

Short Communication

Pharmacy student's view about COVID-19 vaccination in Libya

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Abstract

Vaccination hesitation may affect the national efforts to slow down the spread of coronavirus among the population. This study was aimed to explore the views of final year pharmacy students at Faculty of Pharmacy, Elmergib University, Al khums, Libya towards COVID-19 vaccination. The study was conducted before the vaccine becomes available in Libya. A semi-structured questionnaire was distributed on March 14, 2021 to the fourth- year pharmacy students at Elmergib University, Al khums Libya. Results showed a high degree of hesitancy towards vaccination against this virus (52.6%). Student's participants who said they would take the vaccine probably have said that because of their stress that caused by COVID-19 pandemic (47.4%). With regard to the gender, the participants' views had no significant difference between male and female students on whether to take the vaccine or not ($P = 0.825$). In conclusion, hesitations towards vaccination and stress caused by student fear from the virus need to be addressed to minimize public reluctant to take the vaccine and to improve the education process during the pandemic.

Keywords: Corona virus, COVID-19, Libya, pharmacy, students, vaccine

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Introduction

Vaccination is considered a safe and effective tool to prevent infectious diseases. In case of COVID -19, the full picture of transmission, prevention and treatment is not yet fully understood by researchers. In addition, the general public are less compliance with lockdown, social distancing and wearing face masks. This makes the vaccination is the most effective way to slow down the virus transmission and to safe lives around the world. However, vaccination hesitation is an issue that scientists need to consider and find ways to minimize it through providing a clear and complete information to the general public. Even before the COVID-19 pandemic has started, there was always a debate between pro and anti-vaccination groups [1, 2]. Regarding COVID-19, anti-vaccination group thinks that media and social media platforms have exaggerated the risk of this pandemic [3, 4]. There are several COVID-19 vaccinations have now

been approved under the emergency use because the virus has much spread everywhere on all the countries and millions of lives were lost [5]. Healthcare workers and students seem to have a high level of hesitancy [6, 7]. Emergency approval, lack of transparency and lack of information were the most cited reasons for vaccination hesitation [6]. Healthcare labors are the frontline workers against this pandemic, however, if they are reluctant to take up the vaccine, they put themselves and their patients at a high risk. Moreover, their views may negatively affect the members of the general public who are willing to take the vaccine. Thus, this study was aimed to explore views about the intention of the pharmacy students to vaccinate, who are soon will be healthcare providers.

Materials and methods

A pre-validated semi-structured questionnaire was distributed to 43 fourth-year pharmacy students at Elmergib University, Al khums, Libya, during their last

day (March 14, 2021) of their undergraduate study. Ethical approval has been received from University Ethical Committee (2020). In order to participate in this study, each study participant had invited to participate willingly and given a written informed consent. The students were told that answering the questionnaire is not mandatory and they have the right to not to answer any or all of the questions. They were also instructed to feel free in writing the name or student-ID number. The questionnaire was distributed and collected by an independent supervisor, therefore, the privacy and confidentiality of respondents and non-respondents have fully been protected. The participants were considered consented if they filled the questionnaire. The questionnaire was validated through a pilot version which were sent to five academic staff members at Elmergib University. After the feedback from the academic staff members, the final questionnaire contained 13 questions. The first four questions were about demographic data. Questions number five, six, seven and eight were about their views of COVID-19 vaccination. The rest of the questions were about their opinions and about the best way of protection. The last two questions were about if they knew people who were affected and / or died as a result of coronavirus. A Pearson Chi-square test was applied to find the gender difference on participants' views on whether to take the vaccine or not. A statistical Package (IBM SPSS Statistics, version 25) was used in this study.

Results

The response rate was 88.4% (38 out of 43 filled the questionnaire). The female respondents were more than male responders 68.4% vs 31.6%, respectively. The dominant age group was 20 - 29 years (**Table 1**).

Table 1: Demographic data of participants

Item	n (%)	
Gender	Female	26 (68.4)
	Male	12 (31.6)
Age group (years)	20-29	36 (94.7)
	≥ 30	02 (5.3)

n: number of participants

The main question was (**will you take the vaccine for coronavirus if it is available?**) where it had two answers (**Yes I will take the vaccine** or **No I will not take the vaccine**). The answer (Yes) had six options which were:

it will protect me, it is safe, minimizes my stress about being infected by the virus, makes me work without being worried to transfer the infection to my family, makes me work without being worried about my customers or other: please specify. The answer (No) also had six options which were: it is not effective, it is not safe, short acting, costly, I do not like vaccination generally, or other: please specify.

More than half of the participants stated that they would not take the vaccine (52.6%). They cited the following reasons for their choice; it is not safe (7.9%) and I do not like vaccination generally (7.9%). The rest of the respondents cited both reasons and/or selected all the provided options. Interestingly, no one selected it is not effective. Those who said that they will take the vaccine (47.4%) cited the following reasons: it will protect me from infection (10.5%), safe (5.3%), minimizes my stress (10.5%), I can work without being worried about my family (10.5%). The rest of the respondents cited more than one reason for taking the vaccine.

The gender difference was found to have no effect on participants' views on whether to take the vaccine or not take it ($P = 0.825$, using Pearson Chi-square test). The male respondents were equally distributed to "Yes" and "No" (six on each side). For female respondents, the situation was similar where 12 participants selected "Yes" and 14 participants selected "No".

Discussion

This study explored the personal views of future pharmacists (i.e., the fourth year is the year of graduation). Therefore, their attitudes towards vaccination are important not only for themselves but also for their pharmacy customers when they start their career. COVID-19 vaccine is not mandatory yet in Libya, thus people would have to choose to take the vaccine or not. For fully protection against a pandemic virus, vaccination of the majority of the population must take place to reach the herd immunity. According to the results of the present study, there is a high level of hesitation among the respondents where more than half of them said they will not take the vaccine. This refusal of vaccination is more than that reported by other studies. For example, a French study [8] found only 26% of their respondents were not willing to take the vaccine, if it is available, compared to 52.6% of this study respondents. In an Australian study [9], more people said they will take the vaccine compared to our respondents. These differences between the present findings and the previous reported studies may be explained by tendency of French and Australian people to

take the flu vaccine more than Libyans [10], or may be due to a greater confidence in the government [9]. As future healthcare workers, participants of the present study are at high risk of infection and they may spread hesitation to their families and customers. Similarly, the French study also found that people who are at more risk of infection had more hesitation to vaccination [8]. Therefore, health officials in Libya must work to address the reason(s) beyond vaccination hesitation and supply a clear and trustful information about COVID-19 vaccines. Some respondents cited that the vaccine is not safe as a reason of their refusal to vaccination. This may come from the fact that the vaccine approval was under emergency approval. However, according to the U.S. Food and Drug Administration (FDA) the “efforts to speed vaccine development to address the ongoing COVID-19 pandemic have not sacrificed scientific standards, integrity of the vaccine review process, or safety” [11]. News reports about the postponing of some vaccines may have increased the participant’s worries [12, 13]. However, within few months, millions of people around the world have taken the vaccine without major incidences that would put public health at risk.

Another finding of the present study was 10.5% of the participants agreed to take the vaccine, if it is available, because it “minimizes my stress”. This may reflect the fear and worry from this pandemic among those students. Therefore, it seems that social and governmental support are needed to tract this issue among students and may be the public.

Limitations of the present study included several points. It was conducted before vaccine availability in the country, in which participants’ views may differ if the vaccine was available. The sample size is small and the validation process of the questionnaire has only based on feedbacks from five members of the academic teaching staff at the Elmergib University. However, the response rate was high, and the study results may be applicable to the general public particularly young adults. Finally, since the participants are young adults, who tend to have less intention to uptake the vaccine [14], thus, the results of this study may not reflect the attitudes of elderly people who feel that their risk is higher [14].

Conclusion

Vaccination hesitation among university students and future healthcare workers was clearly notable among participants of this study. More efforts must be done to overcome this uncertainty through collaborative work between health and education officials. The effect of

stress as a result of students fear from the virus should also be addressed by specialists as may affect the education process.

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Conflict of Interest

The author declares no conflict of interest to reveal.

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