Stigma Related to COVID-19 Positive Patients in Jeddah – Kingdom of Saudi Arabia during 2020 Pandemic

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Authors’ contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

Received 23 August 2021
Accepted 23 September 2021
Published 25 September 2021

Original Research Article

ABSTRACT

Background: COVID-19 has contributed to the development of stigma in the community of Jeddah, thus causing negative attitudes and beliefs toward individuals linked to the disease.

Objective: To describe stigma related to COVID-19 positive patients and find out factors associated with stigma subscales.

Subjects and Methods: Analytical cross-sectional study conducted on COVID-19 positive patients (lab confirmed) in Jeddah. The sample size was 420 patients, and the data was collected using a validated questionnaire adapted from HIV/AIDS stigma instrument (HASI-P). The data were analysed using the statistical package for the social sciences (SPSS, version 27.0).

Results: Total number of responses was (419). The median age was 32 (IQR, 25-43). Both genders, Saudi and non-Saudi, were included. The tool used to measure the COVID-19 related

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stigma of different six subscales. The verbal abuse had a median of (0, IQR=0-0.25), negative self-perception (median=0, IQR=0.02), health care neglect (median=0, IQR=0-0), social isolation (median=0.2, IQR=0-0.6), fear of contagion (median=0.33, IQR=0-0.83) and workplace stigma (median=0, IQR=0-0). Male gender was significantly associated with social isolation and fear of contagion, while working in the health care field was associated with workplace-related stigma. Conclusion: COVID-19-related social stigma was reported by a considerable number of Jeddah healthcare providers, specifically workplace-related stigma. Unexpectedly, males need more attention as regard to social isolation and fear of contagion. The results of this study can be of used to guide supportive social interventions to suppress the COVID-19 related stigma.

Keywords: Stigma; COVID-19; Jeddah; Saudi Arabia.

ABBREVIATIONS

CDC : The Centers for Disease Control and Prevention
HCW : Healthcare Worker
SARS : Severe Acute Respiratory Syndrome
KSA : Kingdom of Saudi Arabia
SPSS : The Statistical Package for the Social Sciences
IQR : Interquartile Range

1. INTRODUCTION

The world is facing huge changes due to the COVID-19 outbreak that started in late 2019. COVID-19 is an infectious disease caused by a virus from the corona family. Its spread caused a pandemic outbreak that affected more than 15 million people worldwide. As a result, there are various guidelines and rules developed by the centers for disease control and prevention (CDC) to manage and control the infection process [1]. Furthermore, the affected person confirmed by lab test to have the disease must be quarantined for at least ten days to prevent transmission of the disease. To control the situation, various countries worldwide imposed rules, including lockdown, to control the infection process. Lockdown has caused people of different ages to have social stigmatization. Stigmatization is a mark of shame, disgrace, or disapproval, resulting in an individual being rejected and excluded from participating in several different areas of society [2]. According to sociologists, stigma is socially constructed, embedded in social relationships, and enacted in daily interactions with the immediate social environment [3]. In the context of COVID-19, stigma is the negative attitudes and beliefs toward people who were linked to the disease, for example, those who tested positive or have been released from quarantine [4]. This will lead to discrimination, labeling, stereotyping, and other negative behaviors toward them [4]. However, stigma may also occur when a person internalizes these negative stereotypes towards himself and starts to accept them, resulting in decreased self-esteem, loneliness, and embarrassment [5].

In a review of 24 studies related to the effect of quarantine, they found that quarantined persons experienced negative psychological effects, including post-traumatic stress symptoms, confusion, anger, depression, and stigmatization [6]. According to the CDC, there are groups of people who may experience stigma during the COVID-19 pandemic, those are people who tested positive or have recovered from COVID-19, frontline workers like healthcare providers, people who have other diseases that cause cough and people living in congregate (group) settings [4]. In a cross-sectional study about social stigma during COVID-19 and its impact on healthcare workers (HCW) published in May 2020, they concluded that HCW dealing with COVID-19 patients has faced considerable stigmatization, leading to psychological distress affect work performance [6]. According to a review of studies related to quarantine during the sever acute respiratory syndrome (SARS) outbreak that happened in 2003, which affected more than twenty countries worldwide, they found that quarantined participants were significantly more likely to report stigmatization and rejection from people in their local neighborhoods, suggesting that there are stigma specifically surrounding people who had been quarantined [6]. Moreover, in a systematic review of 143 studies measuring the impact of mental health-related stigma [7]. They found that stigmatization is typically reported as a barrier to seek health care by 21–23% of participants across the studies for embarrassment, negative social judgment, and employment-related discrimination [8]. Finally, fearing stigma can drive people to hide their illness to avoid discrimination, prevent them from seeking health
care and discourage them from taking preventive measures [9]. Unfortunately, this may lead to an increase in the spreading of the disease and result in difficulties in controlling the outbreak [9].

COVID-19 caused huge changes in our community and in people's behavior towards each other's. Stigma to the disease may even increase the effect on patients and the control of the disease. Unfortunately, there are no studies in the literature assessing the stigma related to COVID-19 in the Kingdom of Saudi Arabia (KSA). However, the total confirmed cases of COVID-19 reached more than (540,000) cases in KSA [10]. Moreover, Jeddah is the 2nd top city in confirmed cases which has reached more than (29,500) cases [10]. The current study was conducted to describe stigma related to COVID-19 positive patients and find out factors associated with stigma subscales.

2. MATERIALS AND METHODS

2.1 Study Design

This is an analytic cross-sectional study that have used interview-based data collection method to fill the adapted questionnaire measuring stigma among HIV/AIDS patients.

2.2 Study Population

The targeted population were lab confirmed COVID-19 positive cases in Jeddah, KSA. The inclusion criteria were lab confirmed COVID-19 positive cases in Jeddah, who can speak Arabic language fluently of ages more than (18) years and available mobile phone number in their medical file. The exclusion criteria were patients who don't have lab confirmation, living outside Jeddah, can't speak Arabic language, ≤ 18 years old, patients mobile phone number is not available on database.

Participants were recruited from the available data on public health administration in Jeddah of COVID-19 confirmed cases.

2.3 Sample Size

Sample size was calculated using Raosoft online software (raosoft.com) with 5% margin of error and 95% confidence interval. Using (29,500) as a reference population, the calculated sample size was (380), We added a 10% of the required sample to compensate for missing data.

2.4 Sampling Technique

We used a stratified random sampling. The study population were stratified according to gender (male and female), thereafter, we applied simple random sampling using random number generator from each strata to choose the representative sample of the population of Jeddah.

2.5 Data Collection Tool

In order to assess stigma related to COVID-19, a validated questionnaire for HIV-related stigma for people living with HIV/AIDS (HASI-P) was adapted [11]. The questionnaire is a validated tool that measures stigma among HIV/AIDS patients during the past 3 months [11]. It contains a total of six subscales that measures social stigma of different aspects including verbal abuse (eight items), healthcare neglect (seven items), social isolation (five items), fear of contagion (six items) and workplace stigma (two items). The final subscale is negative self-perception (five items) which measures self-stigma [11].

The tool was translated to Arabic language then translated back to English with a consistency and similarity of >80% between the two English versions.

2.6 Data Collection Technique

Data collection was done through phone call and the questionnaire was filled by the interviewer in accordance with the answers of the selected participants. The dependent variables were the six subscales of the stigma tool, while the independent variables: Age, gender, level of education, geographical area, employment status and job title.

2.7 Statistical Analysis

Statistical package for the social sciences (SPSS, version 27.0) was used to analyze the data. Mean and standard deviation or median and interquartile range (IQR) were used to summarize numerical variables which were calculated using the sum of points fiving to items for each scale separately. While frequency and proportion were used for categorical variables. All the calculated variables of the sections were not normally distributed, for which non-parametric tests, including Mann-Whitney and
Kruskal-Wallis tests, were used to compare between the groups of independent variables. Chi-square test was done to find associations between the categorical variables. In case of invalid Chi-square test due to expected values less than five, Fisher Freeman Halton exact test was used to calculate the significance level. P-values less than (0.05) were considered to be significant.

3. RESULTS

Total number of responses was (419). The median age was 32 (IQR, 25-43). Both genders, Saudi and non-Saudi, were included. The sociodemographic characteristics were demonstrated in (Table 1). The tool was used to measure the COVID-19 related stigma had six sections measuring verbal abuse, negative self-perception, health care neglect, social isolation, fear of contagion, and workplace stigma. Each section contained several subscales measured using four points Likert scale (never=0, once or twice=1, several times=2, most of the time=3). The responses to the items were shown in (Tables 2-5). Items of each section were summed and divided by number of items of each subscale to calculate the average score measuring the related stigma. The results of each item ranged (0-3). The verbal abuse had a median of (0, IQR=0-0.25), negative self-perception (median=0, IQR=0.02), health care neglect (median=0, IQR=0-0), social isolation (median=0.2, IQR=0-0.6), fear of contagion (median=0.33, IQR=0-0.83) and workplace stigma (median=0, IQR=0-0). The six outcome variables measuring COVID-19 related stigma were tested using non-parametric tests to see the differences between the groups of sociodemographic groups. Males had more social isolation-related stigma than females (P-value=0.026). Moreover, males had more fear of contagion-related stigma than females (P-value=0.026). Health care workers had more workplace stigma than non-healthcare workers, while unemployed had the lowest average for workplace stigma (P-value=0.022). However, further analysis failed to show any statistical differences between the groups.

| Variable             | Frequency (n) | Percentage (%) |
|----------------------|---------------|----------------|
| **Age**              |               |                |
| 18 – 39              | 292           | 69.7           |
| 40 – 60              | 120           | 28.6           |
| More than 60         | 7             | 1.7            |
| **Gender**           |               |                |
| Male                 | 185           | 44.2           |
| Female               | 234           | 55.8           |
| **Nationality**      |               |                |
| Saudi                | 385           | 91.9           |
| Non-Saudi            | 34            | 8.1            |
| **Education**        |               |                |
| Primary to intermediate | 9          | 2.1            |
| Secondary to diploma | 113          | 27.0           |
| Bachelor to PhD      | 297           | 70.9           |
| **Area of residence**|               |                |
| West Jeddah          | 86            | 20.5           |
| South Jeddah         | 142           | 33.9           |
| North Jeddah         | 72            | 17.2           |
| East Jeddah          | 119           | 28.4           |
| **Occupation**       |               |                |
| Health care worker   | 104           | 24.8           |
| Non health care worker | 129          | 30.8           |
| Unemployed           | 186           | 44.4           |
Table 2. The responses of verbal abuse items

| Item                                      | Never (%) | Once or twice (%) | Several times (%) | Most of the time (%) |
|-------------------------------------------|-----------|-------------------|-------------------|----------------------|
| Someone scolded me                        | 85.2      | 9.5               | 3.1               | 2.1                  |
| Someone insulted me                       | 84.2      | 10                | 2.4               | 3.3                  |
| I was blamed for my COVID-19 status       | 80.4      | 13.1              | 2.4               | 4.1                  |
| I was told that I have no future          | 93.1      | 2.6               | 2.6               | 1.7                  |
| I was told that God is punishing me       | 90.7      | 5.5               | 1.7               | 2.1                  |
| I was called bad names                    | 85.4      | 10.7              | 1                 | 2.9                  |
| Someone mocked me when I passed by        | 76.8      | 16.9              | 3.6               | 2.6                  |
| People sang offensive songs when I passed by | 85   | 10.3              | 2.2               | 2.6                  |

Table 3. The responses to negative self-perception and social isolations

| Item                                      | Never (%) | Once or twice (%) | Several times (%) | Most of the time (%) |
|-------------------------------------------|-----------|-------------------|-------------------|----------------------|
| I felt completely worthless               | 89.3      | 6                 | 1.9               | 2.9                  |
| I felt ashamed of having this disease     | 84.5      | 12.4              | 2.1               | 1                    |
| I felt that I am no longer a person       | 94.5      | 1.9               | 1.4               | 2.1                  |
| I felt that I brought a lot of trouble to my family | 70.2 | 19.1              | 6.7               | 4.1                  |
| I felt that I did not deserve to live     | 92.4      | 4.5               | 0.7               | 2.4                  |
| People cut down visiting me               | 89.5      | 4.8               | 2.9               | 2.9                  |
| People ended their relationships with me  | 92.4      | 4.1               | 0.2               | 3.3                  |
| A friend would not chat with me           | 83.8      | 9.5               | 2.9               | 3.8                  |
| Someone stopped being my friend          | 52.5      | 15.5              | 14.8              | 17.2                 |
| People avoided me                        | 82.8      | 7.4               | 4.1               | 5.7                  |

Table 4. The responses to health care neglect items

| Item                                      | Never (%) | Once or twice (%) | Several times (%) | Most of the time (%) |
|-------------------------------------------|-----------|-------------------|-------------------|----------------------|
| I was discharged from the hospital while still needing care | 95.7      | 3.6               | 0.5               | 0.2                  |
| I was shuttled around instead of being helped by a hospital/clinic staff | 91.2      | 7.4               | 0.7               | 0.7                  |
| In the hospital or clinic, my condition was ignored | 90.7      | 8.1               | 0.5               | 0.7                  |
| I was refused treatment because I was told I was going to die anyway | 99.3      | 0.7               | 0               | 0                    |
| At the hospital, I was left in soiled bed | 94.7      | 4.5               | 0.2               | 0.5                  |
| I was denied health care                  | 94        | 3.6               | 0.2               | 2.1                  |
| At the hospital/clinic, I was made to wait until the last | 89.5      | 7.2               | 1.7               | 1.7                  |

For each category of the stigma scale, verbal abuse, negative self-perception, social isolations, health care neglect, fear of contagion and workplace stigma, the averages of the individualized sum of items under each category were calculated. The verbal abuse related stigma was present among 42%, negative self-perception stigma was among 28.2%, health care neglect was present among 20.5%, social isolation stigma was present among 57%, fear of contagion stigma was present among 60.9% and workplace-related stigma was present among 6.9%. The computed variables measuring different stigma subtypes were tested for significance comparing between demography groups. Gender was significantly associated with the stigma of social isolation (P-value=0.008), gender was also associated with the stigma of fear of contagion (P-value<0.001). The occupation was significantly associated with workplace related stigma (P-value=0.03). Further testing to find association between stigma subscales and participants’ demography failed to find other significant results (Table 6).
Table 5. The responses to fear of contagion and workplace stigma

| Item                                                                 | Never (%) | Once or twice (%) | Several times (%) | Most of the time (%) |
|----------------------------------------------------------------------|-----------|-------------------|-------------------|----------------------|
| I was told to use my own eating utensils                             | 54.9      | 22.7              | 11.2              | 11.2                 |
| I was made to drink last from a cup                                 | 93.6      | 1.9               | 1                 | 3.6                  |
| I stopped eating with other people                                  | 92.4      | 4.1               | 0.2               | 3.3                  |
| I was asked to leave because I was coughing                         | 69.9      | 11.9              | 8.1               | 10                   |
| I was made to eat alone                                             | 63.7      | 10.7              | 9.8               | 15.8                 |
| I was asked not to touch someone’s child                             | 56.3      | 18.9              | 12.9              | 11.9                 |
| Someone tried to get me fired from my job                            | 96.9      | 1.2               | 1                 | 1                    |
| My employer denied me opportunities                                  | 93.8      | 2.4               | 1.9               | 1.9                  |

Table 6. The associations between stigma subscales and participants’ demography

| Dependent variables | Verbal abuse | Negative self-perception | Health care neglect | Social isolation | Fear of contagion | Workplace stigma |
|---------------------|--------------|--------------------------|---------------------|------------------|-------------------|------------------|
| Age                 | 0.242        | 0.518                    | 0.780               | 0.977            | 0.518             | 0.232            |
| Gender              | 0.241        | 0.912                    | 0.066               | 0.008*           | <0.001*           | 0.916            |
| Nationality         | 0.865        | 0.873                    | 0.853               | 0.597            | 0.608             | 1.000            |
| Education           | 0.988        | 0.874                    | 0.820               | 0.246            | 0.730             | 0.187            |
| Area                | 0.741        | 0.451                    | 0.572               | 0.87             | 0.801             | 0.872            |
| Occupation          | 0.466        | 0.929                    | 0.503               | 0.257            | 0.272             | 0.030*           |

*P-value<0.05

4. DISCUSSION

We conducted this study to explore the COVID-19-related stigma and the associated factors among patients diagnosed with SARS-Cov-2 in Saudi Arabia. A total of six subscales measuring different aspects were included. Fear of contagion was the highest subscale reported by the participants with 12.2%, followed by social isolation with 5.2% scoring. Other subscales scored less than three percent each. In parallel to the pandemic of COVID-19, comes the pandemic of stigma related to the disease. However, this phenomenon was previously noticed and commonly associated with global outbreaks of infectious diseases. It is worth mentioning that stigma can last even long after the resolution of the outbreak as Kelly et al., mentioned in his study which investigated the stigma related to Ebola virus in Liberia [12]. The stigma was documented after 18 months of the resolution of Ebola outbreak [12].

The results of our study indicate that males were more affected with stigma than females (P-value=0.026). This significance level is applied for both social isolation and fear of contagion related stigma equally. This is in line with White Alan report on specifications of men and COVID-19, which revealed that the pandemic has affected men negatively, increasing the mental illness and stigma [13]. Furthermore, Imran et al., and similarly, in a qualitative study measuring different subscales of stigma towards COVID-19, males had more personalized stigma than females, this finding was significant (P-value=0.036) [14].

Consequences of stigma on the affected patients and recovered ones may vary from refusal to serve food or provide accommodation rooms to threats, bullying and physical attacks [15-16]. Xenophobia, which is a term stands for prejudice against people from other countries have been faced by Asians. In Rome for example, one school’s principle asked Chinee’s children to have a formal medical report with their COVID-19 status before attending classes [17]. Stigma has been linked to affect some groups more than others. Those who have been reported to perceive stigma related to SARS-Cov-2 were travelers abroad, those of Asian descent and health care workers (HOW) [18]. Our study findings indicate that perceived work-related stigma was significantly associated with health care workers (P-value=0.022). While considered the heroes of the pandemic, HOW faced attacks and other difficulties while performing their duty due to related stigma [19]. Similarly, there were reports from Mexico indicating that nurses and...
doctors used their bicycle to go to work due to inability to access the public transportation [11]. In Egypt, taxi drivers refused to drive for HCW or to deliver food to the hospital [20]. It is worth mentioning that negative effects of stigma and related mental illnesses can cause sleep disturbance and may cause self-harm or suicide to those who perceive COVID-19-related stigma [21].

Globally, and during the quarantine, the world was economically affected which has caused many employees to lose their job. Furthermore, those who have returned to their work was stressful found to be stressful [22]. The stigma has affected the health conditions of susceptible patients and caused delay in seeking medical attention and even hiding their symptoms [23]. In India, one incidence of a pregnant lady who was abandoned by her family was linked to stigma, the lady was found to be positive after giving birth [24]. The stigma has outraged to affect susceptible individuals in India such as migrant and laborers naming those groups as Corona carriers [25].

5. CONCLUSION

The objectives of this study were to describe stigma related to COVID-19 positive patients and find out factors associated with stigma subscales. The fear of contagion stigma was the highest with 12.2%. This indicate that the levels of stigma towards COVID-19 patients were low, but still exist. Stigma is usually associated with mental illnesses and can lead to fatal consequences. Gender was significantly associated with the social isolation and fear of contagion related stigma, while occupation was significantly associated with workplace-related stigma. During the early stages of the COVID-19 epidemic throughout Saudi Arabia, yet another normal community suffered from moderately severe psychiatric effects. Our results are indeed revealing a serious and ignored issue accompanying the current pandemic. Individualized interventions are highly recommended, particularly among those who have previously established mental disease, through broadening extensive education to eliminate stigma as well as advocating men's emotional wellbeing. We also recommend adding more variables to compare stigma across hospitalized patients.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

ETHICAL APPROVAL AND CONSENT

Ethical approval was obtained from the Research Committee of the Joint Program for Preventive Medicine, Jeddah, KSA and from the Institutional Review Board (IRB) in Jeddah Health Directorate. Furthermore, participants consents were obtained verbally after the explanation of the study objectives and health benefit, stressing on the anonymity of the collected data. The collected data were kept confidential by ensuring anonymity of the participants, the data were stored in personal computer secured by password and were used for scientific research purposes only. The original questionnaire is not copyrighted as declared from main author Holzemer WL and is available to use [13].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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