



# Learning from the Pandemic: Sociodemographic Differences in COVID-19 Stigma among Healthcare Workers

Widyaningsih V<sup>1\*</sup>, Febrinasari R<sup>1</sup>, Poncorini E<sup>1</sup>, Sumardiyono<sup>2</sup>, Mulyani S<sup>2</sup>, Sari V<sup>3</sup>, Pangesti L<sup>3</sup>, Probandari A<sup>1</sup>

1 Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia

2 Vocational School, Universitas Sebelas Maret, Surakarta, Indonesia

3 Public Health Master Program, Universitas Sebelas Maret, Surakarta, Indonesia

\*vitri\_w@staff.uns.ac.id

**Abstract.** In the early days of the COVID-19 pandemic, the novelty of the virus, the related social restrictions, and the surge of information often caused misperception amongst communities, including on stigma. This study assessed the stigma and discriminatory behaviours against anyone perceived to have been in contact with the virus, particularly health-care workers during the early days of the pandemic. Revisiting the stigma on COVID-19 can provide insights into targeted education and intervention in dealing with stigma on other communicable diseases. An online survey among health-care workers were conducted in end of 2020. We collected data from 305 respondents regarding stigma of COVID-19. Stigma scores were obtained by summation of 7 questions regarding stigma (range 0-7). Descriptive analyses were conducted to assess differences in level of stigma by different socio-demographic characteristics. There were 32.9% of respondents with stigma score  $\geq 6$ , mean stigma scores were 4.4 (s.d. 0.1). These includes questions on whether confirmed cases are those ignoring prevention protocol, perceived to hide their status, and needs to be isolated away from communities. There were differences by age, with older respondents had higher stigma score. Significant differences were also observed by education and educational background, with respondent of lower or non-health educational background had higher stigma score. Prevalence of stigma were relatively high (more than 30%), with differences by socio-demographics background. Elderly, and people of low or non-health education had higher stigma scores. Hence, health education to reduce stigma is particularly important for this subpopulation.

**Keywords:** stigma, healthcare workers, socio-demographics

## 1 Introduction.

On January 7, 2020, a new coronavirus was isolated and known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by the International Committee for Taxonomy of Viruses (ICTV) after an outbreak of pneumonia of unknown cause in the city of Wuhan, China (Wu et al., 2020). Coronavirus Disease 2019 (COVID-19) by the World Health Organization on February 11, 2020 (Legido-Quigley et al., 2020).

In the early days of the pandemic, the COVID-19 cases are still relatively high in Indonesia. As of September 28, 2021, the government of the Republic of Indonesia has reported 4,211,460 people who have been confirmed positive for COVID-19. 141,709 deaths from COVID-19 have been reported and 4,031,099 patients have recovered from the disease (WHO, 2021). In 2021, in line with the improvement in RR and CFR at the end of 2020, the national RR and CFR numbers will increase, with RR at 80% and CFR at 3% (Kementerian Kesehatan Indonesia, 2021).

The COVID-19 pandemic has had a huge impact on the world. The novelty of the virus, the social restrictions implied, misinformation, and information overload often led to misjudgment in communities, including on stigma (Brooks et al., 2020). The transmission of this virus is very fast, causing a negative stigma in society as well. Several agencies, including the WHO, have called for the development of interventions that reduce the spread of misinformation about COVID-19. The first step in developing such an intervention is to understand why people share unverified COVID-19-related information on social media (Laato et al., 2020).

This has social impacts such as discrimination against patients and their families. Discrimination due to COVID-19 is indirectly related to anxiety, depression and insomnia (Li et al., 2020). Stigma can lead to stereotypes and assumptions. This stereotype can broaden fears and demean someone who has been exposed to the corona virus. At a more severe level, stigma can make a person avoid help, examination, testing, or quarantine (World Health Organization, 2020). This study assessed the stigma and discriminatory behaviors against anyone perceived to have been in contact with the virus, particularly health-care workers.

## 2 Method

An online survey among health-care workers were conducted to assess the stigma and discriminatory behaviors against anyone perceived to have been in contact with the virus, particularly health-care workers. Participants who are not directly exposed to the risk of COVID-19 but merely had a perceived linkage with the COVID-19 case can take this survey. We collected data from 305 respondents regarding stigma of COVID-19 from November-December 2020. Stigma scores were obtained by summation of 7 questions regarding stigma (range 0-7). Descriptive analyses were

conducted to assess differences in level of stigma by different socio-demographic characteristics. Ethical approval for this research was granted by the Health Research Ethics Board at Sebelas Maret University, number 073/UN27.06.6.1/KEPK/EC/2020.

### 3 Result and Discussion

The description of the sociodemographic characteristics of the respondents who participated in the online survey of COVID-19 stigma is shown in Table 1.

**Table 1.**  
Demographic Characteristic of Respondents

Characteristic (n,%)	n	%
Age (years)		
<30	103	33.9
31-41	169	55.7
>45	33	12.5
Sex		
Male	51	16.2
Female	264	83.8
Education		
Highschool	17	5.7
College	56	18.2
Post-graduate	232	76.1
Education Background		
Health	23	7.7
Non-health	282	92.3

A total of 315 respondents took the online survey. The age of respondents was dominated by 31-41 years old group (55.7%). This group is a group that mostly can access gadgets and questionnaires easily. The majority of respondents are female (83.8%). The last education of the respondents was dominated by post-graduate, 232 people (76.1%). This can happen because at this level of education, most of them already have gadgets and have access to questionnaires. The majority of respondents have an educational background in the non-health sector (92.3%).

The results of stigma survey can be seen from Table 2 regarding COVID-19 which is quite high, both to patients and health workers. The prevalence of stigma is around 30%, with the characteristics that confirmed cases are cases that ignore prevention protocols, are considered to hide their status, and need to be isolated from the community.

**Table 2.**  
Stigma of Respondents

Items	High-school	University	Post-grad	Total
COVID-19 patients were infected because they were not disciplined in following health protocol	55.56	82.46	83.26	81.53
Feeling worried if COVID-19 patients are nearby	77.78	64.91	80.75	77.71
Avoid contact with COVID-19 patients	88.89	80.70	88.66	87.22
People who died due to COVID-19 needs to be buried in different location from other	66.67	33.33	47.70	46.18
COVID-19 patients need to be isolated away from neighborhood	66.67	50.88	47.70	49.36
COVID-19 patients identity should be announced	66.67	50.88	63.29	61.22
I don't want people with COVID-19 living nearby	72.22	31.58	41.42	41.40

**Table 3.** Stigma of Respondents

	Stigma Score	Mean Stigma Score
Total	32.90 (0.2)	4.4 (0.1)
Age (years)		
<30	31.13 (0.3)	4.18 (0.2)
31-41	30.95 (0.2)	4.50 (0.1)
>45	41.03 (0.3)	4.82 (0.3)
Sex		
Male	31.37 (0.4)	4.48 (0.2)
Female	32.58 (0.2)	4.43 (0.2)
Education		
Highschool	50.00 (0.6)	4.94 (0.5)
College	19.30 (0.3)	3.94 (0.2)
Post-graduate	33.89 (0.3)	4.52 (0.1)

Edicational ground	Back-		
Health		41.67 (0.5)	4.30 (0.4)
Non-health		32.17 (0.2)	4.46 (0.1)

There were 32.9% of respondents with stigma score  $\geq 6$ , mean stigma scores were 4.4 (s.d. 0.1). These includes questions on whether confirmed cases are those ignoring prevention protocol, perceived to hide their status, and needs to be isolated away from communities. There were differences by age, with older respondents had higher stigma score. Significant differences were also observed by education and educational background, with respondent of lower or non-health educational background or had higher stigma score

## Discussion

The level of disgrace and shame linked with an infectious disease is solely based on the knowledge about the disease and the available treatment options. Mass fear of COVID-19 is likely due to the uncertain character and unpredictable course of the disease, perceived risk of acquiring the infection and non-availability of FDA approved treatment, unpredictable outcome, high fatality, and novelty of the infection which can generate negative psychological responses including maladaptive behavior, and avoidance reaction among people. Thus, people are likely to be labeled, stereotyped, and discriminated against, treated differently, because of real or perceived links with the disease; therefore, the first quantitative assessment study was taken to determine the prevalence of stigma, its socio-demographic correlates, and association with time since discharge among COVID-19 survivors in a developing country.

Social stigma is a negative association between a specific illness and a group of individuals or people who share certain characteristics. In an outbreak, this can mean labeling, stereotyping, and discrimination (WHO, 2020a). This can negatively affect not only on the affected people, but also on caregivers, family, friends and communities. Stigmatization may increase the consequences of a disease in many way (Dreves, 2015). First, stigmatization may increase the suffering of patients. Second, patients may delay or avoid seeking medical advice, making the disease control more difficult for public health authorities. Third, professionals and volunteers working in the field may also be stigmatized, leading to more stress and burnout. Finally, stigmatization may generate considerable economic losses if people avoid groups or whole regions associated with the disease (Elgohari et al., 2021).

COVID-19 stigma strongly affects multiple domains (Das, 2020). At the individual level, COVID-19 stigma reduces opportunities, negatively affects capacity to prevent and control health risks. Stigma leads to violations of human rights and human dignity, contributes to physical and mental stress, and causes self-stigma. Stigma demotivates people to report the disease and take curative action, thus delaying detec-

tion and treatment (Singh et al., 2021). It impedes containment, contact tracing and timely medical intervention thus severely obstructing the successful control of infectious diseases. In addressing the pandemic and improving public health, stigma causes problems in detection and control of the disease, impacts healthcare professionals and increases mortality and morbidity (Turner-Musa et al., 2020). At a social level, COVID-19 stigma is responsible for increasing social inequality, causing further marginalization. Greef et al. (2010) conducted a longitudinal study to investigate the effect of HIV stigma on life satisfaction. The results showed that as HIV stigma increased over time, the life satisfaction of people living with HIV decreased proportionally.

Disease associated stigma affects health-seeking behaviors and successful health outcomes (Nyblade et al., 2019). Individuals often deny early clinical symptoms, delay testing and seeking care due to the fear and panic of social status loss or being labeled. Affected individuals may remain undetected within the community or hide their medical condition (Hatzenbuehler et al., 2013). A series of COVID19-related suicides around the world and across India underscores the problem of burning self-stigma (Shukla et al., 2021). The fear of getting sick or infecting others, the loss of social status, and the serious stress caused by social expulsion were mentioned in newspaper reports that caused fear and panic in stigmatized people (Kar et al., 2021, Shukla et al., 2021). In many cases, people committed suicide only on the suspicion of being COVID 19 affected (Turner-Musa et al., 2020).

People with greater personal resources (income, education, social support) and good mental health have been shown to have more knowledgeable, less worried and less likely to be stigmatized for infections. Education, clear and honest communication, and the use of non-discriminatory language can significantly improve the knowledge, attitudes and behaviours related to COVID-19 and reduce social stigma (Gollust et al., 2020).

Effective communication includes expert information about the disease (e.g. contagiousness, number of diagnosed people, fatality rate, seroprevalence in the community, indicating the proportion of people who have been infected at some point in the past, etc.) and recommended infection control measures are important to address stigma. Transparent, reliable and efficient communication from national, regional, and local healthcare services can also reduce community anxiety, prejudice and social discrimination. An example, the initiative was implemented in a small Sardinian town, the mayor and the main political party decided to use an interactive educational program based on the World Health Organization (WHO) principles of health education (WHO, 2012). The local population had an opportunity to interacting online with experts and to get answers to their questions, which helped to address general and specific concerns about COVID-19 (Sotgiu & Dobler, 2020).

Healthcare workers should be supported, and their work should be appreciated. It is also important to amplify positive and hopeful stories from those who have re-

covered from their illness (CDC, 2021). Individuals should minimize exposure to news about COVID-19 (WHO, 2020b). Prolonged exposure is associated with exaggerated anxiety and negative reactions. Moreover, social media and other communication methods can be a source of misinformation, that can increase stress levels (Abdelhafiz et al., 2020). Support from family, colleagues, and supervisors helps healthcare professionals overcome these emotions. Professional psychological support should be available to all stigmatized individuals and groups, including healthcare workers (Henderson et al., 2013). Workplace harassment and stigmatization can have a significant negative impact on physical and mental health, which may be reflected in reduced productivity and increased staff turnover.

## 4 Conclusion

Prevalence of stigma were relatively high (more than 30%), with differences by socio-demographics background. Elderly, and people of low or non-health education had higher stigma scores. Hence, health education to reduce stigma is particularly important for this subpopulation.

Public education will be effective if it is carried out comprehensively by using educational strategies that are in accordance with the targets/targets, to reduce the burden of tertiary health services. Education will also be more effective if it is carried out jointly by various sectors. The involvement of health education institutions will play a role in carrying out scientific evidence-based prevention of COVID-19 transmission, and will also be useful in developing the professionalism of prospective health workers in the future.

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