

The Gender Disparities in the Psychosocial Burden of COVID-19 in East Java Province, Indonesia

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The pandemic, COVID-19, which has lasted more than five months, has created psychosocial problems in the community. This study was aimed at analysing the gender disparity in the psychosocial burden or worry level of COVID-19 in East Java, Indonesia. The study involved 1,856 respondents, and data was collected through an online survey. The psychosocial burden was reviewed based on worry levels within five aspects of daily life: economic, religious, educational, employment, and social aspects. Five independent variables, besides gender, were included in the analysis, such as age group, religion, marital status, education level, and employment status. A multivariate test using the multinomial logistic regression was performed at the final stage. The results found that: males are 0.379 times more likely than females to experience the middle psychosocial burden; males are 0.339 times more likely than females to experience the possibility of a high psychosocial burden; the 30–39 years age group is 3.863 times more likely than the ≥ 50 age group to experience the possibility of a high psychosocial burden; and unemployed respondents were 3.826 times more likely than the respondents who were employed to experience the possibility of a high psychosocial burden. Thus, the results highlighted there is a gender disparity in the psychosocial burden of COVID-19 within the East Java Province of Indonesia, with women having a higher likelihood of experiencing a psychosocial burden than men.

Keywords: *Gender disparities, Psychosocial burden, Mental health, Online survey, COVID-19.*

Introduction

Currently, the coronavirus disease 2019 (COVID-19) pandemic around the world is still ongoing. Some countries have experienced a decrease in the epidemic curve, while others are yet to find the momentum to decrease cases. In several countries that have declared themselves able to control COVID-19 cases, it was found that COVID-19 has reappeared again (Chakraborty & Maity, 2020; Gondauri & Batiashvili, 2020; Wang et al., 2020).

The widespread distribution of COVID-19 follows the pattern of human movement, as the hosts, and carriers of this coronavirus (Gondauri & Batiashvili, 2020). This situation has seen governments in several countries restrict the movement of their citizens. Some governments in the world have implemented a lockdown policy, for example in China, Spain, and Italy. Such a policy stops the full movement of its citizens (Atangana, 2020; Davalgi et al., 2020; Mucci, Mucci & Diolaiuti, 2020; Nair, Gandhi & Natarajan, 2020). Meanwhile, several other countries' governments have reduced human movement by imposing restrictions, such as South Korea, setting a combination policy, and Iran, imposing large-scale working hours (Hoseinpour Dehkordi et al., 2020). The Government of Indonesia is one of the governments that has adopted a policy to limit the second type of human movement. The Indonesian Government issued a policy of large-scale social restrictions by issuing several protocol guidelines for people who are forced to still undertake activities outside the home (Task Force for the Acceleration of Handling COVID-19, 2020a). East Java, as one of the provinces in Indonesia, released a large-scale social restriction policy to minimise human movement. This policy is enforced for an initial 14 days and is then extended by another period of 14 days (Governor of East Java Province, 2020).

Prolonged COVID-19 control efforts make the burden experienced by the community even higher, through both psychological, and financial burdens. Several previous studies reported psychosocial cases of anxiety and depression which had occurred in several countries in the world, including in China, India, Spain, Italy, and Lebanon (Dubey et al., 2020; Fawaz & Samaha, 2020a; González-Sanguino et al., 2020; Li et al., 2020; Moccia et al., 2020; Roy et al., 2020). The psychosocial burden does not only occur in the general public, but also applies to health workers. During the COVID-19 pandemic, health workers have received a higher workload than before, due to the accumulation of COVID-19 patients. This psychosocial burden is increasing because it is followed by the risk of transmission of COVID-19, which can have an impact until death (Bohlken et al., 2020; Bostan, Akbolat, et al., 2020; Fawaz & Samaha, 2020b; Petzold, Plag & Ströhle, 2020).

A psychosocial burden during the COVID-19 pandemic is not only caused by disease factors but is still coupled with a lot of hoax circulation, and misleading information (Dyer, 2020; Evans, 2020). This includes the development of conspiracy theories, which are increasingly

massive because of the viral effects of social media that have been booming in the past decade (Ahmed et al., 2020). Although the Indonesian Government has done a lot of clarification and rebuttal, hoax information is still being scattered (Task Force for the Acceleration of Handling COVID-19, 2020b).

Several previous studies reported the influence of gender upon a person's psychosocial burden (Dabas et al., 2020; Husky et al., 2020; Liu & Yue, 2020). The problem of trauma and stress is very closely related to previous experiences, and the social context surrounding a person, as well as individual characteristic factors, such as gender factors (Husky, Mazure & Kovess-Masfety, 2018; Dengsø et al., 2020). Based on the background description, this study is aimed at analysing gender disparity in the psychosocial burden or worry levels of COVID-19 in the East Java Province of Indonesia.

Methods

An online data collection was completed to assess the anxiety felt by the community. The data was collected from people who live in the East Java region of Indonesia. The data was collected for a period of eight days from 6–13 June 2020), which resulted in responses from 1,856 respondents being obtained.

In this study, the psychosocial burden was measured based on the worry level of respondents. The worry level was a self-assessment of anxiety in five aspects of daily life: economic, religious, educational, employment, and social aspects. Each aspect was assessed based on the choice of answers using a Likert scale. The worry level composite variable was composed of scores from the five aspects measured. The total score was divided into three classes of the same size, which were low, middle, and high. Gender was divided into two categories, male, and female. There were five independent variables, besides gender, which were included in the analysis, such as age group, religion, marital status, education level, and employment status.

All the variables analysed are dichotomous variables, so researchers conducted a bivariate test with Chi-Square in the initial stages to examine the relationship between the dependent, and independent variables. A multivariate test in the final stage, using multinomial logistic regression, was employed to analyse the odds ratio. The SPSS 22 software was used in all statistical analyses.

Results

Table 1 shows the results of the bivariate analysis between gender, and all the variables involved in the analysis. It appears that the males, and females are dominated by respondents

who have a high psychosocial burden. Based on age group, the male respondents were dominated by age group ≥ 50 years, while the female respondents were dominated by the age group 20–29 years.

Table 1 informs that based on religion, both gender groups are dominated by those of the Muslim faith. Meanwhile, based on marital status, both gender groups are dominated by those who are married.

Table 1: Descriptive statistics of gender and other variables (n=1.856)

Variables	Gender				P
	Male		Female		
	n	%	n	%	
The worry level					***< 0.001
• Low	22	4.4%	17	1.3%	
• Middle	237	46.9%	559	41.4%	
• High	246	48.7%	775	57.4%	
Age groups					***< 0.001
• ≤ 19 years	8	1.6%	49	3.6%	
• 20–29 years	123	24.4%	485	35.9%	
• 30–39 years	119	23.6%	389	28.8%	
• 40–49 years	112	22.2%	257	19.0%	
• ≥ 50 years	143	28.3%	171	12.7%	
Religion					0.077
• Muslim	484	95.8%	1284	95.0%	
• Christian	17	3.4%	30	2.2%	
• Catholic	3	0.6%	31	2.3%	
• Hinduism	1	0.2%	5	0.4%	
• Buddhist	0	0.0%	1	0.1%	
Marital status					***< 0.001
• Single	120	23.8%	419	31.0%	
• Married	377	74.7%	883	65.4%	
• Divorced/Widowed	8	1.6%	49	3.6%	
Education level					0.561
• Secondary and under	108	21.4%	306	22.6%	
• Higher	397	78.6%	1045	77.4%	
Employment status					***< 0.001
• Unemployed	54	10.7%	376	27.8%	

• Employed	451	89.3%	975	72.2%	
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Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 2: The result of multinomial logistic regression of psychosocial burden (worry level) of COVID-19 in East Java, Indonesia, in 2020 (n=1.856)

Variables	The Worry Level							
	Middle				High			
	Sig	OR	Lower Bound	Upper Bound	Sig	OR	Lower Bound	Upper Bound
Gender: Male	**0.006	0.379	0.191	0.753	**0.002	0.339	0.171	0.673
Gender: Female	-	-	-	-	-	-	-	-
Age groups: ≤ 19	0.062	0.133	0.016	1.108	0.298	0.327	0.040	2.679
Age groups: 20–29	0.891	1.084	0.341	3.449	0.092	2.693	0.850	8.535
Age groups: 30–39	0.242	1.755	0.684	4.503	**0.005	3.863	1.504	9.923
Age groups: 40–49	0.283	1.633	0.667	4.001	0.060	2.378	0.966	5.858
Age groups: ≥ 50	-	-	-	-	-	-	-	-
Marital status: Single	0.123	4.801	0.655	35.173	0.281	2.981	0.409	21.712
Marital status: Married	0.496	1.697	0.369	7.801	0.671	1.391	0.303	6.377
Marital status: Widowed/Divorced	-	-	-	-	-	-	-	-
Employment status: Unemployed	0.109	2.825	0.793	10.061	*0.038	3.826	1.078	13.581
Employment status: Employed	-	-	-	-	-	-	-	-

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 1 shows that based on the education level, both gender groups were dominated by respondents with a higher education. Meanwhile, based on employment status, both gender groups were dominated by respondents who are employed.

Figure 1 shows the distribution of respondents with the high psychosocial burden, as shown by the gender, and age group aspects. In the male group, the respondents in age groups above 20 years old, have a distribution that tends to be evenly distributed. Meanwhile, the female group has a different tendency. The female groups experiencing a high psychosocial burden tend to be dominant in the middle age group, between 20–29 years, and 30–39 years.

Figure 1. Distribution of respondents with a high psychosocial burden by gender, and age in East Java, Indonesia, 2020.

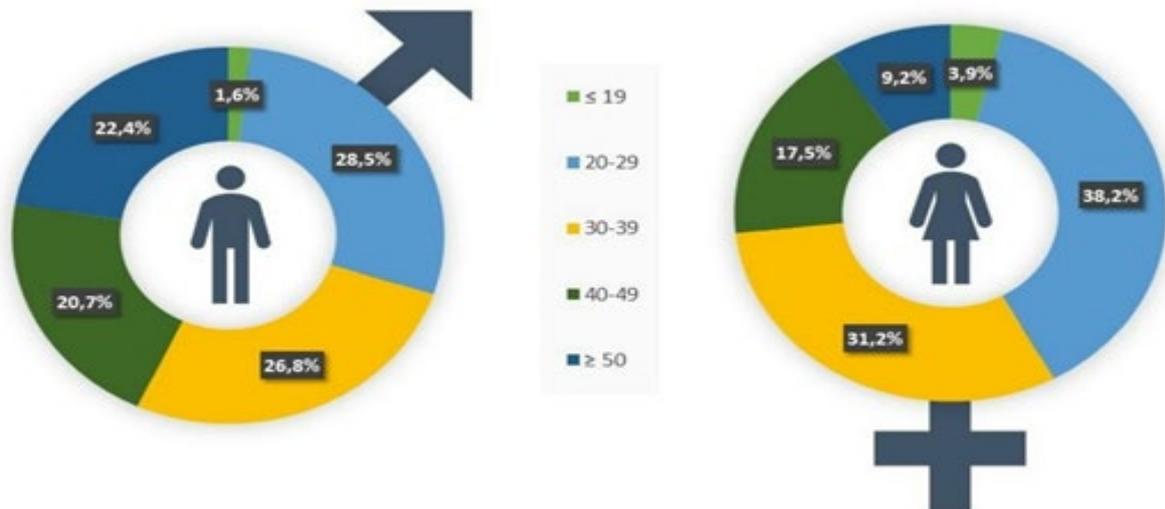


Table 2 displays information on the results of the multinomial logistic regression of the psychosocial burden (worry level) of COVID-19 in the East Java Province of Indonesia. There were four variables tested at this final stage: gender, age group, marital status, and employment status. The multinomial logistic regression tests were carried out using the low worry level as a reference.

Table 2 shows that males are 0.379 times more likely than females to experience the possibility of the middle psychosocial burden (OR 0.379; 95% CI 0.191-0.753). Furthermore, males are 0.339 times more likely than females to experience the possibility of a high psychosocial burden (OR 0.339; 95% CI 0.171-0.673). The results of this analysis inform that females have a higher risk than males of experiencing the psychosocial burden of COVID-19 in East Java, Indonesia.

In terms of age, the respondents aged 30–39 years are 3.863 times more likely than the ≥ 50 age group to experience the possibility of a high psychosocial burden (OR 3.863; 95% CI 1.504-9.923). This means that the elderly group (≥ 50) has a lower risk than the 30–39 age group of experiencing the possibility of a high psychosocial burden of COVID-19 in the East Java Province, Indonesia.

In respect to employment status, the unemployed respondents were 3.826 times more likely than the respondents who were employed to experience the possibility of a high psychosocial burden (OR 3.826; 95% CI 1.078-13.581). The results of this analysis inform that having a job is one of the protective factors of the psychosocial burden of COVID-19, specifically within the East Java Province, Indonesia.

Discussion

The research findings inform us that females have a higher risk than males of experiencing the psychosocial burden of COVID-19, specifically within East Java, Indonesia. This finding is in line with several previous studies, which found that the female gender is more at risk of experiencing psychosocial problems (Rungreangkulkij et al., 2019; Ballering et al., 2020; Deng et al., 2020; Panigrahi, Behera & Sarma, 2020; Somma et al., 2020). The research in Thailand suggests that females are more at risk of experiencing psychosocial problems. This condition is caused by the traditional role of females in the classical social structure in Thailand, as a result of unequal power relationships between the genders (Rungreangkulkij et al., 2019).

The situation of unequal power relationships, such as those evident in Thailand, is also found in the context of Indonesia. It is considered normal if more females play a role in the domestic affairs, while males are positioned to have greater power in almost all social structures in Indonesia. Even though the situation has begun to shift, and women have gained a greater portion of power relationships, the situation still presents itself as being very limited (Laksono et al., 2014; Pratiwi et al., 2019; Nisak & Sugiharti, 2020).

The analysis found that age is one of the variables that influences the psychosocial burden of COVID-19 in the East Java Province, Indonesia. This information confirms the information found in the research with the same theme evident previously in several other countries, including in Italy, and India. Moreover, it was found that the younger age groups tend to be more at risk of experiencing a psychosocial burden (Somma et al., 2020; Varshney et al., 2020). Other studies also specifically report that a psychosocial burden occurs at a much younger age, namely in children, and adolescents (Fegert et al., 2020). This condition can be explained in that, the older a person is, the more experiences or events have been passed. More senior individuals tend to be more mature in dealing with life problems and managing anxiety. Thus, senior individuals tend to have better coping mechanisms (Brown & Hargrove, 2018; Carandang et al., 2019; Lara et al., 2020; Wulandari & Laksono, 2020).

The analysis of the research results highlight that having a job is one of the protective factors of a psychosocial burden of COVID-19 in East Java, Indonesia. Such information, that work type is found to affect the psychosocial burden of COVID-19, is not surprising because it is closely related to income, and financial factors. The policy of limiting the movement of people in many countries makes the income of many people plummet, and accordingly, the economic burden increases. Meanwhile, on the other hand, until now, there has not been an indicator of when this global pandemic will end (Bostan, Erdem, et al., 2020; Dubey et al., 2020; Tran et al., 2020). A study in Vietnam informs that industrial workers have a greater



risk. Industrial workers must continue to work for reasons of economic vulnerability, even though, at the same time, they are infected. This situation was allegedly the reason for the emergence of a spread point in the industrial sector, where infected workers were reluctant to take time off for treatment due to the economic burdens (Tran et al., 2020).

Conclusions

Based on the results of the analysis, it can be concluded that there was a gender disparity in the psychosocial burden of COVID-19, specifically within the East Java Province, Indonesia. Females have a higher possibility of experiencing psychosocial burdens. Two other variables, age, and employment status, were also found to be determinants of the psychosocial burden of COVID-19 within the East Java Province of Indonesia.

Ethic and Consent

This study has received ethical approval from the National Ethics Commission (No: RK.05/KEPK/STIK/V/2020). The respondents identities have all been deleted from the dataset. The respondents have provided written approval for their involvement in this study.

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