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Vaccine Hesitancies Across the World in the Era of COVID-19

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See also COVID-19 & Monkeypox, pp. 1564–1620.

As one of the most cost-effective ways to prevent diseases, vaccination is saving millions of lives each year, and COVID-19 vaccines are no exception to this success. From December 2020 to December 2021, immunization against SARS-CoV-2 (the causative agent of COVID-19) is thought to have prevented nearly 20 million deaths worldwide.[1] In terms of numbers of doses administered, countries affected, or media coverage, COVID-19 vaccination campaigns have broken records. It is thus not surprising that along with this unprecedented mass vaccination has come unprecedented debate about vaccination.[2] In their research article in this issue of AJPH, Beca-Martínez et al. (p. 1611) analyze trends and factors associated with vaccine hesitancy and acceptance in Spain, a country where vaccination rates have traditionally been high.

Defined by the World Health Organization's Strategic Advisory Group of Experts on Immunization as a "delay in acceptance or refusal of vaccines despite availability of vaccination services,"[3] vaccine hesitancy captures the "middle of a continuum ranging from total acceptors to complete refusers."[4(p2150)] Unlike the polarizing term "antivax," "vaccine-hesitant individuals" depicts with more nuance the people who have access to the vaccine but are not vaccinated. Indeed, a majority of unvaccinated people are not formally against vaccination but either have doubts, prefer to wait, or are reluctant to get a specific vaccine but not others.

For COVID-19, vaccine hesitancy prevalence was estimated at around 25% worldwide in June 2021, although varying greatly over time and place.[5] In Spain, Beca-Martínez et al. found a 15.1% rate of vaccine hesitancy at the same period, confirming a relatively high acceptance there compared with other European countries, and they further point out some determinants of vaccine hesitancy. Although some of those determinants were found to have a similar association in other countries (e.g., gender or trust in scientists), some show more complex relations to vaccine acceptance depending on time and place (e.g., age or socioeconomic status). Through a few selected examples, we aim to discuss how those determinants play a role in other parts of the world. Because each situation is composed of multiple layers of complexity, it is beyond the scope of this editorial to exhaustively describe how determinants come into play in each example.

DETERMINANTS OF VACCINE HESITANCY

According to Beca-Martínez et al., high levels of trust in health care professionals and confidence in institutions might be key factors for vaccine acceptance in Spain. Those findings are consistent with previous studies on COVID-19 vaccines in which mistrust in science or governments was strongly associated with vaccine hesitancy.[5] On the other side of the spectrum, Russia shows remarkably low levels of trust in health authorities. In a 2021 study conducted in 17 countries (upper-middle-income to high-income countries only), less than 50% of Russians expressed trust in national public health organizations, making Russia the country with the lowest level of trust assessed.[6] Poland and Ukraine also showed high levels of mistrust toward national health organizations. Overall, distrust in health authorities seems to be one of the factors explaining the vaccine gap between Western and Eastern Europe.

In the United States, mistrust in the health system has been shown to be one of the reasons for lower vaccination rates among some ethnic minority populations, especially in Black communities.[7] Often explained through a historical lens by the legacy of unethical research such as the Tuskegee study, this mistrust is also related to contemporary experiences of racial discrimination in hospitals, lack of representation, or structural inequities in health care.[7]

According to Beca-Martínez et al., older age was associated with higher vaccine acceptance, which correlates with previous results in Europe,

Northern America, and South Korea.[5] Age being a main risk factor for severe disease and death, older individuals see a greater benefit in immunization and are more likely to get vaccinated. Furthermore, older people, born into a world with far fewer vaccines, have observed the success of many vaccines over their lifetime, which may also explain their greater acceptance.

Interestingly, age was conversely associated with higher hesitancy rates in China.[8] Some cultural reasons for this hesitancy might be a preference among the elderly for traditional Chinese medicine or the belief that vaccines are dangerous for fragile patients with chronic diseases.[9] Difficulties for older populations in accessing the vaccine also add to the picture, resulting in low vaccine coverage in adults aged 60 years and older—for example, in Shanghai, where only 38% were fully vaccinated (i.e., received three doses) in May 2022. Low vaccination rates in the elderly can result in consequential situations, such as in Hong Kong during the fifth wave of the SARS-CoV-2 pandemic. With nearly 20% of the population aged older than 60 years unvaccinated, Hong Kong registered fatality rates 10 times higher than that of countries like New Zealand, where only 2% of those aged older than 65 years were unvaccinated (0.76% vs 0.07% crude case fatality rates).[10]

Health literacy is another determinant that has shown mixed association with vaccine hesitancy in literature. Although usually found to promote vaccination, as in the research by Beca-Martínez et al., health literacy has been paradoxically associated with greater hesitancy—for example, for the influenza vaccination in the United States or for the national immunization program in the Netherlands.[4,11] This could be because better health literacy—and especially critical health literacy, defined as "cognitive skills that can be applied to critically analyze information and use it to exert greater control over life events and situations"—allows greater self-determination in health decisions.[11(p479)] Hence, patients with good critical health literacy are more prone to deliberate over their doctor's recommendations than others.

Moreover, some authors highlight a lack of standardization in the assessment of health literacy and state that a differentiation between general health literacy and vaccine literacy might be useful.[11] Some groups may have good health knowledge in certain areas but negative views on vaccination, especially if their health knowledge is influenced by anthroposophical or alternative medicine beliefs.[4]

ADDRESSING VACCINE HESITANCY

The examples given show the variety and complexity of determinants of vaccine hesitancy, which can change across time, regions, and communities. Often unfairly labeled as "antivax," vaccine-hesitant individuals have various reasons for doubt that are understandable and sometimes legitimate. The crystallization of tensions and the polarization of debates on vaccination can discourage those unvaccinated people who are open to dialogue and would like their concerns to be heard. Understanding and acknowledging the complexity of vaccine hesitancy determinants can be a first step toward a healthier debate. Moreover, this complexity highlights the need for tailored responses to different populations of vaccine-hesitant individuals. Although changing people's minds is a difficult task, informing correctly remains the duty of clinicians and health authorities, and some dialogue-based interventions have proven successful in reducing vaccine hesitancy.

For example, efforts to counter misinformation, such as public information campaigns, are essential for addressing vaccine hesitancy. The circulation of misinformation about vaccines greatly influences public perception of vaccine safety and efficacy and increases vaccine hesitancy.[5] Health organizations and health care workers need to share evidence-based, easily understandable information to address myths and false rumors. However, rational arguments may be insufficient or even ineffective in changing the opinion of some. In a health care provider–patient relationship, trying to convince by stating hard facts can be counterproductive. This has led to the development of a motivational interviewing approach in the context of vaccine hesitancy.[12] Initially developed in the treatment of addictions, motivational interviewing relies on a nonjudgmental, collaborative communication approach that does not rely on giving hard facts, unless specifically requested by the patient. Moreover, the clinician does not position himself or herself to convince, but listens to the patient and explores his or her ambivalence toward vaccination.

In addition, strategies to address vaccine hesitancy that involve community engagement, such as collaborating with trusted actors among vaccine-hesitant communities, can be effective.[13] In vaccination campaigns against polio, involvement of religious or traditional leaders has proven to be particularly efficient in African and European countries.[14] In Switzerland, involving complementary and alternative medicine providers in the creation of communication tools for vaccine-hesitant parents has helped in

tailoring a better-fitting message for a skeptical audience.[15]

To conclude, vaccine hesitancy is a complex phenomenon, and its determinants are not always transferable across countries, communities, or vaccine types. Regional and qualitative studies are therefore of great value for better understanding vaccine hesitancy. Vaccine-hesitant individuals are not a uniform group of people, and the reasons for their doubts are varied and often legitimate. Hearing those doubts and reestablishing dialogue not only is a necessary step toward better vaccination rates, but it could also be beneficial for better adherence to health recommendations in general. AJPH

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N. Emery conducted the literature review and wrote the first draft of the manuscript. A. Dugerdil assisted and supervised the review. A. Flahault designed and supervised the review.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

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