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Research Article

Relationship between knowledge and attitude toward travel health preparation behaviour of air travellers during COVID-19 pandemic

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ABSTRACT

COVID-19 is a highly contagious disease. People who travel in this situation, including air travel, can increase the risk of transmitting or being transmitted by COVID-19. The attack rate of COVID-19 during air travel is 4.8%. It is necessary to form a new behaviour regarding good health preparation before travelling to prevent the spread of COVID-19. A person's behaviour can be affected by knowledge and attitude. This research aims to determine the relationship between knowledge and attitude towards the travel health preparation behaviour of air travellers during the COVID-19 pandemic. This research is an observational analytical study with a cross-sectional approach. The population in this study was people who travelled by air from Soekarno-Hatta International Airport during the COVID-19 pandemic, with inclusion sample criteria of people who travelled by air in June – October 2021 and were aged 15–64 years old. The sample was collected using a purposive sampling technique using social media, and 104 respondents were obtained. The data was collected using an online questionnaire via a Google form. The result shows that the majority of respondents have good knowledge (44.2%), a positive attitude (59.6%) and good behaviour (76%). There was no significant relation between knowledge and behaviour (p=0.066) and a significant relation between attitudes and behaviour (p=0.000). This result can be caused by several factors influencing behaviour, such as other predisposing factors (besides knowledge and attitudes), enabling factors, and reinforcing factors, such as easy access to massive information about the COVID-19 pandemic and strict government regulation.

1. Introduction

Indonesia and the world face a difficult situation due to the coronavirus disease 2019 (COVID-19). COVID-19 is a highly infectious disease. Transmission occurs through droplets with a particle diameter of about 5 to 10 micrometres from coughing, sneezing, or expiration. Some manifestations of COVID-19 are fatigue, fever, dry cough, myalgia, and dyspnea (Cascella et al., 2023). Some patients will come out without showing manifestations, but those asymptomatic COVID-19 patients can also effectively transmit SARS-CoV-2 (Li et al., 2020).

Many travel plans were postponed at the pandemic's beginning due to the enactment of Large-Scale Social Restrictions, or Pembatasan Sosial Berskala Besar (PSBB). Kamar Dagang dan Industri (Kadin) stated that the tourism sector lost money until the end of 2020 due to the COVID-19 pandemic and large-scale social restriction policies totalling Rp. 10 trillion (Wahyudi, 2021). Badan Pusat Statistik (BPS) data shows air route departures remain stable until March 2020. They then experienced a significant decrease in April 2020, with 191,002 domestic and 17,499 international departures. This significant decrease is thought to impact government policies due to the COVID-19 pandemic. But, since June 2020, the departures have gradually increased domestically and internationally. Travel, tends to increase triggers new problems in the field of health. Especially during a pandemic (Zairina et al., 2020). A study shows that most travellers are unaware of the health risks and do not take precautions or seek health information before travelling (Kalanlar et al., 2018). Data shows that of the 600 million travellers worldwide, only 8% are preparing for a good trip (Merati et al., 2019).

A study says that the risk of spreading COVID-19 during air travel is lower than in areas such as offices, classrooms, supermarkets, or trains because modern aircraft apply good air circulation using HEPA filters, which are air filters that are also used in hospital operating rooms (Pombal et al., 2020). Similarly, it was also written by the International Air Transport Association, IATA, that the risk of contracting COVID-19 in air travel is shallow if passengers are confirmed to wear masks (International Air Transport Association (IATA), 2023). In addition, the pattern of air circulation in commercial aircraft is side-to-side circulation (laminar), which is air entering the cabin from the top (air inlet), circulating in the aircraft, and then exiting the cabin through a gap near the floor (air outlet). Front-to-back (longitudinal) airflow is minimal. This pattern limits the spread of airborne particles throughout the cabin (Afian & Anditiarina, 2020). Unfortunately, travelling during the pandemic can still increase the risk of spreading and exposure to COVID-19. A journal article on the potential transmission of SARS-CoV-2 on flights from Singapore to China stated that the attack rate (the number of new sufferers of the disease divided by the number of vulnerable populations) on the plane was 4.8% (Chen et al., 2020). Another study on summer flights in Ireland in 2020 stated that the flight-associated attack rate for COVID-19 cases reached 9.8-17.8% (Murphy et al., 2020).

Health preparations during the COVID-19 pandemic may differ slightly from health preparations before travelling in general. When we travel by air, it will take a long time to do processes such as queuing during security checks, boarding, and waiting at airport terminals; activities like this will increase the risk of contact with many people and unconsciously touching many objects' surfaces. In addition, social distancing will be difficult when the flight is crowded (Centers for Disease Control (CDC), 2023). In this situation, new behaviours are expected to be formed, especially preparation for health before travelling, in line with what (Notoatmodjo, 2011) said in his book, that new behaviours, especially in adults, begin when new knowledge arises. Furthermore, this new knowledge will cause a response in attitude. Finally, both knowledge and attitude will cause an even further reaction in the form of behaviour (action). If there is good knowledge, awareness, and attitude, the behaviour formed becomes eternal or long-term compared to behaviour that is not preceded by

based on knowledge. So, in this case, it is necessary to research the aspects of travellers' knowledge, attitudes, and behaviour towards health preparation before travelling (Notoatmodjo, 2018).

2. Materials and Methods

The design of this study is an observational analysis using a cross-sectional method. The population in this study was people who had travelled from Soekarno-Hatta Airport during the COVID-19 pandemic, with inclusion sample criteria that travelled from June - October 2021 and were aged 15-64 years old. One hundred four respondents obtained purposive sampling techniques through social media. Data collected using questionnaires is done online through Google Forms.

The questionnaire was made by adopting and modifying from various sources, including those adapted from Lawrence Green's theory (Notoatmodjo, 2018), as well as provisions regarding travel during the pandemic derived from “Surat Edaran (SE) Nomor 12 tahun 2021” on Domestic Travel Provisions in the COVID-19 and travel provisions by the Centers for Disease Control and Prevention or CDC. All items on the questionnaire were tested for validity and reliability by 30 respondents. All items were declared valid because the r table was higher than the r count (r count 0.361). At the same time, for reliability, the knowledge questionnaire obtained Conbrach's alpha of 0.771, the attitude questionnaire obtained with Conbrach's alpha of 0.609, and Conbrach's alpha behaviour questionnaire were 0.761, which means the three questionnaires are reliable. This research also uses the principles of informed consent and anonymity. It has obtained an ethical clearance or approval letter from the UPN Veteran Jakarta Health Research Ethics Committee with number 450 / X / 2021 / KEPK.

3. Results and Discussions

One hundred thirty-four respondents had completed a research questionnaire, but only 104 met the study's criteria for inclusion and exclusion. This number fulfils the minimum sample requirements. Another 30 respondents (22.4%) were eliminated because they did not meet the inclusion criteria. It is because they were not travelling through Soekarno-Hatta Airport. This questionnaire is filled out by various ages, genders, destinations, and aviation interests, whose percentages can be seen in Table 1. Table 1 shows that most respondents are women (54.8%). Based on age data, most respondents are aged 17 - 25 years (51.0%), and most flight destinations are domestic destinations (86.5%), with the most aviation interests being jobs (41.3%).

Table 1. Characteristics of Respondents

Characteristic	Number of Respondents (n=104)	Percentage (%)
Gender		
Man	47	45.2
Woman	57	54.8
Age		
12 - 16 years old	1	1.0
17 - 25 years old	53	51.0
26 - 35 years old	13	12.5
36 - 45 years old	10	9.6
46 - 55 years old	21	20.2
56 - 65 years old	6	5.8
Flight Destination		

Domestic	90	86.5
International	14	13.5
Aviation Interests		
Academic	9	8.7
Family visit	29	27.9
Work	43	41.3
Tour	19	18.3
Other	4	3.8

Source: Primary Data, 2021

Table 2 shows that most air travellers' knowledge regarding travel health preparations during the COVID-19 pandemic is good, namely 46 respondents (44.2%). However, it only slightly differs from the sufficient criteria, namely 44 respondents (42.3%). It also shows that most air travellers' attitudes during the COVID-19 pandemic were a positive, with 62 respondents (59.6%) and 44 respondents (40.4%) having a negative attitude. Most air travellers' behaviour during the COVID-19 pandemic had with was good behaviour, with 79 respondents (76%). It means that most respondents already have good knowledge about air travel health preparation during the COVID-19 pandemic. The knowledge and behaviour of the community about COVID-19 show that 70% of the community has good knowledge about COVID-19 (Yanti et al., 2020). Identical results were also obtained from 260 respondents, with the results of 71.2% of the respondents having good knowledge about the prevention of COVID-19 (Gunawan et al., 2021). Some results of the earlier research state that the public has good knowledge about the COVID-19 pandemic. According to the researchers, this is due to easy access to information about the COVID-19 pandemic on social media, including information about health preparations that must be done when travelling. As evidenced by a survey published by Psychology Today, 82% of respondents said they often use social media to see information about the COVID-19 pandemic. Information that can be accessed about health-related preparations when travelling can be accessed on the websites and social media of various airlines, even platforms for booking tickets (Nur Utami, 2020).

Table 2. Overview of the Knowledge, Attitude, and Behaviour of Air Travellers during the COVID-19 Pandemic

Variable	Number of Respondents (n=104)	Percentage (%)
KNOWLEDGE		
Good	46	44.2
Average	44	42.3
Poor	14	13.5
ATTITUDE		
Positive	62	59.6
Negative	42	40.4

BEHAVIOUR		
Good	79	76
Average	23	22.1
Poor	2	1.9

Source: Primary Data, 2021

Table 2 shows that most respondents have a positive attitude towards health preparation during pandemics. According to Allport (1954), the attitude has three main components: confidence, emotional life, and tendency to act, and all three will form a whole attitude (Notoatmodjo, 2011). In this study, a positive attitude will determine how a person sees and acts over a situation or object. Good knowledge will encourage people to be positive and ultimately form proper or good behaviour. For example, in this study, if a person believes that masks can prevent the transmission of COVID-19 in public places, then there will be an intention to use the mask when travelling (Linawati et al., 2021). So, it is expected that a positive attitude in this study will lead to good behaviour. Table 2 also shows that most respondents have practiced or behaved well during the pandemic, such as seeking information about COVID-19 destinations before travelling, preparing the necessary medicines, and implementing applicable health protocols. Most of its respondents had good behaviour towards preventing COVID-19 transmission (Chadaryanti & Muhafilah, 2021).

Table 3. Relation Between Knowledge with Travel Health Preparation Behavior of Air Travellers during the COVID-19 Pandemic

Knowledge	Behaviour			Total	P Value
	Good	Average	Poor		
	n (%)	n (%)	n (%)	n (%)	
Good-Average	71 (68.3)	18 (17.3)	1 (1.0)	90 (86.5)	0.066
Poor	8 (7.7)	5 (4.8)	1 (1.0)	14 (13.5)	
Total	79 (76.0)	23 (22.1)	2 (1.9)	104 (100)	

Source: Primary Data, 2021

The results of bivariate analysis between knowledge variables and health preparation behaviours of travellers conducted with the Mann Whitey test obtained a value of p 0.066 (p>0.05) which means there is no significant relationship between respondents' knowledge with their behaviour. This is incompatible with Lawrence Green's (1991) theory that knowledge is one of the predisposing factors influencing a person's health behaviours. In this study, the majority of respondents with good-average knowledge also have good behaviour, by 68.3%. However, some respondents with good and average knowledge are still in the category of average behaviour (17.3%) or even less (1%). Conversely, respondents with poor knowledge did not rule out the possibility of still having good behaviour in this study by 7.7%. That is, only sometimes well-informed respondents will behave well, and respondents with poor knowledge will not consistently behave poorly. Because in this study, the two did not have a significant relationship. These happen because many things, not just knowledge, can form someone's behaviour.

Based on Lawrence Green's theory (1991), other predisposing, enabling, or predisposing factors may exist. For example, the predisposition factor is a job. In this study, the aviation interest most strongly relates to the job (40.4%), forcing workers to practice good health preparation behaviour. Other examples of another factor include government rules of travel during pandemics that cannot be inviolable, so the public is obliged to comply with the laws. Chadaryanti & Muhafilah (2021) also stated that there is no relationship between knowledge and COVID-19 prevention behavior. The study explained that the respondents with good knowledge (37.8%) did not apply good preventive behaviour. It is possible that this good knowledge is not applied to some good behaviour. According to the researchers, this may happen because massive information about COVID-19 on social media increases respondents' knowledge, but only read by the public without taking it deeper and practicing it. It also stated that students' knowledge is unrelated to physical distancing compliance behaviour. The majority of students' knowledge was in the category of average, but the majority of their behaviour was good (Nur Utami, 2020).

Conversely, (Purnamasari & Raharyani, 2020) stated that knowledge influences attitudes and behaviors. This can happen due to variable differences that are very influential, namely the level of education. Their study looked at the criteria of diploma and undergraduate education where higher education is obtained; the higher the level of education, the better the knowledge. The better the knowledge, the better the behaviour. While this study ignored differences in education levels, the data results were more diverse.

Table 4. Relationship Between Attitude with Travel Health Preparation Behavior of Air Travellers during the COVID-19 Pandemic

Attitude	Behaviour			Total	P Value
	Good	Average	Poor		
	n (%)	n (%)	n (%)	n (%)	
Positive	55 (52.9)	7 (6.7)	0 (0)	62 (59.6)	0.000*
Negative	24 (23.1)	16(15.4)	2 (1.9)	42 (40.4)	
Total	79 (76.0)	23 (22.1)	2 (1.9)	104 (100)	

Source: Primary Data, 2021

The results of bivariate analysis between attitudes and health preparation behaviours of travellers conducted with the Mann Whitey test obtained a p-value of 0.000* ($p<0.05$), which means there is a significant relationship between respondents' attitudes to behaviour. These results align with Lawrence Green's (1991) theory that attitude is one predisposing factor influencing a person's health behaviour.

Respondents who had a positive attitude mainly were well behaved, which was 52.9%. While some respondents with a positive attitude have average behaviour (7%) and none who had a positive attitude have poor behaviour (0%), it indicates that when a person has a positive attitude towards something, it tends to relate to or encourage someone to behave well. Attitude is not an action or activity but a 'predisposition' that later gives rise to a further response in action (behaviour) (Notoatmodjo, 2018). This means that respondents already

have an 'attitude' or 'tendency' to behave positively following the recommended health values (in this case, air travel health preparations during the COVID-19 pandemic), and most respondents have put them into practice.

Respondents in this study were mostly aged 17-25 years (51%), which is the age of the late teens based on the Ministry of Health Age Category. This age range will begin cognitive development in the ability to reason and think, which will cause a response and end with action. In other words, the characteristic that arises in adolescents is a behaviour change (Dhamayanti, 2013). This characteristic in adolescents is in line and can be associated with the current pandemic which requires new adaptations or behaviours. Oosterhoff and Palmer (2020) explained that adolescents who support attitudes regarding the severity of COVID-19 disease are taking precautions against COVID-19 (Oosterhoff & Palmer, 2020).

There is a relationship between attitudes and COVID-19 preventive behaviour. Although the study has been controlled by confounding factors of age, gender, and residence place, the results remain related. Even the results of the multivariate analysis found that students with a positive attitude have a 1.98 times greater chance of doing COVID-19 prevention behaviour (Linawati et al., 2021). Nur Utami (2020) also explained in her research that students' attitudes are significantly related to implementing distance behaviours during the COVID-19 pandemic. It also stated the same results as this study attitudes significantly correlate with COVID-19 prevention behaviour (Aini & Purwasari, 2020).

The public is expected to have good knowledge (by updating information about COVID-19, especially if you want to travel during the pandemic) and a positive attitude towards the COVID-19 pandemic so that new behaviours formed will last a long time, understand them well and practice it well. The government is expected to be more aggressive in strengthening the dissemination of information through various platforms, especially digital platforms that are often used by the public (in this case, especially travel platforms).

4. Conclusions

The majority of respondents have good knowledge (44.2%), a positive attitude (59.6%) and good behaviour (76%). However, this study has no significant relationship between knowledge and health preparation behaviours when travelling during the COVID-19 pandemic (p=0.066). At the same time, there are significant relationship between attitude and health preparation behaviour (p=0.000). This result can be caused by factors influencing behaviour, such as other predisposing factors (besides knowledge and attitudes), enabling factors, and reinforcing factors, such as easy access to massive information about the COVID-19 pandemic and the strict government regulation.

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