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Original Research Article

A study on stigma and apprehensions related to COVID-19 among healthcare professionals in Delhi

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ABSTRACT

Background: Public health emergencies during pandemics of communicable diseases, may cause fear leading to social isolation and stigma. Cases have been reported of healthcare professionals (HCPs), facing discrimination on account of heightened fear and misinformation. However, there is dearth of literature with regards to the nature and magnitude of this stigma. Hence, this study was conducted to assess perceived and experienced stigma related to the Coronavirus disease 2019 (COVID-19) among HCPs and also assess their apprehensions about testing, quarantine/isolation and consuming Hydroxy-chloroquine as prophylaxis (HCQ).
Methods: A cross-sectional study was undertaken among the HCPs working in Delhi during the period May to July 2020. The study was conducted using a semi-structured online questionnaire which was circulated on official contact numbers and email IDs of HCPs in the Google.doc format.
Result: Seventy percent of the participants in the current study perceived some kind of stigma, 50% of study participants perceived some form of stigma in their residential colony, 46% observed change in behaviour of their neighbours. Around 20% of participants experienced stigma, most commonly being rude behaviour or harassment from neighbour/landlord. A statistically significant association was observed between marital status (p=0.038), designation (p=0.021) and place of stay (p=0.013) of the study participants and perceived stigma among them. The level of awareness regarding HCQ was high (94.3%), but more than 60% didn't consume it due to apprehension about side effects.
Conclusion: In view of the substantial stigma faced by the HCP, necessary measures to curb the fear and dispel misinformation related to COVID-19 must be undertaken.

Keywords: Stigma, COVID-19, Healthcare professionals, Apprehensions, HCQ

INTRODUCTION

Coronavirus 2019 (COVID-19) was declared as a global pandemic on March 11, 2020 by the World Health Organization (WHO). The pandemic has not only overburdened the healthcare system but owing to its nature and perceived threat, it has led to elevation of the mental stressors among the healthcare professionals (HCPs). Communicable diseases like ebola, Middle East respiratory syndrome (MERS), H1N1 etc. had already witnessed, social isolation and stigma among the infected as well as the cured survivors.[1,2] Weiss et al. defined stigma as, "a social process or related personal experience characterized by exclusion, rejection, blame, or devaluation that results from experience or reasonable anticipation of an adverse social judgment about a person or group identified with a particular health problem".[3] The secondary epidemic of prevailing stigma following COVID-19 has crept in almost all the geographical regions including Mexico, Malawi and India.[4] In a developing country like India, where an immense lacunae already exist

regarding knowledge of disease transmission and misinformation among general population, the risk of social outcast and stigmatization of the frontline workers get compounded.

The frontline HCPs have been working and battling with the epidemic and providing care to those in need. In such an exhaustive scenario, these frontline warriors are facing discrimination in view of heightened fear among public. HCPs are experiencing stigma from all quarters such as their neighbors, colleagues and society, making them a victim of social seclusion.

Thus, addressing the nature, magnitude and extent of the stigma in relation to COVID-19 among HCPs becomes the need of the hour, in order to make better and supportive environment for them to sustain a good mental wellbeing and provide optimum care to those in need. In view of this, the study was conducted with an objective to assess this perceived and experienced stigma by the HCPs in India in residential areas, common public places like markets and at workplace in relation to COVID-19. The study also aims to assess their perceived stigma related to quarantine and isolation and also the apprehensions regarding getting tested and disclosure of results.

METHODS

Study design and population

An online cross-sectional study was conducted among HCPs working in New Delhi from May to July 2020. As no previous published study on stigma and apprehension related to COVID-19 could be traced, the exact prevalence of stigma and apprehension related to the disease is not known. Taking prevalence of 50% and absolute error of 5%, using the formula;

$$n = Z^2pq \div d^2$$

we got the minimum sample size of 384.

All HCPs namely medical officers, faculty, consultants, senior and junior residents, interns and nurses working in New Delhi, India were included in the study. The practitioners of traditional medicine were excluded from the study.

Data collection tool

The data was collected using a semi-structured questionnaire. In view of, lack of existing standardized questionnaire for assessing stigma related to COVID-19, the present questionnaire was designed by adopting questions from a standardized and validated Stigma assessment and reduction of impact (SARI) Stigma scale, which had been modified in context of South-East Asian countries and has been extensively used to assess stigma related to diseases like leprosy and Human immunodeficiency syndrome (HIV)/ Acquired immunodeficiency syndrome (AIDS).[5] The questions were modified in context of the infectious disease COVID-19. The questionnaire was divided into six sections namely, socio-demographic profile, perceived stigma by the doctors at residential areas/hostels as well as workplace, stigma experienced by them at these places, disclosure concerns about getting oneself tested, apprehensions related to positive tested and fears or concerns related to quarantine and isolation. Perceived stigma was defined as "beliefs and expectation that people have about the general populations' stigmatizing attitude towards themselves" and experienced stigma as "their actual encounter with stigmatizing attitude and behavior from general population".[6]

The official email IDs and contact numbers of HCPs working in Delhi were obtained from credible sources such as official directories/ websites, professional bodies like Delhi medical association (DMA), Indian academy of pediatrics (IAP), Indian public health association (IPHA), Indian association of prevention and social medicine (IAPSM) etc. A survey questionnaire with an inbuilt Participant information sheet (PIS) and consent form (google.doc format) was circulated among the eligible participants to ensure participation only once the participant has submitted his/her agreement to PIS and consent form. All participants responding to the study in the stipulated time frame i.e 1.5 months of the initiation of the study were included. The confidentiality and anonymity of the data was strictly maintained.

Data analysis

Data was entered and cleaned using Microsoft excel and analyzed in Statistical package for social science version 20.0 (SPSS 20.0). Continuous variables were expressed as median. Categorical variables were presented as proportions. Chi square test was used to test the statistical association of perceived stigma with the socio-demographic characteristics of the study participants. P value less than 0.05 was considered statistically significant.

RESULTS

The link of the study questionnaire was shared with 1160 individuals, 429 gave their consent and participated in the study. As five forms had incomplete responses so were excluded, 424 participants were finally included in the results.

Socio-demographic characteristics

Median age of study participants was 29 years. Females constituted 57.5% of the participants. Majority were resident doctors 164 (38.7%) were married, 298 (70.3%) were staying at either rented or own house and 243 (57.3%) had been working in high risk areas for maximum duration since March (Table 1).

Perceived stigma

Seventy percent of the participants in the current study perceived some kind of stigma. More than half (50.9%) of study participants perceived some form of stigma in their residential society/colony, 46% perceived change in behaviour of their neighbours or others when they were wearing their lab coat or uniforms. (Figure 1) More than one-third of the participants were hesitant to disclose their testing status to their neighbors, main reason being fear of family members being socially ostracized followed by, fear of being labelled by others. Perceived stigma was significantly higher among unmarried/ divorced/ separated participants (p=0.038), resident doctors (including interns, junior and residents) (p=0.021) and participants staying in hostel or accommodation by hospital in comparison to those staying at home (p=0.013) (Table 1).

Table 1: Association of socio demographic characteristics of the study participants with perceived stigma related to COVID-19 (n=424).

Socio-demographic characteristic		Frequency (%)	Perceived stigma (%)	p value
Gender	Male	180 (42.5%)	123 (68.3%)	0.300
	Female	244 (57.5%)	178 (73.0%)	
Marital status	Married	164 (38.7%)	107 (65.2%)	0.038
	Unmarried/ divorced/ separated	260 (61.3%)	194 (74.6%)	
Designation	Resident doctors[@]	298 (70.3%)	222 (74.5%)	0.021
	Faculty/ medical officers	97 (22.9%)	58 (59.8%)	
	Nursing	29 (6.8%)	21 (72.4%)	
Department	Medicine and critical care[*]	159 (37.5%)	112 (70.4%)	0.268
	Surgical[#]	103 (24.3%)	81 (78.6%)	
	Public health/ Community medicine	80 (18.9%)	52 (65.0%)	
	Paraclinical departments[$]	27 (6.4%)	17 (63.0%)	
	Others[+]	55 (13%)	39 (70.9%)	
Place of stay	Home[^]	298 (70.3%)	201 (67.4%)	0.013
	Hostel/accommodation by hospital	126 (29.7%)	100 (79.3%)	
Place of posting for maximum duration	High risk area	243 (57.3%)	179 (73.7%)	0.160
	Low risk areas	181 (42.7%)	122 (67.4%)	
Total		424 (100%)	301 (70.9%)	

@Interns, Junior residents, Senior residents
*Anaesthesia, General Medicine, Paediatrics, Casualty
#General Surgery, Obstetrics and Gynaecology, Ophthalmology, ENT, Orthopaedics
$Microbiology, Pathology, Biochemistry
+Dental, Dermatology, Radiation oncology etc.
^Own house/ rented accommodation/ paying guest.

Experienced stigma

Out of 424 study participants, 82 (19.3%) had experienced some or the other form of stigma and majority of them experienced it in their residential societies (48.8%) followed by workplace (22.6%). Also, family members of 50 (11.8%) participants experienced act of stigma. On probing into the form of stigma experienced by the participants, majority 57 (69.5%) experienced rude behavior while 26 (31.7%) were targets of racial comments or derogatory remarks, 24 (29.3%) faced harassment by neighbors while 11 (13.4%) of them, faced some difficulty/harassment in commuting to their job due to impositions from officials. (Figure 2)

Among the study participants 35% had been placed under quarantine while 20% had undergone isolation due to COVID-19. More than 90% of the family members of the participants were worried that they might test positive due to nature of their job.

Apprehensions regarding HCQ prophylaxis

The level of awareness regarding Hydroxychloroquine was high (94.3%). Two hundred and seventy two (64%) study participants didn't consume the same, main reason being either working in a low risk area or apprehension about side effects of the drug. (Figure 3)

DISCUSSION

Social stigma in context of the current COVID-19 pandemic can be described as a 'negative association between a person or group of people who share certain

characteristics, leading to acts of being labelled, discriminated, which has been further accentuated among HCPs, in view of their perceived contact with the virus'.[7] The COVID-19 pandemic engulfed nearly every continent on the planet. This exponential incrementing disease burden resulted in oversaturation of the health care system, putting the HCPs under physical as well as psychological strain.

Seventy percent of the participants in the current study perceived some kind of stigma, with nearly 20% experiencing it in the form of rude behaviour, derogatory remarks, harassment, obscene or racial comment (reported by those belonging to the north-Eastern part of the country). Owing to the high-risk exposure among HCP, they are currently facing a dual burden of both the disease as well as the stigma associated with it.[8] Media headlines across the continents are flooded with the social outcast faced by the frontline workers.[8-10] COVID-19 travel bans, lockdowns, and movement restrictions are being implemented across dozens of countries.

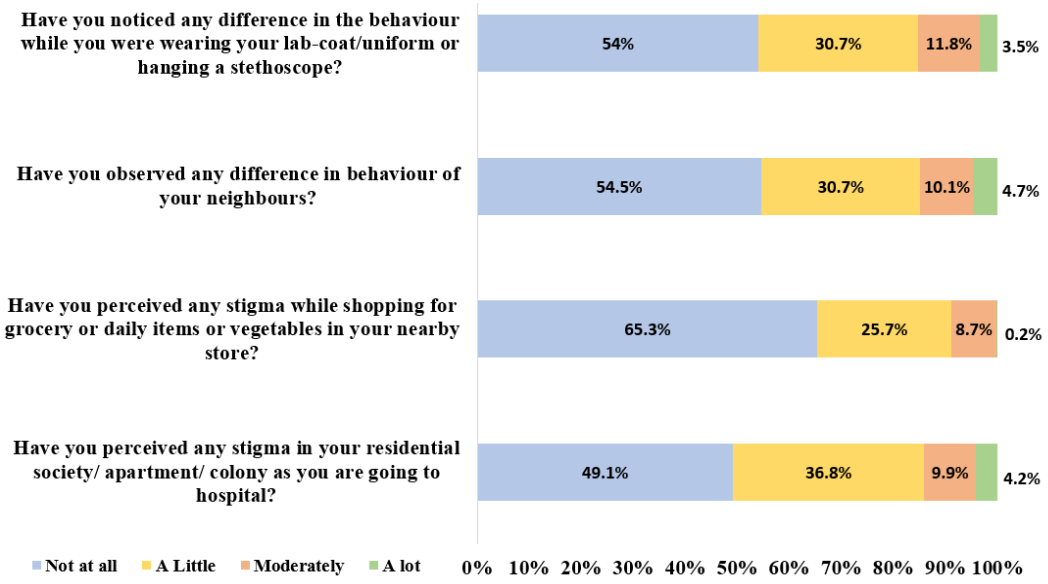

Figure 1: Perceived stigma among healthcare professionals due to COVID-19.

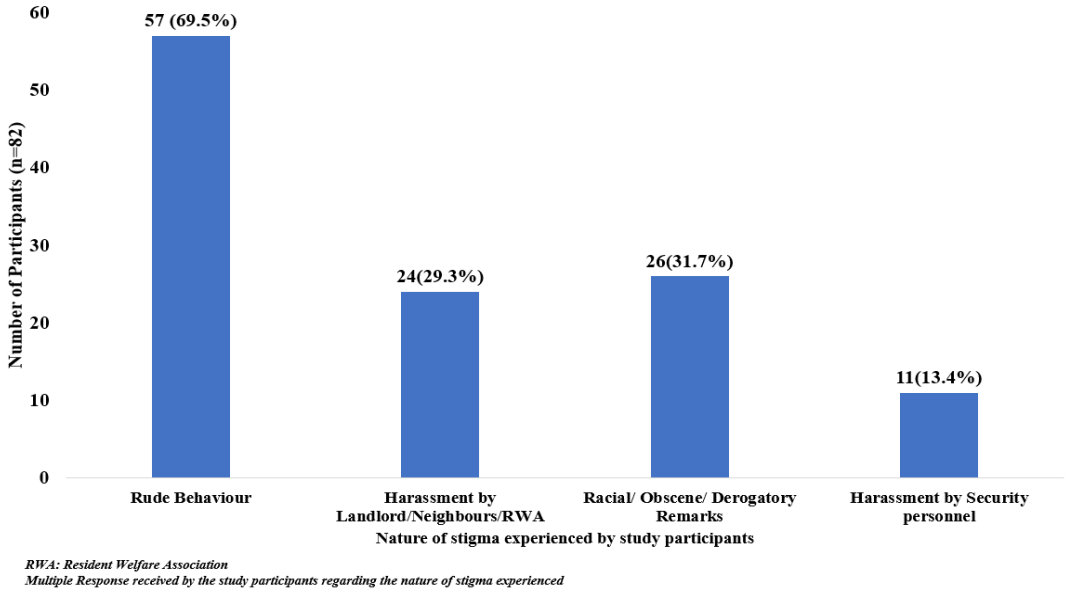

Figure 2: Forms of stigma experienced by the healthcare professional.

Movement bans and quarantines are often legally enforced, for instance military and municipal officials often impose barriers to movement of the HCPs from their place of residence to their workplace. Similar incidents of harassment while commuting to their workplace were reported by HCP.[11] This high burden of stigma among them can be attributed to the existent lacunae in the knowledge among the general population regarding the disease transmission and uncertainty in the outcome due to novel nature of disease. Hence, these HCP are further considered as a potential source of disease transmission, disregarded and socially segregated.[1]

Socio-demographic determinants also plays a significant role in the level of stigma perceived by any person. The study identified marital status (p=0.038), designation (p=0.021) and place of stay (p=0.013) of the study participant to be a significant determinant of perceived stigma. Higher stigma among resident doctors and those staying in hostel could be due to perceived high exposure to the disease by the neighbors. With these fears and apprehensions, they will land up in not only hiding their symptoms and diminishing their health seeking behavior and raised chances of severe forms of disease but also raising the chances of disease spread. Also, it can lead to impaired judgement and decision-making capacity in providing healthcare, which forms the fundamental pillar in combating the contagion.

The study also reported acts of stigmatization to not only among the HCP but also among their family members. As the HCP and their family members shares a common social environment, they also become the victim of social outcast even in absence of significant exposure to infection. More than one third of the study participants underwent quarantine and 20% were put on isolation due to COVID-19. Undergoing quarantine owing to high risk exposure or isolation due to disease further land them up in becoming victims of social rejection. A study by Ramaci et al. also reported persistence of longer duration of stigma and discrimination even after the end of quarantine period.[12] Nursalam et al. in a systematic review on risk factors for social stigma also addressed this feeling of abandonment among the quarantined even after the completion of the quarantine period.[13] Majority of the family members of the study participants (90%) were apprehensive about testing positive as a result of nature of their job with more than half, having fear of the reaction of family members on getting positive. This vicious cycle of stigma, apprehension, increased risk of severe form of illness among this vulnerable group will not only affect them but also the rest of the members of the family. Although the physical impact is faced only by the diseased, the whole family get struck with psychological impact, which has already been witnessed by diseases like schizophrenia and HIV.[14,15] However, etiology of this stigma varies with the disease in terms of nature of disease and the prevailing sociocultural factors in the community ranging from perceiving dangerous behaviour among people with psychological disorders to high risk sexual behaviour among PLHIV.[16]

The Ministry of health and family welfare published an advisory on hydroxy-chloroquine as COVID-19 infection prophylaxis for high risk population including asymptomatic health care workers involved in care of suspected or confirmed cases of COVID-19.[17] Despite high level of awareness regarding HCQ prophylaxis, 64% didn't consume it, owing to apprehensions regarding the side effects, drug interactions, and poor confidence of its efficacy. A retrospective cohort study by Bhattacharya et al. reported lesser likelihood of COVID-19 infection among those HCP who received HCQ prophylaxis, whereas Nagaraja et al. reported greater incidence of adverse events following HCQ prophylaxis, with no serious adverse event reported.[18,19] Given the novel nature of the contagion, sensitization of the health care workers regarding HCQ prophylaxis and its consumption under medical supervision becomes prime till the publication of established evidences.

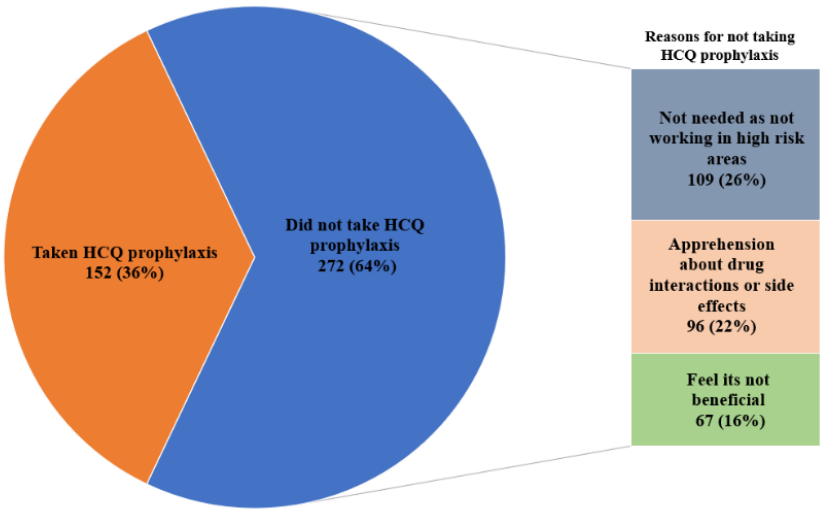

Figure 3: Consumption of HCQ prophylaxis by health care professional (n=424).

This prevailing stigma and apprehension among the HCP as also reported by the current study can become a risk factor towards rising trend of the disease among them, apart from the higher disease exposure risk.[20] Spoorthy et al. also suggested COVID-19 infection as an independent risk factor for stress among HCP.[21] Thus, with the rapid rise in the burden of the disease, supporting these frontline warriors in bringing down the stressors and increasing their self-efficacy becomes the need of the hour.

Government of India has published guidelines addressing the measures like dissemination of correct knowledge regarding disease transmission among the general public along with interrupting the flow of rumors and misinformation in order to not only build a positive behavior change but also help in combating with the second epidemic of stigma and social rejection faced by the HCP.[2] Ministry of home affairs laid guidelines addressing states to make adequate provisions as stated under Disaster Management Act, 2005 ensuring strict actions to taken against the offenders obstructing any health official.[22] Also, amendment was made in the Epidemic Act, declaring any act of violence against HCP as cognizable and non bailable offence.[23]

CONCLUSION

Even in the presence of actions taken up by the center as well as state, substantial stigma was still perceived and experienced by the HCP in the present study. The consumption of HCQ prophylaxis was also low due to apprehensions related to side effects. Thus, requiring further in-depth assessment of the associated risk factors becomes essential to curb the fear and dispel misinformation related to COVID-19. As stated by UN Secretary-General António Guterres "the virus does not discriminate, but its impacts do" thus directing towards the disproportionate impacts among certain groups and the need to build a sustainable working habitat for them in the era of the contagion.

Limitations

The present study was not able to capture the entire gamut of the problem in other parts of the country as it was limited to the city of Delhi. Since the questionnaire was in the form of Google forms the grass-root frontline health workers and lower level staff such as janitors working in the hospital were not included in the study.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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