

Original Article

COVID-19 Vaccination-Related Thoughts, Behaviors, and Expectations of the Academic Personnel in Hacettepe University Medical School

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Abstract

OBJECTIVE: The World Health Organization announced the new coronavirus disease 2019 as a pandemic, as of March 11, 2020. The long-expected method to combat coronavirus disease 2019 pandemic, that is, using an effective and widely available vaccine, has become reality by late 2020. This study was conducted prior to the national coronavirus disease 2019 mass vaccination campaign in Turkey to investigate the individual thoughts, behaviors, and expectations of the academic personnel on coronavirus disease 2019 vaccination practices, who were among the pioneers in both vaccine trials and real-time coronavirus disease 2019 vaccine jabs.

MATERIAL AND METHODS: The Hacettepe University Medical School has a total of 1692 academic personnel. All academicians were reached through their academic email addresses and invited to participate in the survey. Busy academic routines and coronavirus disease 2019-related duties limited response number to 213 academicians, after 3 consecutive reminders at 1 week interval. The survey was conducted using a standardized, 14 question-long questionnaire, using Google forms.

RESULTS: Of the 213 participants, 60.6% (n = 129) were females and the average age ($\pm$ standard deviation) was 40.2 ± 12.0 years. Of all, 17.4% (n = 37) had been reportedly diagnosed to have coronavirus disease 2019 prior to vaccination. A statistically significant positive association was detected between coronavirus disease 2019 vaccination self-experience and recommending such a vaccination for relatives ($P < .001$); odds of recommendation was 19.5 times (95% CI = 4.2-89.6) higher among coronavirus disease 2019 vaccinated academicians compared to their non-vaccinated counterparts.

CONCLUSION: Study participants are among the frontline workers, with expectedly the highest exposure rates from severe acute respiratory syndrome coronavirus-2. A significant proportion of academicians also play important role as scientific consultants and role models for the general public. Thus, their thoughts and concerns regarding public preventive measures and coronavirus disease 2019 vaccination practices are important for decisions health policy makers and administrators in charge of vaccine selection, availability, distribution, and allocation make, besides their self-responsibility in provision of evidence-based vaccine information for the general public, based on local needs and concerns.

KEYWORDS: COVID-19 vaccine, academicians, CoronaVac, health personnel, COVID-19

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INTRODUCTION

Pneumonia cases of unknown origin reported from Wuhan in Hubei Province of China in December of 2019 were linked to a novel coronavirus on January 7, 2020,¹ and led to a pandemic as announced by the World Health Organization (WHO) on March 11, 2020.² The fatal course of disease and the high morbidity rates straining healthcare system led scientist to initiate vaccination development efforts soon after the first surge of pandemic globally.³ Huge financial support of governments and private companies together with global collaborative research activities for the vaccine development processes have led to unprecedented success in development and production of a wide array of coronavirus disease 2019 (COVID-19) vaccines.

Vaccination is, admittedly, the most efficient means of primary prevention of communicable diseases. Vaccination practices aimed to hinder contagiousness of communicable diseases and/or to decrease related morbidity and mortality, via introduction of inactivated or attenuated viruses/bacteria and/or their antigenic particles to the human body.⁴ Vaccination has direct and indirect positive effects on herd immunity, through direct prevention of disease among vaccinated individuals or indirectly by decreasing exposure rates among unvaccinated individuals.⁵ Currently, safe, effective, accessible, and acceptable vaccines appear to be the sole method for prevention of COVID-19-related morbidity and mortality, in anticipation of effective treatment modalities,⁶ and would continue to be the invaluable means of primary prevention of COVID-19 even afterwards.

Pandemics is still evolving, immunity has been shown to wane in time, and nobody is safe until everybody is immune; thus, the WHO has announced that any COVID-19 vaccine with efficacy rates of 50% or more would be of benefit for mass vaccination, granted that it is safe. Global vaccination efforts are vital given the high contagiousness of severe acute

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respiratory syndrome coronavirus-2 (SARS-CoV-2) virus. The first 2 mRNA COVID-19 vaccines (namely, Pfizer-BioNTech and NIH-funded Moderna vaccines) have been approved for emergency use authorization (EUA) in United Kingdom, Canada, United States of America, and the European Union. At present, there are 13 COVID-19 vaccines with EUA in various countries, and 291 vaccines are still under development.⁷ The first EUA-approved COVID-19 vaccine in Turkey is CoronaVac, developed by SinoVac BioTech, China. This inactivated vaccine was first used in China with early access approval, tested in phase 3 trials in Indonesia, Chile, Brazil, and Turkey.

The phase 3 trial of CoronaVac was initiated in Turkey early in September 2020, as a double-blinded placebo-controlled trial.⁸ The first unplanned unblinding of this study revealed a 91.3% (95% CI = 71.3-97.3) efficacy on December 23, 2020, as reported by the Minister of Health.⁹ Preplanned interim analysis of the national phase 3 trial was reported after reaching 41 Reverse transcription polymerase chain reaction (RT-PCR)-positive patients and reportedly revealed an 83.5% efficacy rate.^{10,11} Subsequently, the national mass vaccination with CoronaVac was started by the Ministry of Health on January 14, 2021.

The second COVID-19 vaccine distributed in Turkey for mass vaccination was the mRNA vaccine of Pfizer-BioNTech (BNT162b2).¹² As of April 2021, 46% of the population aged 18 years or older were vaccinated with at least 1 dose of vaccine, while 25% was fully (2 doses of vaccine) vaccinated.¹³

Healthcare personnel (including nonmedical workers at hospital and care settings) were given priority in the Turkish national COVID-19 vaccination campaign, starting from January 14, 2021. Hacettepe University hospitals have been pioneer institution for both COVID-19 vaccine clinical trials and during mass vaccination practices for general public. Faculty members of the medical school have so far acted as active leaders in informing the public of the course of the pandemic and providing de novo information, providing technical support to the Ministry of Health activities, conducting original COVID-19-related research, and in-house/nation-wide training of medical staff on COVID-19-related issues. Three of the National COVID-19 Scientific Committee members are from XXXX University since the initiation of national management practices to combat COVID-19 pandemic in

the country; this led medical faculty members to be updated with not only the global COVID-19 literature but also the national action plans. Along with the availability and accessibility of various COVID-19 vaccines, vaccination rates will be dependent on public acceptance rates, that is, vaccine hesitancy and health illiteracy will eventually be important determinants of vaccine-related herd immunity at local/global scale. Healthcare personnel, besides their direct effects on the course of the pandemic, are prominent role models for the general public in compliance with preventive measures, including vaccination. Academicians' and healthcare personnel's thoughts, concerns, and behaviors in combating the pandemic would have important effects on their (direct/indirect) guidance of the general public for vaccination.

A recent study conducted by Chew et al¹⁴ among healthcare workers in Asia revealed that perceived COVID-19 susceptibility, low potential risk of vaccine harm, and pro-socialness are the main drivers for COVID-19 vaccination among healthcare workers. Drivers for COVID-19 vaccination among Turkish scientists have not been studied yet. This study aimed to investigate healthcare personnel's thoughts and concerns regarding COVID-19 vaccination practices in Hacettepe hospitals (given the reasons summarized above) to illuminate the need for evidence on COVID-19-related issues (if any) to clarify their concerns, prior to the national widespread COVID-19 vaccination practices.

MATERIAL AND METHODS

Study Setting and Participants

A descriptive study was conducted at the Hacettepe University Medical School in Ankara, Turkey. The Medical School was founded in 1967 and has received recognition as one of the top medical schools in the country so far. This study approached all academicians (n = 1692) of this medical school, working with the total 43 departments and 41 divisions. Target population was all residents, fellows, assistant/associate/full professors, actively working in the medical school, to whom invitations for study participation were sent through individual academic e-mail addresses, with 3 reminders at 1 week interval. Over the data collection period of 21 days, a total of 216 academicians reached the standardized questionnaires in the web-based link provided and 213 (12.5% of all eligibles) fully completed the questionnaires.

Data were collected through a short, online questionnaire of 14 questions, prepared by the authors, using Google forms. Questions were skeletonized to save academicians' time and were mostly close-ended in type, with multiple choices, providing space for unexpected answers linked with the "other" option. All participants completed the questions online. Inquiries included COVID-19 vaccination status of the academicians and individuals and health- and occupation-related characteristics that could be potentially associated with vaccination status, as detailed in the "Results" section.

Ethical approval was obtained from Hacettepe University Ethical Board for Observational Studies (numbered GO 21/59) and a further administrative approval was obtained from the Dean's Office. A separate approval process was also

MAIN POINTS

- Thoughts, attitudes, and behaviors of health personnel are crucial in shaping populations' compliance with preventive interventions against coronavirus disease 2019 (COVID-19), including vaccination choices.
- A pioneer study, preceding COVID-19 mass vaccination, among health personnel working in a university hospital revealed a statistically significant positive association between COVID-19 vaccination self-experience and recommending vaccination for relatives.
- Factors affecting health personnel's individual choices of COVID-19 vaccination and relevant recommendations warrant similar studies in larger and more heterogeneous populations.

completed through the Scientific Research Platform of the Ministry of Health, Turkey (2020-12-28T13-10-03), as is mandatory for all COVID-19-related research to be conducted during the pandemic. All data were collected anonymously by academicians themselves. Academicians first approved to participate in the study online, through the link provided in the invitation emails. Information and invitation emails were sent to all academicians directly through the informatics division of the medical school; thus, contact addresses were not shared with the researchers. This approach maximized data safety and personal confidentiality in the study.

Statistical Analysis

Analyses were mainly descriptive, including frequency and percent distributions. Statistical comparisons across groups were assessed using Chi-square test or the Fisher's exact test, when Chi-square test requirements are not fulfilled. Potential associations were checked by odds ratios and relevant 95% CI. Type 1 error was pre-set at $\alpha = 0.05$ for all analyses. Statistical Package for the Social Sciences software ver. 25.0 (IBM, NY, USA) was used for all statistical analyses.

RESULTS

Of all 213 participants, average age was 40.2 years, with a standard deviation of 12.0 years, and 60.6% ($n = 129$) were females. Of all academicians participated in the study, 90.1% ($n = 192$) were medical doctors, 63.8% ($n = 136$) of them were from medical sciences, and 42.3% ($n = 90$) of them were residents (Table 1).

Of the participants, 17.4% ($n = 37$) reportedly had confirmed COVID-19 infection diagnosis preceding the vaccination, while 3.3% of all ($n = 7$) experienced severe disease (Table 2). Of the academicians, 9.9% ($n = 21$) voluntarily participated in phase 3 trials of CoronaVac and other 0.9% did so for Pfizer-BioNTech ($n = 2$). Of the participants, 59.6% ($n = 84$) were reportedly vaccinated for COVID-19 during the national mass vaccination campaign with CoronaVac and 88.3% ($n = 188$) of all participants reported a wish to have their relatives vaccinated for COVID-19 when they become eligible for vaccination in the national vaccination program (Table 2).

Of the participants, CoronaVac vaccination was completed for 97.6% ($n = 82$) among male academicians and 90.7% ($n = 117$) among female academicians; vaccination rates were not statistically significantly different across gender groups ($P = .065$). Similarly, no statistically significant association was detected between CoronaVac vaccination and being a medical doctor, current academic title, department/division she/he works with, previously confirmed COVID-19 infection, and personal knowledge on COVID-19-related issues (P -values were .726, not applicable, .057, .261, and .972, respectively) (Table 3).

Promoting vaccination for relatives was significantly higher among those vaccinated for COVID-19 (98.0%; $n = 195$) compared to those who were not vaccinated (71.4%; $n = 10$) ($P < .001$). In parallel, CoronaVac vaccination was reportedly 19.5 times (95% CI = 4.2-89.6) higher

Table 1. Distribution of the Sociodemographic Characteristics of Academicians Participated in the Study (April 2021. Ankara)

Characteristics Studied (n = 213)	Number	Percent
Age (years)		
25-29	54	25.4
30-36	55	25.8
37-52	51	23.9
≤53	53	24.9
Mean $\pm$ standard deviation = 40.22 $\pm$ 12.04; median = 36; min-max= 25-67 years		
Gender		
Female	129	60.6
Male	84	39.4
Medical doctor		
	192	90.1
Department		
Basic sciences	44	20.7
Medical departments	136	63.8
Surgical departments	33	15.5
Title		
Full professor	58	27.2
Associate professor	30	14.1
Assistant professor	13	6.1
Fellow	22	10.3
Resident	90	42.3

among relatives of vaccinated academician compared to those of unvaccinated academicians (Table 4). Previous history of COVID-19 and vaccination percentage among relatives were not significantly associated with academicians' vaccination status (Table 4).

DISCUSSION

Of all eligible academicians currently working with the medical school, 213 (12.5%) completed study questionnaires. Average age of study participants was 40.2 $\pm$ 12.0 years, similar to that found in a previous study of medical personnel (39.4 $\pm$ 10.8 years)¹⁵; this finding is in line with our expectations, with an onset of academia at least around 30 years and an obligatory retirement at age 67 years for academicians. Of all participants, 90.2% ($n = 192$) were medical doctors and about half (42.3%, $n = 90$) were residents at the time of the study; on the grounds that medical school academicians were selected as the study universe. Although not reached statistical significance at $\alpha = 0.05$, a type II error cannot be excluded for subgroup analyses and apparent differences across gender groups and academic title warrant further confirmation in studies with larger sample sizes. The number of studies on COVID-19 vaccination among academicians was scarce but our findings of high number of medical doctors was in line with another study 64% ($n = 283$).¹⁶ A higher number of participants from medical sciences (63.8%, $n = 136$) could at least be partially explained by a higher number

Table 2. Distribution of Vaccination Status Among Study Participants (April, 2021)

Characteristics (n = 213)	Number	Percent
COVID-19 disease		
No diagnosis	148	69.5
Positive PCR, no symptoms	7	3.3
Positive PCR, mild symptoms	22	10.3
Positive PCR, moderate-severe symptoms	7	3.3
Positive PCR, symptoms still continue	1	0.5
Had contact, yet PCR test negative	28	13.1
Volunteered in phase 3 trials		
Not volunteered for any trial	190	89.2
For CoronaVac, vaccinated	20	9.4
For CoronaVac, but not vaccinated	1	0.5
For Pfizer-BioNTech, vaccinated	2	0.9
CoronaVac vaccination		
Vaccinated	84	59.6
Plan to be vaccinated at a later date	72	33.8
Not yet decided	2	0.9
Plan to be vaccinated with another vaccine	1	0.5
Decided not to be vaccinated for COVID-19	11	5.2
Knowledge on COVID-19 vaccines		
Closely follow new information sources	3	1.4
Consider personal knowledge as adequate	61	28.6
Follow informations, yet consider self-knowledge as inadequate	72	33.8
Follow COVID-19 news here/then	65	30.5
Does not follow COVID-19 information sources	12	5.6
Guidance for relatives		
Promote vaccination	188	88.3
Promote vaccination only for high-risk relatives	17	8.0
Indecisive	4	1.9
No idea	4	1.9

of academicians in these departments and their close contact with COVID-19 cases over the pandemic, which, in turn, could have motivated them more to participate in the study. A previous study in our country revealed 27.7% (n = 95) of COVID-19 prevalence in pediatricians, pediatric nurses, and auxiliary health staff among the population of pediatric hospitals medical staff.¹⁷ We cannot claim that those who responded to the survey were a random sample of all academicians; thus, such comparisons are not accurate for target populations of individuals studies but are rather informative of the exact populations studied.

In a published article by Chew et al¹⁴ in which the majority of 1760 healthcare workers were from 6 countries in the Asia-Pacific region, the authors revealed that 96.2% of the participants were willing to receive COVID-19 vaccination. Perceived COVID-19 susceptibility, low potential risk of vaccine harm, and pro-socialness were reportedly the main drivers. Our finding of less than two-thirds of vaccination among participants, at first glance, could be viewed as a large discrepancy in willingness rates. However, it is noteworthy that actual behavior is linked to several factors besides willingness. Also, relatively low COVID-19 case numbers in Turkey at the time of the study, well-established preventive measures provided in the hospital studied, and conflicting discussions on the efficacy of the inactive virus vaccine provided by the national authorities as the sole vaccine (with no other options) could have affected vaccination rates. In Turkey, COVID-19 vaccination is free for all; thus, low vaccination rates could not be linked to willingness to pay. Hao et al¹⁸ studied attitudes toward COVID-19 vaccination and willingness to pay; they found that both were significantly higher among individuals with depression and anxiety compared to their mentally healthy counterparts. This finding might not be generalizable (as the authors implied), yet could be a sign that mental distress could affect personal decisions on vaccination choices. Social stigmatization against unvaccinated, increased tension due to inability to intermingle in social areas closed to nonimmunized individuals, and increased anxiety of infection risk could all lead to alterations in individuals' choices of vaccination in the pandemic.

Discrepancies in COVID-19 vaccination rates across population suggest variations in predictors of willingness to be vaccinated and urge scientists to conduct local studies to identify various factors and/or confounders that might affect acceptability of vaccination against COVID-19. Detailed qualitative studies are clearly warranted in investigating individual reasons that might affect accessibility to COVID-19 vaccines and compliance rates, with vaccination strategies at local level.^{14,18,19}

Coronavirus disease 2019 infection rates in the population might also affect vaccination decisions. A Palestinian study found the prevalence of COVID-19 as 22.6% (n = 262) in a population of physicians, nurses, and other healthcare workers.²⁰ Our prevalence of COVID-19 (17.4%) was relatively smaller than these studies, which could be explained by local infection rates, obligatory public measures, levels of occupational exposures, variant types in the population, besides individual compliance with personal hygiene, masking, and social distancing, which are expected to increase by awareness and professional responsibilities among medical staff.

Our medical school staff work as trainers for medical students and also serve actively as clinicians in the hospital. Hacettepe University Hospitals took responsibility as research sites for, where 2 phase 3 trials of CoronaVac and Biontech vaccines were concurrently run. It is interesting that only 11.8% of the participants reportedly volunteered in these trials. This hesitance might have been related to the unexplained nature of the disease and/or the fast track of vaccine development during the pandemic. Vaccination rates increased with the national vaccination campaign. Of all participants, 93.4%

Table 3. Distribution of CoronaVac Vaccination by Sociodemographic Characteristics (April 2021)

Characteristics studied (n = 213)	CoronaVac			P	OR (95% CI)
	Vaccinated n (%)	Not Vaccinated n (%)	Total n (%)*		
Gender*					
Female	117 (90.7)	12 (9.3)	129 (61.1)	.065	4.20 (0.91-19.29)
Male	82 (97.6)	2 (2.4)	84 (38.9)		
Medical doctor**				.726	0.68 (0.08-5.54)
Yes	179 (93.2)	13 (6.8)	192 (90.1)		
No	20 (95.2)	1 (4.8)	21 (9.9)		
Department/division**				-	-
Basic sciences	42 (95.5)	2 (4.5)	44 (20.7)		
Medical sciences	125 (91.9)	11 (8.1)	136 (63.8)		
Surgical sciences	32 (97.0)	1 (3.0)	33 (15.5)		
Academic title*				.057	0.28 (0.07-1.03)
Professor (full/associate)	98 (97.0)	3 (3.0)	101 (47.4)		
Assistant professor					
Resident/fellow	101 (90.2)	11 (9.8)	112 (52.6)		
Previous COVID-19**				0.261	2.01 (0.59-6.80)
Yes	33 (89.2)	4 (10.8)	37 (17.4)		
No	166 (94.3)	10 (5.7)	176 (82.6)		
Knowledge on COVID-19*				0.972	0.98 (0.31 – 3.03)
Adequate/updated	127 (93.4)	9 (6.6)	136 (63.8)		
Inadequate/none	72 (93.5)	5 (6.5)	77 (36.2)		

Column percentages are presented. Other percents are row percentages.
 *Chi-square test; **Fisher's exact test

Table 4. Promoting CoronaVac Vaccination for Relatives (April 2021, Ankara)

Characteristics (n = 213)	Promoting CoronaVac Vaccination			P	OR (95% CI)
	Yes n (%)	No n (%)	Total n (%)*		
CoronaVac vaccinated, academicians**				<.001	19.50 (4.24-89.57)
Yes	195 (98.0)	4 (2.0)	199 (93.4)		
No	10 (71.4)	4 (28.6)	14 (6.6)		
Previous COVID-19, academicians					
Yes	37 (100.0)	-	37 (17.4)		
No	168 (95.5)	8 (4.5)	176 (82.6)		
Knowledge on COVID-19**				0.508	.57 (0.11-2.93)
Updated/adequate	130 (95.6)	6 (4.4)	136 (60.2)		
Inadequate/None	75 (97.4)	2 (2.6)	77 (39.8)		

Column percentages are presented. Other percents are row percentages.
 *Chi-square test; **Fisher's exact test

were either vaccinated with and/or planned to be vaccinated with CoronaVac. This was far higher than the “preference (selection) rate” of 23.8% reported for CoronaVac in an earlier study.¹⁶ The time difference between the 2 studies,

1 being prior to the national mass vaccination campaign, could partly explain this difference. However, prioritization of medical staff in the national vaccination campaign, with CoronaVac as the sole vaccine available, might have led to

the high CoronaVac percents in the study population, rather than individual preferences (if any).

In a US-based study among healthcare workers with direct/indirect patient's contact, 46% ($n = 1584$) promoted vaccination among relatives, while 40% ($n = 1370$) were indecisive.²¹ In our study, 88.3% reportedly promoted vaccination of their relatives ($n = 188$), with 8.0% of them promoting vaccination for relatives with high COVID-19 risk only. Such plans may be associated with a "wish for delay" till some robust and conclusive evidence on vaccine effectiveness and safety is obtained, rather than a final decision. In our study, personal experience with vaccination increased the likelihood of vaccination rates among their relatives 19.50 times ($P < .001$, 95% CI = 4.24-89.57). Faculty's awareness and knowledge on effectiveness of vaccines, high proportion of medical doctors in the study group, experience with COVID-19 phase 3 trials in the hospital they work with, and high susceptibility to COVID-19 patients in their workplace might have increased their motivation for COVID-19 vaccination for themselves and/or for recommending vaccination for their relatives. In binary analyses, being a MD, gender, academic title, department, previous COVID-19 infection, or interest in COVID-19 literature were not found to be associated with vaccination status. A larger study in Turkey ($n = 1574$) revealed significant association with COVID-19 vaccination and occupation (MD) ($P = .033$), gender ($P < .001$), and previous COVID-19 infection ($P < .001$).¹⁴ This difference may be explained by sample size (type II error cannot be discarded in our study) and with unequal distribution of study participants in sub-samples. Lastly, but not the least, self-reporting in the study might have biased the results toward "socially desirable answers" on vaccination.

In our study, we mainly investigated how medical staff's own experience and personal characteristics affect their self-decision on vaccination and relevant recommendations. A recent study in Vietnam revealed vaccination and resource mobilization are feasible via effective communication programs to improve risk perception and awareness among people at risk.¹⁹ Such a communication could be facilitated through a mutual process between medical staff and lay people. Thus, it is important for future studies to identify how (if any) medical staff can benefit for such mutual communication means to combat vaccine hesitancy in populations. Implementing COVID-19 vaccination and resource mobilization among pregnant women in Vietnam is feasible, although communication programs to improve risk perception and awareness about vaccine should be developed for facilitating acceptance of the vaccine.

The main strength of our study is it being a pioneer study among medical staff in early phases of mass vaccination in the country. Hesitancy in vaccination was expected given the early stages of availability of vaccines in the country, yet was not confirmed in the study group. Low participation rates could be explained by indirect contact with medical staff in study recruitment (for the need for anonymous data collection); initial information on the study and invitation letters were distributed through academic email addresses by IT office. High patient loads in clinical settings and limited time

interval for data collection could have also limited study participation. Data collection was stopped after 3 weeks due to acceleration of vaccination practices over time, which could have changed attitudes and behaviors over time.

The main limitation of the study is limited size and inability to comment on similarity of participants' profile with that of all eligible academicians. It is likely that nonparticipation was not associated with vaccination rates and/or related thoughts and a non-differential misclassification bias (if any) can be expected. Yet, we should emphasize the potential for low generalizability of our results and we could not exclude the possibility of an unintended selection bias. Lastly, self-reporting bias cannot be excluded.

Last but not the least, vaccination-related attitude and behaviors among healthcare personnel cannot be generalizable to others in the population. As indicated by Vu et al²² in their recent publication on efficacy and sustainability of global, regional and national COVID-19 vaccination programs, building/collaboration with global networks, multisectoral cooperations, and a clear, transparent, and timely risk communication would likely increase willingness to be vaccinated; specific interventions may be planned for maximizing vaccination rates among priority populations, including the healthcare personnel.²²

CONCLUSION

Academicians of the medical school are of high risk of exposure to SARS-CoV-2 infection as they actively work in the clinics and/or contact medical students as part of their daily routine. Besides their individual decisions for vaccination against COVID-19, their thoughts and concerns regarding mass vaccination for COVID-19 is also important, as academicians are role models and information sources for the general public. Thus, healthcare personnel were given priority in mass vaccination. Our study revealed that academicians considered themselves at high risk for COVID-19, had high rates of vaccination, and guided their relatives favoring vaccination. Such a positive approach among academicians for COVID-19 vaccination is pleasing, given their prominent roles in guiding policy makers and the general public being alike, besides potential for affecting administrative decisions at local and/or national level. Vaccination practices are invaluable in combating the pandemic, yet it is vital to emphasize that vaccination cannot substitute for the nontherapeutic preventive measures (including masking, distancing, and personal hygiene) till herd immunity is secured. Improvement of compliance with public preventive measures against COVID-19, including high vaccination rates, will be dependent on the availability of detailed and updated scientific evidence, transparent sharing of scientific experiences, and keen monitoring of established interventions.

Ethics Committee Approval: This study was approved by Ethics committee of Hacettepe University, (Approval No: GO 21/59).

Informed Consent: Written informed consent was obtained from the patients who agreed to take part in the study.

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