



# The Attitude and Behavior Related to Social Distancing as Prevention Transmission of Coronavirus Disease 19 among Adolescents Living in Coastal Area of Indonesia

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## Abstract

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**BACKGROUND:** The majority of adolescents living in the coastal area are Muslim who has a habit of carrying out worship and cultural activities in the congregation. They are in the school-age period and have received sufficient information about social distancing as prevention of coronavirus disease 2019 (COVID-19) transmission.

**AIM:** This study aimed to explore the attitude and behavior related to social distancing in response to prevent COVID-19 transmission among adolescents living in the coastal area, Indonesia.

**METHODS:** This is a cross-sectional study that invited adolescents in the coastal area, Madura, East Java, Indonesia, as participants. Data were collected conveniently through an online questionnaire. Univariate and bivariate analyses were performed for the analysis of the data.

**RESULTS:** A total of 224 participants completed the survey. A number of participants disagreed to certain attitudes related to social distancing including praying from home (21%), wearing a mask (15%), and not organizing mass gathering events (9%). Furthermore, as many as 44% of participants refused to facilitate infected people to do self-isolation.

**CONCLUSION:** The attitudes related to the social distancing of adolescents living in the coastal area might be influenced by culture and Islam reference. Therefore, a religious approach is considered important to be involved in the preparation of strategic actions in preventing the transmission of COVID-19 through social distancing. The refusal of participants to isolate an infected person might be caused by a limited knowledge about COVID-19 prevention. The related institutions need to conduct a major health socialization to prevent COVID-19 transmission through social distancing.

## Introduction

The incidence of coronavirus disease 2019 (COVID-19) in Indonesia has increased rapidly [1], [2], [3]. The Indonesian government has compiled certain good preparedness and a response plan based on the WHO recommendations in facing COVID-19, such as practicing social distancing. Social distancing was identified as a primary strategy to prevent Coronavirus transmission [4], [5], [6]. On the other hand, the rate of COVID-19 infection remains high, indicating that the mitigations and strategic action again COVID-19 were not well-implemented. The data retrieved in November 2020 showed a total of 444,348 infections and 14,761 deaths nationally. At the same time, East Java became one of the top two provinces of COVID-19 infection rate with a reported 54,865 cases [7].

Promoting physical or social distancing in East Java, especially among the coastal community, has serious challenges because they hold gathering habits derived from Islamic and hereditary culture [8], [9]. The majority of the coastal community is Muslim, particularly in

Madura [10]. Indeed, their habitual activities are influenced by Islam instruction such as a handshake, worship activities, and certain religious events conducted in the congregation. Although Islam has rules for maintaining cleanliness and implementing activities that can prevent infectious diseases, it is often neglected because activities carried out together have become a permanent habit that is difficult to control. Furthermore, most people are unwilling to pay the costs of social distancing. Most Indonesians disobeyed the social distancing policy by still doing activities outside the home such as having a vacation and traveling to other cities [11]. These phenomena would limit the effectiveness of social distancing [12].

Adolescents constitute the school-age group that spends a large proportion of their day in school or pursuing school-related activities [13]. The adolescents are well-educated people who surely have enough knowledge about social distancing as an effort against COVID-19 infection, including those who live in a coastal area. However, the rapid increase of infection in East Java indicates that the attitude and behavior of adolescents toward social distancing are in question. To implement health protocols such as social distancing,

they should be able to change their habit of performing worship or other activities conducted in a congregation.

The study of attitude and behavior related to health and prevention of infectious disease is important. A simulation study on agent-based influenza showed that small changes in behavior could have a significant effect on transmission patterns during epidemics [14]. Therefore, this study aimed to explore the attitude and behavior of coastal adolescents toward social distancing in response to prevent COVID-19 transmission.

## Methods

The design of the study is cross-sectional, with 224 adolescent participants living in the coastal area of Madura, East Java, Indonesia. The permission to conduct this study was received from the Institutional Review Board of a university (Approval No. No.1057/UN25.8/KEPK/DL/2020). Before participating in the study, the subjects were informed of the purpose of the research and were assured of their right to refuse to participate in the study or withdraw their consent at any stage.

The data were collected through an online questionnaire shared using social media from March to August 2020. The instruments used in this study are attitude to social distancing and behavior of social distancing. The questionnaires were purposed as a self-managed questionnaire according to the standard protocols for the questionnaire design and testing. The overall fields, concerns, and response options in the questionnaires were related to social distancing. The questionnaire of attitude to social distancing consists of 10 items with a Likert scale format ranging from 5 (strongly disagree) to 1 (strongly agree). The total score was used which categorized attitude into a positive attitude (score >50) and negative attitude (score ≤50). The behavior of social distancing questionnaire consists of ten items with a dichotomous scale format (yes/no). The total score was applied which categorized behavior as good (score ≥7), sufficient (score 3–6), and insufficient (≤2). The content validity index for scale are 0.80 and 0.90 for questionnaire attitude and behavior, respectively, in which they are an acceptable score [15]. The Cronbach's alphas are 0.873 and 0.865 for questionnaire of attitude and behavior in each that reach good level [16]. The correlation among variables was analyzed using Pearson's Chi-square test.

## Results

### Sociodemographic of participants

A total of 224 participants was recruited in this study. All the participants (100%) were Muslim. The

majority (45%) of participants were aged 15–18 years. Of these, 156 (70%) were males and the remaining 68 (30%) were female. Regarding the education level of participants, 24 (10.7%) were junior high school, 167 (74%) were senior high school, and 33 (14.7%) were university students.

### Attitude and behavior of participants related to social distancing

The majority of participants have a good attitude or agreed to perform social distancing as prevention of COVID-19 infection. The participants mostly agreed to do the daily activities at home. However, praying from home, wearing a mask, and not organizing mass gathering events was still a challenge (Table 1).

**Table 1: The attitude of participants related to social distancing**

Attitude	4 Strongly disagree		3 Disagree		2 Agree		1 Strongly agree	
	n	%	n	%	n	%	n	%
Physical distancing/social distancing	1	0	1	0	35	16	187	83
Not organizing mass gathering events	14	6	7	3	29	13	174	78
Wearing a mask	8	4	25	11	67	30	124	55
Work from home	1	0	16	7	49	22	158	71
Study from home	6	3	12	5	46	21	160	71
Worship/pray from home	15	7	32	14	61	27	116	52
Prohibit family from going outside the house if in sick/fever condition	6	3	5	2	35	16	178	79
Keeping children at home	2	1	0	0	31	14	191	85
Regular exercise	3	1	1	0	33	15	187	83
Think positively and do leisure activities to reduce stress	3	1	3	1	34	15	184	82

As shown in Table 2, generally the participants have good behavior related to social distancing as prevention of COVID-19 infection. However, there is still a negative behavior on a certain issue in which almost half of the participants are reluctant to help isolating people with positive COVID. This may be due to the public fear of being infected by coronavirus disease.

**Table 2: The behavior of participants related to social distancing**

Behavior	No		Yes	
	n	%	n	%
Wash hands with water using soap or hand sanitizer	2	1	222	99
Avoid touching the face, mouth, nose	55	25	169	75
Cover mouth with upper arm or tissue when sneezing or coughing or using a mask	14	6	210	94
Wear a mask if you have respiratory problems	27	12	197	88
Keep a minimum distance of 1 meter from others	43	19	181	81
Clean the environment with antiseptic and disinfectant	67	30	157	70
Report to the doctor or health worker if there are family members who experience symptoms of fever, cough, shortness of breath, or recently visited by a COVID-19 sufferer	36	16	188	84
Isolate yourself if you experience symptoms of fever, cough, shortness of breath and just met with a positive confirmation of COVID-19	9	4	215	96
Encourage family and others not to leave the house if there is no urgent need	5	2	219	98
Isolate people who are corona positive	87	39	137	61

The result of Pearson's Chi-square test ( $p = 0.019$ ) showed that attitude has a significant relationship with behavior related to social distancing as a prevention of COVID-19 infection (Table 3).

**Table 3: Correlation between attitude and behavior related to social distancing**

Attitude	Behavior						Total	p-value	
	Insufficient		Sufficient		Good				
	n	%	n	%	n	%			
Negative	1	1	16	15	93	85	110	100	0.019
Positive	0	0	5	4	109	96	114	100	

## Discussion

The attitude of coastal adolescents toward social distancing as prevention of COVID-19 infection was not entirely good. Specifically, they did not agree to perform worship at home. As an Indonesian Muslim, performing worship together has become a habit that is hard to break. Islam has encouraged adherents to pray and perform any worship together at a mosque.

Islam has significantly influenced every cultural component in coastal society. The majority of community activities emerged based on Islamic reference. The habit of carrying out gathering activities does not only occur in religious activities, it also spreads to other cultural activities such as weddings, music, and art exhibitions. Therefore, implementing the health protocol for not holding or attending mass activities is difficult to obey.

Wearing a mask is also tough to do among coastal adolescents. Similar to a previous study, a number of people were also reluctant to wear a mask [17]. The adolescents might not be accustomed to using masks that can restrict breathing. Further, wearing a mask can also reduce the quality of communication because they have to use a louder voice and cannot share a smile.

A number of adolescents are averse to help and encourage infected people to do self-isolation. They do not approach the infected people because they are fearful to be infected by COVID-19. This finding shows that they actually have awareness about the dangers of COVID-19 by staying away from infected people, but they still find it difficult to stop their habit of gathering, especially in worship activities. On the other hand, the fear of being infected with COVID-19 is even experienced by health workers. A previous study reported that almost a half of the health professionals were reluctant to provide services even to those individuals who were asymptomatic and not confirmed cases [18]. The possible reason is that they might receive insufficient information and knowledge about COVID-19 transmission and its prevention so that they overreact toward infected people. Furthermore, the stress associated with the outbreak and the feeling of being at risk of contracting might have impacted their attitude related to COVID-19 [19].

The result of this study shows that attitude and behavior about social distancing are significantly correlated. Attitudes assumed to reflect predispositions to behave in a particular manner are believed to be integrally related to most aspects of social life, carrying expectations about human behavior [20]. Attitudes were reported to have some utility in predicting behavior [21]. Thus, improving a positive behavior related to social distancing through attitude is recommended.

## Conclusion

In general, the coastal adolescents have a good attitude and behavior related to social distancing as a prevention of COVID-19 infection. Several issues, such as performing worship together, organizing, and attending a mass activity might be influenced by culture and Islamic reference. The socialization of COVID prevention needs to involve a religious approach. Still, the reluctance to wearing a mask and poor behavior to help infected people to do self-isolation may depend on adolescents' knowledge and beliefs regarding the COVID-19 pandemic. Massive delivery of information and effort related to COVID-19 prevention is demanded.

### Limitation

This research was conducted for adolescents. Further study needs to explore the attitude and behavior related to social distancing for other age groups. Furthermore, this research only investigated two elements (attitude and behavior) of the Theory of Planned Behavior; future researches are suggested to include more variables.

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