ORIGINAL ARTICLE

Satisfactoriness of COVID19 vaccine among Surgeons and Physicians

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Abstract:
Objective: To determine satisfactoriness of COVID19 Vaccine among Surgeons and Physicians.
Study design:Cross-sectional study
Setting: Hanif Hospital Karachi.
Period: April 2021
Materials and Methods: The study was conducted among general surgeons and gynecologists together with general physicians and anesthetist with working experience of greater than 10-years, of either gender, exposed to both COVID19 patients and non COVID patients. The exclusion criteria involved the doctors not willing to give consent as well as other health café staff like nurses and technicians.
Results: Out of 52 doctors; there were 15 general surgeons, 15 gynecologists and obstetricians, 15 physicians and 7 anesthetist's with mean age of doctors was 42.81± 5.87 years. There were 41 males and 59 females. Exposure of COVID patients was significantly correlated with COVID vaccination acceptance i.e; p-value of 0.000. The knowledge of COVID, attitude towards COVID patients and awareness and COVID prevention and practices were significantly correlated with COVID vaccination acceptance with p-value of 0.003, 0.000, 0.000 respectively.
Conclusions: Our study explains health behavior and attitudes needs to be clarified by more communication strategies in order to improve beliefs on effective measures taken for health benefits.

Keywords: COVID19, covid 19 vaccine, Personal protective equipment general surgeons gynaecologists

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Introduction:
COVID19 pandemic, a continuing threat to lives affecting now more than 1 million deaths and more than 131 million confirmed cases globally.[1-3] Worldwide the recession has affected socially and economically with significant effect on mental and physical health. However, since the introduction of corona vaccine, different countries have implemented especially among elderly people as well as among healthcare regarding vaccines with great number of surgeon's community having criticism regarding workers who are at increased risk.[4] Until now 574.25 million vaccines doses have been distributed worldwide according to national health agency reports. In Pakistan there are 13 vaccines approved in April 2021 for use of people 2-RNA vaccines, 4-viral vector vaccines, 5-inactivated vaccines with effectiveness 95% in prevention of developing COVID-19.[3]

There have been surveys conducted with fear among surgeons with great number of criticizing against mass vaccination programs.[4,5] However, the impression of vaccines in Pakistan and also among our neighboring countries is variable. A cross-sectional survey about vaccination knowledge and awareness showed hesitancy among

Table 1: Demographic data of the doctors and other participants in the present study

Demographic variables	Frequency (percentages) n=100
Age in years	
Mean ±SD	42.81± 5.87 years
Gender	
Male: female	41:59
Marital status	
Married	78
Unmarried	12
Years of experience	
<10yrs	27
>10yrs	73
Attended seminars on COVID19	
Yes / no	85:15

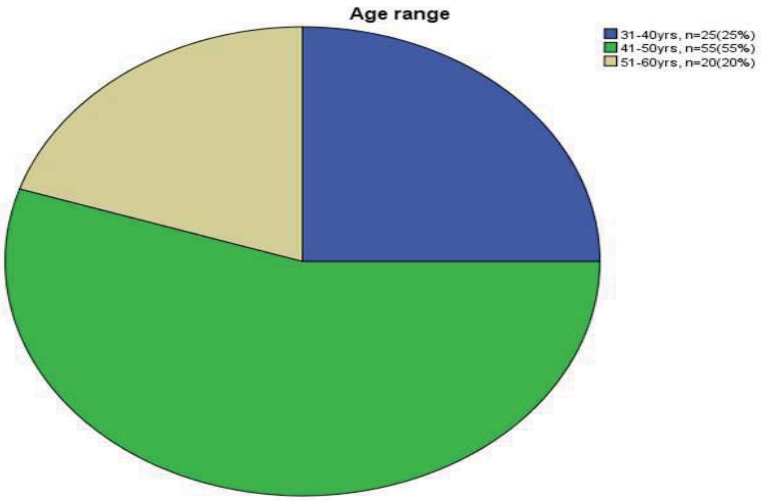

Figure 1: Age range of Doctors

general population with great contribution required from medical professionals in awareness of vaccination.[6] Some doctors have the impression of its safety and success, with positive outcomes, while other even health care workers are worried on contracting the disease and fear of death too, while some have thoughts that these are the experimental and are been rushed into market for testing among people.[7] The lack of awareness, misinformation's among people through social media, misconceptions spread by people are still the important factors contributing and giving rise to misconceptions and trust on vaccines effectiveness and their urgency of need to get vaccinated. In a University of Patra only 22% health care staff took vaccines.[4] Even Physicians behavior towards unacceptability of vaccines could affect non-medical people and their family members too its impact on vaccination programs by government. Another survey on health care workers showed 27.7% accepted vaccine wit positive attitude among doctors.[8] Therefore, we aimed our study to determine the acceptability of COVID19 vaccines among our surgeons and physician's community through an online survey to determine our local data and behavior of our surgeons and physicians regarding COVID19 safety issues.

Material and Methods:

This is a cross-sectional study conducted on 100 surgeons including general surgeons and obstetrics and gynecology, anesthetists and physicians of Hanif Hospital on April 2021. After the Ethical committee approval the study was conducted among surgeons which involved general surgeons and gynecologists together with general physicians and anesthetist with working experience of greater than 10-years, of either gender, exposed to both COVID19 patients and non COVID patients. The exclusion criteria involved the doctors not willing to give consent as well as other health care staff like nurses and technicians.

The data was collected with self-administered questionnaire involved two parts; one involved demographics and other KAPs involved i. COVID related knowledge involved 12 questions involving transmission, clinical features, and patients approach; those who answered 10 out of 12 were considered to have sufficient knowledge; ii. Other are attitude of surgeons regarding COVID19 (willingness of getting vaccine, chances of overcoming this pandemic) and iii. Lastly their prevention techniques (mask wearing, PPE use, social distance effects). The last two points attitudes and practices were grouped together with those scoring high were grouped in positive attitudes. Main interesting variable in KSP model was attitude and getting vaccinated as its now available.

The data was analyzed in SPSS version 24. The demographical data like age, gender, occupa-

Table 2: Age, gender, and experience

	COVID19 vaccination acceptance		
Variables	**Yes**	**No**	**P value**
Age:			
31-40yrs	13	12	
41-50yrs	25	30	0.170
51-60yrs	14	6	
Gender:			
Male	21	20	0.896
Females	31	28	
Years of experience:			
<10yrs	13	14	0.639
>10yrs	39	34	
COVID cases exposure:			
Yes	48	18	0.000
No	4	30	
Knowledge towards COVID:			
Sufficient	37	20	0.003
Insufficient	15	28	
Attitude towards COVID:			
Positive	49	3	0.000
Negative	3	45	
COVID Prevention /practices:			
Good	49	0	0.000
Bad	3	48	

tion, working experience, were expressed in frequencies and percentages. The Chi square was applied among independent variables and main outcome of vaccination was tested and p value< 0.05 is taken as statistically significant value.

Results:

Out of 52 doctors; there were 15 general surgeons, 15 gynecologists and obstetricians, 15physicians and 07 anesthetists. The mean age of doctors was 42.81±5.87 years (table 1). Mostly the age range was among 41-50yrs, n=55(55%);while the rest were 31-40yrs, n=25(25%), 51-60yrs n=20(20%).(figure 1). There were 41males and 59females. (table 1).Most of the doctors were married n=78 while the remaining n=12 were unmarried. Out of enrolled doctors, 73 had working experience of greater than 10yrs, while n=27 had <10yrs experience. Most of doctors have attended nearly > 10 seminars on COVID exposure, risk and management.

Exposure of COVID Patients was correlated with COVID vaccination acceptance and statistically significant correlation was found i-e; p value of 0.000. also the knowledge of COVID, attitude towards COVID patients and awareness and COVID prevention and practices were significantly coorelated with COVID vaccination acceptance with p value of 0.003, 0.000, 0.000 respectively.

While the age and gender, and experience doesnot show any statistical significant correlation (table 2).

Discussion:

Since the introduction of COVID vaccine by the scientific communities around 300 projects are under process of development, around 40 are in clinical evaluation period while some are I phase 3 trials and 3 have produced positive results in phase 3 trials and are FDA approved since December 2020.[9-11] It is expected that these vaccines would be of clinical benefit among high risk individuals and for emergency purpose in order to prevent spread is the main purpose behind vaccine. Besides the positive aspects, technical problems in developing countries is a challenging aspect.

Fear among healthcare workers and even people is a concern among some countries with lack of education, awareness issues, misconceptions and misinformation's spread by social media are the factors prohibiting people from benefit of vaccine.[13-15] In our study surgeons, physicians, some anesthetist and obstetric and gynecologist involved in rapid response teams and emergency surgeries dealing with COVID patients exposure had more knowledge on COVID compared to other group of doctors doing elective surgeries and are not dealing with COVID19 patients. The fear among the surgeons was globally noticed with increased fear of acquiring infection especially in high risk countries with increasing burden of COVID19 patients.[16-18] Doctors with insufficient knowledge on newly developed vaccines and insufficient data on vaccines outcomes has also lead to hesitancy towards vaccines together with feeling of depression, anxiety and

stress. Doctors do have the fear from asymptomatic individuals too, as study by Bellato et al has shown worse outcomes in individuals who were asymptomatic contributed to 30.9% of cases.[18]

Exposure of COVID-19 patients was significantly correlated with doctor's perspective towards vaccination compared to those who did not been exposed. Many doctors too initially had false believe and fear of getting COVID if they had taken vaccine. However, all the doctors have taken vaccinations due to mandatory working requirements.

In study by Polack et al, 95% vaccines were effective and prevented from COVID19 when vaccinated by modified RNA virus vaccine with 90-100% in different subgroups like age gender, ethnicity, co-existing diseases.[12] Study was conducted over a large scale among 43,548 individuals. Only 10 cases reported severe COVID after first dose and only 9 reported after second dose while the ones in placebo group 162 developed COVID who did not received vaccine.[10] These behaviors vary according o different ages as in one study by Barber et al,[16] found older people were less worried about COVID19, while our study more middle age and above 50-years of age people had good knowledge with greater experience on COVID but it showed no correlation with COVID 19 vaccine acceptance rather a fear of acquiring a more severe infection was present in most of doctors.

In our study the doctors who had good knowledge and had been practicing strict COVID preventive measures had been inquisitive too for COVID vaccination and want to get vaccinated and we also found significant correlation among them and COVID 19 acceptance. Attitude was doctors towards COVID vaccination acceptance was fair mostly however it was relatively little positive among doctors with more COVID exposure. Mostly had fear of contracting illness and were not able to recognize flu like illness after vaccination from COVID, some thought even they may have severe COVID and may die after vaccination. Different studies have shown that this failure and hesitancy in vaccination needs strategies to have an effective communication among people.[13-15]

Spread of vaccination among people by doctors plays an important role in awareness.[19,20] In our study all doctors have good knowledge and positive attitude towards COVID however some have misbelieves and had insufficient knowledge regarding COVID19 and therefore also noticed of having minimal safe practices too.

Conclusions:
Our study explains health behavior and attitudes needs to be clarified by more communication strategies in order to improve believes on effective measures taken for health benefits.

Conflict of interest: None

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Role and contribution of authors:
Muhammad Saad Usmani, collected the data, references, and did the initial writeup.

Aisha Khatoon, collected the data and helped in the introduction writing.

Nusrat Ali Jafri, collected the references and helped in discussion writing.

Alvia Saad, collected the data and helped in interpretation of the data

Shua Nasir, critically went through the article and made useful changes.

Lal Shahbaz, collected the data, references and helped in result and conclusion writing.

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