

Knowledge and Awareness regarding Human Papilloma Virus (HPV) infection and vaccination among adolescents aged 14 – 16 years in selected mixed Government Schools in Kesbewa Educational Division, Sri Lanka.

HLC Ushara ^{1#}, HMRR Wijesinghe¹, V Vysnavy¹, GGCR Malalagama¹, MGCH Jayasekara¹, MN Priyadarshanie¹ and Dr. GDI Rodrigo²

¹Department of Nursing and Midwifery, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka

² Faculty of Medicine, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka

#chaniushara1995@gmail.com

Abstract:- Human Papilloma Virus (HPV) is the most prevalent sexually transmitted infection worldwide. It causes cervical cancer which is the second most common cancer type among Sri Lankan women. HPV vaccine has been introduced for early adolescents in preventing HPV. Adequate knowledge and awareness regarding HPV and vaccine is effective in successful prevention. The objective of this study was to assess the knowledge and awareness regarding HPV infection and vaccination among adolescents aged 14-16 years studied in selected mixed government schools in Kesbewa Educational Division, Sri Lanka. A descriptive cross-sectional study was conducted among randomly selected 450 male and female adolescents aged 14-16 years studied in selected mixed government schools in Kesbewa Educational Division using a pre tested self-administered questionnaire. Results portrayed that, only 139(30.89%) participants had heard of HPV infection before the study. Among them 113(81.3%) had overall poor knowledge regarding HPV infection. The mean knowledge score was 6.01±4.332 with the range of 0-18. Out of all participants, only 137(30.4%) had heard of HPV vaccine before the study and 117(85.4%) of them had overall poor awareness on HPV vaccination. The mean awareness score was 3.12±2.997 with the

range of 0-11. Adolescents' knowledge and awareness on HPV infection and vaccination was statistically significant with parents' occupation (p=0.000 95%CI). The study concluded that the majority of adolescents had overall poor knowledge and awareness regarding HPV infection and vaccination. It is necessary to implement well-designed, systematic health education interventions to enhance knowledge and awareness regarding HPV infection and vaccination among adolescents.

Key Words: Knowledge, awareness, HPV infection, HPV vaccination, cervical cancer.

Introduction

Human Papilloma Virus (HPV) is the most prevalent sexually transmitted infection worldwide, affecting more than 6.2 million individuals every year (Bosch et al., 2002). It causes cervical cancer which is the second most common cancer type among Sri Lankan women. More than 90% of cervical cancer among women in Asia and more than 99% of cervical cancers among Sri Lankan women are caused by HPV (WHO,2013). It also recognized as the causative agent for other cancer types such as anal, vulva, penile, vaginal and oropharyngeal cancers (Giuliano et al., 2014). This virus is transmitted via sexual contact where sexual behavior is the main factor associated with

high rates of acquisition of HPV infection among sexually active women. Furthermore, genital HPV infection is acquired by direct skin contact during sexual intercourse with a person who has either clinical or subclinical infection (Harper et al., 2004). Recognition of the role of HPV in cervical cancer has stimulated a search for preventive vaccines with the hope and an option of controlling of cervical cancer worldwide. Thus, HPV vaccine which is introduced in preventing HPV infection has been introduced in many countries including Sri Lanka for early adolescent population as the risk of invading HPV and other related infections are increasing in that age group (WHO,2017). Therefore, adequate knowledge and awareness of HPV infection, vaccine and the vaccination process are effective for this programme to be a success.

Objectives

To assess knowledge and awareness regarding HPV infection and vaccination among adolescents aged 14-16 years, studying in selected mixed government schools in Kesbewa Educational Division.

Material and Methods

A descriptive cross-sectional study was conducted among 450 male and female adolescents aged 14-16 years studying in selected mixed government schools in Kesbewa Educational Division. Data was collected using a pre-tested self-administered questionnaire from 4th of June to 13th of September 2019. Three mixed schools were randomly selected by including one from each school category named as Type 1 AB, Type C and Type 2. Stratified random sampling method was performed to collect a representative sample of adolescents. Adolescents from each school were selected proportionately to the total sample size. Out of them, number of male and female adolescents from each

selected school were selected proportionately to the total number of male and female students in the respective grade. A number of representatives from each grade of 9, 10 and 11 were selected proportionately to the total number of students in each grade in the particular school. A single representative from each grade was selected by using a systematic random sampling method with a sampling interval of 3. Data was entered and analyzed using SPSS version 23.

Descriptive statistics (frequency, percentage tables) and Chi square test were used for the analysis. Statistical significance level was considered 95% of Confidence Interval (CI). All socio demographical data, knowledge and awareness on HPV as well as associations of socio demographic factors with HPV infection and vaccination were presented using tables and graphs.

A scoring system was developed to allocate a score for each response of the close ended questionnaire which was developed on the knowledge and awareness on HPV infection and vaccination among adolescents with responses as in order to categorize their knowledge level and awareness level. The total score received to knowledge level and awareness level was calculated separately. Based on the score received for each component, overall categorization was done in two levels of knowledge and awareness using an approved category namely "poor and good" (Bowyer et al., 2012).

Ethical approval was obtained from the Ethics Review Committee (ERC) of the Faculty of Medicine, General Sir John Kotelawala Defence University, Rathmalana. Permission was also obtained from the Zonal Director of Piliyandala Zonal Educational Office and principals of relevant schools through the Zonal Director to conduct the study. Every participants were

given an information sheet with consent form to ensure the voluntary participation.

Results and Discussion

The study sample consisted of 450 adolescents aged 14-16 years from three different schools in Kesbewa Educational Division as 90 (20%) from type 1AB, 90 (20%) from type 2 and 270 (60%) students from type 1C schools. Majority of respondents were male adolescents (60%, n=270) and 33.33% (n=150) of students were enrolled from each grade. All the participants were Sinhalese with a majority of Buddhist (98%, n=441). Majority of parents, were non health care workers (97.1%, n=437). The most common educational level of adolescents' fathers and mothers was up to O/L (54.9%, n=247 and 61.3%, n=276 respectively).

Out of the total respondents (n=450), only 139 (30.89%) had heard of HPV infection prior commencing the study. Among them the majority (81.3%, n=113) had poor overall knowledge regarding HPV infection. The mean knowledge score was (6.01± 4.332) with a range of 0-18. And also, adolescents' knowledge on carcinogenic association of HPV with gender, mode of transmission, consequences related to HPV infection, risk factors and preventive measures was also not at a satisfactory level. Similar studies conducted in Sweden, Hungary and Greece had reported respectively, 5.4%, 35% and 42.8% of adolescents had heard of HPV infection before commencing the study (Hoglund et al., 2009; Marek et al., 2011 and Vaidakis et al., 2017). Contrary to the above findings, Sopracordevole et al. (2012), Gerend and Magloire (2008) and Kasymova, Harrison and Pascal (2019) had reported that the awareness of HPV infection was relatively good among the study participants with the majority of 75%, 78% and 95.3%

adolescents had heard of HPV infection prior to the study.

Out of the total study participants (n=450), only 137 (30.4%) had heard of HPV vaccine before conducting the study. Of them 22.7% had obtained awareness through mass media. However, the majority (85.4%, n=117) had poor overall awareness on HPV vaccination. The mean awareness score was (3.12 ± 2.997) with a range of 0-11. They also had an inadequate awareness of HPV vaccination procedure practicing in Sri Lanka. Participants' willingness for receiving education on HPV and receiving vaccination against HPV was also assessed. However, the majority (63.6%, n=286) of adolescents interested in HPV education while the minority (25.8%, n=116) interested in receiving HPV vaccine. Similar studies conducted in Sweden and Italy reported that awareness on HPV vaccine before conducting the study was 1.1% and 42% respectively. (Hoglund et al., 2009; Di Giuseppe et al., 2008). In contrast, Sopracordevole et al. (2012) noted that 94.4 %of girls and 71.3% of boys had heard of HPV vaccine prior to the study and Blodt et al. (2011) also indicated a good awareness of HPV vaccine where 96.5% of females and 78.8% males had heard on HPV vaccine before the study. Accordingly, their main source of information was reported as public media (Gerend and Magloire, 2008), school health promotion campaigns and school health services (Patel et al., 2016; Marek et al., 2011) and health care providers (Kasymova, Harrison and Pascal, 2008).

A statistically significant association was observed between adolescents' knowledge on HPV infection and vaccination with the occupation of the parents (p=0.000, 95% CI). Also, grades in which adolescents studied was significantly associated with their awareness on HPV vaccination (p=0.014, 95% CI). In parallel to the current study, gender of the adolescents was also

statistically significant with knowledge regarding HPV infection. Accordingly, females possess higher knowledge than men (Gerend and Magloire, 2008; Marek et al., 2016; Patel et al., 2009 and Blodt et al., 2011). Furthermore, Kasymova, Harrison and Pascal (2019) had reported that both male and female gender ($p=0.005$, 95% CI) and race ($p=0.004$, 95% CI) were statistically significant with knowledge and awareness regarding HPV infection and vaccination. Vaidakis et al. (2017) stated that both gender ($p=0.001$, 95% CI) and area of resident ($p=0.001$, 95% CI) showed a statistically significant with knowledge about HPV infection and vaccination where male adolescents from rural areas were less likely to know about the vaccine than girls and adolescent from urban area.

Conclusion

As per the finding of the current study, only a small proportion of adolescents included in the study had heard of HPV infection and vaccination prior to commencing the study. Of them the majority had overall poor knowledge and awareness of the carcinogenic association of HPV infection with gender, modes of transmission, consequences related to HPV infection, risk factors, high risk sexual behaviors, importance of regular screening, preventive measures, precautions after vaccinations, and current vaccination procedure against HPV infection in Sri Lanka.

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