



Knowledge, attitude, and acceptance of pregnant women's regarding the COVID-19 vaccine in government hospital attached to SMS MC Jaipur Rajasthan: a cross-sectional study

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Abstract

Background: This study determined the knowledge, attitudes, and practice regarding COVID-19 and assessed the acceptance of the COVID-19 vaccine among pregnant women's and the general population

Methods: Cross-sectional study was conducted using convenience sampling in from December 1 to 18, 2020 among the general population and pregnant women. Data on demographic characteristics, COVID-19 vaccination-related concerns, knowledge, attitudes, and practice regarding the COVID-19 vaccine were collected using a self-administered survey.

Results

Conclusions: Acceptance of the COVID-19 vaccine is an essential determinant of vaccine uptake and the likelihood of controlling the COVID-19 pandemic. Developing strategies to decrease public hesitation and increase trust is vital for implementing vaccination programs.

Keywords: COVID-19, SARS-CoV-2, Vaccine, Acceptance, Knowledge, Attitude, pandemics

INTRODUCTION

The recognizing the role of extensive immunization as a global public-health goal for preventing, containing and stopping transmission of SARS-CoV-2^[2]. Vaccination is considered a crucial advance in the field of public health, where it has succeeded in the eradication and control of many infectious diseases worldwide (e.g., smallpox, polio, and rubella)^[3,4]. Improvement in the routine vaccination program over the past two decades and has been successful in interrupting the endemic transmission of vaccine-preventable diseases for more than a decade due to sustained, high-quality surveillance and immediate prevention and control measures^[5,6]. The routine vaccination program has an established system for the monitoring and follow-up of adverse events associated with vaccines.^[7,8] The COVID-19 pandemic evolved worldwide, leading everyone to pursue solutions, including effective and safe vaccines to control the virus and minimize its impact^[10]. As few vaccines got the emergency approval for use, it became important in the process of deploying them to explore the community's knowledge and attitude toward such intervention^[11]. Knowledge regarding COVID-19 influences the intake of vaccines, as shown in our study. Individuals who showed high knowledge regarding the disease, its symptoms, and modes of transmission indicated that they were more intent to be vaccinated against COVID-19. This is similar to findings from other studies which showed that high knowledge was significantly associated with a more positive attitude and perception^[16,17].

Purpose of study: One purpose of our KAP survey was to identify the knowledge-behavior gap and consequently determine the effective intervention and implement it.

Materials and Methods

Study Design and Participants

This cross-sectional, survey was conducted with randomly selected individuals. Interviews were conducted after verbal consent. If a participant did not understand any of the languages, they were excluded. The interviews were conducted in the period.....

Sample Size Calculation

To determine the study sample size, we considered that >95% of the general population would present a high level of knowledge regarding COVID-19.

Inclusion criteria: participants who give consent.

Exclusion criteria: some were excluded from the study due to many reasons, such as no response, busy , run up in the middle of the interview, unqualified respondents <18 years, and respondents who did not understand .

Questionnaire and Data Collection

A structured questionnaire was designed. The first part comprised questions regarding personal demographic information, such as nationality, age, gender, living governorate, education level, occupation, place of residence, and past medical history of chronic illness.

RESULT

Table: Sociodemographic Characteristics

Questioner:

Knowledge										
I think vaccines are important for health of children?										
Yes										
No										
I don't know										
Yes										
No										
I don't know										
Being vaccinated against infectious disease reduces the morbidity and mortality of individuals?										
Yes										
No										
I don't know										
Usually, vaccination against infectious diseases is protective and improving the quality of life, especially for people with low immunity and those who suffer from chronic diseases?										
Yes										
No										
I don't know										
Attitude										
2.1 It is possible to find an effective vaccine that could protect against the COVID-19?										
Yes										
No										
2.2 If an effective vaccine was found, do you think it could be readily available for everyone?										
Yes										
No										
2.3 The benefits of vaccines usually outweigh the risks?										
Yes										
No										
I don't know										
2.4 Do you think the COVID-19 vaccine should be afforded to everyone for free?										
Yes										

No										
2.5 If the COVID-19 vaccine is available for sale, would you buy it?										
Yes										
No										
Many be										
2.6 If you have children, have any of your children ever received a vaccine supposed to protect against diseases that occur during childhood?										
Yes										
No										
I do not have children										
Acceptance										
3.1 If a COVID-19 vaccine is available with an efficacy of 95%, would you be a candidate for receiving all shots?										
Yes										
No										
3.2 If a COVID-19 vaccine is available with an efficacy of 70%, would you be a candidate for receiving the vaccine?										
Yes										
No										
3.3 If a COVID-19 vaccine is available with an efficacy of 50%, would you be a candidate for receiving the vaccine?										
Yes										
No										
3.4 If a COVID-19 vaccine was available with the desired efficacy, would you encourage your parents to get the vaccine?										
Yes										
No										
3.6 Are you planning to receive a seasonal flu vaccine in the next year?										
Yes										
No										

DISCUSSION

The reasons for COVID-19 vaccine acceptance and hesitancy remain complex. As new SARS-CoV-2 variants emerge, adding further complexity^[9], and new vaccines come to the market, it will be important to maintain a delicate balance in communicating what is known and acknowledging the uncertainties that remain. Reporting of adverse events after immunization is a key component of monitoring the implementation of vaccination programs, and although it is important for these events to be documented and reported, intensive media coverage may also discourage people from being vaccinated.14, The world shares a collective responsibility in fighting this pandemic; therefore, continued research on COVID-19 vaccine acceptance and hesitancy should be a priority. A global survey regarding COVID-19 vaccine acceptance in 19 countries with 13,426 respondents found that acceptance varies between countries and income level, with China having 90% and Russia, 55% potential public acceptance of the vaccine^[18]. a recent study published in December 2020 of 1878 US individuals found that 52% were very likely, and 27% somewhat likely, to receive COVID-19 vaccinations, while 7% would not take the vaccine^[19]. Another study conducted involving the Saudi Arabian general population found that 64.7% were willing to take the vaccine^[20]. Health literacy and awareness greatly influence intention to act upon health a recommendation, which is crucial to avoid such negative consequences of the pandemic, such as waste disposal of protective gear and restrictive hygienic practices aimed to reduce the COVID-19 public health burden^[21,22].

Hesitation, spreading rumors, and fake news can affect public mentality and vaccine decisions. A known example is the 2003–2004 Nigerian boycott of the polio vaccine that resulted in a surge of the disease^[14,15]. This will help promote vaccination and establish trust between the general population and health authorities.

CONCLUSION

To increase precautionary behaviors among the public, health officials and policymakers must promote knowledge and efficacy belief. Future interventions and policies should also be developed in a ‘person-centered’ approach, targeting vulnerable subgroups, embracing them, and closing the gap of KAP toward COVID-19. Our study demonstrated the knowledge, attitudes, and practices pertaining to the COVID-19 pandemic and COVID-19 vaccine-related knowledge, attitudes, and acceptance in the Libyan population during the ongoing pandemic. The current study was able to provide understanding, attitudes, and practices regarding COVID-19. Addressing the public concerns, raising awareness about COVID-19 vaccination as a disease-control method, addressing conspiracy theories, reducing hesitation toward vaccination, and increasing efforts toward to provide vaccines in countries with limited resources.

REFERENCES

1. World Health Organization. <https://covid19.who.int/> (accessed 30 June 2021).
2. World Health Organization. https://apps.who.int/gb/ebwha/pdf_files/WHA73/A73_R1-en.pdf (19 May 2020).
3. Dubé, E. Addressing vaccine hesitancy: The crucial role of healthcare providers. *Clin. Microbiol. Infect.* 2017, 23, 279–280. [Google Scholar] [CrossRef]
4. Kabamba Nzaji, M.; Kabamba Ngombe, L.; Ngoie Mwamba, G.; Banza Ndala, D.B.; Mbidi Miema, J.; Luhata Lungoyo, C.; Lora Mwimba, B.; Cikomola Mwana Bene, A.; Mukamba Musenga, E. Acceptability of vaccination against COVID-19 among healthcare workers in the Democratic Republic of the Congo. *Pragmat. Obs. Res.* 2020, 11, 103–109. [Google Scholar] [CrossRef]
5. MoH, Oman. Oman Vaccine Action Plan: 2017–2020; Immunization Section, Department of Communicable Diseases: Muscat, Oman, 2020. [Google Scholar]
6. Al-Abri, S.; Al-Rawahi, B.; Abdelhady, D.; Al-Abaidani, D. Effective vaccine management and Oman's healthcare system's challenge to maintain high global standards. *J. Infect. Public Health* 2018, 11, 742–744. [Google Scholar] [CrossRef] [PubMed]
7. Awaidy, S. Impact of strategies and activities for reducing morbidity and mortality of vaccine-preventable diseases in Oman: A status report. *J. Vaccines Immun.* 2015, 3, 1–6. [Google Scholar] [CrossRef]
8. Patel, P.K.; Al-Rawahi, B.; Al Jawari, A.; Al-Abaidani, I.; Al-Abri, S. Surveillance of adverse events following immunization in Oman, 2006–2015. *East. Mediterr. Health J.* 2018, 24, 119–126. [Google Scholar] [CrossRef] [PubMed]
9. Abdool Karim, S. S. & de Oliveria, T. N. *Engl. J. Med.* **384**, 1866–1868 (2021).
10. Mcateer, J.; Yildirim, I.; Chahroudi, A. The vaccines act: Deciphering vaccine hesitancy in the time of COVID-19. *Clin. Infect. Dis.* 2020, 71, 703–705. [Google Scholar] [CrossRef]
11. WHO. WHO SAGE Values Framework for the Allocation and Prioritization of COVID-19 Vaccination; World Health Organization: Geneva, Switzerland, 2020; Available online: <https://www.who.int/publications/i/item>
12. United Nations. <https://news.un.org/en/story/2021/04/1089972> (16 April 2021).
13. National Center for Statistic and Information, Assessment of KAP towards COIVD-19 Disease. 2020. Available online: www.ncsi.gov.om (accessed on 20 March 2021).
14. Ghinai I, Willott C, Dadari I, Larson HJ. Listening to the rumours: what the northern Nigeria polio vaccine boycott can tell us ten years on. *Glob Public Health.* 2013;8(10):113850. <https://doi.org/10.1080/17441692.2013.859720>.
15. Heymann DL, Sutter RW, Aylward RB. Polio eradication: interrupting transmission, towards a polio-free world; 2006.
16. Papagiannis, D.; Malli, F.; Raptis, D.G.; Papathanasiou, I.V.; Fradelos, E.C.; Daniil, Z.; Rachiotis, G.; Gourgoulisanis, K.I. Assessment of knowledge, attitudes, and practices towards new coronavirus (SARS-CoV-2) of health care professionals in Greece before the outbreak period. *Int. J. Environ. Res. Public Health* 2020, 17, 4925. [Google Scholar] [CrossRef] [PubMed]
17. Ul Haq, N.; Hassali, M.A.; Shafie, A.A.; Saleem, F.; Farooqui, M.; Aljadhey, H. A cross sectional assessment of knowledge, attitude and practice towards Hepatitis B among healthy population of Quetta, Pakistan. *BMC Public Health* 2012, 12, 692. [Google Scholar] [CrossRef] [PubMed]
18. Lazarus JV, Ratzan SC, Palayew A, et al. A global survey of potential acceptance of a COVID-19 vaccine. *Nat Med.* 2021;27:225–8. <https://doi.org/10.1038/s41591-020-1124-9>.
19. Khubchandani J, Sharma S, Price JH, Wiblishauser MJ, Sharma M, Webb FJ. COVID-19 vaccination hesitancy in the United States: a rapid national assessment. *J Community Health.* 2021;46(2):270–7. <https://doi.org/10.1007/s10900-020-00958-x>.
20. Al-Mohaithef M, Padhi BK. Determinants of COVID-19 vaccine acceptance in Saudi Arabia: a web-based National Survey. *J Multidiscip Healthc.* 2020;13: 1657–63. <https://doi.org/10.2147/JMDH.S276771>.
21. Islam SMD, Safiq MB, Bodrud-Doza M, Mamun MA. Perception and Attitudes Toward PPE-Related Waste Disposal Amid COVID-19 in Bangladesh: An Exploratory Study. *Front Public Health.* 2020;8:592345. <https://doi.org/10.3389/fpubh.2020.592345>.
22. Islam SMD-U, Mondal PK, Ojong N, Bodrud-Doza M, Siddique MAB, Hossain M, Mamun MA: Water, sanitation, hygiene and waste disposal practices as COVID-19 response strategy: insights from Bangladesh. *Environ Dev Sustain.* 2021:1–22. <https://doi.org/10.1007/s10668-020-01151-9>.

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