

RESEARCH ARTICLE

Demographic characteristics with compliance on the implementation of health protocol on ship passengers

Candra Panji Asmoro, Robby Bagus Prasetya, Retno Indarwati

Abstract

Objective: To analyse the relationship of demographic characteristics with coronavirus disease-2019 protocol compliance among ship passengers.

Method: The descriptive, correlational, cross-sectional study was conducted in May 2022 at the harbour in East Java, Indonesia, after approval from the ethics review committee of Universitas Airlangga, Indonesia, and comprised individuals of either gender aged 18-65 years who had a passenger ship departure ticket and were able to communicate well in the Indonesian language. Data related to demographic characteristics and coronavirus disease-2019 standard protocol compliance. Data was analysed using SPSS 25.

Results: Of the 157 subjects, 71(45.2%) were males, 86(54.8%) were females, 68(43.3%) were aged 26-45 years, 79(50.2%) had studied up to the bachelor's level, 106(66.2%) were employees, 89(56.7%) had earnings below the provincial standard, and 116(73.9%) were married. Health protocol compliance at the harbour had a significant correlation with gender, age, education, occupation and income ($p < 0.05$).

Conclusion: The factors related to the compliance of the coronavirus disease-2019 protocol at the harbour were gender, age, education, occupation and income.

Keywords: COVID-19, Mask, Marital, Ethnicity, Occupations. (JPMA 73: S-118 [Suppl. 2]; 2023)

DOI: <https://doi.org/10.47391/JPMA.Ind-S2-28>

Introduction

Coronavirus disease-2019 (COVID-19), like the rest of the world, caused a serious health problem in Indonesia. In March 2020, the World Health Organisation (WHO) declared the outbreak a global pandemic¹ and the number of confirmed COVID-19 cases worldwide by February 28, 2022, was well over 400 million, with more than 6 million deaths.² Non-compliance with the COVID-19 standard operating procedures (SOPs) (washing hands, wearing masks, maintaining a minimum distance of 1 meter, staying away from crowds, and reducing mobility), which was part of the government decision in the Adaptation of New Habits (IMR) era, was one of the factors in the widespread risk of exposure to COVID-19. During the pandemic peak, changes in behaviour and public awareness levels were important to stop the virus spread. One of the triggers for COVID-19 exposure was failure to limit outdoor activities and mass gatherings.³

By February 28, 2022, the number of COVID-19 positive cases in Indonesia was over 200,000 and over 2,000 deaths.⁴ A study⁵ on the epidemiology of COVID-19 cases in Klaten district found that most cases had occurred in

men (50.31%), and in people in the productive age group of 15-44 years (49.06%).

A harbour is an outdoor place where people are found in clusters moving from and to various regions, increasing the COVID-19 risk. In addition to the lack of equipment, like that of thermal detectors, online ticketing, personal protective equipment (PPE), masks, health facilities at the harbours, coordination with the Harbour Health Office (KKP), provincial/district/city health offices, and other apparatus was found to be less than optimal.⁶

Transmission of COVID-19 occurred through direct contact, indirect contact, or close contact with an infected person.² The main clinical symptoms of an infection included fever (temperature $> 38^{\circ}\text{C}$), cough, difficulty breathing, shortness of breath, fatigue, muscle aches, gastrointestinal symptoms, such as diarrhoea, and other respiratory symptoms.⁷ Official policies during the pandemic included compliance with health protocols to suppress the spread.⁸ In addition to the biological impact, the virus could also affect the psychology of the sufferer. A study found that stigma had an impact on mental health and quality of life of COVID-19 sufferers.⁹

One study¹⁰ mentioned that the main problem during the COVID-19 pandemic in passenger services and passenger transportation, especially in relation

Department of Nursing, Airlangga University, Surabaya, Indonesia.

Correspondence: Candra Panji Asmoro. email: candra.panji.a@fkip.unair.ac.id

to regulations, was that there was no common perception about restrictions on shipping and harbour operations.

The current study was planned to analyse the relationship of demographic characteristics with COVID-19 SOP compliance among ship passengers at a harbour.

Subjects and Methods

The descriptive, correlational, cross-sectional study was conducted in May 2022 at the harbour in East Java, Indonesia. After approval from the ethics review committee of Universitas Airlangga, Indonesia, the sample size was calculated using the Slovin's formula.¹¹ The sample was raised using simple random sampling technique. Those included were individuals of either gender aged 18-65 years who had a passenger ship departure ticket and were able to communicate well in the Indonesian language. Harbour staff was excluded.

Data was collected using a questionnaire after taking informed consent from the participants and permission from the head of the Harbour Health Office. The questionnaire was adapted from literature.^{12,13} The health protocol questionnaire, also adapted¹⁴ had 10 statement items answered by respondents on a 3-point Likert scale, ranging from always to never. The implementation of the health protocol was considered good at 76-100%; enough at 56-75% and not enough at <56%. The questionnaire was found to be valid with r count ranging 0.565-0.771 and reliable with a Cronbach alpha value of 0.934.

Data was analysed using SPSS 25. Spearman's Rho analysed the correlation of gender, education, age, ethnicity, occupation, income and marital status with SOP compliance. The level of statistical significance was set $p \leq 0.05$.

Results

Of the 157 subjects, 71(45.2%) were males, 86(54.8%) were females, 68(43.3%) were aged 26-45 years, 79(50.2%) had studied up to the bachelor's level, 106(66.2%) were employees, 89(56.7%) had earnings below the provincial standard, and 116(73.9%) were married (Table 1).

SOP compliance at the harbour had a significant correlation with gender, age, education, occupation and income ($p < 0.05$), while there was no significant relationship with ethnicity and marital status (Table 2).

The compliance level was good in 57(36.3%) case and it was less than optimal in 49(31.2%) cases (Table 3).

Table-1: Demographic data of the respondents (n=157).

No.	Characteristic(s)	Category	Total n (%)
1.	Gender	Male	71 (3)
		Female	86 (54.8)
		Total	157 (100)
2.	Age (Years)	17-25	47 (29.9)
		26-45	68 (43.3)
		46-65	42 (26.8)
		Total	157 (100)
3.	Ethnicity	Java	44 (28.0)
		Madurese	37 (23.6)
		Sasak	31 (19.7)
		Others	45 (28.7)
		Total	157 (100)
4.	Education	Elementary	18 (11.5)
		Junior high school	39 (24.8)
		Senior high school	16 (10.3)
		Diploma	5 (3.2)
		Bachelor	79 (50.2)
		Total	157 (100)
5.	Occupation	Employed	104 (66.2)
		Unemployed	53 (33.8)
		Total	157 (100)
6.	Income	Higher than standard	68 (43.3)
		Lower than standard	89 (56.7)
		Total	157 (100)
7.	Marital status	Married	116 (73.9)
		Unmarried	41 (26.1)
		Total	157 (100)

Table-2: The relationship between demographic factors and coronavirus disease-2019 (COVID-19) health protocol compliance.

Variables	p-value
Gender	0.013
Age	0.015
Ethnicity	0.911
Education	0.001
Occupation	0.013
Income	0.011
Marital status	0.940

Table-3: Distribution of respondents in terms of the level of compliance with the coronavirus disease-2019 (COVID-19) protocol for ship passengers at the harbour (n=157).

No.	Variable	Level	n (%)
1.	Health protocol compliance	Not enough	49 (31.2)
		Enough	51 (32.5)
		Good	57 (36.3)
		Total	157 (100)

Discussion

The level of compliance among ship passengers with COVID-19 SOPs at harbour varied in the current study,

which could be due to ignorance or lack of health information.¹³ One way to increase public's exposure to information related to COVID-19 is to provide a social media platform for harbour managers. This platform is easy to access and the message conveyed is acceptable because it is packaged attractively.¹⁵

A study suggested that various factors influence gender differences in terms of health risks, such as biological and physiological, life expectancy, social protection mechanisms, cultural norms, religious beliefs and family rules as well as behaviour, education, income, and low use of health services among women.¹⁶ The last element suggests women tend to pay attention to everything in a new environment, and are more compliant with health protocols. Women are also more worried or viewed COVID-19 as a big problem, and such concerns resulted in better compliance rates.¹⁷

Compliance with SOPs has also been found associated with different age groups.¹⁶ The current findings suggest that with increasing age, a person experiences a decrease in the ability to capture information, affecting the level of health literacy. Good health literacy among the young, especially medical students, has been reported.¹⁸ Academic background also influenced respondents' health literacy in the current study, which is in line with literature.¹⁹

It has been stated that education is a learning effort in the community so that people are willing to take action (practices) to maintain and overcome problems to improve their health.¹⁶ People with low education and low incomes have lower health literacy compared to those with higher education levels and higher incomes, as was seen in the current study. The relationship between income and SOP compliance was also significant. A small group of people who dominate the job market makes mass health literacy difficult.²⁰ A study stated that one of the factors affecting compliance is habituation,²¹ which is the socialization process that encourages people since childhood to gradually pick up the habit of adhering to the prevailing values, which in this case were the COVID-19 SOPs. The current findings are also in accordance with a study which stated that the values of ethnic groups differ in terms of information sharing, work planning and various activities.²² The association between the two elements in the current study was, however, not significant.

The harbour itself facilitated the passengers in the observance of the SOPs. A study reported improvement post-intervention.²³ which was aimed at increasing knowledge. Apart from increasing understanding of COVID-19, video-led interventions may also prevent misinformation.²⁴

A study reported association between nature of work and health literacy.²⁵ The current study also noted such a relationship.

A study stated that the marital status affected an individual's behaviour towards the concept of compliance.¹⁶ The current study also noted the difference though it was not significant. One study reported a relationship between family health tasks implementation and medication adherence.²⁶ Families can be physical and psychological support for people.²⁷

The current study has its limitations. The sample had a number of ethnic groups, and each of them certainly had its specific characteristics that dictated their behaviour towards SOP compliance. As such, ethnic diversity could be a confounding factor in the findings.

Conclusion

The factors related to the compliance of the COVID-19 compliance at the harbour were gender, age, education, occupation and income. Ethnicity and marital status were not significant influencing factors.

Acknowledgment: We are grateful respondents, the harbour staff and the research assistant for their contributions to the study.

Disclaimer: The text was presented as an Abstract at the International Nursing Conference held by the Faculty of Nursing, Universitas Airlangga, Indonesia.

Conflict of Interest: None.

Source of Funding: None.

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