

# SARS-COV-2 Vaccine Hesitancy

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## ABSTRACT

The According to the World Health Organization, vaccination hesitancy is a behavior that is influenced by a number of variables, including concerns with confidence (do not trust vaccine or provider), complacency (do not recognize a need for a vaccine, do not value the vaccine), and convenience (access). Low trust in vaccinations and low uptake are mostly caused by structural factors such as health disparities, socio-economic disadvantages, systemic racism, and access hurdles. Vaccine reluctance can be viewed as a widespread occurrence with variations in the reasons given for vaccine rejection. The perceived dangers vs. advantages, specific religious views, and lack of knowledge and awareness were the most common justifications for vaccination rejection. There are three

main causes of vaccine hesitancy-

- Lack of trust in and fear of vaccines, especially due to the misconception that vaccines carry a risk of infection
- Lack of understanding of the need for a vaccine (for example, due to an underestimation of the severity of the disease)
- Difficulty in obtaining the vaccine for an individual or a community.

**Keywords:** Confidence, SARS-COV-2, Vaccine hesitancy

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## INTRODUCTION

Vaccine hesitation is described by the World Health Organization as “a delay in accepting or refusing safe immunizations notwithstanding the existence of vaccine services (Tola G, 2021; WHO, 2013; Veatch JR, *et al.*, 2021).” Vaccine hesitation can be a complex cognitive and behavioral construct that varies depending on the vaccine, the location, and the circumstance (WHO, 2014; Webb Hooper M, *et al.*, 2021). Conspiracy theories, anxiety, skepticism, mistrust of scientific knowledge, and a lack of information can all contribute to vaccine hesitation (Bereda G, 2021; Bullock J, *et al.*, 2022). Vaccine reluctance can be viewed as a widespread occurrence with variations in the reasons given for vaccine rejection. The most common justifications for vaccination rejection included perceived risks against benefits, particular religious convictions, and a lack of information and awareness (Sallam M, 2021; Lane S, *et al.*, 2018; Wagner AL, *et al.*, 2019; Health TL, 2019; Karafillakis E and Larson HJ, 2017; Pelčić G, *et al.*, 2016; Bereda G, 2022). People who are vaccine-hesitant are a diverse population that has varying degrees of hesitation regarding particular immunizations (Tola G, 2021). The “5C model of the causes of vaccination hesitation,” a concept developed from studies conducted in high-income nations, lists five key individual person-level factors for vaccine reluctance.

## DESCRIPTION

### Confidence

Lack of SARS-COV-2 vaccination confidence puts health at risk in both direct and indirect ways and might divert attention from attempts to stop the current epidemic. Social disadvantages like low education and limited access to accurate information, misinformation, disinformation, rumors, and conspiracy theories, especially on social media, a lack of effective public health messages or targeted campaigns, structural racism, healthcare and socio-economic inequities, and research on some ethnic minority classes conducted in the past in an unethical manner are some of the causes and drivers of low confidence in SARS-COV-2 vaccines.

### Complacency

It comes from the belief that vaccinations are unneeded because one believes they have a minimal chance of contracting SARS-

COV-2 or suffering severe illness effects, or because this belief is a persistent barrier to vaccination. The patients think there is a high danger of getting SARS-COV-2 and that getting the vaccination might have a negative impact on their life and the lives of those close to them (The Royal Society and the British Academy, 2020; Razai MS, *et al.*, 2021).

### Convenience (or constraints)

Some people believe they can't afford to get immunized, and some people are suspicious because they can't physically access a vaccination facility. Many people have incorrect beliefs about the quality of immunization services (SAGE, 2021).

### Calculation of risk

It is to deliberately compare the hazards of infection versus vaccination in order to make a choice. The vaccination has fully persistent side effects and unknowable long-term health repercussions, according to a variety of persons (WHO, 2014).

### Collective responsibility

A decreased desire to get the SARS-COV-2 vaccine is associated with a reduced feeling of communal responsibility (Afolabi AA and Ilesanmi OS, 2021).

Today, a number of psychological theories have been put forth in relation to vaccine hesitancy, including altruistic beliefs, neuroticism and conscientiousness as personality traits, conspiracy, religious, and paranoid beliefs, and distrust of reputable members of society like government officials, scientists, and medical professionals (Nazlı ŞB, *et al.*, 2022; Rieger MO, 2020; Johnson MO, 2000; Hornsey MJ, *et al.*, 2018; Habersaat KB and Jackson C, 2020; Almaghaslah D, *et al.*, 2021; Coustasse A, *et al.*, 2021). SARS-COV-2 vaccine hesitation is frequently associated with characteristics that also have an effect on vaccination hesitancy for other vaccines. These variables include political variables, attitudes and beliefs connected to vaccinations, and vaccination-associated characteristics (Rutten LJ, *et al.*, 2021; Jacobson RM, *et al.*, 2015).

### Individual attitudes

Greater reluctance has also been linked to outright skepticism in vaccination, false beliefs about the seriousness of SARS-COV-2 infection, and a preference for spontaneous immunity. Younger

people, those with less education, those without jobs, those who are jobless, and several ethnic and racial minority groups, including Hispanics and African Americans, who have been disproportionately impacted by SARS-COV-2, all showed greater vaccination hesitation (Rutten LJ, *et al.*, 2021; Kreps S, *et al.*, 2020; Malik AA, *et al.*, 2020; Pogue K, *et al.*, 2020; Reiter PL, *et al.*, 2020; Trogen B, *et al.*, 2020).

### Political factors

Attempts to swiftly proceed with aggressive federal financing and deploy vaccinations with US Food and Drug Administration (FDA) emergency use authorization may exacerbate worries about vaccine safety and efficacy. Data from public surveys in the United States also show the impact of political issues on reluctance, where lack of faith in vaccine advocates, the nation of vaccine origin, and worries about commercial or political objectives increase public mistrust (Rutten LJ, *et al.*, 2021; Fisher KA, *et al.*, 2020).

### Vaccine attributes

According to survey results, there is general skepticism regarding the efficiency of the SARS-COV-2 vaccination, doubt regarding the duration of protection, and concern regarding safety or negative consequences. Important data on the characteristics of vaccines, such as immunity duration and immunogenicity, are steadily accumulating and will differ by vaccine manufacturer and/or between populations. The public's confidence is at risk due to the developing understanding of SARS-COV-2 immunology and virology as well as the historically rapid development of vaccines (Rutten LJ, *et al.*, 2021; Khamsi R, *et al.*, 2020; Kirkcaldy RD, *et al.*, 2020; Yi Y, *et al.*, 2020; Feng W, *et al.*, 2020; Lurie N, *et al.*, 2020).

A complicated decision-making process promotes vaccine reluctance. These elements include communication and media, historical effects, religion/culture/gender/socioeconomic, political, geographic obstacles, prior vaccination experience, risk perception, and vaccination program design (Corey L, *et al.*, 2020; Soares P, *et al.*, 2021; WHO, 2012; Kwok KO, *et al.*, 2021; Mose A, *et al.*, 2022; Saied SM, *et al.*, 2021; Kanyike AM, *et al.*, 2021; MacDonald NE, *et al.*, 2015; Lucia VC, *et al.*, 2021).

### CONCLUSION

The term "vaccine hesitancy" refers to the hesitation or refusal to get a vaccination against a disease, even though the vaccine has been found to be safe and effective. Complacency stems from thinking immunizations are unneeded because one believes they have a minimal chance of contracting SARS-COV-2 or suffering serious adverse effects, or because it is a persistent barrier to vaccination. The patients think there is a high danger of getting SARS-COV-2 and that getting the vaccination might have a negative impact on their life and the lives of those close to them. A variety of variables influence and complicate vaccine reluctance, such as lack of knowledge about the vaccination, lack of faith in the vaccine itself, false information from social media, conspiracy theories, and worry about side effects are some of the variables associated with SARS-COV-2 vaccine reluctance.

### REFERENCES

- Tola G. Comprehending rationale of SARS-CoV-2 vaccine shilly-shally among health care workers in Oromia regional state, Ethiopia: A cross-sectional online-based study, 2021. Ethiopia: A cross-sectional online-based study. 2021. SSRN. 2021.
- What influences vaccine acceptance: A model of determinants of vaccine hesitancy. World Health Organization (WHO). 2013.
- Veatch JR, Simon S, Riddell SR. Tumor-infiltrating lymphocytes make inroads in non-small-cell lung cancer. *Nat Med.* 2021; 27(8): 1339-1341.
- Report of the SAGE working group on vaccine hesitancy. World Health Organization (WHO). 2014.
- Webb Hooper M, Nápoles AM, Pérez-Stable EJ. No populations left behind: vaccine hesitancy and equitable diffusion of effective COVID-19 vaccines. *J Gen Intern Med.* 2021; 36: 2130-2133.
- Bereda G. Eagerness to acceptance of COVID-19 vaccine among health care workers in Oromia regional state, Ethiopia. An online based cross-sectional study. 2021.
- Bullock J, Lane JE, Shults FL. What causes COVID-19 vaccine hesitancy? Ignorance and the lack of bliss in the United Kingdom. *Humanit Soc Sci Commun.* 2022; 9(1).
- Sallam M. COVID-19 vaccine hesitancy worldwide: A concise systematic review of vaccine acceptance rates. *Vaccines.* 2021; 9(2): 160.
- Lane S, MacDonald NE, Marti M, Dumolard L. Vaccine hesitancy around the globe: Analysis of three years of WHO/UNICEF joint reporting form data-2015-2017. *Vaccine.* 2018; 36(26): 3861-3867.
- Wagner AL, Masters NB, Domek GJ, Mathew JL, Sun X, Asturias EJ, *et al.* Comparisons of vaccine hesitancy across five low-and middle-income countries. *Vaccines.* 2019; 7(4): 155.
- Health TL. Vaccine hesitancy: A generation at risk. *Lancet Child Adolesc Health.* 2019; 3(5): 281.
- Karafilakis E, Larson HJ. The benefit of the doubt or doubts over benefits? A systematic literature review of perceived risks of vaccines in European populations. *Vaccine.* 2017; 35(37): 4840-4850.
- Pečić G, Karačić S, Mikirtichan GL, Kubar OI, Leavitt FJ, Tai MC, *et al.* Religious exception for vaccination or religious excuses for avoiding vaccination. *Croat Med J.* 2016; 57(5): 516.
- Bereda G. Medications used for SARS-CoV-2 prophylaxis and treatment. *Ann Pharmacol Pharm.* 2022; 7 (1): 1203.
- COVID-19 vaccine deployment: Behaviour, ethics, misinformation and policy strategies. The Royal Society and the British Academy. 2020.
- Razai MS, Osama T, McKechnie DG, Majeed A. COVID-19 vaccine hesitancy among ethnic minority groups. *BMJ.* 2021; 372.
- Factors influencing COVID-19 vaccine uptake among minority ethnic groups, 17 December 2020. UK Government Scientific Advisory Group for Emergencies (SAGE). 2021.
- Strategies for addressing vaccine hesitancy-a systematic review: WHO SAGE working group dealing with vaccine hesitancy. World Health Organization (WHO). 2014.
- Afolabi AA, Ilesanmi OS. Dealing with vaccine hesitancy in Africa: The prospective COVID-19 vaccine context. *Pan Afr Med J.* 2021; 38.
- Nazlı ŞB, Yiğman F, Sevindik M, Deniz Özturan D. Psychological factors affecting COVID-19 vaccine hesitancy. *Ir J Med Sci.* 2022; 191(1): 71-80.
- Rieger MO. Triggering altruism increases the willingness to get vaccinated against COVID-19. *Soc Health Behav.* 2020; 3(3): 78.
- Johnson MO. Personality correlates of HIV vaccine trial participation. *Pers Individ Differ.* 2000; 29(3): 459-467.
- Hornsey MJ, Harris EA, Fielding KS. The psychological roots of anti-vaccination attitudes: A 24-nation investigation. *Health Psychol.* 2018; 37(4): 307.
- Habersaat KB, Jackson C. Understanding vaccine acceptance and demand-and ways to increase them. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz.* 2020; 63(1): 32.
- Almaghaslah D, Alsayari A, Kandasamy G, Vasudevan R. COVID-19 vaccine hesitancy among young adults in Saudi Arabia: A cross-sectional web-based study. *Vaccines.* 2021; 9(4): 330.

26. Coustasse A, Kimble C, Maxik K. COVID-19 and vaccine hesitancy: A challenge the United States must overcome. *J Ambul Care Manage.* 2021; 44(1): 71-75.
27. Rutten LJ, Zhu X, Leppin AL, Ridgeway JL, Swift MD, Griffin JM, *et al.* Evidence-based strategies for clinical organizations to address COVID-19 vaccine hesitancy. *Mayo Clin Proc.* 2021; 96(3): 699-707.
28. Jacobson RM, Sauver JL, Rutten LJ. Vaccine hesitancy. *Mayo Clin Proc.* 2015; 90(11): 1562-1568.
29. Kreps S, Prasad S, Brownstein JS, Hswen Y, Garibaldi BT, Zhang B, *et al.* Factors associated with US adults' likelihood of accepting COVID-19 vaccination. *JAMA Netw Open.* 2020; 3(10): e2025594.
30. Malik AA, McFadden SM, Elharake J, Omer SB. Determinants of COVID-19 vaccine acceptance in the US. *EClinicalMedicine.* 2020; 26: 100495.
31. Pogue K, Jensen JL, Stancil CK, Ferguson DG, Hughes SJ, Mello EJ, *et al.* Influences on attitudes regarding potential COVID-19 vaccination in the United States. *Vaccines.* 2020; 8(4): 582.
32. Reiter PL, Pennell ML, Katz ML. Acceptability of a COVID-19 vaccine among adults in the United States: How many people would get vaccinated? *Vaccine.* 2020; 38(42): 6500-6507.
33. Trogen B, Oshinsky D, Caplan A. Adverse consequences of rushing a SARS-CoV-2 vaccine: Implications for public trust. *JAMA.* 2020; 323(24): 2460-2461.
34. Fisher KA, Bloomstone SJ, Walder J, Crawford S, Fouayzi H, Mazor KM. Attitudes toward a potential SARS-CoV-2 vaccine: A survey of US adults. *Ann Intern Med.* 2020; 173(12): 964-973.
35. Khamsi R. If a coronavirus vaccine arrives, can the world make enough. *Nature.* 2020; 580(7805): 578-580.
36. Kirkcaldy RD, King BA, Brooks JT. COVID-19 and postinfection immunity: limited evidence, many remaining questions. *JAMA.* 2020; 323(22): 2245-2246.
37. Yi Y, Lagniton PN, Ye S, Li E, Xu RH. COVID-19: What has been learned and to be learned about the novel coronavirus disease. *Int J Biol Sci.* 2020; 16(10): 1753.
38. Feng W, Zong W, Wang F, Ju S. Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2): A review. *Mol Cancer.* 2020; 19(1): 1-4.
39. Lurie N, Saville M, Hatchett R, Halton J. Developing COVID-19 vaccines at pandemic speed. *N Engl J Med.* 2020; 382(21): 1969-1973.
40. Corey L, Mascola JR, Fauci AS, Collins FS. A strategic approach to COVID-19 vaccine R&D. *Science.* 2020; 368(6494): 948-950.
41. Soares P, Rocha JV, Moniz M, Gama A, Laires PA, Pedro AR, *et al.* Factors associated with COVID-19 vaccine hesitancy. *Vaccines.* 2021; 9(3): 300.
42. SAGE working group dealing with vaccine hesitancy. World Health Organization (WHO). 2012.
43. Kwok KO, Li KK, Wei WI, Tang A, Wong SY, Lee SS. Influenza vaccine uptake, COVID-19 vaccination intention and vaccine hesitancy among nurses: A survey. *Int J Nurs Stud.* 2021; 114: 103854.
44. Mose A, Haile K, Timerga A. COVID-19 vaccine hesitancy among medical and health science students attending Wolkite University in Ethiopia. *PLoS One.* 2022; 17(1): e0263081.
45. Saied SM, Saied EM, Kabbash IA, Abdo SA. Vaccine hesitancy: Beliefs and barriers associated with COVID 19 vaccination among Egyptian medical students. *J Med Virol.* 2021; 93(7): 4280-4291.
46. Kanyike AM, Olum R, Kajjimu J, Ojilong D, Akech GM, Nassozi DR, *et al.* Acceptance of the coronavirus disease-2019 vaccine among medical students in Uganda. *Trop Med Health.* 2021; 49(1): 1-1.
47. MacDonald NE. Vaccine hesitancy: Definition, scope and determinants. *Vaccine.* 2015; 33(34): 4161-4164.
48. Lucia VC, Kelekar A, Afonso NM. COVID-19 vaccine hesitancy among medical students. *J Public Health (Oxf).* 2021; 43(3): 445-449.