

# Unmasking the Mask Issues among Healthcare Workers in COVID-19 Era

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## ABSTRACT

**Introduction:** Recent pandemic have showed importance of adequate availability of Personal Protective Equipment (PPE) most importantly the face mask and training of Healthcare Workers (HCWs) for its proper usage for protection from various infections to maintain smooth functioning of healthcare facility.

**Aim:** To examine practices and barriers to compliance regarding face mask usage among HCWs.

**Materials and Methods:** The present study was a cross-sectional observational analytical study which was conducted at Dr. Baba Saheb Ambedkar Medical College and Hospital, Delhi, India, from 30<sup>th</sup> June, 2020 to 24<sup>th</sup> July, 2020 during Coronavirus Disease-2019 (COVID-19) pandemic. Data was collected through semi-structured bilingual online questionnaire using Google form based on recommendations for mask use by World Health Organisation (WHO) and Centers for Disease Control and Prevention (CDC). Data was recorded in MS Excel and Statistical Package for the Social Sciences (SPSS) 16.0

software was used for statistical analysis. Qualitative data was expressed in percentages and continuous data was summarised in mean±Standard Deviation (SD). Chi-square test was used to check the association between the categorical variables.

**Results:** Total 362 HCWs submitted responses, of which 44.7% respondents wore N95 masks to protect themselves from COVID-19. Only 34.2% were satisfied with availability of masks in healthcare facility. Itching and sweating on part inside mask was major problem faced by 52.8% of respondents. Only 58% followed proper hand hygiene precautions while handling mask whereas, 62.7% took proper measures while doffing.

**Conclusion:** There appears to be a lack of awareness about proper hand hygiene while handling mask, appropriate precautions for reuse and doffing. Availability of mask also needs to be addressed. Regular trainings are needed to increase awareness, improve behaviour and practices regarding mask usage for prevention of occupational spread of infection among HCWs.

**Keywords:** Barriers, Behaviour, Compliance, Practices

## INTRODUCTION

In a pandemic situation, human resource in hospitals is an irreplaceable one. Infection prevention and control in healthcare settings involves appropriate use of PPE which includes gloves, eye protection, gown, head and shoe covers, face mask or respirators, etc [1]. It has become quite evident during the recent pandemic of COVID-19 that adequate availability of face masks and training of HCWs for its correct use play an important role as a significant number of HCWs became infected with the disease [2].

The virus is mainly transmitted through respiratory droplets or by touching mouth, nose or eyes with contaminated hands. Therefore, to reduce transmission, HCWs need to strictly adhere to infection control practices. In addition to appropriate hand hygiene practices, the most important measure for infection prevention and control of COVID-19 among HCWs was routine and correct use of face mask. Inadequate knowledge among HCWs leads to inappropriate use of face masks, thus, increasing the risk of transmission [3].

A study found that a significant number of HCWs who got infected with COVID-19 in their settings got exposed due to mask non compliance in non patient care areas or during meals sitting in groups when mask was removed and social distancing rules were not followed [4]. In a systematic review, the compliance with face mask usage among HCWs ranged from 4-55%. The compliance with the use of face mask may vary depending upon individual factors, type of mask being used, environmental conditions and organisational policies [5].

There appears to be a gap between knowledge and practices among HCWs leading to decreased compliance about correct face mask usage, thus exposing them to infection in this pandemic situation.

The present study aimed at examining the knowledge, practices and barriers to compliance regarding the face mask usage among HCWs in hospital settings.

## MATERIALS AND METHODS

A cross-sectional observational and an analytical study was conducted by the Department of Microbiology and Department of Community Medicine at Dr. Baba Saheb Ambedkar Medical College and Hospital, Delhi, India, from 30<sup>th</sup> June, 2020 to 24<sup>th</sup> July, 2020 during the period of COVID-19 pandemic. Ethical approval for the present study was provided by the Institutional Ethical Committee (IEC) Ethics committee approval number: F.5(50)/2020/BSAH/DNB/committee/8211-8216), and the informed consent was obtained from each of the study participant.

**Inclusion criteria:** All HCWs including medical, paramedical, nursing and other staffs, who gave consent were included and who work in a hospital and may come in direct or indirect contact with patients.

**Exclusion criteria:** HCWs who did not give consent to be part of the study were excluded from the study.

A pretested, semi-structured bilingual (English and Hindi languages) questionnaire was prepared based on recommendations for mask use by WHO and CDC [6,7]. The data was collected through online questionnaire made using Google form and circulating the link of the form via various media like email, whatsapp etc. The subjects were considered to be included in the online survey, if, they agreed to participate and give their individual consent for the survey after which detailed questionnaire opened up. Questionnaire contained various questions regarding face mask usage with multiple choice answers of which one best answer was to be chosen for submission. The questionnaire had three sections;

socio-demographic profile, mask usage practices and barriers to mask use. The "socio-demographic profile" section contains questions regarding age, gender and occupation/designation. The "mask usage practices" consist of questions like; Before COVID-19 pandemic, did you wear face mask? What type of mask do you wear for protecting yourself from COVID-19? For how long do you wear the mask every day? How frequently do you change the mask? How do you store the mask? What do you do before reuse of mask? When do you wash hands while handling the mask? When you remove your mask, what do you keep in mind? The "barriers to mask use" section consist of questions like; Have you ever felt dizzy wearing a mask? And after how long do you feel uncomfortable/suffocated wearing the mask? Data was kept confidential by keeping the responses anonymous and was stored under secured settings.

## STATISTICAL ANALYSIS

Data was recorded in MS Excel and Statistical Package for Social Sciences (version 16.0; SPSS Inc., Chicago, IL) software was used for statistical analysis. Qualitative data was expressed in percentages and continuous data was summarised in mean±SD. Chi-square test were used to check the association between the categorical variables. A p-value of <0.05 was considered significant.

## RESULTS

Total 362 people submitted their responses, of which 172 (47.5%) were females and 190 (52.5%) were males. Demographic characteristics of the respondents is shown in [Table/Fig-1]. More than half (58.3%) of the respondents were doctors. More than three fourth of the respondents were of age 20-40 years.

Variables	Frequency (%) N=362
<b>Gender</b>	
Male	190 (52.5)
Female	172 (47.5)
<b>Age group (years)</b>	
20-30	113 (31.2)
31-40	164 (45.3)
41-50	46 (12.7)
51-60	39 (10.8)
<b>Job profile</b>	
Doctor	211 (58.3)
Nurse	58 (16.0)
Others (including technical staff, nursing orderlies, housekeeping or any other staff who may come in contact with the patients)	93 (25.7)

[Table/Fig-1]: Socio-demographic profile of the healthcare workers.

[Table/Fig-2] depicts the usage, type and frequency of change of masks by the respondents to protect themselves from COVID-19.

Before COVID-19 pandemic, 32/211 (15%) doctors, 2/58 (3%) nursing staffs and 19/93 (20%) never wore a face mask. Maximum number (47%) of such respondents was from age group 31-40 years. Of 362 HCWs, 225 (62.1%) used to wear mask during aseptic procedure or while interacting with patients, 29 (8.1%) wore masks only to prevent allergy while the some used to wear mask only once in a while (53, 14.6%). More than two-fifth (44.7%) of the respondents wear N95 mask, while more than one fourth (26.8%) of the respondents wear N95 mask together with triple layer mask. About 182 (50.3%) respondents feel more comfortable with mask having adjustable elastic bands followed by those who prefer masks with two ties on each side that is 93 (25.7%) and rest of the HCWs prefer masks with elastic bands around ears.

Variables	Frequency (%) N=362
<b>Before COVID-19 pandemic, did you wear face mask?</b>	
Never wore a mask	53 (14.6)
Once in a while	53 (14.6)
Only when bad smell around	2 (0.6)
Only while performing some aseptic procedure/surgery	117 (32.3)
While performing aseptic procedure and interacting with patients	108 (29.8)
To avoid pollution/allergy	29 (8.1)
<b>What type of mask do you wear for protecting yourself from COVID-19?</b>	
Triple layer	86 (23.8)
N95	162 (44.7)
Both together	97 (26.8)
Any type of cloth mask/scarf	8 (2.2)
N99 mask/mask with valve	7 (1.9)
None	2 (0.6)
<b>What kind of mask you are more comfortable with?</b>	
One with 2 ties on both the sides	93 (25.7)
One with elastic bands around ears	80 (22.1)
One with adjustable elastic bands over the head	182 (50.3)
Others (including any other face covers instead of masks like scarf, handkerchief etc.)	7 (1.9)
<b>How frequently do you change the mask?</b>	
Every 6-8 hours/every shift	39 (10.8)
Every 12 hours	12 (3.3)
Everyday	74 (20.4)
Every alternate day	22 (6.1)
After >2 days of usage	29 (8.0)
I have four N95 masks and I reuse every 5 <sup>th</sup> day for 20 days	186 (51.4)
<b>How frequently does hospital provide face mask during pandemic time?</b>	
Once a day	45 (12.4)
As per requirement	121 (33.4)
Once in a week	86 (23.8)
Once in 15-20 days	67 (18.5)
Occasionally	33 (9.1)
Hospital never provided us mask	10 (2.8)
<b>For how long do you wear the mask every day?</b>	
<2 hours	9 (2.5)
2-5 hours	71 (19.6)
6-9 hours	199 (55.0)
10-12 hours	68 (18.8)
13-18 hours	15 (4.1)
<b>How satisfied are you with mask issuing frequency?</b>	
Not at all	81 (22.4)
It's fine, but could be more frequent	141 (39.0)
Satisfied	94 (26.0)
Very satisfied	20 (5.5)
I am getting extra as per my requirement	10 (2.7)
I don't want to comment	16 (4.4)
<b>How do you store the mask?</b>	
Hanging in sunlight	74 (20.4)
In labelled paper bags	119 (32.9)
In polythene bags	42 (11.6)
Open in my workplace	11 (3.0)
On a separate shelf in cupboard/drawer	81 (22.4)
Others (including storing unlabelled uncovered in hand bags, pockets of clothes, hanging it on hooks, dashboard of car etc.)	35 (9.7)

If you feel extremely thirsty with your mask on, what do you do before drinking water?	
Just pull down the mask	102 (28.2)
Remove the mask and keep it aside	106 (29.3)
Just loosen the strings of the mask a bit	33 (9.1)
Hang the mask on one ear	20 (5.5)
I prefer to have water with straw without removing the mask	2 (0.6)
I avoid drinking water until mask is removed	99 (27.3)
When do you wash hands while handling the mask?	
Just before donning/wearing mask	38 (10.5)
Just before doffing/removing mask	30 (8.3)
Only after donning	2 (0.6)
Only after doffing	44 (12.1)
If by mistake I touch any part of the mask while it is on	38 (10.5)
All of the above	210 (58.0)
When you remove your mask, what do you keep in mind?	
Hand hygiene before doffing	51 (14.0)
Bend forwards a little	7 (2.0)
No one else should be around within one meter distance	16 (4.4)
Lower strap/string should be removed first	14 (3.9)
Front surface should not be touched	47 (13.0)
All of the above	227 (62.7)

**[Table/Fig-2]:** Face mask usage practices among healthcare workers.

Only 124/362 (34.2%) respondents were satisfied with mask issuing frequency of healthcare facility while 81 (22.4%) were not satisfied. About 141(39%) respondents, said that frequency for issuing mask was fine but it would be better if it was more frequent.

Maximum number of respondents that is 199 (55%) wear mask for 6-9 hours followed by 71 (19.6%) for 2-5 hours, 18.8% for 10-12 hours, 4.1% for more than 12 hours and rest wear mask for less than 2 hours/day [Table/Fig-2]. When asked about the method of storage of mask, only 119/362 (32.9%) were storing it in labelled paper bags as advised, 81 (22.4%) storing it on a shelf in cupboard or drawer, 74 (20.4%) hang it in sunlight, 42 (11.6%) stores in polythene bags, 11 (3%) keep it open in their workplace while 35 (9.7%) said they store by some other methods [Table/Fig-2].

Some mask usage practices that were found to be significantly associated with demographic factors as depicted in [Table/Fig-3-5]. [Table/Fig-3] shows behaviour of respondents before reusing the mask. Significantly higher proportion of younger age groups was less knowledgeable about proper method of reuse of mask ( $p < 0.001$ ).

Variable	Age group (years) of the respondent				Total	$\chi^2$ value, p-value
	20-30	31-40	41-50	51-60		
What do you do before reuse of mask?						
Dry in sunlight	28 (29.5)	43 (45.3)	21 (22.1)	3 (3.1)	95	41.242, <0.001
Wash with soap and water	12 (24.5)	28 (57.1)	4 (8.2)	5 (10.2)	49	
Wash/spray with disinfectant	22 (47.8)	22 (47.8)	0	2 (4.4)	46	
Expose to UV rays	2 (40.0)	2 (40.0)	1 (20.0)	0	5	
Store in separate paper bags	24 (24.2)	40 (40.4)	16 (16.2)	19 (19.2)	99	
None of the above	25 (36.8)	29 (42.6)	4 (5.9)	10 (14.7)	68	

**[Table/Fig-3]:** Association of age with practices before reuse of mask. A p-value <0.05 is statistically significant

[Table/Fig-4] shows number of HCW following hand hygiene practices at every opportunity while handling the mask. The practices don't vary significantly between various age groups; and

Variable	Hand hygiene practices at every opportunity while handling the mask			$\chi^2$ value, p-value
	Not at all steps	At all steps	Total	
Gender				
Male	86 (45.3%)	104 (54.7%)	190	1.760, 0.185
Female	66 (38.4%)	106 (61.6%)	172	
Age group (years)				
20-30	46 (40.7%)	67 (59.3%)	113	4.856, 0.183
31-40	75 (45.7%)	89 (54.3%)	164	
41-50	13 (28.3%)	33 (71.7%)	46	
51-60	18 (46.2%)	21 (53.8%)	39	
Job profile				
Doctor	103 (48.8%)	108 (51.2%)	211	18.620, <0.001
Nurse	10 (17.2%)	48 (82.8%)	58	
Others	39 (41.9%)	54 (58.1%)	93	

**[Table/Fig-4]:** Association of age, gender and job profile with hand hygiene practices. A p-value <0.05 is statistically significant

Variable	Precautions taken while removing the mask			$\chi^2$ value, p-value
	Not adequate	Adequate	Total	
Gender				
Male	86 (45.3%)	104 (54.7%)	190	10.863, 0.001
Female	49 (28.5%)	123 (71.5%)	172	
Age group (years)				
20-30	42 (37.2%)	71 (62.8%)	113	1.159, 0.763
31-40	64 (39.0%)	100 (61.0%)	164	
41-50	14 (30.4%)	32 (69.6%)	46	
51-60	15 (38.5%)	24 (61.5%)	39	
Job profile				
Doctor	79 (37.4%)	132 (62.6%)	211	5.078, 0.079
Nurse	15 (25.9%)	43 (74.1%)	58	
Others	41 (44.1%)	52 (55.9%)	93	

**[Table/Fig-5]:** Association of age, gender and job profile with precautions taken by the respondents while removing the mask. A p-value <0.05 is statistically significant

between males and females, while it varies significantly among various job profiles ( $p < 0.001$ ). The highest proportion of HCWs who perform hand hygiene at every step as recommended were nurses (82.8%).

[Table/Fig-5] shows the number of HCW taking adequate precautions while removing mask. Significantly higher proportion of females 123/172 (71.5%) had knowledge about all precautions to be taken while removing mask as compared to males 104/190 (54.7%) ( $p = 0.001$ ).

[Table/Fig-6-8] depicts responses of HCWs to questions regarding barriers to mask compliances. Of total respondents, 155 (42.8%) could tolerate mask for only 2-5 hours followed by 102 (28.2%) individuals who could barely tolerate it for less than an hour whereas only 32 (8.8%) could tolerate it for duration longer than 12 hours and the rest from 6-11 hours [Table/Fig-3]. Duration of tolerability of mask had no gender difference, between various job profiles but a significantly higher proportion of HCWs in the age group 41-50 were intolerant to mask for long hours as compared to others ( $p = 0.022$ ) [Table/Fig-6].

[Table/Fig-7] depicts the behaviour of HCWs about handling the mask and hand hygiene. When asked about the major problem faced due to mask, 191/362 (52.8%) HCW responded as sweating and itching on part inside the mask followed by inability to drink water frequently by 72 (19.9%), repeated touching of face and forgetting hand hygiene and inability to properly communicate by

Variable	After how long do you feel uncomfortable/suffocated wearing the mask?					Total	$\chi^2$ value, p-value
	After few minutes to 1 hour	After 2-5 hours	After 6-11 hours	After $\geq 12$ hours and long hours			
<b>Gender</b>							
Male	49 (25.8%)	76 (40.0%)	43 (22.6%)	22 (11.6%)	190	6.150, 0.105	
Female	53 (30.8%)	79 (45.9%)	30 (17.4%)	10 (5.8%)	172		
<b>Age group (years)</b>							
20-30	25 (22.1%)	46 (40.7%)	30 (26.5%)	12 (10.6%)	113	19.383, 0.022	
31-40	52 (31.7%)	65 (39.6%)	33 (20.1%)	14 (8.5%)	164		
41-50	12 (26.1%)	29 (63.0%)	5 (10.9%)	0	46		
51-60	13 (33.3%)	15 (38.5%)	5 (12.8%)	6 (15.4%)	39		
<b>Job profile</b>							
Doctor	58 (27.5%)	90 (42.7%)	43 (20.4%)	20 (9.5%)	211	4.269, 0.640	
Nurse	16 (27.6%)	23 (39.7%)	16 (27.6%)	3 (5.2%)	58		
Others	28 (30.1%)	42 (45.2%)	14 (15.1%)	9 (9.7%)	93		

**[Table/Fig-6]:** Association of age, gender and job profile with duration of tolerability of face mask usage. A p-value <0.05 is statistically significant

Major problem faced due to mask	Frequency (%) N=362
Inability to drink water frequently	72 (19.9)
Sweating and itching on part inside the mask	191 (52.8)
Repeated touching of face and forgetting hand hygiene	31 (8.5)
Inability to properly communicate	31 (8.5)
Allergic reaction	10 (2.8)
Pressure marks on the face	27 (7.5)

**[Table/Fig-7]:** Major problem faced by healthcare workers due to mask.

Gender	Have you ever felt dizzy wearing a mask?					Total	$\chi^2$ value, p-value
	Atleast once everyday	In hot/humid conditions	Only after exertion	Many times, everyday	Never		
Male	11 (5.9%)	70 (37.2%)	25 (13.3%)	15 (8.0%)	67 (35.6%)	188	13.784, 0.008
Female	12 (7.0%)	69 (40.4%)	29 (17.0%)	27 (15.8%)	34 (19.9%)	171	
Total	23	139	54	42	101	359	

**[Table/Fig-8]:** Association of gender with dizziness due to wearing a mask. Note: Three healthcare workers reported that they fainted few times. A p-value <0.05 is statistically significant

31 (8.5%), pressure marks on face by 27 (7.5%) while the rest had allergic reaction as major problem.

When asked “Have you ever felt dizzy wearing a mask”, 139 (38%) respondents said that they felt dizzy in hot/humid conditions while 101 (28%) never felt dizzy, 54 (15%) only after exertion, 42 (12%) feel dizzy many times every day and 23 (6%) feel dizzy atleast once every day. Three HCWs reported that they fainted few times. Dizziness was reported in significantly higher proportion of females (p=0.008). More number of females, 27 (15.8%) reported feeling dizzy multiple number of times in a day as compared to only 15 (8%) males. While 67 (35.6%) males reported that they never felt dizzy, only 34 (19.9%) females reported the same [Table/Fig-8].

## DISCUSSION

Face mask acts as a barrier in reducing risk of transmission of microorganisms between patients, HCWs and environment. This study shows that quite a large number of HCWs were not used to wearing face mask which explains why there is a lack of knowledge and compliance in face mask usage. Moreover, since general populations are not trained in the use of face masks, they tend to copy what they observe in media and their practices may be

influenced by healthcare professionals [8]. An Indian study done during COVID-19 pandemic showed only 64% HCWs were wearing masks correctly, while a study from a hospital in China in non isolated areas, 74% patients and their families were wearing masks correctly [9,10].

As per WHO guidelines about PPE usage, use of N95 or equivalent mask is recommended while performing aerosol-generating procedures on patients suffering from COVID-19. Medical masks have been recommended for general care of COVID-19 patients [11]. In this study, highest percentage (44.7%) of respondents wore N95 masks followed by surgical triple layered masks (24%). Whereas in a study done in Uttarakhand, 60% of HCWs were found to be using triple layered mask and only 12% were using N95 mask [9]. Overall a low N95 usage might have resulted due to non availability or strict rational use of N95 masks. Use of appropriate type of mask as per the kind of work involved needs to be strictly advised as various studies have found that N95 respirators provide better protection over medical masks and hand-made masks in different situations [12,13].

Adequate supply, availability of masks and training is essential to optimise compliance. Sudden increase in the costs of masks to 30-100 folds during pandemic situation due to huge supply-demand imbalance resulted in innovations, reprocessing and reusing of masks which may have hindered with their efficacy [14].

A study identified availability of medical masks and respirators as one of the major issues raised by the participants [15]. In present study, only 34.2% of the respondents were satisfied with the mask’s availability.

Only 10.8% respondents in present study were changing their masks at recommended frequency of 6-8 hours. A study found outer surface of 10% of the masks worn by HCWs were contaminated with respiratory viruses and virus positivity was significantly higher among those who used the masks for >6 hours [16]. Longer than recommended duration put HCWs at risk of decreased protection from infection as well spread of infection due to inadvertently touching the in-use contaminated masks. Therefore, HCWs should be cautious and change their masks frequently. If there is no alternative to prolonged use especially in acute shortage situations, they need to take additional precautions especially the hand hygiene before and after handling or touching the in-use masks.

The HCWs are overburdened due to long working hours decreasing efficiency and quality. The masks further seem to worsen the situation [17]. In this study also, less than 30% HCWs could tolerate face masks for 6 hours or longer. Hence, one need to ensure certain measures to be taken to prevent non compliance. The working hours can be reduced to reduce stress on HCWs.

Only 32.9% respondents store mask for re-use in properly labelled paper bags as advised and only 37% of those receiving N95 masks have been storing it in paper bags before reuse. Rest of the respondents have been resorting to ineffective ways or potentially damaging methods of storing and reusing the masks. Extended use and reuse of N95 respirators have been suggested as measures to meet increased demands during pandemic but the safety and efficacy of such practices remain doubtful. Methods like microwaving, hydrogen peroxide gas plasma, autoclaving, alcohol and soaking in soap and water can significantly deteriorate mask’s filtration capacity and integrity. Treatment with bleach may lead to release of chlorine gas on exposure to moisture. Also, repeated doses of ultraviolet irradiation may compromise strength of mask material and straps [18]. Moreover, data from a study also showed to decrease the fit factor of the N95 mask below acceptable limit after five consecutive donning [19].

Wearing masks and respirators may interfere with respiration, vision, communication with co-workers, thermal equilibrium, etc. there appears to be a great variability in tolerance to such interferences and the way people deal with these [17]. In present study, the major problem faced by HCWs due to mask was sweating and itching in 52.8% respondents. Similar findings were reported in another Indian study where sweating was found to be the major problem in HCWs (68%) under study and itching in 52% [20]. Ours being a tropical country, hot and humid weather in most parts is frequent. Despite resisting touching the face repeatedly, it might not be totally avoidable and then forgetting to perform hand hygiene.

For HCWs who were very alert and careful about mask etiquettes and hand hygiene, they would either not drink water during the whole shift like 27.3% respondents did in present study; or they would take all precautions and remove the mask properly (29%) before having water. Other problems like rashes or mild allergy may be managed by emollients or lotions, using fresh mask in every shift etc., [21].

Difficulty in communication was the major problem faced by some due to the mask (8.5%). This might lead to decreased compliance or pulling down the mask while trying to communicate. Majority of respondents felt dizzy atleast once while the mask is on which might be due to hot and humid conditions in our country. Other factors may be dehydration, exertion due to heavy workload or reusing of soiled masks. Moreover, improving the design and material used in the manufacturing of mask may also increase tolerability and compliance [22].

As per WHO and CDC guidelines, it is advisable to perform hand hygiene before and after donning, before and after doffing and also in case one touches the mask accidentally after donning [6,7]. Only 58% of the respondents knew and were following hand hygiene at all these steps. Therefore, one need to emphasise repeatedly upon the very basic hand hygiene while using the masks so that HCWs don't put themselves at risk of transmitting the disease and getting infected via contaminated hands or contamination of their masks.

Last but not the least, even if fully equipped with the PPE, HCWs may contaminate themselves by not removing PPE in the proper order taking all precautions. Face mask should be removed in the end after removing the other components of PPE [2]. In present study, 37% of the respondents were not following all precautions while removing the mask. Thus, regular training should be ensured for the best possible protection of the HCWs. The training on hand hygiene, mask etiquettes should lay emphasis on type of mask for different areas, donning and doffing of surgical masks and respirators since masks have proven to be very effective in curtailment of cases throughout the world, where, these practices have been followed or enforced by law.

### Limitation(s)

Current study had few limitations. First, as the present study was based on self-reported data, hence, the present study might have some recall bias. Second, this was a cross-sectional study, it was unable to establish a cause-and-effect relationship; a follow-up study could be more useful. Third, moreover, the population that responded to the questionnaire would be those having an internet access and who might actually be interested in the subject leading to respondent bias.

### CONCLUSION(S)

We are still amidst the pandemic and some countries faced second waves, some have just started experiencing a second/third

wave, future waves may be predicted due to mutations of the virus causing current pandemic. It becomes unavoidable to address the issues related to mask and respirators which play the most vital role in prevention of transmission, especially among the HCWs. Knowledge about good mask practices, individual and organisational factors which determine the compliance and adherence to recommendations for respirators, all need to be given equal importance to reduce occupational transmission of the disease during this unprecedented situation.

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