





Research Article

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DOCTORS' ATTITUDES AND PRACTISES REGARDING HUMAN PAPILLOMAVIRUS VACCINATION: A QUALITATIVE STUDY

 Hilal Aksoy¹,  Pınar Döner²

¹Hacettepe University Faculty of Medicine, Department of Family Medicine, Ankara, Turkey

²Hatay Mustafa Kemal University, Faculty of Medicine, Department of Family Medicine, Hatay, Turkey

Correspondence:

Hilal Aksoy (e-mail: hilal.aksoy35@gmail.com)

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Abstract

Objectives: Human papillomavirus (HPV) is one of the most common sexually transmitted viruses in the world that causes diseases of the genitourinary system. But it is still not included in the national immunization schedule. Our aim is to find out the attitudes and practices of physicians in Türkiye regarding HPV vaccination.

Materials and Methods: The study was qualitative in nature. It was conducted with 14 subjects consisting of specialists in general medicine, family medicine, gynecology and obstetrics, urology, pediatrics and diseases working in Türkiye. A thematic framework analysis was used for the analysis.

Results: No notable difference was found in the opinions of the doctors in relation to their age or gender. The analysis revealed three main themes: Prejudice and ignorance about the HPV vaccine, insufficient information to patients about the HPV vaccine, and the need to include the HPV vaccine in the national immunization schedule.

Conclusion: The HPV vaccine is currently a paid vaccine, administered only on demand. Participants cited a lack of knowledge about the vaccine and the cost of the vaccine as the biggest barriers to vaccination. However, it is a vaccine that is considered necessary to be included in the "National Immunization Schedule".

Keywords: HPV vaccine, HPV infection, qualitative research.

Introduction

Human papillomavirus (HPV) is one of the most common sexually transmitted viruses worldwide, causing diseases of the genitourinary system.¹ High-risk HPV types can cause primarily cervical cancer but also oropharyngeal, vulvar, vaginal, anal, and penile cancers.² Cervical cancer ranks fifth worldwide in terms of prevalence and fourth in women. It ranks third in cancer-related deaths among women, after breast and lung cancer.³ Cervical cancer is one of the cancers that can be completely cured if diagnosed and treated early.⁴ By the end of 2017, the HPV vaccine had been introduced in 80 countries.⁵ The World Health Organization recommends HPV vaccination for adolescent girls between the ages of nine and thirteen and regular cervical cancer screening for women over the age of 30.⁶ In Türkiye, cervical cancer is part of the routine screening program for women aged 30 to 65. As part of the screening, an HPV-DNA test and cervical smear test are performed every five years.⁷ In preventive medicine, cervical cancer screening is one of the few screening methods that has been shown to reduce the incidence and mortality of invasive cancers.⁸ However, vaccination protection is also very important in reducing the incidence of cervical cancer despite effective screening methods. HPV vaccination is recommended for adolescents and young adults in many countries. Studies have reported that the incidence of HPV infection and HPV-related disease decreased after HPV vaccination was initiated.⁹

During the literature review, it was found that attitudes toward cervical cancer and HPV vaccination vary from society to society.¹⁰⁻¹⁴ Currently, two types of vaccines against HPV infection are being produced, which are also available in our country but haven't yet been included in the vaccination program by the Ministry of Health. The opinion of physicians is important at the stage of inclusion in the vaccination program. Therefore, we wanted to know their point of view. Our goal is to raise awareness about HPV vaccination and cervical cancer by learning about the attitudes and practices of physicians in our country about the HPV vaccine.

Materials and Methods

The study was conducted with specialists in general medicine, family medicine, gynecology and obstetrics, urology, pediatrics, and diseases practicing in Türkiye. The relevant specialists were reached through physician groups on social media. A preliminary questionnaire was sent online (**Box 1**), and the selected individuals who agreed to participate in the study were enrolled in the qualitative study.

Interviews were conducted from January 2021 to March 2021. Research participants were interviewed using semi-structured questions. The interview guide (**Box 2**) was based on similar studies in the literature, although it was adapted for each context. The "quota sampling" method was used for data collection. Because of the COVID-19 pandemic, interviews were conducted by telephone. Consent was again obtained from the participants during the telephone calls. The interviews lasted approximately 15-20 minutes. During the

interviews, the telephone speaker was turned on, and the audio was recorded with a recorder; the interviews were then transcribed. The collection of additional data was stopped after 14 interviews when we felt that no more additional information could be obtained. The transcriptions of the interviews were read and analyzed separately by two researchers. A thematic framework analysis was used to analyze the data. We began the analysis of the interviews by marking the themes that the participant highlighted in the interview texts, and a list of open coding was created. Following the coding, subcategories and main categories were formed. Finally, with the common aspects of the main categories, "main themes" are established as a grouping.

The categories that emerged from the researchers' analyzes were compared, and themes were extracted from the common categories.

Box 1. Pre-questionnaire form

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| <p>Age:</p> <p>Gender: Female <input type="radio"/> Male <input type="radio"/></p> <p>Branch: Family Medicine <input type="radio"/> Gynecology and Obstetrics <input type="radio"/> General Practitioner <input type="radio"/> Pediatrics <input type="radio"/> Urology <input type="radio"/></p> <p>Duration in the profession: 1-5 years <input type="radio"/> 5-10 years <input type="radio"/> 10-15 years <input type="radio"/> 15 years and over <input type="radio"/></p> <p>I would like to participate in the study by being interviewed on the subject.</p> <p>YES <input type="radio"/> NO <input type="radio"/></p> |
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Box 2. Interview guideline

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| <ul style="list-style-type: none">○ What do you think about the HPV vaccine?○ Do you recommend the vaccine to your patients?○ What feedback do you get from your patients when you recommend the vaccine?○ Do you recommend cervical cancer screening to your patients?○ Have you, your spouse or your children had the HPV vaccine? Do you think to have it done?○ What should be the place of the HPV vaccine in the vaccination schedule? |
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Results

Fourteen physicians (nine women and five men) were included in the study. Seventeen of them were from family health centers, and nine were from hospitals. Their mean age was 37 years. The characteristics of the physicians are shown in Table 1. Two of the physicians were general practitioners and worked as family physicians. The number of specialists in general medicine, pediatrics, urology, and gynecology and obstetrics was three. The median number of physicians had been in their profession for 14 years by the time of the interview.

After qualitative analysis of the interviews, no notable difference in physicians' opinions was found in relation to their age or gender.

Three main themes emerged from the analysis: Prejudice and ignorance about the HPV vaccine, inadequately informed patients about the HPV vaccine, and the need to include the HPV vaccine in the national vaccination schedule.

Table 1. Sociodemographic Characteristics of Physicians

| Participant number | Age | Gender | Specialty | Duration in profession | Number of children | Affiliation |
|--------------------|-----|--------|-------------------------|------------------------|--------------------|--------------------------------|
| 1 | 36 | F | Pediatrics | 10 years | No | University Hospital |
| 2 | 41 | M | Urology | 16 years | 2 | Training and Research Hospital |
| 3 | 37 | M | Family Medicine | 13 years | 2 | University Hospital |
| 4 | 40 | F | Gynecology & Obstetrics | 16 years | 2 | State Hospital |
| 5 | 35 | M | Urology | 10 years | 0 | State Hospital |
| 6 | 30 | F | Family Medicine | 6 years | 0 | University Hospital |
| 7 | 36 | F | General Practitioner | 12 years | 1 | Family Health Center |
| 8 | 37 | F | Pediatrics | 13 years | 2 | Training and Research Hospital |
| 9 | 38 | F | Gynecology & Obstetrics | 14 years | 2 | University Hospital |
| 10 | 39 | M | Urology | 14 years | 1 | State Hospital |
| 11 | 30 | F | Pediatrics | 6 years | 0 | Training and Research Hospital |
| 12 | 31 | F | Family Medicine | 5 years | 0 | Family Health Center |
| 13 | 54 | F | Gynecology & Obstetrics | 30 years | 2 | State Hospital |
| 14 | 61 | M | General Practitioner | 32 years | 2 | Family Health Center |

(F: Female, M: Male)

Prejudice and ignorance about the HPV vaccine

It turns out that many of the reasons for the prejudice against the HPV vaccine also apply to the other vaccines. The doctors who participated in our study stated that patients expressed fear of the side effects, reservations about the vaccine and fear of its effectiveness. It was found that those people who believe their knowledge to be true and are closed to other thoughts do not want to be vaccinated. *"....Those who do not want to get vaccinated are mostly those who think negatively about the vaccine and have a slightly more aggressive...mindset. I mean, there's this "I know better" thing! That's where it comes from."(N1)* Most participants stated that the vaccine is expensive and, therefore, they cannot get it. Most of those who wanted to get vaccinated gave up because of this. *"...The reasons why they do not get vaccinated are generally financial. Because the village where I work has a low socio-economic level... they get their children vaccinated for money, but not for HPV" (N3).*

It was also said that patients do not ask for the vaccine because it is a sexually transmitted disease, and the possibility of transmission increases with multiple partners. In addition, participating doctors said that patients do not ask for it because they live in a closed society.

One urologist who has been practicing for 14 years expressed this problem as follows. *"...It is not easy to tell parents to get their unmarried children vaccinated before their sexuality begins...because in our society it is generally accepted that sexuality begins with marriage."(N10)* The fact that people do not care about HPV and it is not as well known as other sexually transmitted diseases such as hepatitis, and AIDS was mentioned as another problem before vaccination. One of our participants, a urologist, explained that he recommends HPV vaccination, especially to young men who come to him with complaints of urethritis and discharge, to protect themselves and their partners, but this remains up in the air. *"....Hepatitis and AIDS are what they fear the most. They do not know much about HPV. When we say it, they cannot get serious because they do not know much about it. They already feel it. The conversation about HPV does not come to a conclusion. I say that the HPV they may get can cause cancer in their spouses even if they do not get cancer themselves. They get a little serious, but the conversation does not go any further than that."(N2).*

Inadequately informed patients about the HPV vaccine

HPV vaccination is usually recommended to patients and sometimes, the information about the vaccine cannot be conveyed due to lack of time or environmental conditions.

A participating pediatrician who works in a hospital that also serves immigrants expressed this situation as follows.

"...Those who ask for the vaccination usually ask with the intention of having it done, but it is very effective when

we ask them out of the blue, and because we have many Syrian groups, we cannot recommend it. We usually tell the parents of the young people..."(N8).

Another doctor commented as follows,

"...I do not recommend it at all. It is something that is not in my area of expertise as I am a pediatric urologist... Apart from that, I cannot rely on the socio-cultural level of the patients..." (N10)

In our study, some of the respondents felt that there was inadequate information about HPV from both doctors and the public.

"....I do not think other citizens, including doctors, have much information on this topic ..." (N7).

Some doctors indicated that primary care has more roles in providing information about HPV vaccination and cervical cancer screening.

One participant, who is a gynecologist and obstetrician, commented as follows.
"...Maybe this should be suggested more in primary care. Because in younger people or people whose sex life has not started yet, it is more effective(N9).

The need to include the HPV vaccine in the national vaccination schedule

All the doctors who participated in our study were in favor of the vaccine and said that the vaccine should be included in the national vaccination schedule. Most of the doctors interviewed felt that the vaccine should be given to both boys and girls, but primarily to girls.

"...It should be given to both if it is possible, but primarily to girls..." (N3).

A urologist who has been practicing medicine for 10 years stated that women should be vaccinated because there are not as many complications in men. Another urologist with 14 years of medical experience expressed a similar opinion,

"...The harm of the disease is greater in women. I think that should be the primary goal for women. It's a big goal to do it for both men and women. That means sharing the effort. I think women should come first..." (N2).

A 30-year-old pediatrician stressed that there are other vaccines that should be included in the national immunization schedule.

"...There are other vaccines that take precedence. For example, meningococcal. But of course, this vaccine should also be....."(N11).

Discussion

The HPV vaccine is an optional, paid-for vaccine that is not included in the national immunization schedule. This qualitative study shows that physicians believe the HPV vaccine is necessary. However, the major barriers to vaccination include the high cost of the HPV vaccine, negligence and lack of information about the vaccine.

Strengths and limitations

This study is the first qualitative evaluation of the HPV vaccine in Türkiye from the perspective of medical professionals. The HPV vaccine is not included in the "National Vaccination Schedule" and it is assumed that it will be included in the vaccination schedule. But this is still not certain. So we expect to fill the knowledge gap from the doctors' point of view. This study also has certain limitations. First of all, the number of doctors we included (n = 14) may be too small. However, we stopped including additional interviews when we felt we had reached saturation, and no further information could be obtained from additional interviews. We reached physicians in the specialties of family medicine, urology, pediatrics and gynecology and obstetrics, who mostly see patients with HPV infections and are more likely to provide information about HPV vaccination. Finally, our results cannot be generalized to all doctors, but the data obtained give a good picture of doctors' current thinking.

Comparison with existing literature

Undoubtedly, physicians' knowledge, attitudes and behaviors regarding vaccination are crucial to protect public health. Therefore, the fact that the doctors in our study think that the HPV vaccine is necessary is very important.

HPV vaccination is recommended for adolescents and young adults in many countries. The studies reported that the incidence of HPV infections and HPV-related diseases decreased after HPV vaccination was started.⁹ In our country, the quadrivalent vaccine (effective against HPV 6-11-16-18) was licensed in 2007 and the bivalent vaccine (effective against HPV 16-18) in 2008.

Physicians who are involved in women's health issues or work with patients who are at high risk for HPV-related diseases may have a better understanding of HPV infections and can therefore recognize the potential health benefits of HPV vaccination. One study has also shown that experience with adolescents is related to willingness to recommend vaccines against sexually transmitted infections (STIs).¹⁵ The clinicians in our study also worked with high-risk patients.

The literature search revealed that the specialties in which the relevant studies were conducted mostly consisted of family medicine, pediatrics and gynecology and obstetrics. However, the studies conducted were quantitative studies and no qualitative studies were found. In a study conducted with pediatric specialists in Türkiye, 91.1% of the 438 physicians who participated in the study recommended the administration of the HPV vaccine.¹⁶

In a study whose population consisted of a random sample of 1,000 physician members of the American Academy of Family Physicians (AAFP), participants considered the HPV vaccine more important than, or as important as vaccines against the following diseases: Anthrax (78%/12%), genital herpes (42%/51%), chlamydia (39%/52%), tuberculosis (28%/42%), influenza (22%/46%) and hepatitis B (14%/59%). Eight of the 10 most frequently cited barriers were related to parental barriers to vaccination.¹⁷ In our study, one doctor stated that the meningococcal vaccine, which is not included in the "National Immunization Schedule", has priority over HPV.

Although the potential harm of HPV is higher in women, it can lead to complications in both sexes. Although most doctors in our study believe that vaccination is appropriate in both sexes, they believe that it should be given primarily to girls. This situation is consistent with the literature.¹⁶⁻¹⁷

When studies conducted with parents in the literature were examined, they also showed that parents tend to have their daughters vaccinated predominantly against HPV.¹⁸ In contrast, Seven et al. found that parents in Türkiye are more willing to vaccinate their sons than their daughters.¹⁹ The literature reports that many families have limited knowledge about HPV infection and the HPV vaccine, but acceptance of the vaccine increases when their physicians recommend it.²⁰⁻²¹ In a survey of gynecologists, Raley et al. also found that beliefs about the HPV vaccine's properties, such as efficacy, were important predictors of physician recommendation.²² In our study, physicians also emphasized that people are not adequately informed about the HPV vaccine.

In Bouchez's qualitative study, physicians reported three different ways of interacting with patients: informing and persuading, conforming to patient opinion, and refusing to compromise on vaccination.²³ In a systematic literature review of factors influencing hesitation to HPV vaccination in Europe, participants most frequently cited problems with the quantity and quality of available information about HPV vaccination, followed by concerns about possible side effects of the vaccine and distrust of health authorities, medical personnel and new vaccines.²⁴

One of the barriers to vaccination is that the vaccine comes at a cost. In a study conducted in Türkiye, the rate of agreement with the sentence "If the HPV vaccine is covered by social security, then I will get vaccinated" was 51.8%.²⁵ In another study, 93% of participants found the HPV vaccine expensive, even though they got

vaccinated.⁹ In a systematic review of parents' knowledge, beliefs, acceptance and uptake of the HPV vaccine in Association of Southeast Asian Nations (ASEAN) member countries, uptake was high when the vaccine was offered free of charge.²⁶

The financial situation significantly influences people's decisions in the area of health, as in any other area. In general, people do not hesitate to spend money on health if they understand its importance very well. Therefore, the importance of HPV vaccination should be explained in more detail until it is included in the vaccination schedule, and the public should be made aware of this issue. Among the caveats in the literature, the proportion of families who have concerns that vaccination may encourage risky sexual behavior varies between 30-60%.²⁷⁻²⁹ In our study, doctors did not mention such a caveat. Some doctors simply said that some people are afraid to talk about sexual issues and are, therefore, reluctant to ask about this vaccine. Even if some parents have reservations about vaccination against sexually transmitted infections, doctors can be reassured because many parents find vaccination against sexually transmitted infections (STIs) acceptable.^{15,30}

In the study conducted by Raley et al., the American University of Obstetricians and Gynecologists (ACOG) recommendations on this aspect were shown to have the greatest influence on gynecologists when recommending HPV vaccination to their patients.²²

The issuance of similar statements by the Turkish Pediatricians Association, the Turkish Family Medicine Specialists Association and the Turkish Urologists Association will have a positive impact on awareness of HPV vaccination.

Although the HPV vaccine is to be included in the "National Immunization Schedule", the vaccine is currently a paid vaccine that is administered only on demand. For this reason, doctors' recommendation of the vaccine will increase confidence in the vaccine and reduce HPV complications, at least among those who can afford the vaccine. However, reducing HPV-related mortality across society depends on completing vaccination before sexual activity begins.

Ethical Considerations: Ethical approval was acquired from the local Ethics Committee (22/07/2020-08).

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