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Research Article

EVALUATION OF IMPACT OF AWARENESS/KNOWLEDGE OF HPV AND VACCINATION ACCEPTANCE AMONG ADOLESCENTS IN HIGH SCHOOL

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ABSTRACT

Introduction: Many studies associate HPV vaccination acceptability to positive and adequate information regarding HPV and its importance. In response to other studies suggesting that knowledge may increase HPV vaccination, it has been argued that it is at least important to increase awareness. This study investigated the potential influence of awareness and knowledge of HPV on the willingness to accept immunization against HPV infection because, there has been widespread interest in its role, and its association has been unclear.

Method: A cross-sectional descriptive study of 648 teenagers attending High School in Port Harcourt, Nigeria. Four High Schools situated in Port Harcourt Urban city were selected. Data was collected between the month of March to May, 2018. Proper PowerPoint health talk on HPV infection and HPV vaccination was given for 20 minutes, and at the end, the second (post health talk) questionnaire was given. The study focused on two parts, the first explored knowledge and awareness and the second evaluated how well the participants retained the knowledge and their willingness to receive the vaccine if given the opportunity.

Results: Before the health talk, the awareness/ knowledge of HPV infection and HPV vaccination were both low, n- 632 (98%), and n- 636 (98%) respectively. The result suggest that the health talk helped majority of the respondents 98% (n – 640) to understand the importance of HPV and vaccination. Thus, most of the respondents 92% (n – 596) are willing to take the HPV vaccination if given the opportunity.

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INTRODUCTION

Cervical cancer has been noted to be a major global public health problem. About 270,000 deaths occur each year from cervical cancer, with about 55% from under-developed countries¹. Cancer of the cervix is the most occurring cancer in women in Sub – Saharan African region². Nigeria is with a population of approximately 175 million people³ and has incidence rate of cervical cancer of about 25/100,000 per year⁴. This suggest that cancer of the cervix is the most frequent cancer among women in Nigeria. In addition, Umezulike⁵ reported high burden of cervical cancer in Nigeria Federation capital city Abuja. In-view of the high burden of cervical cancer, various means of prevention ought to be encouraged. Two vaccines, the Bivalent HPV vaccine (cervarix) and the Quadrivalent HPV vaccine (Gardasil) has be approved and introduced into use by the US Food and Drug Administration (FDA) to be given against oncogenic HPV types^{6,7}. These

vaccines are approved for administration to teenagers from 9 years before they become sexually active^{8,6}.

In spite of the reported high rate of cancer of the cervix and the provision of immunization against the occurrence of cancer of cervix, vaccination against HPV infection has remained low^{9,10,11}. High level of knowledge and awareness through adequate information medium could conceivably influence vaccination rate, but currently the relationship is unknown. This study, therefore was aimed at finding out how the level of awareness and knowledge of HPV infection and HPV vaccination among teenagers in high schools could influence the acceptance of the immunization against HPV infections.

MATERIAL AND METHODS

This was a cross-sectional descriptive study of 648 teenagers attending High School in Port Harcourt, Nigeria. The 4 selected High School are situated in Urban city. Data was collected between the month of March to May, 2018. Approval for the

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study was obtained from the Research Ethics Committee of State School Board. Each respondent completed a consent form and a questionnaire. Participation was voluntary and anonymous. The research questionnaire consisted two parts; social demographic profile, and awareness questions form the first part. Then a proper PowerPoint health talk on HPV infection and HPV vaccination was given for 20 minutes, and at the end, the second (post health talk) questionnaire was given.

The second questionnaire included relevant information regarding HPV and its vaccination. This was done to create adequate awareness of HPV infection and its vaccination. With the awareness created, willingness to accept HPV vaccination or not was evaluated. Therefore, the study focused on two parts, the first explored knowledge and awareness and the second evaluated how well the participants retained the knowledge and their willingness to receive the vaccine if given the opportunity. The flow chart of the study is shown in Figure 1

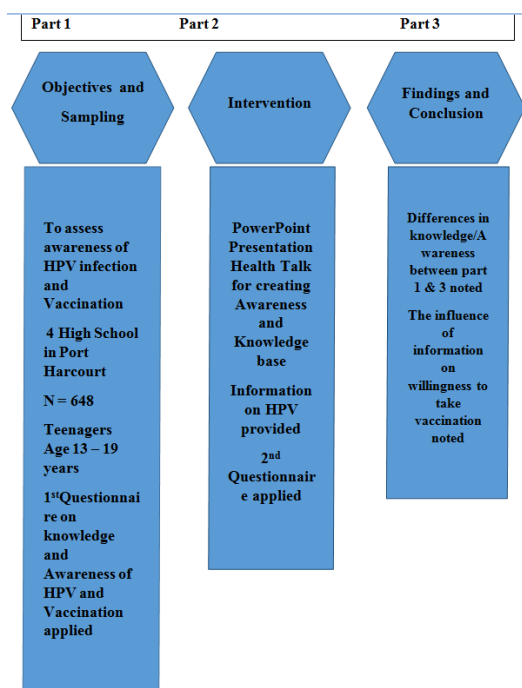


Fig 1 The Study Flow

Result and Statistical Analysis

In this study, simple descriptive statistics were used. The study question items were organized into categories: demographic 5 items, awareness based 8 items which include pre and post health talk and one question on willingness to receive the vaccination. Questions were answered in “Yes” or ‘NO’ items. Those with answers “Yes” = 1 point and “No” = 0 point. All scores were summed up to calculate the overall awareness scores for HPV infection and HPV vaccination.

Table 1 shows the demographic data of the study population

| Variable | Classification | Frequency | Percentage |
|--------------|----------------|-----------|------------|
| Age | 9 – 14 | 432 | 67% |
| | 15 - 19 | 216 | 33% |
| Sex | Boys | 264 | 41% |
| | Girls | 384 | 59% |
| Have had sex | Yes | 182 | 28% |

| | | | |
|------------------|--------------------|-----|-----|
| | No | 466 | 72% |
| Age at first sex | 13 years | 7 | 4% |
| | 14 years | 22 | 12% |
| | 15 years | 48 | 26% |
| | 16 years and above | 105 | 58% |

At baseline, 648 adolescents responded to a questionnaire measuring awareness and knowledge variables. Study participants were High School students in low income country The sample was mostly adolescents leaving in urban city in Nigeria. The adolescents were 13 to 19 years, with means age at 16 years. Twenty eight percent ($n = 182$) of the adolescents reported being sexually active. Table 1 reveals additional characteristics.

The educational intervention using PowerPoint presentation health talk was done immediately after the preliminary questionnaire was completed. Table 2. shows the differences in the awareness and knowledge by both pre- health talk (part 1) and post health talk (part 3) questionnaire and its influence on willingness to take the vaccine.

Table 2 Differences in knowledge / Awareness of HPV infection and Vaccination between part 1 and 3 and Willingness to accept Vaccination.

| Awareness/Knowledge before Health Talk | Classification | Frequency | Percentage |
|--|-----------------------------------|-----------|------------|
| HPV Infection | No Awareness/Knowledge | 632 | 98% |
| | Yes Awareness/Knowledge | 16 | 2% |
| | No Awareness/Knowledge | 636 | 98% |
| HPV Vaccination | Yes Awareness/Knowledge | 12 | 2% |
| | No Awareness/Knowledge | 134 | 21% |
| HPV Infection | Yes Awareness/Knowledge | 514 | 79% |
| | No Awareness/Knowledge | 206 | 32% |
| HPV Vaccination | Yes Awareness/Knowledge | 442 | 68% |
| | Not willing to accept vaccination | 52 | 8% |
| Willingness to accept vaccination | Willing to accept vaccination | 596 | 92% |

To evaluate the impact of the health talks on the increasing awareness and knowledge and on the willingness to accept vaccination is by assessing the pre and post -test questionnaire results, and the results are as indicated in Table 2. The result suggest that the health talk facilitated majority of the respondents 98% ($n = 640$) to understand the importance of HPV and vaccination. Thus, most of the respondents 92% ($n = 596$) are willing to take the HPV vaccination if given the opportunity.

DISCUSSION

Many studies reviewed associated HPV vaccination acceptability to positive and adequate information regarding HPV and its importance^{12,13}. Awareness is modifiable and widely considered a promising target. In response to other

studies suggesting that knowledge may increase HPV vaccination, it has been argued that it is at least important to increase awareness^{14,15}. Though, most of those studies had been conducted in the developed countries, awareness seem to link to vaccination. .

In the present study, though initially the studied group were not aware of HPV, and after briefing with health talk, willingness and acceptance increased. The results showed a significant increase in the knowledge and awareness. And willingness to get vaccinated shows no significant exception. This is in line with Cates and Brewer study findings^{16,17}, which noted that uptake of HPV vaccine was positively associated with information about the vaccine. The study findings confirms this relationship. Therefore, it is noteworthy to know that awareness of HPV and vaccination is the key to change general attitude towards vaccination acceptance, which in turn will minimize the increasing rate of cervical cancer in women.

CONCLUSION

In conclusion, in a low income country such as Nigeria, the ideal program to prevent all human papilloma virus associated cancers would be undoubtedly the vaccination of adolescent from age 9 years. Increase in awareness, knowledge of the importance of HPV infection has a significant positive impact on the acceptance and willingness to take HPV vaccination against human papilloma related cancers. Therefore, to increase awareness, of HPV virus, various outlets could be used to disseminate the information across all adolescents. In addition to increasing knowledge-based programs in schools and college's, efforts should also be made to increase the decision-making capacity. Fighting human papilloma types of cancer is possible through, outreach, education, screening and treatment. It is hoped that the immunization option for cancer prevention through vaccination of adolescents is a sure way to reduce global burden.

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