

# Knowledge, Attitude, and Practices on Human Papilloma Virus amongst Females in Developing Countries

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Received: 04 September 2018; Accepted: 29 September 2018

**Citation:** Pichainarongk S, Bidaisee S. Knowledge, Attitude, and Practices on Human Papilloma Virus amongst Females in Developing Countries. *Microbiol Infect Dis*. 2018; 2(1): 1-3.

## ABSTRACT

*This review will critique various literature pertaining to the knowledge, attitude, and practices on Human Papillomavirus (HPV) amongst participants in certain developing countries. HPV is the most common sexually transmitted infection, which also leads to about 99% of cervical cancer cases in women [1]. This paper will explore studies conducted in developing countries on the Knowledge, Attitude, and Practices (KAP) towards human papillomavirus. A knowledge, attitude, and practices survey seeks to determine a target population's perception towards a particular issue [2]. By critiquing these articles, I hope to show the knowledge gap with respect to HPV and eventually develop an intervention plan in the future to address these issues.*

## Keywords

Human papilloma virus, Cervical cancer, KAP, Viruses.

## Background

Human Papillomavirus (HPV) is the most common sexually transmitted infection, and almost all sexually active individuals get it at some point in their lives [3]. It has the name Papilloma because of the warts some types of HPV strains may cause [4], while other types of HPV tend to cause cancer, especially cervical cancer in women. Over 100 different HPV types exist, and about 30 of these types affect the genitalia [5]. The HPV strains that cause warts are referred to as low risk HPV, while the ones responsible for cervical cancer (specifically HPV strains 16, and 18) are referred to as high risk or oncogenic HPV [1]. HPV can be transmitted through direct intimate contact from person to person. This is achieved especially through vaginal, anal, and oral sexual activities. Penetrative sex is not the only requirement for transmitting this infection. Skin-to-skin contact is also a recognized mode of transmission [4].

In many cases, HPV goes away and does not cause any severe health issue [3], but at other points it could lead to genital warts and cervical cancer. According to the World Health Organization [6], over 290 million women are living with HPV infection. HPV also causes about 528,000 cervical cancer cases and 266,000 cervical cancer deaths each year [6]. Cervical cancer is the fourth most

common cancer amongst women after breast, colorectal and lung cancer [6], and it is most common amongst women in developing countries [7]. It is also the most common cause of cancer related mortality among African women, and its progression is increased in the presence of HIV infection. 99% of cervical cancer cases are associated with high-risk HPV types; hence this poses as a major public health issue.

It is quite difficult to prevent HPV infection especially low risk HPV that causes genital warts. In reducing genital warts, individuals are advised to maintain a mutually monogamous sexual relationship, and also to use condoms during sexual activity [8]. Additionally, vaccines are also available to prevent against HPV. Gardasil, Gardasil 9, and Cervarix are known to reduce the likelihood of getting cervical cancer, while Gardasil and Gardasil 9 are known to reduce the risks of getting genital warts [8]. The presence of genital warts usually indicates a potential case of HPV. It could also be diagnosed through a vinegar (acetic acid) solution test, a pap test, or a DNA test [8]. For the vinegar solution test, vinegar is applied to the HPV infected area and turns them white. The presence of difficult to see flat lesions indicates the presence of HPV [8]. For the Pap test, cells from the cervix are collected by a physician and sent to the laboratory for analysis. This test also helps to reveal abnormalities associated with cervical cancer [8]. The DNA test also uses cells from the cervix. Testing these

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cells can reveal the DNA of high-risk HPV types that could cause cervical cancer. The use of the DNA tests is recommended in association with the pap test especially for women 30 years and older [8]. In managing HPV, it is advised to consult a physician that would provide the best-case management for HPV patients.

In developing countries sexually transmitted infections are among the leading cause of disability-adjusted life years lost especially for women of reproductive ages [9]. In spite of medical and public health advancements, sexually transmitted infections are found to have a very high incidence and prevalence in developing countries [10]. Due to poor management and treatment of these infections, there are greater complications for people in developing nations. This is mainly as a result of poor medical training, poor medical facilities, and low levels of awareness on sexual health in these regions [10].

In addition to the poor health care organization in developing countries, there is also an educational crisis. Research has shown that poor access to education and poor educational quality is on a steady increase amongst developing nations [11]. This is especially worse for women in these regions, because since 1990 almost two-thirds of illiterates are women [11]. With these available facts, a hypothesis can be made on the knowledge attitude and practices of women in developing nations. With very low literacy levels, poor access to healthcare, and poor health care quality, one can assume that there is a knowledge deficit in regards to sexual transmitted infections especially HPV amongst women in developing nations. By exploring peer-reviewed articles on knowledge, attitudes, and practices on HPV, the goal of this paper is to prove this hypothesis towards HPV and women in developing nations.

### **Global Context on KAP**

A knowledge, attitude and practice (KAP) survey is a set of standardized questions that addresses qualitative and quantitative issues of a specific problem [2]. According to Zahedi, Sizemore, Malcolm, Grossniklaus, and Nwosu [12], A KAP “is a representative study of a specific population that aims to collect data on what is known, believed and done in relation to a particular topic”. It helps to understand people’s misconceptions, knowledge, belief, to specific issues and it provides a platform to develop interventional programs in order to provide accurate information of specific issues. This paper will explore the knowledge attitude and practices of HPV amongst women in Mali, Haiti, and South India.

### **Peer reviewed article on Mali**

In 2011, the GAIA Vaccine Foundation collaborated with the Malian region department of health in conducting KAP and willingness to participate (WTP) in vaccine trials for HIV and HPV. A pilot test was done to examine KAP and WTP for 51 participants in Bamako, Mali. The study identified that less than 1% of the participants have heard of HPV and about 98% of them were willing to participate in an HPV vaccine. This shows that there is a very low level of knowledge on HPV in Mali but a very high willingness to participate in HPV vaccine [13]. Since

this study was a pilot test it may not be representative of the total Malian population. Further extensive study on HPV would need to be conducted in this region in order to generalize the results to the target population.

### **Peer reviewed article on Haiti**

It has been estimated that Haiti has the highest incidence of cervical cancer in the western hemisphere with about 353 women dying of cervical cancer each year [12]. In 2013, a KAP was provided to health care workers at several Haitian clinics throughout the Central Plateau. This was done to assess baseline KAP on cervical cancer, screening and its treatment. This survey used health care workers 18 years or older as its participants. The survey addressed “healthcare worker’s knowledge of risks, treatment and prognosis of cervical cancer, awareness of available screening methods, and their experience and attitudes to the different methodologies” [12]. A total of 27 health care workers participated in this study. The health workers included nurses, midwives, community health workers and physicians.

Based on the results, about half believed cervical cancer is preventable and a little less than half believed it was curable. Many of the participants were unaware of the asymptomatic phase that could accompany cervical cancer, even though they were aware of some of the obvious cervical cancer symptoms. Only about a third of the participants were aware of HPV vaccines. Some of the participants that admitted to not being at risk for cervical cancer identified “poor hygiene and IUD use as risk factors for cervical cancer” [12]. This gap in knowledge is very dangerous; especially since health workers have a greater responsibility for the patients they serve. One would think that as health workers, they would have greater knowledge on HPV and cervical cancer. This further confirms that intervention programs need to be created to address the knowledge deficiency with respect to HPV and cervical cancer.

### **Peer reviewed article on South India**

India houses about 17% of the world’s women population, and globally it contributes to about 27% of total cervical cancer cases [14]. A cross sectional house-to-house survey was conducted amongst women in a rural area between ages 18-65 years. The study area was Perdoor village in Udipi Taluk, Udipi district, Karnataka State, India. Within Perdoor village, Within Perdoor village, grampanchayath wards 2,3,5,6 and 7 with a total of 2000 women were chosen [14]. This study was conducted from June 2013 - December 2014. A questionnaire was used to determine sociodemographic characteristics, knowledge, attitude, and practices on HPV and its effects. Multiple-choice questions were used to determine modes of HV transmission, its association with cancer, the outcome of its infection, and preventive measures available for HPV [14].

Majority of the participants were between 25-44 years with the mean age being 38.9 years. Based on the results, none of the participants had ever heard of HPV or its health effects. Only 2.4% of the women had knowledge on pap smears while the remaining 97.6% had never heard of such screening test. Again, a knowledge

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gap on HPV is evident amongst women in this region.

## Discussion

The high rates of cervical cancer amongst women in developing countries could be as a result of the high knowledge gap on HPV and its health effects. Examining the KAPs of women in these developing countries has shown that there is a need for serious awareness on HPV and is an effect. Most of the participants in the three studies had never heard of HPV, which means they have no idea on how it is transmitted and how to prevent it. Worldwide 15% of all cancer cases and about 26% of cancer cases in developing conditions are as a result of poor hygiene [15].

Sub-Saharan Africa and south Asia houses most of the developing countries in the world. These countries have severe poverty rates with poor health care facilities, with high incidence on infectious diseases. HPV is the leading cause of cancer related deaths in sub Saharan Africa [15]. In addition to this, several studies in developed countries have shown that knowledge, attitude, and practices on HPV especially amongst health care workers and the general public varies between low to high levels [16]. Further studies should be done to address the KAP of HPV in developed countries. This would create more awareness on the knowledge gap associated with HPV.

According to Makwe & Anorlu [16], knowledge of HPV infection is higher in countries with existing HPV national programs. Such programs create improved awareness and knowledge on HPV infection and other related infections for the general public as well as health care providers. The developing countries explored in this paper did not have HPV prevention programs at the time of the study. This could also explain the high knowledge gap on HPV infection obtained from the studies conducted in these countries.

With medical and public health advancements, vaccines have been created to help avoid the transmission of HPV. While vaccines like these are readily available to certain populations, developing countries have little to no access to these vaccines. From the various studies conducted, it is evident that there is very low knowledge on HPV among the general public and health care workers, but there is a high readiness to use HPV vaccines to prevent the transmission of this infection.

Another noteworthy issue is the role of health care workers and their knowledge on HPV. From the KAP study done in Haiti, the health care workers were not as knowledgeable as one would expect for a health care professional. This is quite dangerous because, these are the people responsible for taking care and saving human lives. If they are also experiencing a knowledge gap on such a serious global health issue, then the general public will not be receiving the right information in protecting their lives. Another KAP study in Nigeria was done on health care workers and its results were consistent with the results from the study in Haiti [16]. In spite of the knowledge gap, these health care workers were willing to learn more on HPV infection and its vaccination. They were also more likely to recommend vaccination to preadolescent girls.

In shaping the health of a society, health care workers also play a significant role. In changing the knowledge, attitude, and practices of HPV infection in developing countries, healthcare workers in these regions need to be made aware on HPV, its consequences and its prevention.

## Conclusion

HPV is the most common sexually transmitted infection. It is of utmost importance that the world needs to be aware of what it is, how it can be transmitted, and how it can be prevented. Having vaccines to prevent these infections would not be as effective as expected if there is a high gap in knowledge on what HPV is really about. There is dire need to create more awareness on HPV, cervical cancer, and their effects to specific populations especially those in developing countries including health care workers. This knowledge gap can be reduced through collaborative efforts. Public health workers, physicians, community leaders, health educators, teachers, community members need to come together to raise more awareness on this issue. Community based approaches that will include all stakeholders and promote community leaders should be implemented in changing the knowledge gap on HPV. To promote the health of our communities, everyone needs to get involved.

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