
The Knowledge, Attitudes and Practices (KAP) Regarding Human Papilloma Virus (HPV) Among Women in Karachi, Pakistan

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Abstract: *Background:* The burden of STIs in Pakistan is much larger than reported. Various research studies indicate that the knowledge of sexually transmitted infections (STIs) and Human Papilloma Virus (HPV) in the women is low. The objective of this study is to assess the knowledge, attitudes and practice regarding STIs, HPV and sexual behaviors of contraceptive practice among women in Karachi, Pakistan. *Methods:* The current study was conducted in a tertiary care hospital in Karachi from Aug 2014- Aug 2015, including 600 women (aged 19-50 years) by convenience sampling technique from waiting areas of out-patient clinics. *Results:* The mean age of participants was 39.5 ± 10.7 years. Eighty eight percent women (n = 529) were married, 8% (n = 50) female were unmarried and around 3% (n = 19) female were divorced, separated or widowed. Participants with no knowledge about STIs and viruses causing some cancers were 57% (n = 341) and 70% (n = 418) respectively. There was no knowledge about Pap smear in 80% (n = 479) of study population and the proportion of women not attending the annual gynecological examination were 88% (n = 525). Vaccine acceptability was found to be as low as 38% (n = 225). A similar trend 12% (n = 71) was seen in the response about willing to pay by themselves for the vaccination cost. *Conclusion:* The current study highlights inadequate knowledge about STDS, HPV, cervical cancer and its screening among women. Public health awareness programs should be raised at community level in order to increase the health seeking behavior of women.

Keywords: Sexually Transmitted Infections, Human Papillomavirus (HPV), HPV Vaccine

1. Introduction

HPV infection is very common in women with early sexual activity (before the age of 25 years), usually this infection resolves without clinical consequence. [1] However it may persists in 10% of cases and progress to a higher grade and invasive cancer. Cervical intraepithelial neoplasia (CIN) can lead to invasive cancer in an immune competent woman within 10 to 20 years. [2] This slow progression helps in an effective secondary prevention based on screening using Papanicolaou (Pap smear or Pap test), visual inspection of the cervix with 3–5% acetic acid (VIA), HPV DNA testing, prophylactic HPV vaccination and treatment of precancerous lesions. [3]

Several factors contribute to high burden of disease include poor knowledge about the disease and screening test among general population. Moreover screening is not available in most parts of the country and routine pap-smear is not even done in gynecological practice. With the scarcity of epidemiological data, the only information about burden of disease is available through institutional and regional cancer registries, which may not be representative of true burden. [4], [5] Based on one such registry in urban setting cervical cancer was responsible for 3.6 percent of cancer mortality. [6] In another study, it was reported that only 5 percent of women in Pakistan were aware of screening and only 2.6 percent of women actually had Pap smear once a life. [7]

Despite the active role of health care professionals in preventing and educating about cervical cancer few studies has been conducted which explores the current awareness about cervical cancer and HPV infection. In this study we aim to access the current knowledge amongst women about STIs, HPV, cervical cancer and its prevention. The findings from this study will be useful at the policy level to complement knowledge and awareness about this important public health issue.

2. Methods

A cross sectional study carried out in women attending the out-patient waiting area of a tertiary care hospital in Karachi from Aug 2014 - Aug 2015. Convenience sampling was applied. Women aged 19-50 years were included in the study. Illiterate women and those who refused to consent were excluded. After their written consent a self-administered questionnaire (available in English and Urdu) was used to assess the Knowledge, Attitude and Practices (KAP) regarding sexually transmitted infections, Human Papilloma Virus (HPV) among women in Karachi, Pakistan. Age groups were divided in four different categorizes. The questionnaire consisted of simple stated statements regarding knowledge attitude and practices. Data was entered and analyzed using SPSS version 21. Frequencies and percentages were calculated for categorical variables. Mean and standard deviation was calculated for continuous variables.

3. Results

Total 600 women were enrolled in this study. The mean age of participants was 39.5 ± 10.7 years. Eighty eight percent women ($n = 529$) were married, 8% ($n = 50$) female were unmarried and around 3% ($n = 19$) female were divorced, separated or widowed. Women with Primary education were 21% ($n = 125$), Middle and intermediate education was 52% ($n = 309$), and bachelor/master were 26% ($n = 153$). Out of 600 women 97% ($n = 583$) were Muslim and 86% ($n = 518$) women were house wife. The socio-demographic characteristics of the study group are presented in Table 1.

Table 1. Socio-demographic features of women Respondents. ($n = 600$).

Demographics	Parameters	n (%)
Age (years)	Mean	39.58
	Std. Deviation	10.78
Marital status	Refused	2 (0.3)
	Single	50 (8.3)
	Married	529 (88.2)
	Divorced	6 (1.0)
	Separated	4 (0.7)
	Widow	9 (1.5)
	Primary	125 (20.8)
Educational Status	Middle	150 (25)
	intermediate	159 (26.5)
	bachelor/master	153 (25.5)
	Doctor	9 (1.5)
	Nil	4 (0.7)

Demographics	Parameters	n (%)
Religion	Muslim	583 (97.2)
	Christians	7 (1.2)
	Hindu	10 (1.7)
Working status	House wife	518 (86.3)
	Working	82 (13.7)

This study showed 57% ($n = 341$) of participants had no knowledge about sexually transmitted diseases and 70% ($n = 418$) had no knowledge that viruses may cause some cancers. Most women 83% ($n = 499$) were unaware about HPV, HPV related lesions 89% ($n = 533$), its causal relation with cervical cancer 96% ($n = 576$) and that condom is protective against HPV 92% ($n = 551$). There was no knowledge about Pap smear in 80% ($n = 479$) of study population. Of the women who had knowledge of HPV, 48% ($n = 286$) got the information from their doctor while 33% ($n = 197$) gained this information from nurses and 20% ($n = 117$) from other resources. About 53% ($n = 316$) of the women did not know about routes of transmission of HPV. (Table 2)

Table 2. Knowledge about STI and HPV in women of Karachi. ($n = 600$).

Knowledge	Response	n (%)
Knowledge about sexual transmitted disease	Yes	259 (43.1)
	No	341 (56.8)
Knowledge that viruses may cause some types of cancer	Yes	182 (30.3)
	No	418 (69.6)
Knowledge of the Human Papilloma (HPV) Virus	Yes	101 (16.8)
	No	499 (83.1)
Knowledge about the HPV related lesions	Yes	67 (11.1)
	No	533 (88.8)
Knowledge about the causal relation between HPV and cervical cancer	Yes	24 (4.0)
	No	576 (96.0)
Knowledge that the condom protective against HPV	Yes	49 (8.1)
	No	551 (91.8)
Knowledge about Pap smear	Yes	121 (20.1)
	No	479 (79.8)
	Doctor	286 (47.6)
Source of knowledge about HPV	Nurse	197 (32.8)
	Other	117 (19.5)
	Don't know	316 (52.6)
Knowledge about routes of transmission of HPV	Sexual contact	150 (25.0)
	Kissing	19 (3.1)
	Handshaking	69 (11.5)
	Other	46 (7.6)

Most of the women 60% ($n = 361$) were not aware to use condoms during sexual intercourse. The proportion of women not attending the annual gynecological examination were higher 88% ($n = 525$). A similar trend was also seen in the response about ever having a pap smear. Table III shows the responses to sexual practices. (Table 3)

Vaccine acceptability was found to be as low as 38% ($n = 225$). Similar response was received when inquired about consenting for their daughter's vaccination 37% ($n = 220$). However, most women responded negatively when asked about vaccine acceptability in their sons 88% ($n = 529$). A similar trend 12% ($n = 71$) was seen in the response about willing to pay by themselves for the vaccination cost. Table 4

shows the responses to questions regarding HPV vaccine awareness.

Table 3. Attitude about STI and HPV of women Karachi. (n = 600).

Attitude	Response	n (%)
You or your partner use condom	Yes	239 (39.8)
	No	361 (60.1)
Regularly have an annual gynecological examination	Yes	75 (12.5)
	No	525 (87.5)
Ever had a pap smear	Yes	113 (18.8)
	No	487 (81.1)
Ever had an abnormal pap smear	Yes	6 (1.0)
	No	594 (99.0)

Table 4. Practices about HPV prevention and uses of HPV vaccination.

Practices	Response	n (%)
If the vaccine were to work at any age, would you accept the HPV vaccine for yourself?	Yes	225 (37.5)
	No	375 (62.5)
Would you consent for your daughter to receive the vaccine?	Yes	220 (36.7)
	No	380 (63.3)
Would you consent for your Son to receive the vaccine?	Yes	71 (11.8)
	No	529 (88.2)
	Government	311 (51.8)
Who should pay for the vaccine?	On self	71 (11.8)
	Don't Know	218 (36.3)

4. Discussion

According to the findings of the current study the trends has been indicated regarding the knowledge, attitudes and practices regarding HPV among women. Lack of knowledge about cervical cancer and Pap smear and unfavorable attitude towards Pap smear test and prophylactic HPV vaccine can have negative impact on utilization of the test by women. On the other hand, cervical cancer preventive programs at community level can be effective in increasing cervical cancer knowledge, perceived susceptibility, and cancer prevention behavior. The purpose of this study was to evaluate the knowledge attitudes and practices (KAP) regarding HPV, cervical cancer and HPV vaccine. The result of this survey showed most respondents were not at all or very less aware of cervical cancer, HPV, and HPV vaccine.

Low levels of knowledge were also reported in one survey that showed only 19.0% of adult Korean women knew that HPV infection is a risk factor for cervical cancer. [8] In another study it was found that only 26.9% of Chinese women knew that HPV infection is risk factors for cervical cancer. [9] Similar low levels of knowledge regarding cervical cancer in the general population have also been seen in other Asian countries where there are no cervical cancer screening programs. [10] Several research studies have shown that health education through different teaching strategies is an effective way of imparting knowledge. Education is needed to prevent the incidence of cervical cancer. [11] By education, women can be empowered with knowledge of cervical cancer, its early

warning symptoms and the availability of adequate therapies. [10] In the current study we found 43.2% of the participant had knowledge about sexually transmitted diseases. Only 16.8% participants had knowledge of HPV. Subjects further assessed about their knowledge about HPV itself then only 25% correctly reported sexual contact as the mode of transmission for HPV.

Other studies showed inadequate knowledge of the participants on the concerned topic and its prevention. [12], [13] It was observed that 61% of women practiced unprotected sexual intercourse and only 39% women used condoms during intercourse. On the basis of these findings it can be expected that the knowledge regarding prevention of disease in general population is also less in our region.

Gynecologic examinations are important opportunities for cancer screening. This issue needs to be addressed to educate women and to make an informed choice in participating in cervical cancer screening. As studies undertaken in Turkey, Uganda, and other countries have demonstrated, there are frequently inadequate knowledge, inappropriate attitudes, and deficiencies in practices of cervical cancer prevention among health care providers. [14], [15] In a recent study in Pakistan, Imam SZ et al. reported that the knowledge of availability of screening for cervical cancer amongst general population was only 5% and only 2.6% had ever received a Pap test done in their reproductive life. [7] In our study about only 9% women were attending gynecology clinics for their annual gynecological examination and only 13.7% of women had Pap smear done in their life.

Prevention of HPV infections is very essential in prevention of cervical cancer. The studies reported better knowledge in developed countries like the USA, Belgium and Australia, but other countries like Thailand, Turkey and China had poor information about HPV and HPV vaccine. [16] This vaccine has now available in Pakistan. As expected very few of the respondents were aware of the vaccine against HPV. A pleasing result found in the current study was most of the participants wanted to know more about the vaccine but HPV-vaccine acceptability for was only 37.5% and surprisingly most of the participants (88% versus 63.3%) responded negatively when they asked about vaccine acceptability for their sons and daughters respectively. A similar trend was seen in the response about willing to pay for the vaccination cost by the government rather than by themselves.

5. Conclusion

This study highlights inadequate knowledge about STDS, HPV and cervical cancer and its screening among women. Public health awareness programs should be raised at community level to improve awareness of sexually transmitted diseases like HPV and importance of screening of cervical cancer and prophylactic HPV vaccination to reduce the incidence rate and mortality of cervical cancer is strongly recommended in order to increase the health seeking behavior of women.

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