

Student's attitude toward COVID-19 vaccine in health departments at King Khalid University, Abha, Saudi Arabia

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SUMMARY

Objective: This study aims to investigate Student's attitude toward COVID-19 vaccine in health departments at King Khalid University, Saudi Arabia.

Methods: A cross-sectional, self-administered questionnaire-based survey. The study includes 258 health department students (male and female) in Abha, Khamis Mushait and Muhayil of Aseer region. Statistical analysis was performed using descriptive statistical analysis.

Results: The total 258 respondents participated in the research. The female respondents were 87% and male respondents were 13%. Mean of the acceptance \pm S.D was 23.45 ± 4.5 . 41.1% of the respondents accepted to take free vaccine while 41.5% responded to take vaccine even if it is not free, 17.4% totally rejected to take the vaccine (either free or not).

Conclusion: This study highlights that most of the participants of this study agreed to take COVID-19 vaccine. The rest of the respondents were reluctant to receive the vaccine. They need more health and media education about the vaccine benefits.

Key words: COVID-19, vaccine, vaccination, SARS-CoV-2, coronavirus, clinical trials, MERS-CoV, ARDS.

INTRODUCTION

In the last few decades, there have been several global viral pandemic. Recently, coronavirus disease (COVID-19) has become a viral pandemic. In December 2019, people in Wuhan, in China's Hubei Province, reported many linked cases of unexplained pneumonia-like symptoms [1]. The etiological agent of this pneumonia was later discovered to be a virus, and was named 2019-nCoV [2]. This virus belongs to the same family of β -coronaviruses that caused the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 and the Middle East Respiratory Syndrome (MERS) outbreak in 2012 [3,4]. During 2020, the world was devastated by the overwhelming effects of the COVID-19 pandemic, with more than 1.8 million deaths and the exhaustion of healthcare systems, in addition to its negative socio-economic and psychological impacts [5-10].

Pfizer and its German partner BioNTech applied to the Food and Drug Administration to authorize its corona-virus vaccine for emergency use on November 20, 2020. The company estimates it is 95% effective. They plan on making 50 million doses available by the end of December. The United States will receive 25 million then, 30 million in January, and 35 million in February and March. Neergaard (2020) reported that Moderna will apply for emergency use of its vaccine that they state is as effective as Pfizer's within weeks [6-15].

The study showed that a surveyed 258 college students to assess why they were reluctant to be vaccinated for the H1N1 influenza. College students had one of the highest frequency rates for infection; however, 8% received the H1N1 vaccine. Yang found that most students were not knowledgeable about the basic details about H1N1 and the H1N1 vaccine. Another surveyed 735 college students to decide whether they will decide to be vaccinated for the COVID-19 coronavirus vaccine. They found that 633 (86.1%) students reported that they would be vaccinated and 102 (13.9%) indicated that they would not or were not sure [15-20].

The Kingdom of Saudi Arabia (KSA) was quick to adopt unprecedented measures to control the transmission; for instance, the KSA placed restrictions on the inbound Umrah pilgrimage on February 27, 2020. The kingdom also suspended the recently introduced e-Visa program, banned the inbound travel of persons from COVID-19-affected countries, and restricted the travel of Gulf Cooperation Council (GCC)

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citizens who had recently travelled to COVID-19-affected countries [21]. Finally, all schools, universities, and mosques throughout the kingdom were closed [22,23]. Information does change perceptions. Steps need to be taken now to determine if college students will get the vaccine in order to design information campaigns geared towards them.

METHODOLOGY

A descriptive cross-sectional approach was for this study. The study was conducted during the period from September 2020 to January 2021. All students filled enrolled in the selected courses/levels were included in this study. Those who filled the questionnaire were included in the study. Information was gathered utilizing organized poll which created by the specialists after intensive writing survey and master's counsel. The poll information incorporated individual's socio-segment information. Board specialists looked into the survey autonomously for content legitimately and every revealed change and adjustments were applied till the last instrument accomplished. A sequential accommodation examining strategy was utilized due. Ethical endorsement was gotten from REC of the school and educated assent was taken from the members.

After information were extricated, it was overhauled, coded and taken care of factual programming IBM SPSS variant 22 (SPSS, Inc. Chicago, IL). Chi-square tests used for comparisons at 0.05 level of significance.

RESULTS

The total 258 respondents were participated in the research. Mean ± S.D was 23.45 ± 4.5. The female respondents were 87% and male respondents were 13%. 41.1% of the respondents stated that "I'll only take the vaccine if it's free" 41.5% responded that "I will get the vaccine even if it is not free" 17.4% stated that "I will never get the vaccine (either free or not)" Table 1.

Table 2 depicted that majority of the respondents got information from 34.5% and 33.7% social media and WHO, CDC respectively. Table 3 depicted that 45.7% of the respondents having believe on conspiracy theories.

Table 4 depicted that 78.7% of the respondents agreed that they have sufficient knowledge to make decision regarding COVID-19 vaccination.

Tab. 1. Overall survey on vaccination decision		COVID-19 vaccination decision	Frequency	Percent
Valid		No, I will never get the vaccine (either free or not)	45	17.4
		Yes, I will get the vaccine even if it is not free	107	41.5
		Yes, I'll only take the vaccine if it's free	106	41.1
		Total	258	100

Tab. 2. Source of Information on vaccination		Source of information	Frequency	Percent
Valid		Internet search	21	8.1
		Media	31	12
		Other	30	11.6
		Social media	89	34.5
		WHO , CDC	87	33.7
		Total	258	100

Tab. 3. Conspiracy theories on COVID vaccination		Do you believe about conspiracy theories?	Frequency	Percent
Valid		No	140	54.3
		Yes	118	45.7
		Total	258	100

Tab. 4. Overall information on vaccination decision		My information about the disease is sufficient to make a decision about taking the vaccine	Frequency	Percent
Valid		No	55	21.3
		Yes	203	78.7
		Total	258	100

Tab. 5. Gender does the availability of the vaccine free of charge affect your decision? Cross tabulation		Does the availability of the vaccine free of charge affect your decision?			Total
Gender	Gender	No, I will never get the vaccine (either free or not)	Yes, I will get the vaccine even if it is not free	Yes, I'll only take the vaccine if it's free	
Gender	Female	41	97	86	224
	Male	4	10	20	34
Total		45	107	106	258

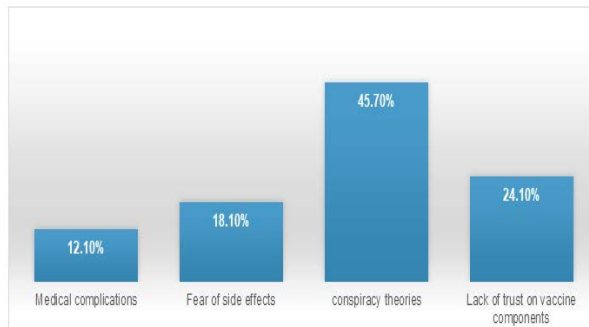


Fig.1. Conspiracy theories on COVID vaccination

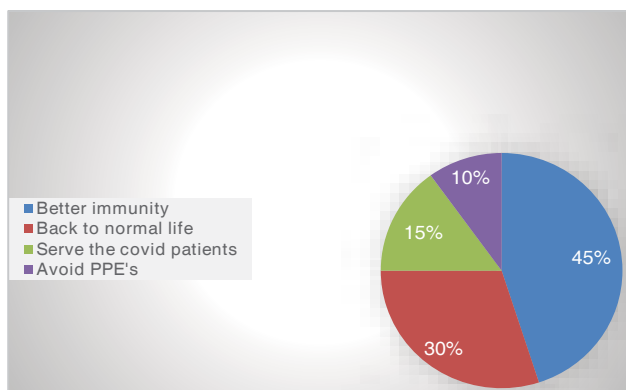


Fig.2. Motivation factor for vaccination

Figure 1 depicted that conspiracy theories were the major barriers in opting the vaccination procedure. Figure 2 depicted that 45% will go for vaccination to enhance immunity, 30% for back to normal life.

Table 5 depicted that we did not observe significant gender differences while comparing vaccination decisions.

DISCUSSION

Our results showed that the large number of respondents is accepting to be vaccinated. it's clear from the students' responses. Limitations to this that their main concern is fear of the presumptive inadequate clinical trials on the vaccines and hence the adverse effects of all vaccines are not well elaborated. The lack of confidence about the vaccine benefits has been observed in the quarter of the study sample (24.1%). This could be attributed to the lack of scientific true information that the

benefits of the vaccine outweigh its risks.

Many high-profile people locally, statewide, and nationally are vaccinated publicly on television, within the newspapers and social media. This is often important for the giant parts of the population. Unfortunately, college students get their news online [24, 25] which have no scientific basis. Additionally, students who provided comments mentioned vaccine politicization. The need for information transparency is the pillar of positive vaccine attitude [26-29]. Our study suggested that we did not observe significance difference between gender regarding the vaccination decision. Bassetti M et al. observed no gender difference in vaccine attitude [30].

A group of researchers conducted a cross-sectional survey study about COVID-19 with adults in the US in May 2020 (about two months after COVID-19 was declared a pandemic). Eligibility criteria included being age 18 or older and currently living in the US. They utilized a convenience sample from this online panel for this study. They found that nearly 70% of adults in the US would be willing to get a COVID-19 vaccine if one becomes available, where 59%-75% of US adults indicated a willingness to get vaccinated [31]. Their finding represents one of the first estimates of acceptability of a COVID-19 vaccine in the US and can be used to guide projections of future vaccine uptake [32].

Vaccine acceptability was lower among several demographic groups, including participants who were non-Latinx black, had lower incomes, had no health insurance, or were conservative in their political leaning. The pattern among non-Latinx black participants is concerning since early data suggest that non-Latinx blacks have among the highest COVID-19 incidence and mortality rates in the US [33-35]. Study includes the cross-sectional design and self-reported data.

CONCLUSIONS

This study highlights that most of the participants of this study agreed to take COVID-19 vaccine. The rest of the respondents were reluctant to receive the vaccine. They need more health and media education about the vaccine benefits.

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