

# COVID 19 related perceived discrimination in medical settings, March and April 2020

INQUIRY: The Journal of Health Care Organization, Provision, and Financing  
Volume 58: 1–5  
© The Author(s) 2021  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/00469580211020884  
journals.sagepub.com/home/inq



Farzaneh Soleimani<sup>1</sup> , Mahtab Aligholipour<sup>1</sup>, Moosa Aghal<sup>1</sup>, and Ebrahim Aliafsari Mamaghani<sup>1</sup>

## Abstract

Global spread of a disease causes fear that can lead to discrimination against the people infected with the disease. On December 2019, COVID-19 emerged in Wuhan, China, and has spread throughout the world. In this descriptive and analytic study Perceived discrimination of the patients admitted to COVID-19 wards was measured in medical settings. Data was collected of 176 patients discharged in March and April 2020. Discrimination scale was used to collect data in medical settings. Overall mean score of the scale was  $11.51 \pm 3.883$  indicating low level of perceived discrimination. The highest level of discrimination belonged to refusal of physicians and nurses to physically examine the patients ( $0.992 \pm 3.49$ ). Low level of perceived discrimination was reported in this study, which necessitated taking useful measures to identify discrimination, determines causes and prevent discriminatory behaviors in medical settings to improve the hospitalization experience and disease outcomes.

## Keywords

COVID-19, discrimination, Iran, ethic

### What do we already know about this topic?

The highest level of discrimination belonged to refusal of physicians and nurses to physically examine the patients. Low level of perceived discrimination was reported in this study. Necessitated taking useful measures to identify discrimination, determines causes and prevent discriminatory behaviors in medical settings to improve the hospitalization experience and disease outcomes.

### How does your research contribute to the field?

The results of the study can be effective in reducing discrimination in the field.

### What are your research's implications toward theory, practice, or policy?

Authorities and practitioners should take advantage of expert human resources to inform the public the medical staff of COVID-19 latest information, useful personal protection methods, transmission period, accessible PPE in order to prevent discrimination against COVID-19 patients and decrease negative effects of COVID-19 discrimination and stigma in the health system.

## Introduction

The COVID-19 pandemic has led to dramatic loss of 1308975 people in less than a year. It is still unknown what permanent side effects would have stricken 53766728 survivors.<sup>1</sup> According to previous studies, social distance should be at least 1.83 cm. Lifespan of the virus varies at different surfaces. For example, the virus survives on plastic surfaces for more than 3 days and survival time SARS-CoV-2 on human skin was determined long 9-hour. The incubation period for COVID-19 is between 1 and

14 days and the symptoms usually manifest within 3 and 7 days after exposure to the disease.<sup>2,3</sup> Average age of the patients ranges

<sup>1</sup>Maragheh university of Medical Sciences, Maragheh, Iran

Received 8 March 2021; revised 14 April 2021; revised manuscript accepted 7 May 2021

### Corresponding Author:

Ebrahim Aliafsari mamaghani, Maragheh university of Medical Sciences, Maragheh, Iran.

Email: ealiafsari@gmail.com



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

from 47 to 59 years of age and 41.9% to 45.7% of women are infected with COVID-19.<sup>4</sup> The most common symptoms are fever, cough and tiredness. The course of disease is like influenza. A small number of the patients might experience respiratory distress and failure and die (due to incurable metabolic acidosis, septic shock, and coagulation disorders).<sup>5</sup>

New evidence suggests that COVID-19 has higher mortality rate compared to other similar viruses including acute respiratory syndrome or Middle East respiratory syndrome. Therefore, anxiety disorder might be critical in COVID-19.<sup>6,7</sup>

COVID-19 outbreak is widely covered by media throughout the world and epidemiological update is given by various authorities in a daily manner. The pandemic has inadvertently raised public panic. Previous outbreak of infectious diseases were also associated with extreme discrimination and xenophobia, even during SARS outbreak in 2003. Studies have also shown discriminatory behavior in the European society against Asian medical students during COVID-19 pandemic (since the disease was first emerged in Asia).<sup>8</sup>

A study showed that 1320 of 97 632 medical personnel died of COVID-19 in Mexico.<sup>9</sup> The incidence of COVID-19 in the medical staff (3.3%) was higher than the general population (0.33%) and mortality rate of the medical staff was reported as 0.5%.<sup>10,11</sup> All the above causes increase fear of COVID-19 in them.

Fear of transmitting the disease can lead to discrimination in medical care.<sup>12</sup> Fear of social isolation and stigma can increase prevalence of the disease in society because sick people might deny their symptoms and do not pursue treatment. Social stigma and discrimination not only have economic and social consequences, but also causes internalized fear and stigma in the patients.<sup>13</sup> Studies have also shown that some patients that were hospitalized due to acute respiratory syndromes were also treated with discrimination and prejudice, and were even suspended and dismissed from the work. These factors led to long-term social isolation resulting from dismissal from work, which increased the risk of suicidal attempts in the patients.<sup>14</sup>

COVID-19-related discrimination and its causes were not adequately studied in medical settings. Discrimination is rooted in sociocultural factors of every society and should be further assessed in order to find solutions to apply justice in treatment of patients. The study aimed to determine level of discrimination in patients suspected and hospitalized due to COVID-19 in medical settings in Maragheh.

## Materials and Methods

This was a descriptive and analytic study. The code of ethics was obtained from the ethics committee of Maragheh University of Medical Sciences (IR.MARAGHEHPHC.REC.1399.012). Required data was collected. Medical records of 176 patients discharged from the hospital were collected. A convenience sampling was used. Since the researcher could be infected with COVID-19 if he contacted

the patients during their hospitalization, the researcher decided to collect their medical records after their discharge from the hospital to get accurate information from the patients themselves. Objectives of the study were explained to the patients and consent forms were collected from the patients. The instruments used to collect the data were demographic questionnaire (made by the researcher) and discrimination scale in medical settings. The latter contained 7 items scored based on a five-point Likert scale (never, sometimes, most of the cases, often, and always). Overall score of the instrument ranged from 7 to 35. Score 7-15 represented poorly perceived level of discrimination, scores 16-25 showed moderate level, and scores 26-35 indicated high level. Validity and reliability of the scale were high in previous studies.<sup>12,15</sup> Ten faculty members of Maragheh School of Medical Sciences were asked to comment on the scale, which led to removal of intelligence item and replacement of physical examination in the scale. Cronbach's alpha was used to assess reliability of the scale in 20 patients (0.83). SPSS v.21 was used for data analysis.

## Findings

Half of the patients were females. Majority of them were above 60 years of age (62.5%). Most patients had no history of comorbidities conditions (63.6%) and most patients complained of myalgia (81.3%). RT-PCR was tested positive in only 38.6% of patients. The more length of hospitalization was between 4 and 7 days (Table 1).

Table 2 shows level of perceived discrimination in patients hospitalized in COVID-19 wards. Their scores were less than average in items 1 to 6 (the range of scores was between 1 and 5) but their score was 3.49 in item 7 (physical examination), which was higher than average. This showed that nurses and physicians were reluctant to physically examine the majority of patients. The mean overall score of the scale was  $11.51 \pm 3.883$  indicating low level of perceived discrimination.

Table 3 showed no statistically significant difference between men and women ( $P = .222$ ) in different age groups ( $P = .224$ ) and between patients with positive and negative PCR results ( $P = .541$ ).

## Discussion

Any transmittable disease force the healthcare personnel to adhere to principles of personal protection. Frequent modifications in scientific findings related to transmission of COVID-19 also raised doubts in minds of medical staff. However, personal experiences of COVID-19 survivors or hospitalized patients are unbelievable. Stress, emotional torment, internalized stigma, fear of infecting loved ones, shame of infecting others, self-hatred, cursing fate, thinking "why God has punished me and my family" exacerbate patients' feelings of "being imprisoned" and being

**Table 1.** Distribution of Descriptive Characteristics of Samples (n= 176).

Descriptive characteristics	%
Female	50
Age	
18-40	8
41-60	29.5
>60	62.5
Co-morbid conditions	
None	63.6
Coronary artery disease	9.1
Hypertension	1.1
Diabetes	10.2
CKD	2.3
Cancer	2.3
Pulmonary disease	5.7
Other	5.7
Days of hospitalization	
1-3 days	43
4-7 days	52
Over 8 days	5
Common symptom	
Fever	14.8
Cough	70.5
Shortness of breath	70.5
Nausea and vomiting	21
Diarrhea	28.5
Myalgia	81.3
Other	14.8
RT-PCR test	
Positive	38.6
Negative	61.4

away from family.<sup>16</sup> These are frustrating feelings and confirm that medical personnel have the right to feel frightened.

Fear of transmitting the disease can lead to discrimination in health care disparities.<sup>12</sup> This case is not limited to COVID-19. Previous studies on other transmittable diseases have also shown discrimination in health care services including:

Wang et al showed instances of discrimination against AIDS patients including offensive behavior, refusal to offer healthcare services, delay in treatment, different treatment methods, not respecting patient privacy, and overprotection of medical staff.<sup>17</sup> Discrimination against AIDS patients was reported in nurses working in hospitals affiliated to Tehran University of Medical Sciences and Shahid Beheshti University of Medical Sciences in Iran. Half of the nurses felt right to treat these patients by discrimination and 36% of nurses strongly felt frightened of being infected with disease.<sup>18</sup> Almutairi et al<sup>19</sup> studied transmittable respiratory diseases in health workers who survived MERS and recalled painful experiences of discrimination and social stigma. This showed discrimination in other diseases too.

**Table 2.** Discrimination in Medical Settings Scale.

Item	Mean (SD)
You are treated with less courtesy than other people	1.45 (0.820)
You are treated with less respect than other people	1.42 (0.852)
You receive poorer service than others	1.50 (0.907)
You feel like a doctor or nurse is not listening to what you were saying	1.19 (0.583)
A doctor or nurse acts as if he or she is afraid of you	1.24 (0.725)
A doctor or nurse acts as if he or she is better than you	1.22 (0.575)
A doctor or nurse avoided your physical examination	3.49 (0.920)
All 7 items	11.51 (3.883)

**Table 3.** Relationship between demographic characteristics and perceived discrimination.

Variables	DMSS	P-value
Gender		
Female	11.15 (3.124)	.222
Male	11.86 (4.506)	
Age		
18-40	10.54 (1.613)	.224
41-60	11.98 (3.808)	
>60	11.15 (4.137)	
RT-PCR test		
Positive	11.28 (3.920)	.541
Negative	11.65 (3.870)	

Discrimination might target a specific group of society and not those infected with the disease. For example, 61.2% of Asian students living in Poland were discriminated from the society.<sup>8</sup> Perceived discrimination can also depend on the underlying circumstances and conditions. He et al reported the level of COVID-19-related social discrimination in Chinese people living in the country under study as 90% and in foreign countries as 25.11%. In the former study, 50.58% of the participants tended to avoid residents of Hubei province, 16.94% of them even agreed to expel residents of Hubei province from the country. Social discrimination and isolation has destructive social consequences that necessitate an immediate action to design policies and teach media to deal with this public health emergency.<sup>20</sup>

Level of discrimination against COVID-19 patients was lower than average in the present study. Other studies also showed discrimination against COVID-19 patients although discrimination in treatment and health care system should be assessed and eliminated. Aacharya showed some instances of discrimination against patients with fever symptoms in healthcare centers and showed that healthcare personnel were frightened of caring for patients suspected

of COVID-19 due to shortage of personal protection equipment (PPE). As a result, some patients (not infected with COVID-19) died due to negligence of medical staff in COVID-19-isolated wards.<sup>21</sup> This indicated seriousness of discrimination against COVID-19 patients. Liu et al also showed that discrimination against COVID-19 increased over time as the incidence of the disease increased. Discrimination was also higher against black people and the Asian and those wearing face masks, which showed discrimination in society against black and Asian people even in absence of COVID-19.<sup>22</sup>

COVID-19-related stigma might lead to decreased access to healthcare services, not adhering to treatment, delay in treatment, and not being tested for COVID-19.<sup>23</sup> Chopra and Aurora highlighted the role of the scientific members of society who should try to eliminate COVID-19-related social stigma. They confirmed that the most important and crucial role of this segment of society is controlling spread of the disease and their second role is assessing social stigma of COVID-19 patients in society, family, friends, and workplace,<sup>24</sup> which necessitate serious actions in the field of health to inform the public about the disease and prevent the spread of the disease.

## Conclusion

This study showed low level of perceived discrimination in patients admitted to COVID-19 wards. The highest level of perceived discrimination belonged to physical examination. Perceived discrimination in medical settings can reflect perceived social discrimination against the patients by health professionals. Although shortage of PPE can increase discrimination against these patients, it is necessary to identify, assess and eliminate discrimination in medical settings to improve hospital experience and disease outcomes to encourage the patients to pursue treatment and not be afraid of positive test results. Authorities and practitioners should take advantage of expert human resources to inform the public the medical staff of COVID-19 latest information, useful personal protection methods, transmission period, accessible PPE in order to prevent discrimination against COVID-19 patients and decrease negative effects of COVID-19 discrimination and stigma in the health system.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## ORCID iD

Farzaneh Soleimani  <https://orcid.org/0000-0002-2250-0618>

## References

1. World Health Organization. *Weekly Epidemiological and Operational Updates November 2020*. WHO; 2020.
2. Jin Y-H, Cai L, Cheng ZS, et al. A rapid advice guideline for the diagnosis and treatment of 2019 novel coronavirus (2019-nCoV) infected pneumonia (standard version). *Mil Med Res*. 2020;7(1):4.
3. Hirose R, Ikegaya H, Naito Y, et al. Survival of SARS-CoV-2 and influenza virus on human skin: importance of hand hygiene in COVID-19. *Clin Infect Dis*. Published online October 3, 2020. doi:10.1093/cid/ciaa1517
4. Guan WJ, Ni ZY, Hu Y, et al. Clinical characteristics of coronavirus disease 2019 in China. *N Engl J Med*. 2020;382(18):1708-1720.
5. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395(10223):497-506.
6. Pan XW, Xu D, Zhang H, et al. Identification of a potential mechanism of acute kidney injury during the COVID-19 outbreak: a study based on single-cell transcriptome analysis. *Intensive Care Med*. 2020;46(6):1114-1116.
7. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen Psychiatr*. 2020;33(2):e100213.
8. Rzymiski P, Nowicki M. COVID-19-related prejudice towards Asian medical students: a consequence of SARS-CoV-2 fears in Poland. *J Infect Public Health*. 2020;13(6):873-876.
9. Agren D. Understanding Mexican health worker COVID-19 deaths. *Lancet*. 2020;396(10254):807.
10. Nguyen L, Drew DA, Graham MS, et al. Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *Lancet Public Health*. 2020;5(9):e475-e483.
11. Gómez-Ochoa SA, Franco OH, Rojas LZ, et al. COVID-19 in health-care workers: a living systematic review and meta-analysis of prevalence, risk factors, clinical characteristics, and outcomes. *Am J Epidemiol*. 2021;190(1):161-175.
12. Benjamins MR, Middleton M. Perceived discrimination in medical settings and perceived quality of care: a population-based study in Chicago. *PLoS One*. 2019;14(4):e0215976.
13. Person B, Sy F, Holton K, Govert B, Liang A; National Center for Infectious Diseases/SARS Community Outreach Team. Fear and stigma: the epidemic within the SARS outbreak. *Emerg Infect Dis*. 2004;10(2):358-363.
14. Morioka S, Saito S, Hayakawa K, et al. Psychiatric burdens or stress during hospitalization and concerns after discharge in patients with severe acute respiratory syndrome coronavirus-2 isolated in a tertiary care hospital. *Psychiatry Res*. 2020;289:113040.
15. Peek ME, Nunez-Smith M, Drum M, Lewis TT. Adapting the everyday discrimination scale to medical settings: reliability and validity testing in a sample of African American patients. *Ethn Dis*. 2011;21(4):502-509.
16. Sahoo S, Mehra A, Suri V, et al. Lived experiences of the corona survivors (patients admitted in COVID wards): a narrative real-life documented summaries of internalized guilt, shame, stigma, anger. *Asian J Psychiatr*. Published online May 30, 2020. doi:10.1016/j.ajp.2020.102187

17. Wang Y, Zhang K-N, Zhang K-L. HIV/AIDS related discrimination in health care service: a cross-sectional study in Gejiu city, Yunnan province. *Biomed Environ Sci.* 2008;21(2):124-128.
18. Sh M, Zeighami E, Esmaily H, Nikbakht NA. Fear of being at risk of acquiring HIV, willingness to care, and discrimination in care and treatment of AIDS patients among nurses. *Sci J Iran Blood Transfus Organ.* 2011;8(3).
19. Almutairi AF, Adlan AA, Balkhy HH, Abbas OA, Clark AM. "It feels like I'm the dirtiest person in the world.": exploring the experiences of healthcare providers who survived MERS-CoV in Saudi Arabia. *J Infect Public Health.* 2018;11(2):187-191.
20. He J, He L, Zhou W, Nie X, He M. Discrimination and social exclusion in the outbreak of COVID-19. *Int J Environ Res Public Health.* 2020;17(8):2933.
21. Aacharya RP, Shah A. Ethical dimensions of stigma and discrimination in Nepal during COVID-19 pandemic. *Ethics Med Public Health.* 2020;14:100536.
22. Liu Y, Finch BK, Brenneke SG, Thomas K, Le PD. Perceived discrimination and mental distress amid the COVID-19 pandemic: evidence from the understanding America study. *Am J Prev Med.* 2020;59(4):481-492.
23. Ransing R, Ramalho R, de Filippis R, et al. Infectious disease outbreak related stigma and discrimination during the COVID-19 pandemic: drivers, facilitators, manifestations, and outcomes across the world. *Brain Behav Immun.* 2020;89:555-558.
24. Chopra K, Arora V. Covid-19 and social stigma: role of scientific community. *Indian J Tuberc.* 2020;67(3):284-285.