RESEARCH ARTICLE

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Perspectives of Medical Experts' on Health Culture for Human Papillomavirus (HPV) Vaccination Compared to Auxiliary Health Workers

Mohammad Reza Masjedi[1,2,3], Narges Soltanizadeh[4], Elaheh Ainy[5]*

Abstract

Background and Objectives: The viewpoints of Shahid Beheshti University of Medical Sciences medical experts'' were compared with those of auxiliary health workers regarding health culture related to human papillomavirus vaccination in 2020. **Methods:** In this cross-sectional study, 220 medical experts' (gynecologists, cultural, psychological, infectious, dermatological, and educational) and auxiliary health workers were randomly selected and investigated. The required data were collected using a researcher-made questionnaire modeled on international questionnaires. These questionnaire contained demographic information on the subjects' age and sex as well as health culture was also assessed by measuring the knowledge, attitude, and practice of the subjects. **Results:** The mean age of the included medical experts' and auxiliary health workers was 38.0 3±8.3 and 35.2±7.5 years old, respectively. There was a significant difference in the knowledge of auxiliary health workers as 55.3 ± 3.8 in comparison with the medical experts' as 51.6 3± 6.3 ($p < 0.002$). There was a significant difference on whether changing cultural attitudes about the need for vaccination could be effective on reducing sexually transmitted diseases between the auxiliary health workers and medical experts' ($p < 0.001$). There was a significant difference in the knowledge of auxiliary health workers 55.3 ± 3.8 in comparison with the psychology and cultural experts' as 48.5± 6.3, 48.3± 6.8 ($p<0.001$) respectively. **Conclusion:** Knowledge among the auxiliary health workers was significantly different from that of psychology and cultural experts' in relation to health culture for human papillomavirus vaccination. It was indicated that these experts need to upgrade their health culture knowledge to increase the rate of community participation in human papillomavirus vaccination.

Keywords: Human papillomavirus- auxiliary health workers- medical experts

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Introduction

Health culture is generally defined as a culture in which health and well-being flourish in the geographical, demographic, and social parts (Huppert and So, 2013). Culture plays a significant role and promotes people's health status (Raphael, 2008). The assessment of the impact of culture on different aspects of individual and social life, especially in the context of disease, is difficult and inadequate data exist in this regard. However, the influence of cultural factors on human behavior is definite and influential undoubtedly. Due to this reason, cultural priorities, although are not decisive in themselves, can be considered as a very important component of health.

Cervical cancer, as the third leading cause of death in women, is caused by a virus called human papilloma virus (Olusola et al., 2019). It is estimated that about 29,000 new cases are affected by this virus and 275,000 deaths in 2008 were due to the virus, which has the smallest viral DNA, the ability to cause tumors, and the prevalence of which has currently become a global problem (Ferlay et al., 2010). Human papillomavirus infection is one of the leading causes of sexually transmitted infections (Bogaards et al., 2011). In this regard, young age at the time of the first intercourse, having multiple parthner and smoking are known as aggravating factors (Umana et al., 2014).

After breast, esophageal, gastric, and cervical cancers, cervical cancer is the deadliest cancer among Iranian women (Borumandnia et al., 2019). It has been reported that this cancer has a prevalence rate between 10.3% and 15.6% among women aged less than 25 years old (Jamdar et al., 2018). Zare et al., (2006) in their study in 2005 by investigating the effect of puberty health education on

*[1]Cancer Control Research Center, Cancer Control Foundation, Iran University of Medical Sciences, Tehran, Iran. [2]Tobacco Control Research Center (TCRC), Iranian Anti-tobacco Association, Iran University of Medical Sciences, Tehran, Iran. [3]Department of pulmonary medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. [4]PhD in Cultural Management and Planning, Shahid Beheshti University of Medical Sciences, Tehran, Iran. [5]Associate Professor, Safety Promtion and Injury Prevention Research Center of Shahid Beheshti University of Medical Sciences, Tehran, Iran. *For Correspondence: ainy.elaheh@gmail.com*

knowledge, attitude, and practice of girls aged between 12 and 14 years old showed that one of the basic needs of puberty and reproductive health is to raise the level of knowledge and awareness of young people regarding the cultural framework and religious beliefs of the society. This cancer can also be significantly reduced by applying some prevention methods. Correspondingly, one of the effective strategies on controlling the disease is vaccination and immunization against human papillomavirus before the first sexual intercourse.

Nowadays, due to the fading of moral values, and especially the need to adhere to the status of the family, study, and identify factors that can jeopardize the foundations of the family on the one hand, and on the other hand, a large financial burden, the most important issue in cervical cancer control is regular screening of all eligible women. According to the recommendation of the World Health Organization, the prevention of this disease can be done through some cultural activities, planning by the responsible authorities, and vaccinations.

In order to promote health culture, it is very important to address the neglected aspects of health culture. In this regard, the lack of cultural structure and context in dealing with diseases caused by human papillomavirus infection was recognized as an important motivation to conduct this study with the aim of comparing the viewpoints of the specialist from Shahid Beheshti University of Medical Sciences with those of the auxiliary health workers on health culture in terms of the importance of human Papilloma virus vaccination in 2020.

Materials and Methods

In this cross-sectional study, by Simple Random Sampling 220 medical experts' (gynecologists, cultural, psychological, infectious, dermatological, and educational) and auxiliary health workers [prevalence of HPV=%15 (Borumandnia et al., 2019), d=0.05, Z=1.96, power= %80, considering attrition risk=%20] were randomly selected and investigated.

$$n = \frac{z^2 p(1-p)}{d^2}$$

Cultural Health refers to having a deep awareness of your personal culture and life experiences and understanding how they influence your value system, worldview, and practices; recognizing and respecting the culture and life experiences of others and intentionally taking time to empathize with, understand, and respect (Cummiskey and Donnelly, 2022).

Expertise refers to the psychological processes that underlie the superior achievement of experts, who are typically defined as those who have acquired special skills in, or knowledge of, a particular subject through professional training and practical experience (Ericsson, 2014).

Cultural expertise refers to ability to participate ethically and effectively in personal and professional intercultural settings. It requires knowing and reflecting on one's own cultural values and world view and their implications for making respectful, reflective, and reasoned choices, including the capacity to imagine and collaborate in cross cultural contexts (Kumagai and Lypson, 2009).

In the current study, the required data were collected using a researcher-made questionnaire modeled on international questionnaires. This questionnaire contained demographic information on age and gender as well as some questions related to knowledge, attitude, and practice of the individuals. In this study, cultural health was assessed by measuring the knowledge, attitude, and practice of the included participants. For this purpose, the initial validity of the instrument was calculated by quantitative content validity using a content validity ratio (CVR) and a content validity index (CVI). Moreover, its reliability was assessed using test-retest and Cranach's alpha coefficient. Internal consistency values were also calculated as <81%, which was considered satisfactory. The Knowledge, Attitude, and Practice Questionnaire consisted of 45 items that have been previously prepared through literature review.

Knowledge, attitude, and practice included 12, 18, and 15 items, respectively. Knowledge (The response options for all items were true/false/don't know), attitude, and practice were given on a 5-point Likert scale from 1 to 5 (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, and strongly agree = 5). As well, total knowledge score was ranged from 12 to 60, attitudes ranged from 18 to 90, and practice from 15 to 75. Definition of knowledge score: below 20 was considered as low knowledge, between 20 and 40 as an average, and above 40 as good. Definition of attitude score: below 30 was considered as weak attitude, between 30 and 60 as an average attitude, and above 60 as good attitude. Practice score definition: Below 25 was considered as poor practice, between 25 and 50 as an average practice, and between 50 and 75 as good practice score.

The collected data were entered into SPSS software version 20 and analyzed. P<0.05 was considered as statistically significant. Data analysis was performed using one-way ANOVA, T-Test, and non-parametric tests. This study was approved by the ethical committee of Shahid Beheshti University of Medical Sciences.

Results

The results show that the mean age of the included medical experts' and auxiliary health workers was 38.0 3±8.3 and 35.2±7.5 years old, respectively.

Table 1 show that the highest percentages of the subjects were women. In terms of gender, this difference was significant (p <0.001).

In regard with the provision of cultural activities in order to encourage people who are at higher risk to be vaccinated, auxiliary health workers had significantly different opinions compared to the examined medical experts" (p <0.045). Accordingly, this difference was also observed to be in agreement with the integration of human papillomavirus vaccination in health system vaccination programs (p <0.015). Additionally, there was a significant difference on whether changing cultural attitudes about

Table 1. Gender of the Studied Population

Variables	Auxiliary health workers N (%)	Medical experts'' N (%)	Total
Male	79 (36.1)	1 (0.3)	80 (36.4)
Female	30 (13.4)	110 (49.2)	140 (43.6)
Total	109 (49.5)	111 (50.5)	120 (100.0)

N (%), number (percent)

Table 2. Knowledge, Attitude and Practice of the Studied Population in Relation to Health Culture for Human Papillomavirus Vaccination

Variables	SD ± Mean Auxiliary health workers	SD ± Mean Medical experts''	P value
Knowledge	55.3±3.8	51.6±6.3	0.002
Attitude	69.8±6.0	67.2±8.0	0.96
Practice	61.2±7.7	58.3±8.9	0.1

T test, P<0.05 was considered as statistically significant

Table 3. Comparision of Knowledge of Individuals Based on the type of Expertise in Relation to Health Culture for Human Papillomavirus Vaccination

Variables	SD ± Mean Auxiliary health workers	SD ± Mean Psychology Expert'	SD ± Mean Cultural Expert'	P value
Knowledge	55.3±3.8	48.5±6.3	48.3±6.8	0.001
Attitude	69.8±6.0	64.6±6.2	69.4±8.1	0.097
Practice	61.2±7.7	56.0±6.4	60.3±7.5	1

One-way ANOVA, P<0.05 was considered as statistically significant

the need for vaccination could be effective on reducing sexually transmitted diseases between the auxiliary health workers and medical experts' ($p < 0.001$). Overall, most of the auxiliary health workers agreed with the raised issues.

Table 2 shows that knowledge, attitude, and practice of the studied subjects in relation to health culture for human papillomavirus disease were assessed to be a good level. The statistical tests showed that there was a significant difference in the knowledge of auxiliary health workers in comparison with the medical experts ($p < 0.002$).

Table 3 shows that there was a significant difference in the knowledge of auxiliary health workers in relation to health culture for human papillomavirus vaccination in comparison with the psychology and cultural experts'.

There was no significant difference in knowledge of dermatology, infectious and gynecology experts' in relation to health culture for human papillomavirus vaccination in comparison to health worker.

Discussion

The knowledge, attitude, and practice of health culture for performing human papillomavirus vaccination in the study population were at good levels. The knowledge of the auxiliary health workers on health culture for human papillomavirus vaccination was higher than that of the experts'. There was a significant difference in the knowledge of auxiliary health workers in comparison with the psychology and cultural experts. As well, the average age of the auxiliary health workers was lower than that of the health experts.

The results of the Zari et al.,'s (2006) study showed that one of the basic needs of puberty and reproductive health is to raise the levels of knowledge and awareness of young people on the cultural framework and religious beliefs of the society. In order to reduce social and family barriers, teaching puberty health issues seems practical due to justifying religious political leaders, paying attention to religious beliefs, and respecting families. Education should be started at an early age.

In the Kamalikhah et al.'s study, it was shown that the greatest obstacle in the way of education and opposition for students' was cultural practices as they and others noted it as the greatest opposition to their sex education and marital problems, and even they said that they preferred not to inform their family about the education. The findings of this research showed that the health educator play an effective role in reproductive health education. The participants' emphasis on benefiting from religious teachings in the field of reproductive health education and the capacities of religious institutions in this field could be useful as well. The socio-cultural context of this education should be provided in the families by participating in the educational planning provided by schools (Kamalikhah et al., 2012).

In a study, Tafuri et al., (2010) showed that increasing the awareness and skills of health system staff with an emphasis on education as an effective strategy on reducing the incidence of human papillomavirus, should be considered. In Europe, human papillomavirus vaccination was done for 12-year-old girls. It is notable that human papillomavirus vaccination along with other health programs, are more adaptable to the health system. Continuation of training and upgrading of necessary skills were also found to be effective practical strategies (Fernandes et al., 2013).

In another study, Plummer and Franceschi, (2002) showed that vaccination was a strategy effective on controlling cervical cancer. Screening programs require some additional items like vaccinations for decades. Sinanovic et al., (2009) in their study showed that vaccination along with screening was more cost effective than screening alone. Hadji et al., (2015) showed that awareness-raising program to educate on cervical cancer prevention could provide an opportunity to promote cervical health and prevent cancer.

Ali-Risasi et al., (2014) showed that increasing women's awareness is the first step performed to prevent the occurrence of this disease and its related mortality. The findings of the present study were in line with the findings of other researchers in this field.

Songthap et al., (2009) showed that the knowledge level of nurses and physicians on cervical cancer and human papillomavirus vaccine was moderate. Both nurses and physicians' viewpoints were positive about human papillomavirus, cervical cancer, and human papillomavirus. Approximately 80% of nurses and 63% of physicians agreed to the use of the human papillomavirus vaccine. Almost all nurses and doctors suggested that vaccination should be performed before the age of 18 years old. In addition, 73% of nurses and 76% of physicians stated that they advise patients to receive human papillomavirus vaccine.

Koç and Çinarli, (2015) showed that having knowledge on human papillomavirus infection and human papillomavirus vaccine and the willingness to be vaccinated were at low levels among Turkish nurses working in hospital. To support patients in receiving effective cervical cancer screening and prevention services, effective educational strategies are needed for increasing their knowledge.

Koç and Çinarli, (2015) showed that training programs for nursing staff could help in improving their knowledge on cervical cancer and preventive measures.

In a survey conducted on studying knowledge and attitudes about human papillomavirus and vaccination, Silva et al., (2018) found that attitudes toward immunization were favorable. So, they concluded that it should be considered in nursing education programmes.

In another study, Makwe and Anorlu, (2011) showed that there is a little knowledge on the human papillomavirus vaccine in female nurses at Lagos University Teaching Hospital. Despite this poor knowledge, most nurses expressed a strong desire for vaccination and intention to advise preschool girls. As well, the main reason for not recommending the vaccine was the uncertainty about its effectiveness. Therefore, there was an urgent need for training to fill this gap.

Hopkins and Wood, (2013) showed that some physicians do not focuse on vaccination, especially for young age groups yet. Education for both people and doctors could bring a crucial effect in the future. The findings of the present study are inconsistent with those of the above-mentioned studies in some cases, which can be due to the discrepancy in the selection of the samples.

The present study, similar to other studies in the field of papillomavirus (Holman et al., 2014; Shaikh et al., 2019), pointed out that in order to increase awareness on papillomavirus and vaccination, the health care system should be involved and then provides focused efforts in this regard. Accordingly, they must be able to control obstacles and take more effective measures to promote and prevent this disease.

On the other hand, creating a health culture and encouraging women to be screened are important tasks of other policy-making institutions, including scientific institutions and organizations, especially universities.

In regard to the provision of cultural activities to encourage those individuals who are at risk to be vaccinated, auxiliary health workers were significantly different from those who agreed to have cultural activities. This difference was also observed in terms of the integration of human papillomavirus vaccination in health system vaccination programs.

Additionally, there was a significant difference on whether changing cultural attitudes could be effective on reducing sexually transmitted diseases between the auxiliary health workers and experts. In general, the auxiliary health workers were more in agreement with the raised issues.

The reason for these differences seems to be rooted in the job descriptions of health personnel, because this group usually has more interactions with the community and due to the nature of the existing job descriptions, they have experienced health culture in different health dimensions and in a more tangible way.

In a nutshell in line with World Health Organization actions, and other studies (Kamberi and Muhaj, 2019; Sopian et al., 2019; Gollu and Gore, 2021) to perform cultural activities such as appropriate education for adolescents before reaching physical maturity, education to prevent high-risk sexual behaviors, education about premarital relationships, planning by cultural and health policy makers, and vaccination and screening can be done by auxiliary health workers in the country.

This study was conducted for the first time in the country, so it could be considered as an innovation. Studying at Shahid Beheshti University of Medical Sciences reduced the generalizability of the study, which was considered as a limitation of the study.

It is suggested that more studies be conducted in the field of increasing the awareness of the population about human papillomavirus vaccination before puberty by experts' and academics' in the field ofcultural health.

Using modern technologies to change the attitude of the beneficiaries related to human papillomavirus vaccination.

In conclusion, Knowledge among the auxiliary health workers was significantly different from that of psychology and cultural experts' in relation to health culture for human papillomavirus vaccination. It was indicated that these experts need to upgrade their health culture knowledge to increase the rate of community participation in human papillomavirus vaccination.

Author Contribution Statement

MRM: Supervision, article writing; NS: Study design, data gathering, data entry, article writing; EA: Study design, project management, data analysis, article writing.

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Ethical approval

The study was approved by the ethics committee of Shahid Beheshti University of Medical Sciences (Reference Number: 012.2018.REC.SBMU.IR).

Conflict of Interests

None to declare.

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