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A study on the Impacts of COVID-19 on health, Economy, Employment and Social Life of People in Indonesia

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Abstract

Background: The aftershocks of COVID-19 pandemic are still emanating in different regions of the world in term of increasing number of cases and deaths due to mutation in the virulence and pathogenicity of the virus. The pandemic affected almost every part of our lives including health, economy, employment, and social interactions. This study surveyed the Indonesian public to better understand their health, employment, and economic deterioration during the early stages of the COVID-19 outbreak.

Methods: An online cross-sectional survey of 200 participants was conducted from eight different regions (Jawa Timur, DKI Jakarta, Kalimantan Tengah, Yogyakarta, Bali, Sulawesi Selatan, Jawa Tengah) of Indonesia who speak Bahasa. A standardized questionnaire was used to obtain information about COVID-19 impacts on health, employment, the economy, and social life from the respondents. Descriptive statistics and Chi-square tests were conducted to analyze the data.

Results: According to the findings, out of 200 participants, 40% stated that the impact of COVID-19 did not affect their salary. People under the age of 20 with an intermediate education who worked in government sectors were more likely to lose their jobs (p-value 0.05), which would result in a loss in salary that would have an impact on the education of their children. Only the "use of hand sanitizers" indicated a statistically significant difference between the practices of male and female respondents (p-value = 0.038), which is one of the activities that helps to prevent fever and respiratory difficulties during the present pandemic.

Conclusion: The finding of the study depicted that COVID-19 has no immediate collateral effects on the economy of the study participants. However, the pandemic has a negative impact on the employment, health, and social life of the people. To mitigate the negative effects of this pandemic on health, employment, economy, and social life, a complete evaluation of COVID-19 impacts, as well as public health interventions, should be conducted.

Introduction

The lingering uncertainties of COVID-19 are still prevalent globally due to excessive virulent mutation in the virus presenting a probability of future pandemic of the same nature and course. The implications of the COVID-19 pandemic and its medical interventions extend across physical and psychological health to include broader well-being effects based on what people might be doing [1]. The evaluation of personal outcomes relevant to health is difficult due to these dynamics, and it can be better approached within the conceptual context of Amartya Sen's capacity strategy implemented in the early 1980s [2]. Physical contact and gathering are prohibited in all fields of activity including economic activity. In a country with the world's largest economy, it raises fears of an oncoming economic catastrophe and recession [3,4]. According to the International Monetary Fund (IMF), this will have a considerable impact on global economic activity, especially for the people working in different sectors [5,6]. The pandemic's restricted public health measures and attendant fear could influence an individual's job and social life. Several research studies were undertaken early in the epidemic to look at the psychological and social effects of COVID-19. The national lockdown has been linked to having higher levels of stress and a direct impact on education, health, the economy, and social life [7,8]. The health crisis not only resulted in a tragically huge number of human deaths but also inflicted a significant blow to market confidence and economic activity. The severity of the subsequent economic crisis and the speed at which it occurred were unprecedented in our lives till today [9]. According to the researchers, recent investigations into COVID-19 as well as lessons learned from previous epidemics, imply that the pandemic might have significant and potentially long-term effects on psychological health, education, economic, social, and religious obligations [10-12]. The current pandemic is having a significant social and psychological impact on the entire global community, resulting an increase in unemployment, family separation, and a variety of other changes that are commonly regarded as important psychological risk factors for anxiety, sadness, suicide and self-harm [12].

The COVID-19 pandemic moved quickly from China to ASIAN countries, has generated major worries about the region's pandemic response [13-15]. The pandemic is spreading rapidly in Indonesia, prompting the government to develop the PSBB (Pembatasan Sosial Berskala Besar) strategy [16]. However, this strategy has endangered the Indonesian economy, employment, and other countries' economies as a result of the companies decreasing performance. These crucial difficulties are visible in enterprises that produce and distribute foodstuffs and other products that have an impact on the employment and economy of Indonesian people [17,18]. However, it is crucial to note that the COVID-19 epidemic not only impacted the food production chain, but also other areas of the economy and jobs in Indonesia and around the world [19]. Due to a shortage of infrastructure and a heavily indebted poor population, Indonesia is expected to be one of the most affected countries by COVID-19. On March 2, 2020, two confirmed cases of COVID-19 were registered in Indonesia. It has grown to half a million cases in 30 provinces, and Jakarta, West Java, Banten, East Java, and Central Java are the top five provinces in the COVID-19 cases. The increase in the number of cases was rapid, and there was a wide distribution across countries. As a result, the World Health Organization declared COVID-19 as pandemic on March 11, 2020.

Coronavirus-related economic and social restrictions continue to have a devastating influence on human development. Poverty is growing again in the country after years of partial economic stability and progress [20]. In Indonesia today, one out of every ten people lives below the national poverty level. Poverty among children is likely to rise dramatically in future if the COVID_19 pandemic is coupled by other natural calamities. Without government assistance, the social impact would have been substantially worse [10].

This study aims to provide empirical evidence regarding the impact of COVID-19 on the health, economy, employment, and social life of the Indonesian public with the ultimate objective of informing policymakers to take appropriate and timely measures for controlling the disease while ensuring the health, socioeconomic, and employment well-being of the general population.

Methods

A one-month cross-sectional survey type study approved by the Animal Care and Use Committee (ACUC), Faculty of the Veterinary Medicine University of Airlangga Surabaya was conducted through an anonymous online population-based semi-structured questionnaire among people aged <20 years–40+ years in February-and March 2021 during the execution of lockdown measures by the government of Indonesia. The questionnaire was made with the Microsoft form survey tool, and the generated link was distributed to the general public via electronic media (Email) and social media (WhatsApp). The URL was also personally distributed to the investigators and research assistants on the contact list. The researcher chose an online method to collect data in order to maintain social distance during the strict lockdown in Indonesia. The sample size was determined as suggested by [21] and the questionnaire was distributed among 500 people. After removing incomplete responses, the remaining 200

responses (a response rate of 40%) were included in the final analysis. The inclusion criteria for the study were Indonesian citizenship, internet access, and a willingness to participate voluntarily.

Research tools

The online questionnaire contained the informed consent and questions regarding sociodemographic, health, social life, employment, economy, and precautionary measures. Socio-demographic information, including gender, age, level of education, religion, and place of residence was collected at the time of the pandemic. The questionnaire's final section included self-reported standardized and validated outcome items that were used to assess COVID-19 impacts on respondents: health, social life, employment, and economy which was comparable to a parallel connected study in the United Kingdom [22]. The final section was also containing the questions regarding precautionary measures to prevent negative impacts of the COVID-19. The standardized questionnaire was designed in "English" and then translated into the local language Bahasa Indonesia by the expert so that the participants' understanding may be at its maximum level. A total of 21 questions (6 items on health), (5 items on employment and economy), (4 major items on social life), (4 items for precautionary measures) were included in this section. All the (200) respondents that were included in this study were given the options of Yes, No, May be, Always, Sometimes, Rarely, and Never as designed inside the questionnaire.

Study validation

We did pilot research with a limited sample of participants to confirm that the survey's content and anonymization were correct before it was widely circulated. The questions were written in English and Bahasa Indonesia. When all mistakes were corrected and minor suggestions about the language of the questions were handled, we continued and deployed the survey broadly.

Data analysis

To accomplish the data analysis, Microsoft Excel and SPSS version 25.0 (Chicago, Illinois, United States) were utilized. Excel was utilized for the purposes of editing, sorting, and coding. The excel file was then shifted into SPSS version 25. The data were subjected to descriptive statistics (frequency and percentage) and Chi-square ($X2$) test, and p value <0.05 was considered for statistical significance.

Results

A total of 200 participants were included in the final analysis of which 60% were female with an age range of <20 to 40+ years. The majority of the participants had a

bachelor's level (45.5%) of education followed by a master's (27%), lived in cities (75%), and belongs to the Muslim religion (90%) (Table-1).

Variables	Count	Percentage (%)
Gender		
Male	80	40.0
Female	120	60.0
Age		
<20 year	12	6.0
20-29 year	66	33.0
30-39 year	40	20.0
40+ year	82	41.0
Level of education		
Intermediate	18	9.0
Graduate	91	45.5
Master	54	27.0
Postgraduate	37	18.5
What your religion		
Muslim	180	90.0
Christian	19	9.5
Hindu	1	0.5
Where you have spent most of your time during the pandemic		
City	151	75.5
Village	44	22.0
Apartment	5	2.5

Table 1: Socio-demographic characteristics of the study participants (n=200)

Characteristics	Did you have lost your employment during the COVID-19 pandemic		Total	Chi-square	p-value
	Yes (%)	No (%)	N (%)		
Gender					
Male	7 (8.7)	73 (91.3)	80 (40)	0.10	0.920
Female	11 (9)	109 (91)	120 (60)		
Age					
<20 year	1 (8.3)	11 (91.7)	12 (6)	9.102	0.028*
20-29 year	11 (17)	55 (83)	66 (33)		
30-39 year	4 (10)	36 (90)	40 (20)		
40+ year	2 (2)	80 (98)	82 (41)		
Level of Education					
Intermediate	4 (22)	14 (78)	16 (8)	17.372	0.001*
Graduate	14 (15)	77 (85)	91 (46)		
Master	0	54 (100)	54 (27)		
Postgraduate	0	37 (100)	37 (19)		
Religion					
Muslim	18 (10)	162 (90)	180 (90)	2.198	0.333
Christian	0	19 (100)	19 (9.5)		
Hindu	0	1 (100)	1 (0.5)		
Residence					
City	13 (9)	138 (91)	151(76)	0.823	0.663
Village	5 (11)	39 (89)	44 (22)		
Apartment	0	5 (100)	5 (2)		
Employment status					
Government servant	1 (1)	84 (99)	85 (43)	22.4	<0.001*
Private	4 (7)	49 (93)	53 (27)		
Student	2 (4)	46 (96)	48 (24)		
Un-employed	1 (25)	3 (75)	4 (2)		

Table 2: Socio-employment impacts of COVID-19 (n=200)

The study table-2 revealed that respondents had an age <20 years, intermediate level of education, and working in government sectors reported a loss of employment because of the COVID-19 (p-value <0.05). All other social variables were not showed any significant association with COVID-19 impacts (p-value >0.005). Table-3 shows that only 15.5% of respondents reported that the pandemic has an impact on their salary

while an average of 40% of them said that their salary had not been affected during the pandemic. Most of the respondents were stratified with facilities regarding the treatments and tests provided by the organization.

| How your salary package/benefits have been affected by the COVID-19 pandemic?		N	%
Salary increased		9	4.5
Salary decreased		31	15.5
Neither increased		123	61.5
Nor decreased		37	18.5
Role of the organization during COVID-19			
Did your organization provide all safety measures to the employees for COVID-19?			
Yes		151	75.5
No		49	24.5
Did your organization help the employees with COVID-19 tests and treatments?			
Yes		150	75.0
No		50	25.0

Table 3: Impact of COVID-19 on economic status and role of organization (govt/private) (n=200)

According to the information that is shown in Table 4, it is revealed that in response to statement 1 i.e., Wearing of face mask or face cover to prevent the COVID-19 infection most of the respondents (male=91.25%, female= 97.5%) reported always, in response to statement 2 i.e., Washing of hands after touching a contaminated object, majority of the respondents (male=81.25%, female=89.16%) reported always, in response to statement 3 i.e., social distancing, majority of the respondents (male=58.75%, female=65%) reported always, in response to statement 4 i.e., use of hand sanitizers most of the respondents (male=67.5%, female=82%) reported always. Only statement 4 (p = 0.038) showed a statistically significant difference in the practice of male and female respondents taking precautions, while there was no significant difference in their practices in all other statements questioned about precautionary measures (p>0.05).

Precautionary Measures	Response	Gender		Chi-square	p-value
		Male n (%)	Female n (%)		
Wear mask or face Covers	Always	73 (91.25)	117 (97.5)	4.364	>0.05
	Some time	6 (7.5)	3 (2.5)		
	Rarely	1 (1.25)	0		
Washing of hands	Always	65 (81.25)	107(89.16)	3.391	>0.05
	Some time	12 (15)	12 (10)		
	Rarely	3 (3.7)	1 (0.8)		
Social distancing	Always	47 (58.75)	78 (65)	2.863	>0.05
	Some time	25 (31.25)	36 (30)		
	Rarely	7 (8.75)	6 (5)		
	Never	1 (1.25)	0		
Use of hand sanitizers	Always	54 (67.5)	98 (82)	6.522	0.038*
	Some time	24 (30)	18 (15)		
	Rarely	2 (2.5)	4 (3)		

Table 4: Precautionary measures adopted by study population in current COVID-19 (n=200)

Figure 1 depicts that most of the study participants feel health problems during current pandemics in terms of respiratory, digestive, sore throat, and loss of taste and smell. Figure 2 revealed the impacts of COVID-19 on the social life of the study participants. Most of the participants believe that the pandemic put negative impacts on their social activities importantly on children's education and religious obligations. when undergoing the test was the reason. The frequency distribution of other reasons for not taking a Pap smear test from the participants' point of view is shown in detail in Table 4.
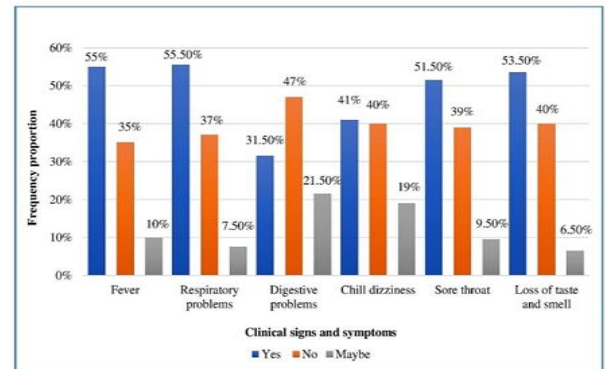
Figure 1: Graphical representation of clinical signs and symptoms among the respondents observed during the COVID-19 pandemic
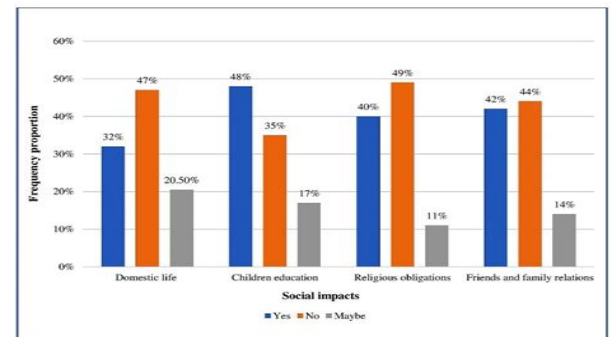
Figure 2: Graphical representation of social impacts of COVID-19 among study participants

Discussion

According to the findings of our research, COVID-19 does not have any immediate collateral consequences on the economy. Nevertheless, it does have a negative impact on the health, employment, and social life of the general population in Indonesia. As per our knowledge, this is one of the first research to investigate the impacts of COVID-19 among the general population in Indonesia.

The results of current study revealed that 40.5% of Indonesian participants reported no change in their salary, while only 15.5% reported a loss of employment as a result of COVID-19. This figure is less than that reported in India (45.6%), Vietnamese (66.9%), and G7 countries (31%)[23-27] Inconsistencies in economic

systems and main markets between countries may be responsible for the discrepancy. Our findings further fortify the impacts of SARS-CoV-2 on the general public economic situation by calculating the extent of the income deficit caused by COVID-19 pandemic.

In the current study, people who were less than 20 years of age, had an intermediate level of education, and worked in the government sector instead of the private were more likely to lose their jobs because of COVID-19. This could be the result of businesses being forced to close their doors or reduce their workforces as a direct consequence of the country's stringent social distance rules. Previous surveys in Indonesia revealed that the majority of employees had their hours and compensation decreased, their pay slashed, or their job suspended until further notice. Less than 45% of employees said that COVID-19 pandemic had no effect on their employment [28,29]. In contrast, during the epidemic in Vietnam, employees with higher levels of education were significantly more likely to become sick than those with no education beyond a high school diploma or less [26]. According to earlier research, 76%of respondents working in government sectors judged their occupations to be at least somewhat risky in terms of potential exposure to people who may have COVID-19 [30].

According to our findings, majority of the respondents followed the precautionary measures, importantly: wearing face masks or covers (95.0%), washing of hands after touching contaminated objects (86.0%), social distancing (62.5%), and using hand sanitizers (76.0%) during the ongoing pandemic. The study demographics revealed a significant difference in practice statement: "using of hand sanitizers" between male and female respondents (p=0.038).

Our findings were consistent with those of an earlier study conducted in Indonesia, which found that the majority of individuals took preventive measures like hand washing (71%) and wearing a face mask (86%) to avoid COVID-19 infection [31]. These findings are in concordance with the outcomes of the study in Hong Kong where 96% of compliance with the use of face masks assisted the country in reducing COVID-19 infections [32]. Similarly, according to a Ghanaian survey, 90% of people wash their hands every day and 73% use hand sanitizers regularly [33]. A previous study in Bangladesh reported that most of the participants showed positive preventive measures such as washing hands with water and soap (93.5%), maintaining social distance (93.5%), and wearing a mask (87.2%) to prevent the COVID-19 infection [34]. In another study conducted in Malaysia, more than half of the participants (51.2%) utilized a face mask and hand sanitizers when going out in public and 83.4% avoided crowded areas and practiced social distancing during the

pandemic [35]. The findings of this research were in line with the study conducted in Pakistan reported that more than 65% of participants agreed that wearing of face masks, using hand sanitizers, staying at home and social distancing are the important tools to prevent and control the COVID-19 pandemics [36].

In the current study, more than half of the participants reported clinical signs and symptoms such as respiratory problems (55.5%), fever (55.0%), loss of taste or smell (53.5%), and sore throat (51.5%) due to the influence of the COVID-19 pandemic. Only 11.25% answered "may be" during the pandemic; their health had been affected (Figure-1). These findings corroborate the investigations of Wang et al. (2013), who utilized the same scale in a study conducted in China in 2021 at the early phases of the virus transmission and discovered that 53.8% of participants had moderate to severe health symptoms, while 21.7% had mild effects. However, the findings we reported in our results are much robust than that obtained in China in term of adversities [37,38]. Other Chinese research has also highlighted the high frequency of mental and other health problems among the general population as a result of COVID-19 exposure [39,40].

Our findings pointed out that most of the participants stated that COVID-19 influenced their children's education, while 40% answered that their religious obligations were also affected by COVID-19. All the other mentioned social activities in the survey were not affected too much. Previous studies conducted in many parts of the world including China showed that the COVID-19 pandemic has affected people social and domestic life [41-43]. According to a recent survey performed in Kashmir, more than half of the respondents (53.5%) felt that the current lockdown due to the COVID-19 outbreak may exacerbate social problems [12]. This study also revealed that the pandemic had little effect on the participants' employment (9.0%) with the majority of them working in the government sector, and just 25% of persons receiving new job chances as a result of the pandemic and is in agreement with other researchers' report [38]. The impacts of these pandemics are often serious, and they can harm a population health, employment, economy, and other social life activities within the community [44].

The primary limitation of this study was that this report was limited to a few provinces of Indonesia and maximum respondents from East Java. Another limitation of the current study was that it included only those persons who utilized internet/social media; uneducated or very poor people who do not use the internet or social media were excluded. The online survey may be regarded as one of the finest approaches for collecting data from a big sample size at a low cost

and in a timely manner; nevertheless, the drawbacks of this strategy include the possibility of self-report bias and high uniformity of data due to the lack of strict oversight. Another factor to consider is the small sample size, which reduces generalization to other populations.

The findings of current study depicted that COVID-19 pandemic had no substantial effect on the study participants' economies, but it had a negative impact on their health, social lives, and employment status. The study also reported that most of the respondents followed the COVID-19 pandemic precautional measures. Female participants were found to be more likely to follow the practices measures toward current COVID-19 than male participants. Additional in-depth analyses of COVID-19 effects on a variety of demographic, socioeconomic, and health facts of the public in the affected countries, in terms of medication, morbidities, mortalities, and GINI Index, will enable the administration to put in place the necessary policies to assist the most vulnerable populations with their employment, social lives, and health. Public health activities, particularly health programs, should be implemented to address the consequences of the epidemic on quality of life of citizens.

Competing Interest

All authors declare no conflict of interest

Author Contributions

SR designed and supervised the study. SR and MHE did the experiments, data analysis and wrote the first draft of manuscript, UEN, AT, AA, MK, MAR and MN critically reviewed, made corrections, and wrote the discussion part. SR UM, MHE, AA, AR, and MAR helped in sample collection, demographic data collection, paper write up, editing and review procedure of the study.

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