 25 randomly selected grade 6th female students were included. The survey was conducted on April 6/2024. Data were collected using a self-administered structured Amharic questionnaire. Data collection was done by college Lecturers. The completeness of the questionnaires was checked by the principal investigator. Data were coded, entered, and analyzed using SPSS 20. Descriptive statistics were used to summarize data.

All of the study participants were in grade 6th of Addis-alem Primary School of Dessie town. The mean age of the survey participants was 12.2 (ranged 11–15) years. As shown below in Graph 1, the survey respondents were asked (to assess their level of understanding) and answered about the issue. All of the respondent's report that they haven't heard about HPV infection ever. However, 36% of respondents report as heard of cervical cancer only about its name during the vaccination campaign. Most of the girls didn't know about what causes cervical cancer, what are the risk factors, and how can protect their self's from this cancer. Knowledge about cervical cancer and the HPV vaccine was significantly more among vaccinated girls as compared to unvaccinated.



EH- Ever heard, HPV- Human Papilloma Virus

Figure 1; Knowledge of adolescent girls about HPV, cervical cancer, and HPV vaccination among adolescent girls, March, 2024.

As shown in the table, about 80% of the survey respondents didn't know the risk factors for HPV infection. Out of the total adolescent female students, 76% perceived that they don't think as they become susceptible to cervical cancer.

***Table 1**: Knowledge of Adolescent Girls About HPV, Cervical Cancer, And HPV Vaccination Among Adolescent Girls, March, 2024.*

Variables	***Response***			***Remark***
	Yes n (%)	***No n (%)***	***I don't Know n (%)***	
HPV infection increases the risk/probability of developing cervical cancer	3 (12.0%)	2 (8%)	20 (80%)	N=25
Early initiation of sexual intercourse increases the risk of getting cervical cancer	8 (32.0%)	-	17 (68.0%)	N=25
Having multiple sexual partners increases the risk of getting cervical cancer	7 (28.0%)	-	18 (72%)	N=25
Perceiving high susceptibility to cervical cancer	6 (24%)	19 (76%)		76% say I don't think
Have you received HPV vaccine	6 (24%)	19(76%)		N=25

Based on the survey findings (Table 1), when respondents were asked ever heard of the HPV vaccine (in the name of cervical cancer prevention vaccine), 36% of them responded "Yes". However, all those respondents who ever heard of the HPV vaccine were not vaccinated.

The main reasons mentioned by the respondents for not taking the vaccine were lack of knowledge/ awareness (48.0%), they did not know where to get it (8.0%) and they did not want/ not need to be vaccinated (20%) (Fig 2). As a conclusion of survey findings, the level of awareness of school girls was low.

Even those students who are vaccinated didn't know about the vaccine that they received. Finally, a basic training workshop is required to improve the knowledge gap a recommendation, which is why the conception of this community service.

The second phase is implementation.

To achieve the stated objectives, the following intertwined activities were performed: interactive educational workshop/training was organized & provided on cervical cancer and HPV vaccination for 86 students in collaboration with local schools. These workshops were tailored to the age group and included engaging activities to capture their attention. Healthcare professionals were invited to share their experiences and knowledge. The other activity was an informational campaign, which distributed printed educational materials including information notes, posters, and leaflets. By considering direct & indirect targets & to transmit information to the large community, more than 200 printed educational materials were distributed for both gender. These materials explain cervical cancer, HPV, the benefits of the HPV vaccine, and address common misconceptions or concerns.

Post-implementation

At the stage of post-implementation, as an outcome of the community service, the knowledge of school-age adolescent girls about HPV infection, cervical cancer, and HPV vaccination was evaluated and has improved as evidenced by post training assessment. Out of the total trainees, 90% of them scored their post training exam 90% and above. The rest of trainees score 85% and above. This result indicates that there was a big change after training.

The other success of this community service activities were access to HPV vaccination was increased and all unvaccinated girls were vaccinated after awareness was created (76% of the students got vaccine after this training). More than 200 printed educational materials were distributed for both male & females by considering them to transmit information to their parents and their local community. Any myths and misconceptions

surrounding cervical cancer were corrected among participants and they became a resource to correct any misconceptions within the community.

CONCLUSION

The conclusion must clearly indicate the results obtained, the strengths and weaknesses, and the possibility of further development.

There are several important activities were performed in this community service including a community survey, training materials preparation, a training workshop, printed educational materials distributed, and conducting post-training evaluations. Initially, most of the respondents didn't have an understanding, but after training, we can improve their knowledge as well as they become empowered, as a result, unvaccinated girls were vaccinated. This community service will hopefully provide input for others to adopt and apply in other similar schools. Finally, to create good understanding at the community level, for future community service activities in the similar issue it is better to include parents of adolescent girls in the training.

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