Module 1. Cultural Awareness - Topic 3. Values, Attitudes and Behavior

Christiana Kouta, Elena Rousou, Elena Nikolaidou, Panagiota Ellina, Paraskevi Charitou
Cyprus University of Technology

1. INTRODUCTION

Vaccination hesitancy can be considered a global health threat. Studies indicated that public vaccine hesitancy is influenced by health care professional's negative attitudes towards vaccination and the degree of health care professional vaccine hesitancy. The reason for this is that health care professionals are considered to be a reliable source of information on health issues and vaccination (Li *et al.*, 2021).

Even though it is very well documented that the use of vaccines has reduced the rate of specific diseases that threaten public health and global economy, hesitancy shows an increasing trend in the general population, including health care professionals (Li *et al.*, 2021).

According to WHO, factors influencing vaccine hesitancy can be grouped into three domains: contextual influences, individual/social group influences, and vaccine and vaccination-specific issues, which includes the role of health care professionals (Tomljenovic et al., 2021). Research suggests that the factors influencing parent's decision to vaccinate their child and themselves are: personal experience, perceived effectiveness, and concerns regarding vaccine safety and side effects (Goss *et al.*, 2020). On the other hand, Health Care Professionals vaccine hesitancy is strongly associated with inadequate knowledge, risk perceptions, trust, emotions, values, worldviews, critical events such as outbreaks, doubts about vaccine necessity or efficacy and concerns about possible adverse effects, and suboptimal uptake themselves.

It is important to understand the attitudes and behaviours of health professionals toward vaccination to develop strategies to improve vaccination rates of health professionals and other individuals (Asma *et al.*, 2016). Improving Health Care Professionals knowledge and assuring their access to trustworthy information will promote vaccine acceptance as "trusted messengers" of vaccines effectiveness (Lin *et al.*, 2021; Tomljenovic *et al.*, 2021).

2. AIMS

The aim of this module is to raise awareness about the influence of values, attitudes and behaviour on vaccine acceptance and uptake.

3. LEARNING OUTCOMES

At the end of this training, the participants will be able to:

- Become aware of the cultural values, attitudes and behaviour that health and social professionals and population may have for vaccination related matters.

4. THEORETICAL FRAMEWORK

4.1. Concepts and definitions

Values: the moral principles or standards of behaviour. Family, religion, culture, and moral figures in the society strongly influence the values (porUpen, 2018). **Values** are personal priorities and guiding principles for one's life that transcend specific situations, represent desired goals, and serve as criteria for evaluating decisions. Values are known to influence attitude formation and behaviour across

cultures and domains. Values influence vaccine attitudes, which in turn influence intentions (vaccine hesitancy) and behaviour (Cataldi et al., 2019).
Values and attitudes are major components in a person's character and personality. Values and attitudes are both subjected to change with different social interactions and social experiences of a person. Though these two are inter-related concepts, there is a distinct difference between values and attitudes (porUpen, 2018).
Attitudes are judgments, standpoints or opinions about a certain subject, matter or a person. These standpoints or opinions are formed based upon that person's values and emotions (porUpen, 2018).

Both values and attitudes are integral components of a person's overall behaviour.

4.2. What the research says on the topic

Regazzi, L., Marziali, E., Lontano, A., Villani, L., Paladini, A., Calabrò, G. E., Laurenti, P., Ricciardi, W., & Cadeddu, C. (2022). Knowledge, attitudes, and behaviors toward COVID-19 vaccination in a sample of Italian healthcare workers. *Human Vaccines & Immunotherapeutics*, *18*(6), 2116206. https://doi.org/10.1080/21645515.2022.2116206. [Accessed 18/11/2022]
Health Care Workers (91.7%) believe that vaccines are scientifically studied and among the safest pharmaceutical products, 97.0% thinks that vaccines represent an indispensable tool for the protection of individual and public health, while 91.5% do not agree that vaccines have a negligible impact on the spread of infectious diseases. Overall, 17.0% of the sample showed a "General hesitancy".
For what concerning "COVID-19 hesitancy," 90.0% thinks the risk of complications from COVID-19 disease is greater than the risk of serious adverse effects from COVID-19 vaccine, 5.6% of them judge that it is preferable to acquire immunity against SARS-CoV-2 by contracting the infection rather than by vaccination, almost 10.9% is convinced that there is insufficient evidence on the efficacy and safety of COVID-19 vaccines due to their rapid development and 92.5% believes that the COVID-19 vaccine is effective in preventing COVID-19.
When the behaviour of the participants was examined 98.1% of HCWs received anti-SARS-CoV-2 vaccine, motivated by social responsibility (63.0%), trust in COVID-19 vaccine as a preventive measure (79.0%), desire to protect one's family (48.7%) and because of high risk of contracting SARS-CoV-2 infection because of their work (55.1%). Moreover, more than half of the participants (51.4%) declared that the fear of SARS-CoV-2 infection highly influenced their decision to get vaccinated (score 8–10 on a scale 1–10). Among those who did not vaccinate themselves against SARS-CoV-2 (1.5%), the majority believed that more proofs of efficacy and safety of the vaccine were needed (57.6%), most of them were afraid of possible side effects (54.6%) and some others did not consider themselves at high risk of developing severe disease (39.4%). Most of the surveyed HCWs advised the vaccine both to their patients (88.1%) and to their family (93.3%).
The level of education is an important factor that correlates with vaccination adherence: people with a higher degree of education (Master's degree, specialization or PhD), in fact, appear to have confidence in vaccinations, resulting in a factor negatively associated with vaccine hesitancy.

Lin, C., Mullen, J., Smith, D., Kotarba, M., Kaplan, S. J., & Tu, P. (2021). Healthcare Providers' Vaccine Perceptions, Hesitancy, and Recommendation to Patients: A Systematic Review. *Vaccines*, *9*(7), 713. https://doi.org/10.3390/vaccines9070713. [Accessed 18/11/2022]
Health Care Professionals (HCPs) are a key population in the study of vaccine trust and behaviour, as their recommendations influence patient acceptance. Moreover, their personal vaccination behaviour affects communicable disease prevention and control in health care settings.
There was ample evidence that HCPs' attitudes toward vaccines influenced their recommendation practices across specialties (maternity care providers, occupational physicians, general practitioners). Paediatricians with positive attitudes of meningococcal B vaccine (4CMenB) were five times more likely to recommend it, as were providers who believed vaccines are effective, beneficial, and safe. HCPs

who believed administering vaccination and advising patients about vaccines were their responsibility had increased recommendation, discussed vaccines more often, and perceived greater vaccine utility. Receiving encouraging information on vaccines from trustworthy medical institutions or official organizations increased HCPs' confidence and thus likelihood to recommend vaccines, while logistical barriers such as lack of time had a negative effect. The recognition that HCPs, a group often thought of as a trustworthy source, require reliable sources of their own heightens the importance of effective provider education to facilitate their influence on patient acceptance.

Troha, M., Šterbenc, A., Mlaker, M., & Poljak, M. (2018). Human papillomavirus (HPV) infection and vaccination: Knowledge and attitudes among healthcare professionals and the general public in Slovenia. ***Acta Dermatovenerologica Alpina Pannonica et Adriatica*****, *27*(2). https://doi.org/10.15570/actaapa.2018.14. Available at: https://www.acta-apa.org/journals/acta-dermatovenerolapa/papers/10.15570/actaapa.2018.14/actaapa.2018.14.pdf [Accessed 18/11/2022]**

This study was designed to obtain information about the knowledge of and attitudes toward HPV infection and vaccination among various healthcare professionals that vaccinate adolescents and/or are consulted regarding their opinion on HPV vaccination. In addition, the survey was also administered to parents of sixth graders in elementary school that are faced with the decision whether to vaccinate their children, and to woman visiting certain gynaecology outpatient clinics that should be aware of the fact that HPV is found in virtually all cases of cervical cancer and that cervical cancer only exceptionally develops in the absence of the persistent presence of HPV.

Healthcare professionals generally did not support postponing HPV vaccination, whereas a significant proportion of parents of sixth-graders would prefer the HPV vaccine to be administered at a later age and at their children's initiative, probably because of fear of potential side effects they have heard or read about in the media and on the internet or because they believe that their children will not engage in sexual intercourse in the near future.

Compared to the general public and other healthcare professionals, paediatricians and school medicine specialists were the only group that showed strong belief in the safety of the HPV vaccine. Thus, the general public and healthcare professionals need to be continuously reminded that the risk of developing cervical and other HPV-related cancers far outweighs any potential risks of adverse events of HPV vaccine.

Paediatricians and school medicine specialists did not identify the internet as the main source of information regarding HPV vaccination for parents, whereas more than half of parents of sixth graders and the majority of medical students thought that the decision to vaccinate against HPV is mostly influenced by information obtained on the internet. It is possible that paediatricians' and school medicine specialists' beliefs are based on their own experiences.

Physicians are strongly encouraged to provide accurate, clear, and updated information regarding HPV-related diseases and HPV vaccination, which should be available on appropriate, easily accessible, and user-friendly websites.

Kalimeri, K., G. Beiró, M., Urbinati, A., Bonanomi, A., Rosina, A., & Cattuto, C. (2019). Human Values and Attitudes towards Vaccination in Social Media. ***Companion Proceedings of The 2019 World Wide Web Conference*****, 248–254. https://doi.org/10.1145/3308560.3316489. [Accessed 18/11/2022]**

Psychological, political, cultural, and even societal factors are entangled in the reasoning and decision-making process towards vaccination, rendering vaccine hesitancy a complex issue. Here, administering a series of surveys via a Facebook-hosted application, we study the worldviews of people that "Liked" supportive or vaccine resilient Facebook Pages. In particular, we assess differences in political viewpoints, moral values, personality traits, and general interests, finding that those sceptical about vaccination, appear to trust less the government, are less agreeable, while they are emphasizing more on anti-authoritarian values. Exploring the differences in moral narratives as expressed in the linguistic descriptions of the Facebook Pages, we see that pages that defend vaccines prioritize the value of the family while the vaccine hesitancy pages are focusing on the value of freedom. Finally, creating

embeddings based on the health-related likes on Facebook Pages, we explore common, latent interests of vaccine-hesitant people, showing a strong preference for natural cures.

Reimer, N. K., Atari, M., Karimi-Malekabadi, F., Trager, J., Kennedy, B., Graham, J., & Dehghani, M. (2022). Moral values predict county-level COVID-19 vaccination rates in the United States. *American Psychologist*, *77*, 743–759. https://doi.org/10.1037/amp0001020. [Accessed 18/11/2022]
Despite the widespread availability of COVID-19 vaccines, the United States has a depressed rate of vaccination relative to similar countries. Understanding the psychology of vaccine refusal, particularly the possible sources of variation in vaccine resistance across U.S. subpopulations, can aid in designing effective intervention strategies to increase vaccination across different regions. Here, we demonstrate that county-level moral values (i.e., Care, Fairness, Loyalty, Authority, and Purity) are associated with COVID-19 vaccination rates across 3,106 counties in the contiguous United States. Specifically, in line with our hypothesis, we find that fewer people are vaccinated in counties whose residents prioritize moral concerns about bodily and spiritual purity. Further, we find that stronger endorsements of concerns about Fairness and Loyalty to the group predict higher vaccination rates. These associations are robust after adjusting for structural barriers to vaccination, the demographic makeup of the counties, and their residents' political voting behaviour. Our findings have implications for health communication, intervention strategies based on targeted messaging, and our fundamental understanding of the moral psychology of vaccination hesitancy and behaviour.

Madewell, Z. J., Chacón-Fuentes, R., Jara, J., Mejía-Santos, H., Molina, I.-B., Alvis-Estrada, J. P., Ortiz, M.-R., Coello-Licona, R., & Montejo, B. (2021). Knowledge, attitudes, and practices of seasonal influenza vaccination in healthcare workers, Honduras. *PLOS ONE*, *16*(2), e0246379. https://doi.org/10.1371/journal.pone.0246379. [Accessed 17/11/2022]
Influenza vaccination coverage in a sample of healthcare workers who attended patients in hospitals was 52.0%, which is almost half the coverage reported by PAHO for healthcare workers in Honduras in 2017 (100%). Coverage was also lower than that of healthcare workers in Panama (92%), Costa Rica (88%), Guatemala (74%) and El Salvador in 2018 (61%), which may be attributed to differences in vaccination schemes, implementation frames, targeted healthcare worker groups, vaccine availability, communication activities, and previous experiences with influenza.
Low seasonal influenza vaccination coverage among healthcare workers in 2018 may be attributed to misconceptions of influenza virus and vaccine. The main knowledge gap was not knowing the vaccine was composed of inactive viruses or segments of viruses that are non-infectious. These results were supported by the finding that most participants believed the vaccine may cause influenza-like symptoms. Furthermore, some of the vaccinated participants mentioned they had flu-like symptoms within one week of receiving the influenza vaccine. Among unvaccinated participants, the main reason for declining vaccination was fear of side effects and of contracting influenza.
Knowledge and attitude scores were higher for healthcare workers who learned about influenza vaccination from formal trainings at healthcare facilities.
If healthcare workers have positive initial vaccination experiences, they may be more likely to seek vaccination in following years, and subsequently recommend vaccines to their patients.

5. LEARNING ACTIVITIES

Activity 1 (duration: 25 minutes)**:**
QUIZ 1 – Fill in the blanks
Watch the following video https://youtu.be/ozE6dlXDLko (14'38'') (English, Subtitles auto-generated in all languages) and fill in the blanks, then share your thoughts/opinions/experiences about the issues on this topic on the dedicated forum and give feedback to other participants:

https://www.goconqr.com/quiz/38390040/iene-11-module-1-5-assessment

A person's beliefs and _____ can influence how they understand health concepts, how they take care of their health and how they make decisions related to their health.

Beliefs are ideas that people hold to be true and these can influence a person's _____**.**

A belief can come from _____ such as prior illness or vaccination, an accepted part of one's _____ or upbringing, such as beliefs in traditional remedies and religious teaching and practices related to health and healing.

Understanding to someone's _____ related to health and vaccination can help you identify the types of information that may be useful to support their _____.

Values are guiding _____ and ideas about what is important to a person.

Values might include traits like bravery, _____, independence, _____, community or health itself.

To promote vaccine _____ one of the most effective ways to begin a conversation about the topic is to listen to a person's story and concerns.

Beliefs that result in hesitation about getting a vaccine may be linked to a lack of information or _____ that has spread through the community or in the media.

Sometimes people will have strong beliefs or values based on _____, informal rules or normal practices that guide behaviour for a social, religious or cultural group.

As a community health worker, you might consider engaging local faith _____ to help promote the uptake of vaccines as a way to complement faith-based practices.

values, behaviours, personal experience, culture, beliefs, decision-making, principles, responsibility, reliability, acceptance, misinformation, norms, leaders

Activity 2 (duration: 20 minutes)**:**
QUIZ – Multiple choice questions
Watch the VIDEO and answer the Questions, then share your thoughts/opinions/experiences about the issues on this topic on the dedicated forum and give feedback to other participants:

https://www.ama-assn.org/delivering-care/public-health/dealing-covid-19-vaccine-hesitancy-among-health-care-workers (13'08'').

Question 1:
What are the three main reasons according to Arthur Caplan that some health care workers would choose not to get vaccinated against COVID-19?

a) Women in the workforce, health care workers tend to be worried about fertility in pregnancy. They say these vaccines have not been tested adequately on pregnant women.
b) They say that they don't need a vaccine. They've been exposed to the flu. They've been exposed to COVID. They are frontline workers. It's probably their fifth exposure. They are sure that they have antibodies.
c) They say the vaccine was rushed they worry that corners were cut, studies were stopped prematurely to give emergency use.
d) All of the above.

Question 2:
Given that the public relies on the advice of professionals like physicians and nurses, how should health professions such as nursing and medicine address vaccine hesitancy among its members? (More than one answer)

a) Institutions need to spend more time educating the health care workforce, more webinars, more seminars and more educational activities.
b) Fire health care workers that refuse to get vaccinated.
c) monitor the social media anti-vax websites and provide reliable information.
d) using spokespersons in minority workforce because there's more trust sometimes in someone who seems to be a peer.
e) pay those who refuse to get vaccinated large amounts of money to convince them
f) have religious figures, rabbis, priests explain why vaccination is a duty which nearly every religion sees it as

Resources to be used for the module learning activities:

No.	Title and description of the resource	Type	Language of resource	Learning, training, assessment and evaluation activities	Access URL / download
1.	Addressing Beliefs and Values | Supporting Vaccination	Video 14'38''	English* **(compulsory)**	Quiz - Fill in the blanks	https://youtu.be/ozE6dlXDLko
2.	Dealing with COVID-19 vaccine hesitancy among health care workers	Video 13'08''	English (optional)	Quiz - multiple choice questions	https://www.ama-assn.org/delivering-care/public-health/dealing-covid-19-vaccine-hesitancy-among-health-care-workers

* Subtitles auto-generated in all languages

6. ASSESSMENT ACTIVITIES

QUIZ – Multible choice questions

1. According to Reimer et al (2022), fewer people are vaccinated in counties whose residents prioritize moral concerns about bodily and spiritual purity.
2. The level of education is not necessarily correlated with vaccine adherence.
3. According to Madewell et al (2022), among unvaccinated participants, the main reason for declining vaccination was fear of side effects and of contracting influenza.

7. REFERENCES

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