

Perceptions of volunteering during the COVID-19 pandemic among medical and dental professionals in Saudi Arabia

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ABSTRACT

Background: Volunteering can be defined as any action where time is freely donated to help another individual, organization, or cause. During pandemics, volunteers in the healthcare industry are essential. There were different perspectives on volunteering around the world. This study evaluated Saudi Arabia's clinical medical and dentistry students' attitudes and perspectives on volunteering during the coronavirus disease 2019 (COVID-19) pandemic. **Method:** A descriptive cross-sectional study of medical and dental students completing the clinical experience in Saudi Arabia. A web-based survey gathered data, and SPSS, Chi-square, and Fisher's exact tests were used for analysis. **Results:** The majority of participants had positive attitudes and perceptions of volunteering during COVID-19 on most items. A total of 93.80% said they would volunteer given the opportunity, and 86.25% would respond to governmental calls during health crises. However, 62.26% would volunteer only if compensated, 66.58% needed parental approval before volunteering, and 74.93% had fears about infecting family members. Nearly all items were not significantly different by specialty (medicine/dentistry), gender, nationality, region, or education level. **Conclusions:** Medical and dentistry professionals had good attitudes about volunteering during health disasters, especially when provided proper protection and training. The majority of participants were likely to respond to governmental calls if needed. Future studies should investigate compensation methods and types.

Keywords: COVID-19, dentists Saudi Arabia, medical doctors, medical student and dental students, volunteering

Introduction

Volunteering can be defined as any action where time is freely donated to help another individual, organization, or cause.^[1] There are three main types of volunteering during natural or

human-made calamities; professional, community-based, and emergency volunteering.^[2] The last category is particularly important when local specialized human resources are insufficient, resulting in high demand for volunteer efforts, particularly in health care. This means that many medical students have the characteristics necessary to provide vital volunteer support, reducing the load placed on healthcare workers in emergency situations like a global pandemic.^[3] They can assess primary care and family physicians to reduce the burden of healthcare shortage.

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The global pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, or COVID-19)^[4] resulted in significant morbidity and mortality around the world.^[5] To minimize transmission of the virus, governments around the world implemented a range of restrictions, including mask usage, movement restrictions, and avoidance of close contact with others.^[6,7] Volunteers have been an integral part of the healthcare workforce during the outbreak. For example, volunteers were a major force in responding to hotline calls for medical inquiries during the outbreak.^[8]

Medical and dental students may have been reluctant to volunteer in traditional settings that required direct contact with others.^[9,10] For this reason, virtual platforms, such as telehealth and health promotion through social media, were suggested as alternative venues for medical students to volunteer during the pandemic.^[9,10]

A small number of studies assessed the willingness and attitudes of medical students to volunteer during the COVID-19 pandemic, in Vietnam and Nigeria.^[11,12] A majority (72.5%) of respondents were willing to volunteer in Vietnam during the COVID-19 outbreak.^[12] In Nigeria, 82.9% of respondents were willing to volunteer if provided with proper personal protection equipment (PPE), and 79.3% would volunteer if they received the necessary training.^[11] Even if they would not be compensated, female students were more willing to volunteer than male students, but parental consent would often be required.^[11] In Riyadh, Saudi Arabia, medical students' willingness to volunteer varied, from 10.6% if there was contact with suspected patients in healthcare facilities to 43.4% who would volunteer for community services outside of healthcare facilities.^[13]

There were different perspectives on volunteering around the world. In Poland, volunteers reported anticipating negative scenarios, which affected their sense of safety and security before even starting.^[14] In Nigeria, a majority of responders (91.2%) volunteered during the pandemic as a way to gain knowledge.^[11] The main barriers to volunteering were the fear of spreading the virus to family members (76.2%) and insufficient knowledge/training.^[12,13]

No study has investigated perceptions among medical and dental (in particular) professionals of volunteering during the COVID-19 pandemic across different regions of Saudi Arabia. Such a study is important because the value of volunteering and the contributions of volunteers become more apparent in times of crisis.^[7,15] Therefore, this study aimed to assess perceptions of volunteering during the pandemic among medical and dental professionals throughout Saudi Arabia.

Materials and Methods

Study design, participants, and setting

This study used a descriptive, quantitative, cross-sectional study design. Data were collected using a convenience sample from June to July 2022 among medical and dental professionals (students

and workers) throughout Saudi Arabia. A self-administered online questionnaire in English was sent as a link through groups of medical and dental professionals on social media sites, including WhatsApp, Twitter, Instagram, Facebook, and Snapchat. The inclusion criteria were dentists, dental students, doctors, and medical students in Saudi Arabia. Any retired medical or dental professionals and other health specialists were excluded. All participants had to complete an electronic informed consent form by clicking "approve" before they could answer the questionnaire. It took approximately 6–8 minutes to complete the questionnaire. Any identifiable information that could have revealed a participant's identity was eliminated and all data were used anonymously.

Variables and measurements

The questionnaire comprised 29 questions divided into five sections. Section one collected demographics, including gender, age, specialty, academic year, city, region of Saudi Arabia, and nationality. Sections two to five were derived from a previous study, with modifications.^[11] These questions had agree or disagree as responses. The second section focused on attitudes about volunteering during COVID-19 and assessed participants' motivations for volunteering. Section three contained questions about the ethical and professional responsibilities of volunteers. The fourth section evaluated respondents' opinions about the requirements for enlisting medical and dentistry students as volunteers. The fifth section examined risk knowledge, protection, and being isolated as volunteers, asking if volunteers should be anxious about infecting family members if they had adequate information about COVID-19 and infection, and the prevention and use of PPE. Seven medical students participated in pilot research to assess the questionnaire to ensure the questions were understandable, flowed logically, and had no grammatical errors. This was considered as face validation of the questionnaire in a pilot phase. The institutional review board of Umm Al-Qura university gave ethical approval for the study, with the number HAPO-02-K-012-2022-06-1113.

Statistical methods

In addition to Excel (Microsoft Corp., Redmond, WA, USA), SPSS version 25 (IBM, Inc., Armonk, NY, USA) was used for data analysis. Mean, standard deviation, count, and percentage were employed as descriptive statistics to present the data. Data analysis methods included Chi-square and Fisher's exact test. The statistical significance level was set at a *P* value of 0.05.

Results

A total of 371 participants with a mean age of 22.56 ± 3.73 completed this study's questionnaire. They were from 19 cities in Saudi Arabia: Makkah, Jeddah, Taif, Jazan, Dammam, Riyadh, Alahssa, Alqunfudah, Alkhobar, Unaizah, Almadinah, Bisha, Arar, Abha, Albaha, Tabuk, Sakaka, Qatif, and Haql. Participant demographic data are provided in Table 1.

The questionnaire assessed participant attitudes about volunteering in four sections. The participants' answers to the questions are provided in Table 2.

According to Chi-square and Fisher's exact tests, none of the volunteering questions except one were significantly different between medical and dental professionals. The statement, "Medical/dental students should be recruited in the event of a healthcare manpower shortage," was the exception ($P = 0.018$). The majority of dental participants agreed

with the statement (91.4%), in comparison with 73.5% of the medical professionals. There were no statistically significant relationships for any of the volunteering items when assessed using Chi-square and Fisher's exact tests by gender, nationality, region, or educational level.

Discussion

General attitude toward volunteering

Our findings indicate that medical and dental students would volunteer during a pandemic if they are given the proper PPE and training (91.91–93.80%). These percentages were higher than previous studies in Vietnam (72.5%),^[12] Nigeria (79.3–82.9%),^[11] and Riyadh (10.6–43.4%).^[13] The differences might arise from the possible range of answers; in this study, the only answer options were agree or not agree, in comparison with previous studies using 3- to 6-point Likert scales.^[11–13] Additionally, the prior Saudi Arabian study^[13] classified volunteering in narrowly specific situations, so the comparison might not be accurate. Nevertheless, this shows that there is a strong tendency to volunteer among medical and dental professionals around the world. It should be noted that proper training of volunteers about pandemics is very important to enhance their understanding, outlook, abilities, and readiness, as suggested by a recent systematic review.^[16]

Such results should be taken as great potential by primary care authorities and clusters, as they are the frontline of healthcare,

Table 1: Participants' demographic data

Variable	Category	n	%
Gender	Male	98	26.42
	Female	273	73.58
Specialty	Medicine	336	90.57
	Dentistry	35	9.43
Nationality	Saudi	361	97.3
	Non-Saudi	10	2.7
Academic year	4 th	179	48.25
	5 th	88	23.72
	6 th	64	17.25
	Intern or graduated	40	10.78
Region in Saudi Arabia	Western	319	85.98
	Central	13	3.5
	Southern	9	2.43
	Eastern	22	5.93
	Northern	8	2.16

Table 2: Participant Answers to Assessments of Volunteering During COVID-19

Statement	Agree n (%)	Disagree n (%)
Attitudes about volunteering during COVID-19		
I will volunteer my service if given the opportunity to do so.	348 (93.80)	23 (6.20)
I will volunteer if adequately trained to do so.	341 (91.91)	30 (8.09)
I will volunteer if adequate personal protective equipment (PPE) is provided.	346 (93.26)	25 (6.74)
I will volunteer even if I am not compensated.	187 (50.40)	184 (49.60)
I will volunteer only if I am compensated.	231 (62.26)	140 (37.74)
I will volunteer because I am capable of doing so.	335 (90.30)	36 (9.70)
I will only volunteer if my parents support it.	247 (66.58)	124 (33.42)
Perceptions about moral and professional obligations to volunteer		
I have a moral sense of duty to volunteer as a person.	341 (91.91)	30 (8.09)
Medical/dental students have moral and professional obligations to volunteer.	309 (83.29)	62 (16.71)
I am not qualified to volunteer in any pandemic.	121 (32.61)	250 (67.39)
The government would be justified to request medical/dental students as volunteers.	296 (79.78)	75 (20.22)
Perceptions about conditions for the recruitment of medical/dental students as volunteers		
I will work as a volunteer if the government requests it.	320 (86.25)	51 (13.75)
The government has no right to ask medical/dental students to volunteer during a pandemic.	129 (34.77)	242 (65.23)
Medical/dental students should be recruited in the event of a healthcare manpower shortage.	279 (75.20)	92 (24.80)
Medical/dental students can assist doctors and work under their supervision.	342 (92.18)	29 (7.82)
Volunteering during a pandemic is a form of experience and education for students.	333 (89.76)	38 (10.24)
Experience as a volunteer should count toward practical experience in medical/dental care.	339 (91.37)	32 (8.63)
Perceptions about compensation, risk knowledge, and protection as volunteers		
Medical/dental student volunteers should be given monetary compensation.	276 (74.39)	95 (25.61)
I am anxious about infecting my family members if I volunteer.	278 (74.93)	93 (25.07)
I think I have adequate knowledge and information about COVID-19.	310 (83.56)	61 (16.44)
I have adequate knowledge about infection and preventive strategies.	303 (81.67)	68 (18.33)
I have adequate knowledge and information about the use of personal protective equipment (PPE).	312 (84.10)	59 (15.90)

especially during the pandemic. In fact, using the high power of volunteers can reduce the high burden of a potential shortage of primary care units and family physicians, especially during health disasters.

Moral obligation to volunteer

The majority of medical and dental professionals in our study reported that they had a moral obligation to volunteer and would do so if the government asked them to. This supported studies among medical students conducted in several other countries, including Nigeria, Canada, Brazil, China, and Ireland.^[11,17-19] These results are promising, as volunteering is one of the major goals in the Saudi Arabia Vision 2030 transformational national plan, with a goal of increasing the number of volunteers from 11,000 to 1 million annually.^[20] An understanding of the moral and autonomous internal motives for volunteering revealed by this study will enable governmental stakeholders in Saudi Arabia to achieve their goals. This view is supported by studies in Germany, Nigeria, China, and Denmark among medical students, showing that a sense of social responsibility and dedication was behind their volunteer endeavors.^[11,19,21,22] A previous study in Jeddah, Saudi Arabia, among medical graduates found that factors related to values and social responsibility were predictive of volunteering, whereas factors related to career development were not.^[23] Our study expanded these findings to medical students, dental students, medical graduates, dental graduates, and healthcare workers.

Volunteering compensation and parental approval

Two important aspects were found in our results: compensation and parental approval. A slim majority (62.26%) of our respondents reported that if they would not be compensated, they would not volunteer. That is higher than the Nigerian study (49.9%).^[11] Other studies in Germany and China indicated that compensation was more important for final-year medical students,^[19,22] whereas our study did not find such a difference. Nonetheless, our results indicate that compensation is an important factor among volunteers, but the data were not clear on the type of compensation. Some studies have emphasized monetary compensation as important to discuss and plan for.^[24] A different study emphasized medical student volunteers receiving reasonable payments for their efforts.^[25] However, other forms of compensation, such as appreciation, lowered volunteer hours, trophies, and other nonmonetary rewards, were not thoroughly discussed. This may be because some health students pay entry fees to participate in volunteer services in Saudi Arabia, especially in Islamic pilgrimage programs. It was found in a Polish study^[26] that religion is an important factor for some when considering volunteering. It is recommended that this aspect be investigated using qualitative and quantitative studies to reveal more about how to effectively compensate healthcare volunteers.

A total of 66.58% of our respondents indicated that they would require parental approval to volunteer, which is similar to the

results from Nigeria (62.5%).^[11] Because this aspect is important, it might be wise to include this aspect when planning future volunteer programs and promoting the benefits of volunteering to parents.

Volunteering among medical versus dental professionals

It should be noted that our study did not find any differences in the results between students and graduates among medical and dental professionals. This can be explained by the strong social bond and family attachments in Saudi Arabian culture. This is supported by the high percentage (74.93%) who were worried about causing infection in their families. However, it might also be due to the low proportion of graduate participants in our study. Future studies may want to consider that aspect during recruiting.

Strength and limitations

Because this is one of only a few studies including participants from cities across Saudi Arabia, it is important to acknowledge some of this study's limitations. Our sample population had a higher percentage of medical professionals than dental professionals. Therefore, we might have an unrepresentative sample of dental professionals for external validity. It is suggested that participants in future studies be asked about different volunteer settings and also examines professionals' experiences of volunteering, which could shed light on current practices and problems encountered. Future studies should be directed to use stratified or quota samples of medical/dental students and graduates to increase external validity. Additionally, compensation types and religious motives for volunteering should be included in future studies.

Conclusion

Medical and dental professionals have good attitudes toward volunteering during health disasters, especially when receiving proper protection and training. The majority of the participants in this study were inclined to respond to governmental calls if needed. Compensation, fears about transmitting an infection to family members, and parental approval appear to be important factors for volunteers.

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Conflicts of interest

There are no conflicts of interest.

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