

ORIGINAL ARTICLE

Mitigation behaviour analysis to understand the effectiveness of COVID-19 infection control policies in Riau

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Abstract

Objective: To analyse mitigation behaviour in understanding the effectiveness of coronavirus disease-2019 infection control programme.

Method: The quantitative, descriptive study was conducted in the Riau province of Indonesia from April to May 2020. After approval from the Faculty of Medicine, Riau University, and comprised individuals of either gender aged 15-69 years. Data was collected using a closed questionnaire generated on Google Forms and distributed through social media using WhatsApp. Data was analysed using SPSS 27.

Results: Of the 440 subjects, 304(69.1%) were women, 185(42%) were in the late adolescent age group, and 345(78.4%) had education up to the college level. The mitigation behaviour was appropriate in 263(59.8%) cases at the individual level and 233(53%) at the community level.

Conclusion: The mitigation behaviour towards coronavirus disease-2019 infection prevention was appropriate in majority of the subjects at both individual and community levels.

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Introduction

Coronavirus disease-2019 (COVID-19) posed a new threat to the world as the pandemic had a massive impact on all aspects of life globally, from health issues to socioeconomic aspects.¹ It needed strategies and efforts to control the spread of infection. Governments worldwide worked hard by devising and developing various strategies in jurisdictional policies during the pandemic.² In early 2020, the government in Indonesia took non-medical policy measures to curb the spread of COVID-19 by improving information flow to improve awareness about preventive measures against the virus.³ During the pandemic, all countries tried to reduce the spread of infection by designing various practical and simple mitigation strategies in the communities.⁴

The mitigation steps applied at both individual and community levels. At the individual level, the measures included self-isolation and self-quarantine at home if exposed and symptomatic. At the community level, the steps included social restrictions, lockdowns and closure of educational institutions.^{4,5} Other measures included restriction on inter-city travel, limiting physical contact with others, and maintaining a distance of 1-2 meters from other people in public places.⁶⁻⁸ In addition, several efforts were also recommended to break the chain of infection

transmission, including workplace closures, use of masks, and increased hand-washing.⁹⁻¹² The World Health Organisation (WHO) recommended personal hygiene as one of the significant steps to mitigate COVID-19 infection.¹³ All these steps were enforced by the government even though they were rarely used before.¹⁴

However, not all communities accepted the recommendations policies, and while people were generally supportive of preventive steps, they were less supportive of social restrictions.¹⁵

The current study was planned to assess the mitigation behaviour at individual and community levels to prevent the spread of COVID-19 infection.

Subjects and Methods

The quantitative, descriptive study was conducted in the Riau province of Indonesia from April to May 2020. After approval from the Faculty of Medicine, Riau University, and comprised individuals of either gender aged 15-69 years. The sample size was calculated using the World Health Organization (WHO) calculator, with 95% confidence levels.¹⁶ The sample was raised using consecutive sampling technique. Individual aged <15 year and >69 year were excluded.

After taking informed consent from the subjects, data was collected using a closed questionnaire generated using Google Forms and distributed through WhatsApp. The questionnaire was adapted from the 32-item COVID-19 prevention and transmission guidelines published by the Indonesian Ministry of Health.¹⁷ The questionnaire had

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three parts. The first part comprised general data of the respondents. The second part explored compliance at the individual level, while the third part assessed compliance at the community level.

The questionnaire was in the local language, and its validity test values ranged 0.464-0.788, with Cronbach's alpha value 0.823.

Data was analysed using SPSS 27. Data was subjected to univariate analysis, and was expressed as frequencies and percentages.

Results

Of the 440 subjects, 304(69.1%) were women, 185(42%) were in the late adolescent age group, 345(78.4%) had education up to the college level, 120(27.3%) were working as private-sector employees, and 232(52.7%) obtained most information about COVID-19 from the social media (Table 1).

Table-1: Respondents' characteristics (n=440).

Variable	n (%)
Age (years)	
Early Adolescence	5 (1.1)
Late Adolescence	185 (42)
Early Adulthood	138 (31.4)
Late Adulthood	81 (18.4)
Early Elderly	29 (6.6)
Late Elderly	2 (0.5)
Gender	
Male	136 (30.9)
Female	304 (69.1)
Education Level	
Elementary School	3 (0.7)
Junior High School	8 (1.8)
Senior High School	84 (19.1)
College	345 (78.4)
Occupation	
Not Working	24 (5.5)
Student	117 (26.6)
Civil Servants	98 (22.3)
Private Employees	120 (27.3)
Self-Employed	36 (8.2)
Housewives	19 (4.3)
Other	26 (5.9)
Source of Information COVID-19	
Family	3 (0.7)
Print Media	3 (0.7)
Electronic Media	156 (35.5)
Social Media	232 (52.7)
Friend	8 (1.8)
Health officers	38 (8.6)
Total	440 (100)

The mitigation behaviour was appropriate in 263(59.8%) cases at the individual level and 233(53%) at the community level (Table 2).

Table-2: Respondents' behaviour towards COVID-19 transmission prevention measures.

Variable	n (%)
Individual Level	
Appropriate	263 (59.8)
Inappropriate	177 (40.2)
Community	
Appropriate	233 (53)
Inappropriate	207 (47)
Total	440 (100)

COVID-19: Coronavirus disease-2019.

Discussion

Research has shown that women tended to behave better than men in following standard operating procedures (SOPs) related to COVID-19 prevention.^{12,18} However, this difference could be reduced if respondents were given information properly and consistently.¹⁹ Younger respondents showed lower compliance with the SOPs¹² and higher age was found associated with better practice of the SOPs.¹⁹

Individual or community understanding of COVID-19 prevention programmes was influenced by several motivations, such as the desire to protect themselves, and the responsibility to protect the community at large.^{6,15,20,21}

Human rights and mental health, including the fatigue factor, were cited as factors inhibiting the implementation of COVID-19 SOPs.^{22,23}

Practical efforts to improve individual compliance were needed, including the provision of timely information effectively.¹⁸ A study found that coping appraisal, threat appraisal, and improved knowledge positively influenced compliance.²⁴ Every country, including Indonesia, needed to review and update policies regarding the pandemic by comprehensively analysing specific conditions.¹

The current study has limitations, as it could not confirm directly that the questionnaire had been filled out by the respondents themselves because of online data collection. Besides, limited mobilisation during the data-collection phase owing to pandemic-related social restrictions forced the study to depend on social media platforms. This risk was minimised by involving several existing social media groups and networks, making the sample representative of all the communities in the study area.

Conclusion

Mitigation behaviour at the individual level was primarily good, while at the community level it was less appropriate.

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