Table 4: Attitude towards the vaccine; Response from participants

Availability of HPV vaccine	Frequency
Yes	40(33.3%)
Not Sure	69(57.5%)
No	11(09.2%)
If 'Yes'	
Received the vaccine	09
Do not want to receive	00
Eager to receive	31
If 'Not sure'	
Eager to receive	03
Do not want to receive	08
Unsure of vaccine received	58
If 'No'	
Eager to receive vaccine	00
Do not want	11

vagina, penis, head and neck.[9] Cervical cancer kills over 300,000 women worldwide annually and over 570,000 new cases are diagnosed each year. In developing countries this is the most common killer out of the female cancers.[5,10] Despite this, the knowledge and attitudes towards this cancer among the population appear lower, especiallyamong the young.

In Sri Lanka an estimated 8.4 million women from the age 15 years onwards are at risk of developing carcinoma of cervix. Further, this cancer is the third leading cause of cancer deaths in females and the prevalence of virulent HPV in cases of cervical cancer is reported as 80.6%.11The ICO/IARC Information Centre on HPV and CancerFact Sheet 2018on Sri Lanka[11]reports that 'Current estimates indicate that every year 1136 women are diagnosed with cervical cancer and 643 die from the disease'. Thus,prevention is the strategy. Thus, cervical screening, HPV vaccination and safe sexual behavior with one faithful partner hold the key to minimize the incidence of cervical cancer. Awareness among the young people with regard to these factors would play a major role in achieving this goal.

This study was thus focused on the young females who had the eagerness for higher studies after secondary school education, but not gainedentrance to a conventional university.

Previous studies of this nature had been carried out often among the university students and thus we aimed to conduct our study among the other students. In this study we were able to find out that 57.5% of the participants had known that there exists cancer of cervix. Studies done in Sri Lanka among the undergraduate students in Kandy (57.7%)12 and at Eastern University, Sri Lanka (59.4%)13also showed similar rates. Although similar results have been found in the neighboring countries such as India (66%) and Nepal (58.6%) in the study reported in 2011[12], subsequent studies showed improved results. A study conducted among students in Rajarata University of Sri Lanka in 2015 revealed that 72% of students (both males and females) were aware of cervical cancer.[14] In a study done at a private university in India in 2015, the awareness of cervical cancer among girl students was found to be 82.45%[15] with Biology stream students showed significantly higher knowledge. Another study reported in 2019 in Zimbabwe showed 87.47% of students of both sex from the universities and high schools[16] concluding that 'young people in Zimbabwe have an idea about cervical cancer and the seriousness thereof'.

Our study found that 70% of those aware of the cervical cancer link with HPV. Among the studies done in Sri Lanka, in the Rajarata University study 47% of the participants identified HPV as a causative factor of carcinoma of cervix[14]. The Kandy study assessed the knowledge of HPV among the undergraduates; 48.5% of Sri Lankan participants reported to have such knowledge. The same study reported that 49% of Indian and 52.5% of Nepali participants had such knowledge.[12] The other studies from India and Zimbabwe reported 45.6% and 47%.[15,16] respectively indicating that less than half the young student population has the knowledge of HPV and its link to carcinoma of cervix. The study conducted among the students in the public and private universities in Lahore, Pakistan (reported in 2016)9revealed that 57% (223) of the participants have heard about HPV. Except a few, all of them (215) reported that HPV as causative factor of cervical cancer.

Cervical screening has been an established practice world-wide with different formats in different countries. In Sri Lanka visualizing the cervix and Pap smear has been the practice in women of 30 years and older, once in every five year frequency. 51% of the participants reported the availability of cervical screening in the Sri Lankan health system; half of them reported of availability of both Pap smear and HPV testing and in total, about 87% had known that Pap smear as the screening method (Table 3). The Eastern University study[13]showed 52% of the participants had adequate knowledge on cervical screening. The Zimbabwe study[16] reported that the 'study has shown that the knowledge of the screening services and their availability is very low even among young women between the ages of 21 to 24 years'. It should be noted that in Sri Lanka, although Pap smear has been an established practice, coverage is rather small. It should also be noted that the HPV DNA test-

ing is not routinely done in Sri Lanka but available in the private labs at high cost.

Vaccination against HPV is the key to primary prevention of women contracting cervical cancer. Vaccine could give 95% protection against cancer causing strains[2]. This type of immunization should be given to young girls before the exposure to sexual activities. In this study the knowledge of the availability of vaccine for HPV in the health system has been known to one third of the participants (Table 4). The Rajarata study[14] also showed a similar result of 35%. However, the Eastern University study showed lower rates; about 18% of the participants had satisfactory knowledge about the vaccine and mixed results with regard to the knowledge on its availability.[13] The Indian study[15] showed that 44% of girls and 31.6% of boys had the knowledge of HPV vaccine; The Pakistan study[9] reported that about 45% of students stated that HPV can be prevented by vaccination. The same study also reported that 'almost 64% rejected the statement that HPV vaccine prevents cervical cancer'.

The interesting finding came from this study is the fact of participants were 'not sure' HPV vaccine available in Sri Lanka and also of that they are 'unsure of having received the vaccine'. This type of confusion the students have cannot be considered as unusual. It is because Sri Lanka has a well-structured immunization program.This they receive at the tender age when their understanding about the vaccine given seem limited.

Conclusion

The present study was done among the students receiving the higher education in institutions outside the conventional Sri Lankan University system. The study noted higher percentage of knowledge and awareness with regard to various aspects connected to the cervical cancer prevention comparing to the previous studies. However, such awareness could be noted under 60% and this indicates the need for structured awareness programs to reach the entire young population on cervical cancer.

Authors' contribution: Concept for the research work was conceived by FMAA, MJN, MFFL, ASFJ who were also involved in literature survey and data collection. KEK was involved in data analysis, literature search and paper writing and SM contributed in statistical analysis and paper writing.

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