Related factors to fear and stigma of COVID-19

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ABSTRACT

Few studies have explored the fear and stigma of COVID-19 among the general Indonesian population. This study aimed to investigate the fear and stigma of COVID-19-related factors among the general population. A cross-sectional study was done in Banten, Indonesia, from Augustus to September 2020. Sample of the study was recruited using convenience sampling. Multivariable linear regression model was used to analyze data. The majority of respondents were female (66.9%), with the mean age was 32.5 (SD=8.7). Fear of COVID-19 score was negatively associated with social support. Stigma towards COVID-19 score was negatively associated with higher education level, knowledge, social support. It positively associated with non-healthcare professional living in the city, confirmed COVID-19, suspected case, quarantine for close contact, and fear of COVID-19. The results indicated that the COVID-19 fear and stigma have been experienced by many of the general Indonesian community. Therefore, public health education and awareness-raising of the significance of public support are needed to remove the perceived stigma.

Keywords: COVID-19, Discrimination, Fear, Indonesia, Stigma

1. INTRODUCTION

COVID-19 is a disease that has a significant impact on public health around the world. This pneumonia-like disease first appeared in Wuhan, China, in November of 2019, and was later designated as coronavirus disease 2019 (COVID 19) by the World Health Organization [1]. Despite only being in existence for a few months, COVID-19 has already caused major harm to public health, as well as financial and economic loss in numerous nations. Globally, there have been 306,194,548 confirmed instances of the disease, with a total of 5,503,810 confirmed deaths. As of January 9, 2022, cases of COVID-19 had been documented in more than 220 nations across six different geographic regions worldwide. It is still the United States that has the highest number of confirmed cases and fatalities, followed by countries like India, Brazil, and the United Kingdom, which collectively represent 43% of all known cases around the world [1]. In Indonesia, there have been 4,265,666 confirmed cases of COVID-19, with a total of 144,127 confirmed deaths [2]. In terms of the number of confirmed cases and deaths, the country placed top among the ASEAN countries in this category. However, this occurred despite intensive precautions to prevent disease transmission from occurring, such as rigorous social distancing, community quarantines, and disease education programs.

The significant increase in COVID-19 infections has heightened public concern in several countries [3]–[5]. During times of infectious epidemic crises, the severity and mortality of disease, as well as a person's
susceptibility to disease, can cause or increase anxiety and panic, which can have a negative impact on their health and well-being, as well as their ability to perform their jobs effectively [6]. During the COVID-19 pandemic, increased fear combined with financial and social difficulties can lead to depression and anxiety that affect both the individual and society [6–8]. The other aspect of this crisis is a result of preventive measures enforced by civic authorities, disease control centers, and numerous health organizations, with a particular emphasis on social isolation. Social isolation can result in a lack of social interactions on a daily basis. This adds another layer of complexity to individuals’ coping methods, as the employment of maladaptive coping techniques may contribute to an increase in symptoms such as dread, anxiety, and depressive symptoms [9]. Numerous studies demonstrate that extended social isolation and loneliness increase the likelihood of depression developing in the general population [10]. This phenomenon could be exacerbated further by concerns about and issues affecting personal, family, and community well-being [11], [12] as a result of the lingering economic crises induced by pandemics, hence contributing to the prevalence of symptoms.

A new form of prejudice against people living with COVID-19 or who get the disease has evolved in some societies [3]. Additionally, COVID-19-related stigma may cause a variety of severe repercussions for those impacted, including persons returned from abroad who have tested positive for COVID-19, as well as possible and diagnosed cases and survivors of COVID-19 [8], [9]. Stigma may become a barrier to the prevention and control of COVID-19 since people suffering from a high degree of stigma may be less likely to disclose their health [13], [14]. Stigma is a crucial component of unfairness structures, and lessons learned from earlier pandemics show that addressing stigma is critical to a successful and fair response to COVID-19. Many studies on human immunodeficiency virus (HIV) and Ebola showed stigma experienced by those affected diseases [15]–[17]. Because COVID-19 is new, numerous unknowns and concerns related to this novelty may contribute to anxiety and further entrench stereotypes and stigmas [18].

Since the coronavirus disease epidemic in November 2019, many studies have been completed and published on the consequences of the disease outbreak on general population mental health. However, despite the growing number of studies on the subject, few studies have been undertaken to determine whether the mental consequences and stigma associated with COVID-19 have an impact on results. Unmanaged worry or concern about COVID-19 may have long-term repercussions on work performance and job satisfaction [19], [20]. To date, few studies have explored the fear and stigma of COVID-19 among the general Indonesian population. It is critically important to examine whether fear and stigma of COVID-19 to provide important information for policymakers and administrators to successfully support the mental health of Indonesian citizens and maintain a well-engaged, especially during this pandemic. Therefore, this study aimed to investigate the fear and stigma of COVID-19-related factors among the general population in Indonesia.

2. RESEARCH METHOD
2.1. Study design
A cross-sectional was done from Augustus to September 2020 in Banten, Indonesia. Banten as Indonesia’s westernmost province, is recognized for its wilderness areas and seaside villages. Based on the Banten Provincial Government data as of June 21, the total active cases were 54,216 cases, 2,962 patients were treated, 49,854 patients recovered, and 1,390 patients passes away [2].

2.2. Sample
All people at the minimum age of 18 and fluent in Indonesian were recruited using convenience sampling. The sample sizes eas estimated using the G*Power software version 3.1.92 with asumption, alpha=0.05, a power of 0.95, an effect size of 0.05, and ninth variables were applied. A minimum sample of 322 should be recruited. A brochure inviting them to participate in the study was delivered through social media, and over 1,000 potential respondents were reached. Hence, 780 respondents were returned (response rate was 78%), unfortunately 20 respondents were eliminated due to missing data. Thus, the study covered a total of 750 respondents.

2.3. Instruments
Socio-demographic characteristics included age, employment, sex, education levels, employment, marital status, religion, residence, and health status. There are two types of occupations: health professionals and non-health professionals. The health status is classified into four categories: confirmed COVID-19 infection, possible COVID-19 infection, quarantine for people who have close contact, and non-infected.

The stigma associated with COVID-19 was measured using the social impact scale (SIS) with 24-items [21]. The SIS is divided into four dimensions: social rejection, financial insecurity, emotional shame, and social isolation. From “strongly disagree” to “strongly agree,” the SIS item values range from 24 to 96. The current study's Cronbach alpha is 0.82.
Fear of COVID-19 was measure using a 5-item [6]. A five-point scale from "strongly disagree" to "strongly agree" was used to assess participant response to each item. Higher scores indicate higher fear of COVID-19. The Cronbach's alpha in the current study was 0.85. Questions on the knowledge were prepared in a true/false format, and a scoring system was developed to determine how well the respondent understood the material [22]. COVID-19 prevention had eight questions, and nine questions were about COVID-19 symptoms and transmission. Incorrect responses got zero points. The Cronbach’s alpha in this study was 0.79.

Social support is evaluated by the short form of multifaceted Social Support Interpersonal Interactions [23]. This includes three dimensions: family, friend, and significant other supports. The scale consists of six items, each assessed on a seven-point Likert scale (1=strongly disagree, 7=strongly agree). The Cronbach's alpha d in the current study was 0.81. The multidimensional scale of perceived social support was used to measure perceived government support [23]. It comprises five questions, each of which is assessed on a seven-point Likert scale (1 being "very disagree" and seven beings "strongly agree." The Cronbach's alpha for the scale used in the current study was 0.80.

2.4. Data collection procedure

The research work has been approved by the Institute Review Board (E034/III/ETIK/2020). Participants who received and clicked the link were taken to a description of the study and informed consent. Participants were prompted to click the agreement button at the bottom of the consent form if they had no concerns. After agreeing to participate in the survey, individuals were requested to provide demographic information and fill out additional sets of questions presented. The participants were not required to provide any personally identifiable information and were advised not to answer any questions that may provoke negative emotions since the tools might have certain items that cause distress. Responses were immediately kept on Google Drive with an encryption key and may only be accessed by the researchers who conducted the study. Respondents were requested to distribute the form among their colleagues. There were no monetary incentives offered in exchange for involvement.

2.5. Data analysis

The data was described using descriptive statistical analysis. The Kolmogorov–Smirnov test was performed to assess the variable distribution. The overall COVID-19-related stigma scores were analyzed using independent samples t-tests and one-way ANOVA. The Pearson correlation test was used to conduct the correlation analysis. Models of multivariate linear regression were utilized to identify the factors linked with COVID-19 stigma and fear. SPSS 22.0 for Windows statistics software was used for the statistical analysis. A p-value less than 0.05 was considered statistically significant.

3. RESULTS AND DISCUSSION

3.1. Results

The majority of respondents were female (66.9%), had secondary level of education (51.7%), married (52%), Muslim (83.1%), and non-health professional (53.3%). Most of them lived in the city (54.7%) and were quarantined for close contact (48%). The age range was from 18 to 55, and the mean age was 32.5 (SD=8.7). Females had a secondary level of education, and non-health professionals were more experience fear of COVID-19. Female, had tertiary level of education, married, non-Muslim, health professional, living in the city are, and confirmed with COVID-19 were more experience of COVID-19 related stigma as presented in Table 1.

Respondents reported higher financial insecurity (mean=3.13, SD=0.78), followed by social rejection (mean=3.08, SD=0.84), and social isolation (mean=2.49, SD=0.60). The mean of fear was 3.12 (SD=1.34), knowledge was 18.2 (SD=9.34), social support was 4.97 (SD=1.71), and government support was 3.14 (SD=1.68). Bivariate analysis showed a significant correlation between social rejection, financial insecurity, internalized shame, social isolation, knowledge, fear, social support, and government support (p<0.05) as shown in Table 2.

Multiple regressions analysis was conducted to examine factors associated with fear towards of COVID-19. Participants’ overall fear of COVID score was positively associated with female), non-healthcare professional, living in city, confirmed with COVID-19, suspected, quarantine for close contact, and knowledge. Fear of COVID-19 score was negatively associated with social support (β =-0.18, 95%, CI=-0.77, 0.07). The overall adjusted R square was 0.39 as shown in Table 3.

Related factors to fear and stigma of COVID-19 (Ernawati Umar)
In the multivariable regression analysis, overall stigma towards COVID-19 score was negatively associated with higher education level, knowledge, and social support, and positively associated with non-healthcare professional, living in the city, confirmed COVID-19, suspected case, quarantine for close contact, and fear of COVID-19. Social rejection was negatively associated with social support and positively associated with the general population and confirmed COVID-19. Financial insecurity was negatively associated with the general population and confirmed COVID-19 and fear of COVID and knowledge, and social support, and positively associated with non-healthcare professional, living in the city, confirmed COVID-19, suspected case, quarantine for close contact, and fear of COVID-19.
associated with education level and social support and positively associated with non-healthcare professionals living in the city area, confirmed COVID-19, and suspected case. Internalized shame was negatively associated with knowledge and social support and positively associated with fear of COVID-19. Social isolation was positively associated with non-healthcare professionals, confirmed COVID-19 and suspected case as shown in Table 4.

Table 4. Multivariable linear regression models for factors associated with COVID-19 related stigma and its subscales

<table>
<thead>
<tr>
<th>Variables</th>
<th>Overall stigma score β (95% CI)</th>
<th>Social rejection β (95% CI)</th>
<th>Financial insecurity β (95% CI)</th>
<th>Internalized shame β (95% CI)</th>
<th>Social isolation β (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education</td>
<td>-0.19 (2.31, -0.50)**</td>
<td>-0.31 (-1.08, -0.46)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-healthcare professional</td>
<td>0.18 (0.10, 0.51)**</td>
<td>0.24 (0.03, 1.62)**</td>
<td></td>
<td>0.30 (0.16, 2.06)**</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>0.17 (0.01, 0.71)*</td>
<td>0.21 (0.21, 3.49)**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirmed COVID-19</td>
<td>0.23 (0.04, 2.09)**</td>
<td>0.13 (0.07, 2.34)**</td>
<td>0.21 (0.01, 2.16)**</td>
<td>0.18 (0.05, 3.39)**</td>
<td>0.17 (0.08, 3.21)**</td>
</tr>
<tr>
<td>Suspected</td>
<td>0.18 (0.07, 2.91)**</td>
<td>0.24 (0.03, 3.11)**</td>
<td></td>
<td>0.15 (0.06, 3.12)**</td>
<td></td>
</tr>
<tr>
<td>Quarantined for close contact</td>
<td>0.14 (0.10, 3.81)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>-0.14 (-1.08, -0.24)*</td>
<td></td>
<td>-0.17 (-3.27, -0.25)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fear of COVID-19</td>
<td>0.25 (0.18, 4.83)**</td>
<td></td>
<td>0.16 (0.10, 2.85)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social support</td>
<td>-0.24 (-1.55, -0.11)*</td>
<td>-0.13 (-0.52, -0.06)*</td>
<td>-0.20 (-1.44, -0.31)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government support</td>
<td>0.17 (-2.19, -0.40)*</td>
<td>0.29 (0.16, 0.43)**</td>
<td>0.32 (0.02, 0.63)**</td>
<td>0.30 (0.02, 0.63)**</td>
<td>0.35 (0.02, 0.63)**</td>
</tr>
</tbody>
</table>

3.2. Discussion

Our preliminary data showed that most participants had experienced some level of fear, similar to the findings in Jordan [24]. Fear of COVID-19 may lead to delays in getting medical care or suicidal behavior [25]. It is vital to identify adverse psychological disorders and carry out adequate early detection to limit and control COVID-19 spread and associated adverse mental health outcomes [8]. Additionally, this study discovered that fear was substantially connected with individuals confirmed to have COVID-19, suspected cases, and those who were quarantined due to close contact. Fears are not solitary occurrences; they are group-based and arise from the widespread use of social media. As a result, minimizing individual fear is critical for preventing the transmission of COVID-19.

Females were found to be more fearful of COVID than males. It may be that this is related to the fact that women tend to take on a more significant load during a pandemic, as well as with the generally higher rates of stress that women experience in their lives [26]. Similar results have been observed in China, when women in the early phase of the COVID-19 assessed their fear as moderate to severe [27]. Other predictors of fear of a pandemic were found in prior investigations, but this was not the case in the current research [28]. Older adults are probably more proficient in regulating emotions than their youthful people and exhibit less fear than elderly individuals. Non-healthcare professionals and living in the city are associated with a high level of fear. During the epidemic, myths and disinformation that primarily concern the general public harm the general people's psychological health [29]. Individuals with a higher level of health literacy are more likely to have a more positive attitude toward health-related information [30]. A prior study found that health literacy protects against mental illness [31].

Results indicate that the majority of participants were subjected to some degree of COVID-19 stigmatization. In the past, stigmatization associated with infectious diseases had been documented in an Eastern country [32]. Likewise, the current COVID-19 epidemic could have led to stigmatization, such as social isolation, prejudice, self-denying, and shame [33]. Due to the ambiguity surrounding COVID-19 and its dynamic nature, various erroneous ideas and myths may emerge in society and be disseminated by the media [34]. The stigma associated with COVID-19 may affect health issues not just on an individual’s level but also on a societal level by altering, deteriorating, or interfering with daily contact and physiological reactions [35]. Addressing COVID-19-related stigma, its determinants, and enablers requires multi-level, long-term, and comprehensive approaches [34]. In order to be effective, COVID-19 stigma-focused
treatments that target the entire Indonesian community must be developed and integrated into the existing system.

Social support may help alleviate the fear and stigma associated with COVID-19. Social support is protective for persons exposed to an epidemic [36]. An earlier study revealed that recognizing social support helps determine psychological health [37]. Several studies have found that stereotyping is a substantial cause of stress for disadvantaged groups and that perceived risk information brings people into a state of distress [38]. However, prior research has indicated that many persons did not receive adequate support or counseling during the COVID-19 pandemic [24]. It is possible that increasing social support, such as through self-affirmation training, will be beneficial [39].

Overall COVID-19 stigma was adversely associated with higher education and knowledge levels. These findings support prior research that found a negative relationship between higher education and the stigma of COVID-19 [40]. Previous research indicates that people lack a comprehensive knowledge of the COVID-19 virus's transmission mechanisms, owing to non-scientific preconceptions and an insufficient comprehension of the virus's biology [41]. For instance, some people believe that treated patients and healthcare professionals in a hospital can spread infection. It also involves ambulance crews, COVID-19 patients' families, and even survivors discharged from the hospital [41]. Assessing people's understanding of the condition to identify stigma better, working with community agencies to tackle stigma, and raising public awareness and education in skill development to combat stigma are effective measures to reduce epidemic stigma.

This study has several limitations that should be noted. Because this was a cross-sectional study, causal relationships between fear and stigma with other variables could not be investigated. Second, although determinants of felt stigma were reported for findings, external stigma was not evaluated. Third, due to mobility restrictions throughout the study period, this study adopted a non-probability sequential. Future research using probability sampling and incorporating non-internet users (including the ignorant) would help corroborate our findings, as these persons can spread sickness locally.

4. CONCLUSION

The results indicate that the COVID-19 fear and stigma have been experienced by many of the general Indonesian community. Therefore, public health education and awareness-raising of the significance of public support are needed to remove the perceived stigma. Several factors predicted fear and stigma associated with the COVID-19 epidemic. Our data indicated that COVID-19 had a significant negative impact on persons' mental health. The current study suggests that governments should provide psychosocial support to people during pandemics. A suitable mental wellbeing therapy to increase social support for the high-risk group and reduce social stigma and discrimination could reduce the epidemic's psychological impact. In meeting that requirement, telepsychiatry may also have a role to play: telephone and video calls can support traditional psychotherapy.

REFERENCES

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