



Awareness of HPV, Cervical Cancer and Preventive Measures: A Questionnaire survey from Hyderabad, India

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Abstract

Aim: This study aimed to cross-sectionally examine women's awareness and understanding of HPV infection, its role in causing cervical cancer and preventative measures available in an urban Indian setting.

Methodology: A convenience sample of 1000 women (between 20 and 50 years of age) who attended the Gynecology OP department of an urban general hospital in Hyderabad, India was invited to complete a questionnaire survey. The 29-item knowledge and attitudes questionnaire assessed subjects' awareness of HPV infection, its relationship to cervical cancer and the availability & use of cervical smears and vaccines to prevent the same. The data was systematically collated and analyzed using descriptive statistics.

Results & Conclusions: Only 31.9% of the sample had an awareness of HPV infections. Most of those who had this awareness, knew that it could cause cancer but only a fifth knew that HPV was transmitted sexually. Less than a third had some awareness of cervical screening and only 25% knew about HPV vaccination. 62% of the subjects were prepared to undergo cervical screening, with the remaining refusing due to cost, embarrassment, fear or pain. Finally, awareness was mainly obtained through various media sources, and was higher amongst subjects who were more literate and from upper socio-economic backgrounds.

The implications of these findings to focusing and planning public awareness campaigns- perhaps through the use of media resources is discussed.

INTRODUCTION

Cervical cancer is the second most common cancer in women. A large majority (over 90%) of the global burden of this condition lies in developing countries (Hughes 2009). The past few decades have seen a revolution in our understanding of cervical cancer, particularly in relation to its early detection through cervical smear tests and (more recently) the role of the

Human Papilloma Virus (HPV) in its etiology. HPV infection is now known as an important cause of cervical cancer, and effective vaccines have been developed to prevent the same (Marlow, Waller, & Wardle, 2007; Marshall, Ryan, Robertson, & Baghurst, 2007; Wong, 2009). Although both cervical screening and HPV vaccines have the potential to prevent cervical cancer, their effectiveness and efficiency is

limited by low levels of awareness and poor uptake- this despite the existence of a number of guidelines and recommendations (Conroy, et al 2009; Chao et al 2009). A number of studies have identified low levels of knowledge and awareness of HPV, cervical screening and HPV vaccination across the developing world (Rama et al 2010; Imam et al 2008; Al-Dubai et al 2010; Aswathy et al 2012; Ali et al 2010). Similarly, studies have also explored patients', doctors' and family members' attitudes and beliefs about HPV vaccination that might influence acceptability of the vaccine (Chan et al 2012; Wong et al 2013, Zimet 2006, Lenselink et al 2008).

The present study aims to cross-sectionally explore women's awareness and understanding of HPV infection, its role in causing cervical cancer and preventative measures available in an urban Indian setting. It is hoped that this will help in establishing a baseline upon which future public health measures could be planned and monitored against.

METHODOLOGY

The study was conducted at St Theresa's Hospital, Hyderabad, India. A convenience sample of 1000 women (between 20 and 50 years of age) who attended the Gynecology OP department of the hospital from March 2010 to March 2012 was invited to complete a paper survey for this study. Consenting subjects were asked to complete a 29-item knowledge and attitudes questionnaire to assess their awareness of HPV infection, its relationship to cervical cancer and the availability & use of cervical smears and vaccines to prevent the same.

Data was systematically collated and analyzed using descriptive statistics.

RESULTS

The mean age of the sample was 26 years. 21% of the subjects were either illiterate or had attended primary school, while 40 % had completed secondary or pre-university education, and a further 39% were graduates or post-graduates. The

majority of the subjects belonged to a middle (44.9%) or lower socio-economic (27%) background. Most were married (95%), with the mean age at marriage being 20 years. 48% of the subjects lived in joint families and 52% lived in nuclear families. For those who had children, the mean age at childbirth was 21 years.

Awareness of HPV infection and its spread/ consequences

Three hundred and nineteen subjects (31.9%) reported being aware of HPV infections. There were no significant differences in the level of awareness across different age ranges- although fewer older people reported being aware of this infection (21% of subjects above 40 years of age). Subjects who were better educated (76.79%), and from an upper socio-economic class (85.71%) reported being more aware of HPV infections, and was statistically significant when compared to subjects who were less literate and from middle/lower socio-economic classes ($p < 0.05$). Amongst those who were aware of HPV infections, 193 (60.5%) had heard about it from various media sources.

Of the 319, 272 (85.3%) subjects were aware that HPV infection could cause cancer, 41 (12%) were aware that it could cause genital warts and 6 (1.8%) knew that it could cause both.. The level of awareness of the physical complications of HPV infection was higher amongst the more literate subjects than others ($p < 0.05$).

Only 21% of the study population knew that HPV is transmitted sexually, a larger number of subjects from the upper socio-economic classes had this awareness (55%). With respect to cure, about 30% of the subjects felt that this could be cured, and that the use of condoms would prevent this infection. This was also more in women from an upper social class.

Awareness of risk and prevention

Based upon their awareness and understanding of HPV, 26% of the sample felt themselves to be at risk of the same, while the remaining gave 'don't

know' responses. The majority of the latter had poor awareness of HPV, while most (22%) those who perceived themselves to be at risk were from an upper socio-economic class.

Only 28% of the study group had some awareness of cervical screening (cervical smear test) and its role in early detection of cervical cancer. The majority of those who had such awareness were from an upper socio-economic class and were more literate than those who did not have such awareness- both these findings were statistically significant.

After it was explained to them, only 62% of the study group were prepared to undergo cervical screening. Financial reasons (39%), embarrassment (22%), fear (22%) and pain (17%) accounted for the reasons to refuse cervical screening. Further, only 41 subjects (4.1%) had previously been screened using a cervical smear test.

Awareness of HPV vaccination

Most of the subjects had good awareness of vaccinations in general (99.6%) and 98.6% received vaccines of some description in the past. However, only 25% of the subjects had an awareness of the availability of HPV vaccination. Younger (20-29 years old) and literate (graduates and higher) subjects had better awareness of the existence of the HPV vaccine than older and less-literate subjects. Similarly, a higher proportion of subjects (75%) from an upper socio-economic class had an awareness of the HPV vaccine than those from a middle (8%) or lower (0%) class background.

The knowledge regarding HPV vaccination like eligibility, national recommendations, advantages, and administration during postpartum period was also proportionately higher amongst subjects from more literate and upper socio-economic backgrounds.

DISCUSSION

This study was conducted in an urban General hospital setting in Hyderabad, India. The hospital

provides subsidized medical care to a wide catchment of working class people from a predominantly lower and middle socio-economic background. Subjects (n=1000) were recruited from the walk-in Outpatient clinics of the Gynecology department. The large sample size was felt to be a strength of the study and as such, the sample was felt to be generally representative of an urban care-seeking primary care population in South India, and the findings are therefore likely to be generalizable to them.

The study was designed as a cross-sectional survey using a 29-item questionnaire that elicited the respondents' awareness and attitude towards the study topics. This however meant that subjects' responses could not be explored in detail, and could be an area for future studies to consider to gain a better understanding of the respondents' attitudes towards cervical screening and HPV vaccination in India.

To summarize the findings from our study, only 31.9% of the sample had an awareness of HPV infections. Most of those who had this awareness, knew that it could cause cancer but only a fifth knew that it was transmitted sexually. Less than a third had some awareness of cervical screening and only a fourth knew about HPV vaccination. Only 62% were prepared to undergo screening, with the remaining refusing due to cost, embarrassment, fear or pain. Finally, awareness was mainly obtained through various media sources, and was higher amongst the more literate and those from upper social backgrounds.

Studies from other developing countries suggest a higher level of awareness of HPV (range from 61-78%) than in our study. Awareness of its relationship to cervical cancer was similar to Al-Dubai's findings from Malaysia, but much lower than Ali's study in Pakistan, and higher than Rama's findings from Brazil (Rama et al 2010; Al-Dubai et al 2010; Ali et al 2010). Awareness of cervical screening to prevent cancer was lower than in the Brazil study, but higher than in Imam's study in Pakistan. Finally, awareness of the existence of a preventive HPV vaccine was

somewhat similar to Al-Dubai's findings from Malaysia.

Put together, the results highlight an urgent need to build a focused awareness campaign around HPV, cervical screening and HPV vaccination—these will not only have a significant impact on alleviating individual suffering but will also go a long way in reducing the burden of cervical cancer in India. Given that literacy, improvements in socio-economic situation and media - all appear to be associated with better awareness (and acceptability) of these preventative measures—public health measures could be usefully focused on these aspects too.

CONCLUSIONS

Our study found a comparable, but low level of awareness about HPV infections, its consequences and availability of preventative measures in an urban female working class population in Hyderabad, India. The study has implications for planning and focusing on public health measures to improve this awareness (perhaps through media-based campaigns)—thus addressing potential barriers to the uptake of these preventive measures.

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