

# Perception of Medical and Paramedical Staff in regard of Standard Operating Procedure (SOP) of Covid-19

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## ABSTRACT

**Objective:** The current study accessed the observance of SOPs especially the mask related, personal, and social factors that discourage medical and paramedical staff from using face masks.

**Study Design:** Observational, Cross-Sectional Study

**Place and Duration of Study:** This study was conducted at the Departments of Psychiatry, JPMC, Karachi and Psychiatry / Anatomy, LUM&DC, Jamshoro from March to August 2020.

**Materials and Methods:** All healthcare professionals who gave electronic consent and had internet access were included in the study. Due to the government-ordered lock down, an online semi-structured questionnaire was developed using Google forms to collect data. The socio demographic characteristics, past medical or surgical history, recent infection, which was followed by knowledge about coronavirus and attitude toward masks were recorded in a predesigned questionnaire. All data was analyzed using SPSS v 24.

**Results:** The mean age (SD) was 34.3 (10.25) years. The majority of the health-care workers wore masks at the workplace (97%). 1% of doctors who always wore face masks claimed that the mask displaces spectacles, 4% reported that it interferes with communication, 5.9% reported that it is not always available. 12.9% doctors did not experience any problem. Those who confessed to not wearing masks at the workplace, felt suffocated (16.8%), mask hurt their ears (7.9%), or mask interfered with their prescription spectacles (5%).

**Conclusion:** The current study indicated that the majority of the healthcare workers wore masks at the workplace and only a few percentages of participants faced a problem due to a face mask. The knowledge about face masks and its correct usage are important to mitigate negative attitudes.

**Key Words:** pandemic, epidemic, COVID-19, SARS-COV-2, surgical mask, prevention

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## INTRODUCTION

Epidemics that turn into pandemics have been a constant threat to humanity as a race. Corona-virus disease 2019 (COVID-19) was announced as a public health emergency of international concern by the World Health Organization (WHO) on 30<sup>th</sup> January 2020.<sup>1</sup> Coronavirus belongs to the positive-stranded RNA group of viruses causing severe acute respiratory syndrome; therefore, it is named SARS-CoV-2. The recent mutation that has equipped it to cause COVID-19 has also earned its name "novel" coronavirus.<sup>2</sup>

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Early on, the SARS-CoV-2 outbreak happened in Wuhan city of Hubei Province of China in people exposed to live animal markets, which had suggested animal-to-human transmission as a source of origin.<sup>2</sup> Subsequently, the spilling of COVID-19 from the epicenter to the people, with no exposure to animal markets, globally suggested human-to-human spread.<sup>2-3</sup> United States health officials have suggested two main transmission routes for the COVID-19: 1) person to person transmission and 2) contact transmission.<sup>3</sup> On a person to person transmission, the virus could spread: Through respiratory droplets released when an infected person coughs, sneezes or talks among people who are in close contact with one another (within about 6 feet). These droplets may land in the mouths or nose of people who are nearby or possibly be inhaled into the lungs. Moreover, the contact transmission involves the spread through touching contaminated surfaces then touching one's mouth, nose, or eyes.

As of October 2020, there have been a total of 36361054 confirmed cases of COVID-19 and 1056186 confirmed deaths globally.<sup>4</sup> Out of these, a total of 317,595 confirmed cases, and 6,552 confirmed COVID-19 related deaths occurred in Pakistan.<sup>5</sup> The

COVID-19 may range from being asymptomatic to fatal. The symptoms, if they appear, are fever, tiredness, and dry cough.<sup>4</sup> Sometimes, however, aches and pain, nasal congestion, runny nose, sore throat, and diarrhea may also be present. Its prognosis worsens with old age and the underlying comorbidities that may weaken the immune system.<sup>4-6</sup>

Owing to the highly infectious nature of SARS-CoV-2, the community is in great risk especially the Frontline workers including the health care personnel as they deal directly with diseased persons therefore, they are most likely to be exposed to the virus.<sup>5</sup>

Their nature of work does not allow them to observe standard procedures of social distancing to keep themselves at bay from getting infected. However, the practices of wearing a mask, washing hands with soap or sanitizing them, and wearing personalized protective equipment if necessary, are the methods that could help healthcare workers to prevent themselves from COVID-19.

This article specifically focuses on the attitude of healthcare workers toward mask in this COVID-19 Pandemic.

## MATERIALS AND METHODS

This was an observational, cross-sectional study conducted in Pakistan from 30<sup>th</sup> March to 19<sup>th</sup> August 2020. Due to the government-ordered lock down, an online semi-structured questionnaire was developed using google forms to collect data. The link of the questionnaire was then sent to multiple health care workers via Whatsapp, email, and other social media platforms by the investigators.

All participants who gave an electronic consent, had internet access, were health-care workers, aged 18 years or older were included in the study. The participants were redirected to google forms where the questionnaire was to be filled. The questionnaire collected information on the socio demographic characteristics, body mass index, history linked to psychiatric, medical or surgical significance, recent infection in oneself or within the family, substance use history, followed by knowledge about coronavirus and attitude toward masks. The recipients of the link were encouraged to forward the link to their contacts in the snow-ball style of sampling.

There were questions with short typing answers, the best choice from various options, ticking multiple options for multiple responses. The data was analyzed using SPSS v 26, after collection of data of 101 respondents using descriptive statistics. Mean, standard deviation, and frequencies/proportions have been used to analyze the data. The findings were presented in tables and graphs.

## RESULTS

Data of 101 healthcare workers were collected using the online platform of Google forms. Out of these 101

respondents, 67 were male, and 34 were females. The mean age (SD) was 34.3 (10.25) years. Other socio-demographic characteristics are represented in table 1. The study population was diverse belonging to different ethnicities and religions.

**Table No.1: Socio-demographic characteristics of Study Population (n=101)**

Item	n (%)
Mean Age (SD) in years	34.3 (10.25)
Gender	
Male	67
Female	34
Marital Status	
Married	57.4%
Unmarried	35.6%
Engaged	6.9%
Ethnicities	
Sindhi	44.6%
Urdu speaking	26.7%
Punjabi	8.9%
Pushtoon	5.9%
Others	5%
Medical History	
Medical illness in past year	20.8%
History of Psychiatric illness	5%
Recent infection	10.9%
History of infection within the immediate family in the past two weeks	9.9%
History of Substance abuse	
Yes	13.9%
No	86.1%
Smoking	
Yes	27.5%
No	72.5%

20.8% have had a history of medical illness in the past year, and 5% had a history of psychiatric illness. Moreover, 10.9% had a history of recent infection, and 9.9% had a history of infection within the immediate family in the past two weeks from the date of administration of the questionnaire (table 1).

Upon assessing the awareness about coronavirus, we found that only 1% of respondents did not know about how the coronavirus spread, and also 1% of respondents felt no need to wear a mask. Moreover, 6.9% did not know if the mask could prevent them or others from getting infected. See table 2 for details.

The majority of the health-care workers wore masks. Upon assessing the issues among participants who always wore the masks, faced while wearing the masks, it was found that in 1% mask displaced spectacles, 4% reported that it interferes with communication, 5.9% reported that it is not available, 6.9% complained about shape, 7.9% complained about its tightness and 12.9% people experienced no problem at all, however, 3% unspecified any issue with the mask (Table 3). The responses of those who responded that they do not wear a mask all the time are also presented in table 3.

**Table No.2: Awareness and Practice of Wearing Mask among Study Participants**

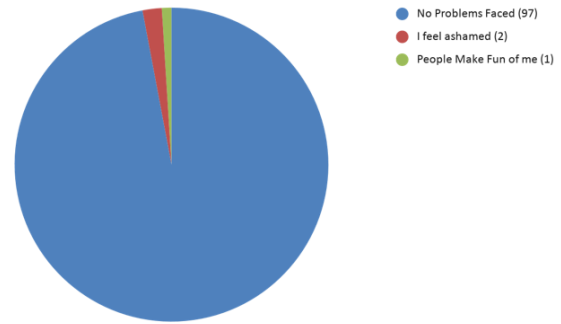
Item	n (%)
Are you aware of how coronavirus disease spreads?	
Yes	99%
No	1%
Do you feel the need to wear the mask?	
Yes	99%
No	1%
Does wearing a mask prevent you from getting infection?	
Yes	93.1%
No	6.9%
Do you wear masks at work place i.e. hospital? Always	
Most of the time	41.6%
Sometimes	47.5%
Seldom	9.9%
Never	0.1%
Mask-related Problems - Personal (Wore masks always)	
Displaces Spectacles	1%
Interferes in communication	4%
It is not available	5.9%
Its Shape	6.9%
Too tight	7.9%
No Problem Faced	12.9%
Others	3%

**Table No.3: Mask-related, personal, and social issues pertaining to wearing mask as a precautionary measure against the spread of COVID-19 infection**

Problems	Group who responded with whether always wear masks at work place	
	Yes	No
<b>Mask-related Problems</b>		
Displaces Spectacles	1%	4%
Interferes in communication	4%	6.9%
It is not available	5.9%	7.9%
Its Shape	6.9%	4%
Too tight	7.9%	22.8%
No Problem Faced	12.9%	4%
Others	3%	8.9%
<b>Personal Problems</b>		
Do not like it	5%	3%
Feel suffocated	4%	16.8%
Hurts in ear	3%	7.9%
Interfere with eyesight glasses	2%	5%
Its not available	2%	5.9%
No Problem Faced	16.8%	12.9%
Stuck in beard	3%	3%
Other	4%	5.9%

Three percent of the participants who did not wear the mask claimed that they do not like to wear it, 16.8% felt suffocated, 7.9% claimed that the mask hurt their ears, 5% claimed that it interfered with their eyesight glasses, among other reasons. Social reasons revealed that 2% of participants felt ashamed, 1% reported that people might make fun, while 97% of participants didn't face any problem (Figure 1). Besides, 51.5% reported that the patients might feel uncomfortable if the healthcare professional did not wear a mask.

Social Problems related to Mask



**Figure No.1: Social Problems faced by Study Participants when wearing Masks in Public**

**DISCUSSION**

The current study evaluated the Coronavirus disease 2019 (COVID-19) Pandemic is continuing to infect and take lives of people across the world since last year. Its definite cure or vaccine has not been discovered yet.<sup>2-4</sup> Therefore, it makes it more pertinent to observe precautionary measures to avoid getting infected. Since healthcare professionals are the most vulnerable and exposed to the COVID-19 virus, the practice of precautionary measures must be encouraged and strict measures should be taken to ensure that all healthcare personnel are taking all precautionary measures to prevent the spread of Coronavirus disease. To realize the preventive effect of the face mask, the attitude of health care workers toward mask-wearing is crucial. The study was conducted to ascertain the attitude and possible factors that may contribute to the negative attitude of healthcare workers toward mask. A total of 101 responses were received from healthcare workers. Majority of the participants wore masks all the time or most of the time. However, there were some who did not wear the mask all the time or wore it only occasionally. It is well known that surgical masks can prevent the inhalation of large droplets and sprays but have limited ability to filter submicron-sized airborne particles.<sup>6,7</sup> In the long run, the extreme steps of lockdown and other measures may not be sustainable because of detrimental effects on the economy and other aspects of society. Logically, therefore, the alternative methods for containing and preventing the spread of COVID-19 are to be used. Wearing a mask is one of the most important of these methods. Face masks work by providing a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment.<sup>8</sup> In resource-limited settings, where the incidence of infectious disease is high, and the environmental conditions of hospitals are often poor, hospitals may rely heavily on a face mask to protect medical staff against COVID-19 and to prevent cross-contamination among patients and HCWs.<sup>9</sup> The use of a face mask

among HCWs is strongly recommended by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) as a standard for transmission-based precaution.<sup>10,11</sup>

In our study, the issues related to mask wearing were stratified and asked from the participants. We found that both groups i.e. those who wore masks all the time and those who did not, had similar problems pertaining to the mask wearing practice. Mask related issues give insight into the ways how a mask is affecting its user and ways to improve it. Many participants complained about the mask interfering with the communication or the tightness of the mask. Some complained about the boom in the mask industry after COVID-19 was unprecedented. The consumption has touched new heights and is expected to grow at a CAGR of over 5% during 2019-2025 period.<sup>14</sup> This gives industry the opportunity to manufacture masks that could address the concerns of consumers in the long run for compliance to its use.

Similarly personal problems/concerns were also asked from the study participants. The personal problems related to masks have a wide spectrum. Long duration of wearing masks during duty hours may cause healthcare workers to feel pain in the ears.<sup>15-16</sup> And, sometimes the masks material is too thick that may cause suffocation. Moreover, improper use or dysfunction of nasal seals in the mask may cause water vapors from the breathing to travel up and cause blurring of glasses.<sup>15</sup>

Post-covid-19 world has pushed the world to a new form of world order. Fashion industry may not be an exception to it. The mask has become a new norm. Despite that, some healthcare professionals faced social issues with wearing masks.<sup>16-18</sup> Astonishingly, as many as 48.5% of the healthcare professionals believed that the patients may not be feeling uncomfortable if they do not wear a mask. This may point to the lack of knowledge about how corona virus may spread in the general population, or, trivialization of the threat it poses as pandemic. It put more responsibility on healthcare professionals to sensitize and impart knowledge about COVID-19 among their patients.

## CONCLUSION

The attitude toward masks has been defined by several reasons among healthcare professionals. The knowledge about masks and its correct usage are important to mitigate negative attitudes. Moreover, the mask related industry may also come up with user friendly masks that may overcome the problems faced by the consumers specially healthcare professionals.

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## REFERENCES

1. World health organization. www.who.int. [Online] <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>.
2. Control, center of disease. CDC. www.cdc.gov. [Online] <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/summary.html>.
3. Control, Center disease. www.cdc.gov. www.cdc.gov. [Online] [https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fprepare%2Ftransmission.html](https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fprepare%2Ftransmission.html).
4. Organization, World Health. WHO. www.who.int. [Online] [Cited: April 22, 2020.] <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.
5. GOP. covid.gov.pk. www.covid.gov.pk. [Online] [Cited: April 22, 2020.] <http://covid.gov.pk/>.
6. Sahin AR, Erdogan A, Agaoglu PM, Dineri Y, Cakirci AY, Senel ME, et al. 2019 Novel Coronavirus (COVID-19) Outbreak: A Review of the Current Literature. *Eurasian J Med Oncol* 2020;4.
7. Song Z, Xu Y, Bao L, Zhang L, Yu P, Qu Y, et al. From SARS to MERS, Thrusting Coronaviruses into the Spotlight. *Viruses* 2019;11.
8. University of Maryland. "Wearing surgical masks in public could help slow COVID-19 pandemic's advance: Masks may limit the spread diseases including influenza, rhinoviruses and coronaviruses & quote; Science Daily. Science Daily. [Online] April 3, 2020. [Cited: October 5, 2020.] [www.sciencedaily.com/releases/2020/04/20200403132345.htm](http://www.sciencedaily.com/releases/2020/04/20200403132345.htm).
9. Migliori GB, Nardell E, Yedilbayev A, Lia D, et al. Reducing tuberculosis transmission: a consensus document from the World Health Organization Regional Office for Europe. *Eur Respiratory J* 2019;53:1900391.
10. Ho HSW. Use of face masks in a primary care outpatient setting in Hong Kong: Knowledge, attitudes and practices. *Elsevier Public Health* 2012;126.
11. Kumar J, Katto MS, Siddiqui AA, Sahito B, Jamil M, Rasheed N, et al. Knowledge, Attitude, and Practices of Healthcare Workers Regarding the Use

- of Face Mask to Limit the Spread of the New Coronavirus Disease (COVID-19). *Cureus* 2020;12(4).
12. Organization, World Health. Advice on the use of masks in the community, during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak: interim guidance. [Online] January 29, 2020. [Cited: October 8, 2020.] <https://apps.who.int/iris/handle/10665/330987>. CC BY-NC-SA 3.0 IGO.
  13. Siegel JD, Rhinehart E, Jackson M, Chiarello L. Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings. *Am J Infect Control* 2007;35:S65-164.
  14. Markets, Research and. Face Mask Industry Assessment and Growth Projection 2020-2025 - COVID- 19 Updated: Globe Newswire, 2020.
  15. Esposito S, Principi N, Leung CC, Migliori GB. Universal use of face masks for success against COVID-19: evidence and implications for prevention policies. *Eur Respir J* 2020;55(6):2001260.
  16. Leung CC, Cheng KK, Lam TH, Migliori GB. Mask wearing to complement social distancing and save lives during COVID-19. *Int J Tuberc Lung Dis* 2020;24(6):556-8.
  17. Joseph R, Highton M. Masks and Face Covers: Challenges for Health Care Workers. *J Pediatr Surg Nurs* 2020;9(3):97-106.
  18. Ribeiro VV, Dassi-Leite AP, Pereira EC, Santos AD, Martins P, de Alencar Irineu R. Effect of Wearing a Face Mask on Vocal Self-Perception during a Pandemic. *J Voice* 2020;10.