Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Editorial

Acceptance of COVID-19 vaccines among medical teams in Egypt

The COVID-19 outbreak poses a grave threat to human health [1]; thus, investigators are competing to develop and study COVID-19 vaccines [2]. Once vaccines become available, the success of immunization will still depend on the community's acceptance of the vaccines. Although most people would agree to receive a novel vaccine against COVID-19 [3–5], approximately a quarter of them would refuse [4,6,7].

In 2020, international organizations and national regulatory authorities in collaboration with multinational pharmaceutical industries directed their efforts for developing COVID 19 vaccines as the pandemic continues. By the end of 2020, five vaccines have been authorized to be used on an emergency use authorization (EUA) basis in the USA [8]. In Egypt and up till now the preparation the Ministry of Health offers two vaccines for its population (an inactivated vaccine and a vector based vaccine

Healthcare workers (HCWs) can be both source of infection and illness victims [9]. Kassem et al. [10] reported that the point prevalence of COVID-19 in gastroenterology HCWs is 13.5% in a tertiary care facility in Egypt. Thus, HCWs should be protected from COVID-19 contagion, not only to protect themselves but also for protection of their families and patients as well. The World Health Organization (WHO) had planned to prioritize healthcare professionals for COVID-19 immunization [1]. However, the issue of obligatory vaccination against COVID-19 for healthcare professionals remains debatable.

After clinical development, COVID-19 immunization will still need acceptance by the community. The success of COVID-19 vaccination programs will rely heavily on the public's willingness to accept the vaccine. In 2019, WHO identified 10 global health hazards, which include vaccine indecision and a pandemic risk [11]. Unfortunately, the world is currently facing both hazards. Vaccination hesitancy refers to delayed acceptance or rejection of vaccines regardless of the accessibility of vaccination services [12].

Controversy exists among different medical teams, including gastroenterologists and pulmonologists, regarding COVID-19 vaccination. Hence, Egyptian gastroenterologists and pulmonologists conducted a cross-sectional online-based survey between December 1, 2020 and January 1, 2021. This online survey consisted of closed-ended questions. The questionnaire, which was developed on Google Forms, was distributed through social media and WhatsApp groups.

This survey aimed to describe the existing COVID-19 vaccine approval landscape among the HCWs and medical students and to identify the most probable cause of agreement or disagreement.

A total of 496 HCWs and medical students answered the questionnaire. Geographically, 98 (19.8%), 115 (23.2%), 68 (13.7%), 77 (15.5%), 72 (14.5%), and 66 (13.3%) respondents were from Assiut, Cairo, Alexandria, South Valley (Aswan, Luxor, Qena), Lower Egypt (Tanta, Kafrelsheikh, Zagazig), and Suez Canal and Red Sea cities, respectively. Among these respondents, 34.9% were male, and 65.1% were female. Concerning age groups 55%, 37.5%, 7.1%, and 0.4% were 18–45, 26–45, 46–65, and >65 years old, respectively.

In terms of profession, among the 488 participants responded that they were medical students (39.8%), physicians (30.9%), nurses (17.2%), medical school staff members (4.5%), laboratory workers (4.5%), and technicians (3.1%).

With regard to COVID-19 vaccination acceptance (488 responses), only 66 (13.5%) totally agreed, 158 (32.4%) somewhat agreed, and 64 (13.2%) were undecided. Therefore, 200 (40.9%) disagreed to take the vaccine.

These results indicate that the medical teams are generally willing to accept the vaccine; however, the "somewhat agree" statement may indicate hesitancy and background-specific concern in accepting the new vaccine. This hesitancy was confirmed when the participants were asked about the causes of vaccination disapproval. The causes of disapproval were as follows: unsafe nature of the vaccine, fear of genetic mutation, uncertainty about the recent techniques, and belief that the vaccine is not effective (57%, 20.2%, 17.7%, and 16.6%, respectively). Furthermore, 57% of the participants said that the vaccine is "not safe clinically," indicating the lack of reassurance regarding vaccine safety and future unknown adverse events.

According to our survey, although a higher percentage of the participants are willing to accept the vaccine, the acceptance is considered low. The vaccine hesitancy among Egyptian medical teams can be the major barrier to the widespread acceptance of COVID-19 vaccination in Egypt. A global survey with 13,426 participants from 19 countries assessed the potential of COVID-19 vaccine acceptance and showed that differences in the acceptance were 80% in Asian nations and <55% in Russia [13]. Therefore, the acceptance of the vaccine is expected to be low in Egypt, considering that vaccine hesitancy exists globally.

Taken together, fear from the rapid release of the vaccine to the public and the lack of research on Arab populations may have led to increased uncertainty about the importance of receiving the newly developed vaccines. Vaccine hesitancy is common in HCWs and medical students in Egypt, indicating an alarming barrier to vaccine acceptance in the rest of the population. Therefore, conducting campaigns is urgently needed to increase awareness of the importance of COVID-19 vaccines.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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