

## RESEARCH ARTICLE

### Nursing Faculty Members' Perception Regarding Wearing Mask and Accepting Coronavirus Vaccines

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#### ABSTRACT

The COVID-19 pandemic is posing significant public-health issues. Broad adoption of preventative measures such as masking and vaccination is required to keep the pandemic under control. As nursing faculty play an important role in the future of nursing, their perception regarding wearing mask and taking vaccine can be crucial in preventive measures regarding COVID-19. The study aims to assess the perception of nursing faculty regarding wearing mask and coronavirus vaccines. A descriptive correlational design was used to guide this study. A total of 76 nursing faculty members in six colleges of nursing at six different universities in Iraq were selected by convenience sampling. Each faculty member received a questionnaire and consent form to be signed. from February 1, 2022 to February 24, 2022. The sampling method was applied in this study using a non-probability purposive method. Data were collected from faculty using questionnaire distributed at the faculty member's offices consisted of demographic characteristics and 32 items about the Face Mask Perception Scale and 11 items about VAC-COVID-19 scale. The results indicated that the majority of faculty had a positive perception of wearing facial masks (n = 69; 90.8%). The results also revealed that the majority of faculty have somewhat sound perception of coronavirus vaccine (n = 67; 88.2%). In this study, we described nursing faculty members' perceptions of the mask use and coronavirus vaccines during COVID-19 pandemic. According to the findings, the organization of work of the faculty, and the efforts of them in this crisis are being very effective.

Keywords: Covid-19; Coronavirus Vaccines; Face Masks Wearing; Faculty Members



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### INTRODUCTION

Although early research showed that coronavirus disease 19 (COVID-19), which was declared a worldwide pandemic on March 11, 2020 (World Health Organization [WHO], 2020a), is primarily spread by respiratory droplet and physical contact (Burke et al., 2020; Chan et al., 2020; Huang et al., 2020), more recent study reveals that, like its precursor, Severe Acute Respiratory Syndrome Coronavirus (SARS-COV), airborne transmission plays a critical role in the spread of the infection (Morawska & Milton, 2020; Zhang et al., 2020). As a result, in comparison with social distance, face mask use are now the most popular method of infection prevention as the simplest and easiest way to implement individual safety precaution (Abboah-Offei et al., 2021; Ditekemena, 2021). The WHO has deemed this measure efficient (WHO, 2020b). The Center for Disease Control and Prevention (CDC) advised people to wear a facial mask in public if they cannot stay at least six feet away from others to help stop the spread of COVID-19. (CDC, 2020). The recommendation to wear a mask appears to have sparked debate among the general people (Eikenberry et al., 2020; Scheid et al., 2020).

A protest movement against the wearing of masks was established during the most recent corona pandemic (Franchini, 2020; Taylor & Asmundson, 2021). As in the 1919 Spanish flu pandemic in San Francisco, the Anti-Mask League was created, arguing that masks were ineffective and inappropriate for general use, but the Anti-Mask League did not persist long, and most people respected the advice to use masks (Cohn, 2018; Dolan, 2020; Franchini, 2020). Following the coronavirus pandemic, large organizations began producing vaccines against COVID-19 to decrease infection (Duc Ha et al., 2020). On the other side, vaccination is seen to be a preventive and successful means of reducing infections (CDC, 2021; Duc Ha et al., 2020; Monto, 2006; Nichol, 2008; and WHO, 2021).

Vaccine hesitancy, on the other hand, was recognized a global health problem by the WHO. Vaccine hesitancy is defined as a person's denial or rejection of vaccines besides the availability of a vaccine (WHO, 2019). However, the media may add to anti-vaccination sentiment by allowing erroneous information to spread fast (Cuello-Garcia et al., 2020; González-Padilla & Tortolero-Blanco, 2020). When the populace began receiving mass vaccinations, wearing face masks was still crucial as a precaution to reduce the chance of contracting the coronavirus (Lesser & Whittaker, 2021). This is owing to the virus's fast propagation of new strains that are more infectious than the original (Shashina et al., 2021). However, it is possible that the pandemic

will continue to spread despite the creation of specific COVID-19 prophylaxis. Where, it is challenging to vaccinate a significant section of the population in a short time for a variety of actual and perceived reasons: contraindications, chronic conditions, and certain individuals' anti-vaccination attitudes must all be considered (Lesser & Whittaker, 2021; Shashina et al., 2021). In order to prevent the virus from spreading, strict adherence to other transmission-reducing methods, such face masks and social isolation, is still required because the majority of the population is not vaccinated (Lesser & Whittaker, 2021; Shashina et al., 2021).

As Manning and colleagues (2021) found, academic nursing leaders, on the other hand, play an important role in ensuring that faculty and students are vaccinated widely, as this has a significant influence on public acceptability of vaccination. Therefore, Miller (2021) states that people with a higher level of education have a greater willingness to obtain a COVID-19 vaccination and a higher degree of belief in the vaccine's efficiency and safety. On the contrary, new researches looking into the willingness to get the COVID-19 vaccination in many nations discovered that a lack of knowledge is linked to a lower readiness to receive the vaccine (Abedin, et al., 2021; Kelly, et al., 2021; Kessels, et al., 2021). Perception that specific protective behaviors would help to reduce infection risk and perception of oneself as more vulnerable to pandemics and more susceptible to infection are linked to engaging in illness prevention, avoidance, and management behaviors to protect oneself (Bish & Michie, 2010; Sim et al., 2014).

### IMPORTANCE OF THE STUDY

In previous pandemics, healthcare practitioners, notably nurses, played an important role in vaccine adoption (Deem, 2018). Therefore, Manning et al. (2021) findings suggested that faculty and student vaccination concerns may require consideration by academic nursing leaders, as well as vaccine development education. Additionally, nursing faculty will be crucial in preparing students to confidently respond to questions about vaccinations, as well as in developing a vaccination program for their school or institution (Manning et al., 2021). Nursing faculty members who teach the next generation of nurses (Dewart et al., 2020) as frontline healthcare practitioners are required to ensure a safe and continuing COVID-19 vaccination response (Manning et al., 2021), as well as educate the public about safety

precautions including mask use (Howard, 2020). Nurses must grasp the importance of vaccination and the fact that difficulties and worries are handled when nursing professors teach and act as role models for their students (Manning et al., 2021).

As a result, it is essential to understand how nursing faculty perceive about face masks and COVID vaccinations in order to develop interventions that will change how people use face masks and get vaccinated. Because they may have a range of attitudes regarding face masks and vaccinations, not only positive or negative ones that influence their behaviour (Howard, 2020; Mejia et al., 2021). In the end, the research aims to assess nursing faculty members' perceptions of mask use and COVID-19 vaccination acceptance. This highlights the importance of nursing faculty members having the COVID-19 vaccine and wearing a face mask, which can protect them and reduce the spread of infection to their families and communities. The researchers hypothesized that nursing faculty members had a positive perception of wearing a face mask and receiving a COVID-19 vaccination.

## METHODS OF THE STUDY

To carry out this study, a descriptive correlational design was used. All of Iraq's nursing colleges' faculty members were included in the research population. By using the convenience sampling method, 76 nursing faculty members were chosen as a sample. Participants were nursing faculty who met the following inclusion criteria: nursing science specialists with doctorate and master's degrees, as well as male and female faculty members of various ages. Nursing faculty members who are teaching in nursing colleges with no nursing degrees such as biologists and those who are not formally faculty members in a college of nursing, as those from the ministry of health that teach in colleges of nursing, are excluded from the study. The number of faculty members enrolled in Iraqi nursing colleges of the target universities is about 136. With a 90% degree of confidence and a 5% margin of error, 91 faculty members must be included in the sample. A total of 76 individuals were gathered for this investigation. This study was conducted at six nursing schools at six different universities in Iraq (Baghdad, Karbala, Babylon, Al-Kufa, Al-Qadisiyah, and Al-Muthanna). Data for this study was gathered using a demographic questionnaire, the Face Mask Perception Scale [FMPS], and the VAC-COVID-19 scale. The demographic data includes gender and age. Howard (2020) developed the FMPS, which measures the justification for not wearing a face mask. The instrument was used in this study to find out nursing faculty members'

perceptions about wearing masks. "Comfort," "efficacy doubts," "access," "compensation," "inconvenience," "appearance," "attention," and "independence" are the scale's eight dimensions. There are four items per dimension. A total of 32 items were used to evaluate the participants. A seven-point Likert scale was used to score each item (1 being "strongly disagree," and 7 being "strongly agree." The more negative the perceptions of the face mask, the higher the subscale values. The dimension cut-off point was determined by deducting the lowest score of "4" from the highest score of "28." Participants with scores between "4" and "16" would be deemed to have a positive perception, while those with scores between "17" and "28" would be considered to have a negative perception (the range of "28" would be divided by "2" to get the interval of "12"). After receiving approval through email from the copyright owner, the FMPS was used.

Mejia et al. (2021) created the VAC-COVID-19 scale to assess the perception of COVID-19 vaccine acceptance. Positive and negative perceptions toward COVID-19 vaccines are assessed using the VAC-COVID-19 scale. There were two categories on the scale. The first group contained seven items, including reasons for not getting vaccinated, and the second group contained four items, including reasons for being vaccinated. An 11-item scale will be completed by the study sample. "Strongly disagree," "disagree," "neither disagree nor agree," "agree," and "strongly agree" are the five possible Likert-type responses for each item. By deducting the minimum score of "11" from the maximum score of "55," the cut-off point for coronavirus vaccination perception is determined. Three tertiles are obtained by dividing the range by three. Participants with scores between "11" and "25" would fall into the first tertile of "unsound perception," those between "26" and "40" would fall into the second tertile of "somewhat sound perception," and those between "41" and "55" would fall into the third tertile of "sound perception." According to Mejia et al. (2021), the EFA and CFA were used to establish the validity of the instrument, proving that the measure has high construct validity. Cronbach's coefficient was used to assess the scale's reliability and was found to be above 0.8, indicating that the VAC-COVID-19 scale is reliable. Once the copyright owner had granted permission via email, the VAC-COVID-19 scale was utilized. Two bilingual faculty members performed a forward translation of the study tool and a backward translation with another pair of bilingual faculty members. This translation was completed blindly and independently.

## Data Analysis

The data analysis was carried out using the statistical package SPSS version 26.0. The demographic data was analyzed including age and gender using descriptive statistics to describe the sample. The means and standard deviations of continuous variables were stated. The frequency and percentages were used to represent categorical variables. The structural equation modelling, correlation personal, and independent-sample t-test was used to determine which of the characteristics related with face masks and COVID-19 vaccines.

**THE RESULTS OF THE STUDY**

According to the descriptive study, faculty members were 40.70 ± 10.53 years old on average. Concerning the gender, more than a half are males (n = 41; 53.9%) compared to females (n = 35; 10.6%).

In contrast to those who have a negative perception (n = 25; 32.9%), most faculty members have a positive perception (n = 51; 67.1%) and believe that wearing a face mask is comfortable. In contrast to those who have a negative perception regarding efficacy doubts (n = 12; 15.8%), the majority of faculty members have a positive perception (n = 64; 84.2%) and believe that wearing a face mask is effective. In contrast to one who has a negative perspective on access (n = 1; 1.3%), the vast majority of them (n = 75; 98.7%) have a positive perception of being able to wear a face mask. In contrast to those who have a positive perception (n = 30; 39.5%), most faculty members (n = 46; 60.5%) have a negative perception of compensation connected to wearing a face mask. In comparison

to those who have a negative perception (n = 9; 11.8%), the majority (n = 67; 88.2%) perceive wearing a face mask as an inconvenience. In contrast to those who have a negative perception regarding appearance (n = 3; 3.9%), the vast majority (n = 73; 96.1%) have a positive perception of wearing face masks. In contrast to those who have a negative perception (n = 12; 15.8%), the majority (n = 64; 84.2%) believe that wearing a face mask increases attention. In comparison to those who have a negative perception of independence (n = 37; 48.7%), more than half (n = 39; 51.3%) have a positive perception of independence associated with wearing a face mask. In contrast to those who have a negative perception (n = 7; 9.2%), the majority of faculty members (n = 69; 90.8%) have a positive perception regarding wearing a facial mask.

According to the study's findings, the majority of faculty members (n = 67; 88.2%) had a somewhat sound perception of the coronavirus vaccine, with an unsound perception (n = 6; 7.9%) and a sound perception (n = 3; 3.9%).

The study's results revealed that there was no statistically significant correlation between faculty members' perceptions of wearing facial masks and their age (p value = .002). Additionally, there was no statistically significant correlation (p value = .171) between faculty members' age and perception of the coronavirus vaccine. Also, there was no statistically significant difference in faculty members' perceptions of wearing a facial mask (P value = .230) or receiving the coronavirus vaccine (P value = .464) based on their gender groups.

Table 1. Faculty members' perceptions of wearing facial masks (N = 76)

Dimension	Negative		Positive	
	Frequency	Percent	Frequency	Percent
Comfort	25	32.9	51	67.1
Efficacy Doubts	12	15.8	64	84.2
Access	1	1.3	75	98.7
Compensation	46	60.5	30	39.5
Inconvenience	9	11.8	67	88.2
Appearance	3	3.9	73	96.1
Attention	12	15.8	64	84.2
Independence	37	48.7	39	51.3
Overall	7	9.2	69	90.8

Cut-off-point for dimensions: Positive = 4-16; Negative = 17-28  
 Overall cut-off-pint: Positive = 32-128; Negative = 129-224

Perceptions of coronavirus vaccines						
	Unsound (11-25)		Somewhat sound (26-40)		Sound (41-55)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Overall perception	6	7.9	67	88.2	3	3.9

Table 2. Faculty members' perception of coronavirus vaccine (N = 76)

Table 3. Correlation between faculty members' age and perception of wearing facial mask and perception of coronavirus vaccine

	Faculty's Age	Faculty Wearing Mask Perception	Faculty Coronavirus Vaccine Perception
Faculty's Age	-	-.002	.171
Wearing Mask Perception	-.002	-	
Coronavirus Vaccine Perception	.171		-

Table 4. Difference in faculty members' perception of wearing mask and perception of coronavirus vaccine between gender groups

Independent Samples Test										
		Levene's Test for Equality of Variances				t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
Faculty's perception of wearing mask	Equal variances assumed	.613	.436	-1.210	74	.230	-6.95052	5.74597	-18.39961	4.49857
	Equal variances not assumed			-1.225	73.999	.224	-6.95052	5.67196	-18.25216	4.35111
Faculty Coronavirus Perception	Equal variances assumed	.457	.501	-.736	74	.464	-.78606	1.06813	-2.91437	1.34224
	Equal variances not assumed			-.728	68.137	.469	-.78606	1.07970	-2.94049	1.36837

Df: Degree of freedom; F: F-Statistics; Sig.: Significance; Std. Error: Standard Error; t: T-Test

## DISCUSSION

According to the descriptive analysis, the average age of the faculty members was  $40.70 \pm 10.53$  years. Considering the current results that showed no statistically significant correlation between faculty members' age and their perception of wearing facial masks and coronavirus vaccine. Research by Howard (2021a) looked at the link between age, perception of face masks, and the wearing of face masks, which discovered that age had no statistically significant relationship with any face mask perceptions. Bish and Michie (2010) noted that age has an unclear role in recognizing preventive behaviors. It is possible, that the impact of age on behavior differs across all preventive behaviors. Older people, for example, may be more likely to get vaccinated but less likely to wear face masks (Al-Mohaithef and Padhi, 2020; Howard, 2021a). While some studies have found that older respondents are more likely to accept vaccination (Al-Mohaithef and Padhi, 2020; Coe et al., 2022; Malik et al., 2020), while others have found no link (Harapan et al., 2020; Wang et al., 2020). According to the findings of Ghazi et al., (2021), respondents who accept vaccination are substantially younger. A possible explanation of the current study result is that nursing faculty members are considered specialists and are more committed to preventive measures. In comparison to other individuals, they may also be more knowledgeable with and confident in scientific phenomena.

Concerning gender, more than a half of faculty members participated in the study are males compared to females. The current study reveals that there is no statistically significant difference in faculty members' perception of wearing facial masks and coronavirus vaccine between gender groups, suggesting that during the COVID-19 pandemic, men and women had the same perceptions about wearing face masks. Howard (2021b) observed that gender had a substantial impact on how people perceived face masks. Face masks were perceived as impeding on men's independence more than women's, while women found it uncomfortable (Howard, 2021b). According to some limited research men and women showed equal willingness and behaviors related to using face masks during the SARS outbreak (Barr et al., 2008; Bish & Michie, 2010). According to the findings of a research by Haischer et al. (2020), the odds of a female wearing a mask are much higher than that of a man. There is also a study reported that men have been shown to be less likely to wear a face mask (Naeim et al., 2021), but another study reported a failure to identify gender differences

in mask wearing (Howard, 2021b). Although previous research suggested that gender was a predictor of vaccine acceptability (Fisher et al., 2020; Malik et al., 2020; Wang et al., 2020) the current findings revealed a non-significant correlation, which is in line with the findings of other studies (Ghazi et al., 2021; Harapan et al., 2020). Vaccination intentions have been studied in published researches, and, perhaps unexpectedly, compared to women, men are more likely to plan to be vaccinated. (Fisher et al., 2020; Reiter et al., 2020).

In the current study, the majority of faculty member's participants have a positive perception of wearing facial mask. A possible interpretation to that is that the nursing faculty members are specialists on the field of health care and are aware of the importance of adhering to preventive measures, including wearing a mask, so it is natural to find their perceptions about face masks positive, as they represent the first lines to confront pandemics, and as being a role model for their students. About three-quarters of participants in a cross-sectional study in Egypt that looked at Egyptians' knowledge, perceptions, and attitudes concerning the COVID-19 disease believed that wearing a face mask may prevent them from getting sick; only about 35% were willing to do this; and there was a positive attitude towards using protective measures (Abdelhafiz et al., 2020). In addition, a research comparing masking-related perceptions in China and three German-speaking nations (Austria, Germany, and Switzerland) published in April 2020 found that Chinese participants exhibited higher pro-masking perceptions than European ones (Zhao and Knobel, 2021). The majority of respondents (84%) to a Taylor and Asmundson (2021) online poll reported wearing masks because of COVID-19. The remaining 16% who did not wear masks scored negative attitudes towards masks over most measures. They discovered that people's rejection of masks is driven by the belief that the masks are unpleasant or make wearers look dumb. However, Kasting et al. (2020) stated that those who are concerned about COVID-19 are also more likely to believe that wearing a mask is an effective way to reduce the virus from spreading.

The findings show that the majority of faculty members have a reasonable understanding or somewhat sound perception of the coronavirus vaccination. Faculty are key in maintaining a safe, continuing COVID-19 response as frontline health care staff, and nurses, as the most trusted profession, play a significant role in influencing vaccination readiness of patients and the community. This finding agreed with a cross-sectional community survey in Bangladesh, found positive attitudes towards COVID-19 vaccine among the general population (Islam et al., 2021). The finding is inconsistent with a cross-sectional study that examined the perceptions of Korean citizens regarding the COVID-19 vaccine

and discovered that the majority of Koreans hold negative perceptions about the vaccine (Lee et al., 2021). A cross-sectional study was conducted in Iraq to examine general population approval of the COVID-19 vaccine found that (77.6%) respondents agreed to take the COVID-19 vaccine when available (Ghazi et al., 2021). Previous studies in Egypt (Fares et al., 2021), Congo (Nzaji et al., 2020), and the United States of America (Shekhar et al., 2021) indicated that the COVID-19 vaccinations had a poor acceptance rate. In contrast, a research in France (Detoc et al., 2020) discovered that 77.6% of participants "probably agreed" to get vaccinated. In addition, a research conducted by Barry et al., (2021) to assess COVID-19 vaccination confidence in a Middle East Respiratory Syndrome Coronavirus affected country discovered that two-thirds of Health care workers reported readiness to accept a prospective COVID-19 vaccine. There are some limitations in this study. The sample size was small depending on the inclusion criteria. Also, the research form was not completed by all faculty members, and the response rate was only 81.72% for faculty members. In the current study, only six nursing schools from six universities were considered, which may not accurately represent all nursing schools across the country. A larger sample size would have allowed for the production of more representative results. The fact that this study only included nursing faculty means that the findings cannot be applied to other faculty members in other professions.

## CONCLUSION

In this study, we described nursing faculty members' perceptions of the mask use and coronavirus vaccines acceptance during COVID-19 pandemic. This is the first study, to the best of our knowledge, to describe nursing faculty perceptions of the mask use and coronavirus vaccines during the COVID-19. In general, the present study results indicated that the majority of faculty members had positive perceptions toward face masks, which are crucial to preventing the disease from spreading. The current study also showed that, in general, faculty members had a reasonable understanding of the coronavirus vaccination. According to the findings, the organization of work of the faculty members, and the efforts of them in this crisis are being very effective. To promote positive opinions of COVID-19 vaccines, targeted health education initiatives are necessary. In order to create effective responses and multidisciplinary educational initiatives in the post-pandemic period, it may be essential to comprehend faculty views concerning the COVID-19 vaccines as well as to promote their health participation and awareness.

## ETHICAL

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## AUTHOR'S CONTRIBUTIONS

All author has agreed to be accountable for the full manuscript's content and has given their approval for submission.

## Competing interests

Authors claim to have no competing interests.

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