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Toward Related Factors Determinants Incident of Covid-19: Indonesian Case

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Abstract

This study describes the health phenomena of the Covid-19 incident in Eastern Indonesia, in this case, East Nusa Tenggara Province. It shows the factor determinants that are concerned with the case. The data for this study was gathered through document studies, interviews with samples, and observation. Data were processed and analyzed descriptively and inferentially using a computer with the appropriate program. Based on the results of the study, it is stated several points as follows. First, most respondents are between the ages of 41 and 45, with as many as 20 people falling into this category (30.77 percent). Second, all passengers, a total of 65 people, wear masks (100 percent). Third, the E-HAC application has been used by 90.9 percent of respondents. Fourth, according to 60% of respondents, logistics for handling covid-19 are not available at El Tari Airport or the Kupang Tenau Ferry Port. Fifth, only 35 people (53.8 percent) of the 65 respondents observed are willing to collect data. Sixth, according to 83 percent of respondents, health officers performed data processing activities for covid-19. Seventh, 48 respondents (73 percent) stated that health workers had performed data analysis activities for COVID-19. Next, 65 respondents (100%) stated that health workers had participated in covid-19 information dissemination or dissemination activities. The last, only nine (13.8 percent) of the 65 people interviewed had a history of illness or concurrent factors from the occurrence of covid-19.

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1. Introduction

By November 20, 2020, there had been reports of 517 thousand confirmed Covid 19 incidents in Indonesia, with 16,352 patients dying and 434 recovering. DKI Jakarta Province has the most confirmed incidents in Indonesia, with 131,525 confirmed people and 2,592 deaths, followed by East Java Province with 60,190 confirmed incidents and 4,275 deaths, and Central Java Province with 50,880 confirmed incidents and 2,197 deaths (Megatsari et al., 2020). Despite increasing the number of positive incidents and deaths in various Indonesian provinces, East Nusa Tenggara (NTT) has the second-lowest number of confirmed incidents in Indonesia, with 1,077 positive incidents and 17 deaths. This study was conducted in NTT as the second-lowest number of confirmed Covid-19 incidents in Indonesia (Cf. Utama, 2020).

Health protocols are being implemented in every region, including the province of NTT, to prevent and control the spread of the SARS Cov-19 virus infection in Indonesia in new life order, also known as the new typical. The people of NTT are also required to improve their clean and healthy living behaviour in the new order of life by maintaining physical distance, washing hands with soap, taking appropriate steps, and wearing masks when leaving the house.

The use of masks is one of the critical steps in prevention that can limit the spread of the virus from person to person, particularly among those who are active outside the home (World Health Organization, 2020). Everyone must wear masks to avoid infecting each other with the coronavirus. When sick people interact with healthy people and healthy people interact with others, there is a high risk of transmission (Bin-Reza et al., 2012). The use of masks is required to divert lumps of gas ejected by people coughing or splashing saliva, droplets, or aerosols. Mask compliance and the rules for wearing masks outside the home must be considered because they play an essential role in preventing and controlling the spread of the SARS Cov-19 virus infection (Allison et al., 2020).

Compliance with health protocols is an intriguing phenomenon to investigate because it plays a critical role in preventing the spread of the SARS Cov-19 virus in the community (Barari, 2020). Given the long-term consequences of people failing to wear masks or to use masks following the rules, it is necessary to research the analysis of Indonesian people's behaviour related to Corona Virus Disease 19 (Covid-19).

2. Materials and Methods

The Covid-19 Incident

As of this writing, the COVID-19 pandemic has spread to more than 200 countries. On August12,2020, there were 20,162,474 reported cases and 737,417 fatalities. There were 130,718 cases and 5,903 fatalities in Indonesia on August 12, 2020 (Purnama & Susanna, 2020). According to the WHO, the COVID-19 virus can be communicated to others by droplets from coughing or sneezing or by touching contaminated objects (Ghinai et al., 2020). As a precaution, the World Health Organization (WHO) recommends requiring people to wear face masks and shutting businesses, schools, churches, and other social meeting places. Also, keep a gap of at least 2 meters away from other people (Lewnard & Lo, 2020). Also, we should keep our lips, nose, and eyes away from our bodies (Kampf et al., 2020). However, it was found to be less popular with the public than other control measures, as demonstrated by an increase in local and communal transmission. To stop the spread of COVID-19, Indonesia has established a new law that restricts large-scale social activities (PSBB).

Events such as cultural and religious gatherings and workplaces may be shut down (Viner et al., 2020). A significant and quick increase in the number of COVID-19 cases and deaths, as well as

epidemiological linkages to comparable situations in other areas or countries, necessitate the use of PSBB.

All Indonesian areas must implement physical and social distance policies to halt the virus's spread among the country's population (De Vos, 2020). Residents of all Indonesian provinces are urged to reduce their activities due to the danger of illness. Unfortunately, according to Purnama & Susanna (2020), public knowledge of COVID-19 transmission, especially in Indonesia, is still lacking, as seen by those who live openly in public areas.

The Surveillance System's Mission

The purpose of the surveillance system is highly dependent on the study material, whether communicable or non-communicable diseases and other health problems (Antoniou & Angeloy, 2016), so we can ask several questions about the applicable surveillance system, such as whether the purpose of the surveillance system can be more than one goal that needs to be clearly stated? Is it necessary to use the data/information generated by the surveillance system in decision making? Furthermore, how and when is the surveillance system's data/information used for what decisions? Antoniou & Angelov (2016) stated that both a PC (using Linux-based OS) and a smartphone (using Android-based OS) could run the system (using Android). Additional compatibility with all current Android devices and most GPU-powered platforms, including Raspberry Pi, Nvidia Tegra X1 and Jetson, run on Linux. Using the advantages of parallelism, the suggested system can be readily implemented on any of these devices and benefit from faster execution times. For automatic object recognition into one of the seven categories, the suggested system achieved a classification accuracy of the top one class of >95.9 percent. The precision in the top two divisions is even better (99.85 percent). This suggests that, at the very least, one of the system's two top classes is correct. As a final touch, various graphic demonstrations of the system in action on both PC and Android devices are shown. Using this program, the authors decided on the research location.

Techniques and Instruments for Data Collection

The data for this study was gathered through document studies, interviews with samples, and observation. Data collection sheets, question sheets or questionnaires, and observation sheets are used in data collection.

Data processing and analysis

Data is processed and analyzed descriptively and inferentially using a computer with the appropriate program, namely SPSS.

3. Results and Discussions

Findings

The results of meeting targets in implementing the Quarantine Control and Epidemiological Surveillance section activities are presented as follows. One of the Kupang KKP's tasks is to provide alert and early services for potential disease outbreaks, including Covid-19 Monitoring and Monitoring. Monitoring and Supervision of Covid-19 and Operational Work Assistance at the Seaport are carried out; Activities carried out: (a) Inspection of Transport Equipment, i.e. all transportation equipment entering the port of Tenau Kupang is quarantined, and the ship's condition is in good

health. (b) People and goods supervision, specifically incoming passenger supervision by checking body temperature, giving and checking HAC / E HAC. Passengers with COVID-19 symptoms are referred to Undana Hospital for further examination and treatment. Furthermore, all passengers who do not have complete health documents and certificates of being free of COVID-19 / ILI are referred to the Kupang Undana Hospital, (c) Disinsection if there are risk factors on board, (d) Disinfection: this action was carried out on one suspect suspected of COVID-19 and one roommate and their belongings, (e) Epidemiological investigation of the Kupang laboratory: on July 20, one investigator from the Kupang KDP PCR was the first specimens collected on July 8 and 9, 2020. During the waiting period for the examination results, the person in question continued to perform his duties as usual while wearing full PPE. After being confirmed positive, a PCR examination was performed on the officers of Bajo Wilker Labuan and the BNPP Team, who were the incident's close contacts. Officers suspected the infection during an interview with the Covid-19 suspect and were declared positive after arriving in Larantuka, Indonesia.

The study findings at Kupang's two entrances and exits, El Tari Airport and the Kupang Tenau Ferry Port, are presented in the following tables.

Personal Protective Equipment (PPE)

Table 1
Respondent Distribution Frequency Based on Mask Use

No	Use of Mask	Amount	Percentage (%)
1	Yes	65	100
2	No	0	0
	Total	65	100

Table 1 shows that all passengers, a total of 65 people, wear masks (100 percent).

The application of the e-HAC system

Table 2
Respondent Frequency Distribution Based on e-HAC uses

No	Tools and materials	Quantity	%
1	Not Used	6	9,2
2	Used	59	90,8
Total		65	100

According to table 2, the e-HAC system was used and followed by most travellers during the data collection period. The application is used by 90.9 percent of travellers, according to data.

Barriers

No obstacles were discovered during the pandemic's monitoring and handling of travel agents based on the data gathered. In addition to most travellers adhering to the protocol and early warning

system, the number of travellers is kept to a minimum, ensuring that field officers are not overburdened.

Inventory Management

Table 3
Respondent Frequency Distribution Based on Inventory Logistics

No	Power, tools and materials	Amount	%
1	Not Available	39	60,0
2	Available	26	40,0
Total		65	100

According to the table above, 60% of respondents stated that logistics for handling Covid-19 were not available at El Tari Airport or the Kupang Tenau Ferry Port.

Data Gathering

Table 4
Respondent Frequency Distribution Table Based on Inventory Logistics

No	tools and materials	Amount	%
1	Not Collecting Data	30	46,2
2	Collecting data	35	53,8
Total		65	100

According to table 4, most travel agents willing to collect data represent only about 53.9 percent of all observed travellers. The table below shows the results of interviews with 65 people about Covid-19 data processing.

Table 5
Respondent Frequency Distribution Using Covid-19 Data Processing

No	Data Processing Activities	Total	%
1	No data processing	11	16,9
2	Performed data processing	54	83,1
Total		65	100

According to the table above, the majority of respondents, 83 percent, stated that Covid-19 data processing activities took place at El Tari Airport and the Kupang Tenau Ferry Port.

Data examination

The table below summarizes the findings of interviews conducted at El Tari Airport and the Kupang Tenau Ferry Port regarding the Covid-19 data analysis activities.

Table 6
Respondent Frequency Distribution Based on Covid-19 Data Analysis Activities

No	Activity Data Analysis	Amount	%
1	No data analysis	17	26,2
2	Performed data analysis	48	73,8
Total		65	100

According to the table above, as many as 48 respondents (73 percent) stated that El Tari Airport and Kupang Tenau Ferry Port officers performed data analysis activities for COVID-19.

Table 7
Distribution of Respondents' Frequency of Information Dissemination Based on Covid-19 Data Analysis Activities

No	Information Dissemination Activities	Amount	%
1	No information dissemination	65	100
2	Applying Information dissemination	0	0
Total		65	100

According to the table above, all respondents were given information about COVID-19. This demonstrates that COVID-19 information dissemination activities were carried out correctly. Particularly at the El Tari Airport and the Kupang Tenau Ferry Port.

Simultaneous Factor

The table below shows the results of interviews with 65 people about the Simultaneous Factors of Covid-19 Incidence.

Table 8
Respondent Frequency Distribution Based on Covid-19 Data Analysis Activities

No	Factors Simultaneous	Quantity	%
1	Exist	9	13,8
2	Not exist	56	86,2
Total		65	100

According to the table above, only nine of the 65 people interviewed had a history of illness or concurrent factors from the occurrence of COVID-19.

Discussion

In response to COVID-19 prevention and control measures, it is critical to provide human resources, tools, and materials. It can facilitate and optimize Covid-19 handling activities in the field due to the availability of adequate resources. According to the study findings, 93.8 percent of respondents stated that energy, tools, and materials for dealing with COVID-19 are always available

at El Tari International Airport and the Kupang Tenau Ferry Port. This demonstrates the Kupang city government's overall preparedness to deal with the COVID-19 incident, particularly Kupang City.

This study's respondents were mainly between 41 and 45, with up to 20 people participating (30.77 percent). Adults continued to outnumber those who travelled; this is due to the requirements for travellers, which are still stringent in terms of health checks such as Rapid Test antigen and RT-PCR and showing the first dose of vaccine card.

According to the findings of the interview, all respondents wear masks when travelling. This demonstrates that all respondents are aware of and comprehend the rules imposed on them by wearing masks. See the table below to learn about the different types of masks that respondents wore.

Table 9
Respondent Frequency Distribution Depending on Mask Type

No	Type of Mask	Quantity	(%)
1	N95/KN95 mask	5	7,69
2	One-ply surgical mask	37	56,9
3	Three-ply surgical mask	13	20
4	One-ply cloth mask	8	12,31
5	Three-ply cloth mask	2	3,1
6	Surgical masks and cloth masks	0	0
Total		65	100

The results show that they all use masks, but the majority of the travel agents are still using masks that do not meet the requirements, namely 45 people, 37 of whom use one-ply surgical masks and eight of whom use one-ply cloth masks.

According to the Indonesian government rules Number 16 of 2021, regarding the provisions for Traveling Domestic People During the Covid-19 Pandemic, masks must be worn properly, covering the nose and mouth with a minimum of three layers of cloth masks or medical masks.

Table 10
Respondent Frequency Distribution Based on Handwashing Habits

No	Handwash	Quantity	(%)
1	Yes	59	90,77
2	No	6	9,23
	Total	65	100

According to the table above, most of them (59 people) wash their hands (90.77 percent). It will be difficult for the hands to avoid viruses, bacteria, or germs during daily activities. Because the virus cannot be seen directly by the eyes, washing hands is the best way to avoid spreading the disease. Keeping hands clean by washing them is the second method and wearing masks that must be followed when the virus enters and attacks Indonesia. Using a hand sanitiser to clean hands from germs is another option. Experts agree, however, that using soap and running water is still the best option—good handwashing for at least 20 seconds with the proper technique.

Table 11
Respondent Frequency Distribution Based on Habits of Keeping Distance in Public Places

No	Keep Distance	Quantity	(%)
1	Yes	58	89,23
2	No	7	10,77
	Total	65	100

According to the table above, most passengers (58 people) keep their distance in public (89, 23 percent). Circular Number 16 of 2021, concerning the provisions for Domestic People Travel During the Covid-19 Pandemic, emphasizes that travellers are strictly prohibited from speaking by phone or directly throughout the trip by public transportation modes by land, rail, sea, river, lake, or air. This is about keeping a safe distance between passengers in public places.

This study also demonstrates that most travellers comply with and adhere to the e-HAC system (respondents). During the data collection period, 90.9 percent of travellers used the application, reinforcing efforts to mitigate, prevent, and report Covid 19 incidents. Every passenger or traveller who enters the country from another country or travels within the country must fill out a Health Alert Card or Electronic Health Alert Card (E-HAC) from the Indonesian Ministry of Health.

The Electronic Health Alert Card (E-HAC) is a more modern version of the Health Alert Card. E-Hac monitors tourists coming from infected areas both internationally and domestically. As a prospective passenger, each traveller must register before departure, fill out the form with the correct personal data, and after arriving at the airport or port, show the barcode on the E-HAC application on the device to the health officer, who will check the data that has been collected.

Data entry in the E-HAC application is required and must adhere to actual and valid conditions. Travel agents must also communicate the actual symptoms of health problems. The app also includes a panic button menu in an emergency involving a traveller's health. COVID-19 was handled well and smoothly at El Tari Airport and the Kupang Tenau Ferry Port. This statement is based on the information gathered during the research. During the pandemic, there were no difficulties in monitoring and dealing with travellers. In addition to travellers who mostly followed protocol and the early warning system, the number of travellers is usually tiny, so field officers are not overburdened. Meanwhile, based on the data obtained, the availability of logistics in dealing with the pandemic is still insufficient. This includes the availability of hazmat clothing, personal protective equipment (PPE) to support health protocols, vitamins, and supplements for officers during the monitoring and management of Covid 19.

Inadequate availability can be caused by several factors, including a failure to prioritize logistical needs in health care facilities, which is still a priority. PPE-supporting protocols such as masks and hand sanitisers continue to dominate the available logistics. The logistics and distribution systems should have used information technology principles to ensure adequate distribution and availability (Saragih, Nova, Hartati, Verani., Fauzi, Muhammad, 2021). The findings of observations at the research site of the information system used for logistics availability were not maximized using information technology systems. Existing requests and allocations are still restricted to social media channels and are tailored to current situations and conditions.

Another critical aspect of the covid-19 control program is the implementation of covid-19 epidemiological surveillance. According to Minister of Health Regulation Number 45 of 2014 on the Implementation of Health Surveillance, Health Surveillance is defined as "an activity of systematic and continuous observation of data and information about the incidence of disease or health problems and conditions that affect the increase and transmission of diseases or health problems in order to obtain and provide information to direct effective and efficient control and prevention actions."

Furthermore, it is stated that health surveillance activities are carried out as an inseparable unit of data collection, data processing, data analysis, and dissemination to produce objective, measurable, comparable information across time, regions, and community groups as decision-making material.

According to this study, respondents willing to collect data account for only 53.9 percent of all observed travellers (respondents). This is a concerning situation where we find it difficult to track each traveller's data and history of illness or early symptoms. Contact tracing requires openness, which is critical in efforts to control the pandemic. Officers benefit from regular and continuous data collection in epidemiological investigations and surveillance efforts.

Data processing and analysis activities were carried out by Health officers at El Tari Airport and Kupang Tenau Ferry Port, as evidenced by the results of interviews, in which 83 percent of respondents stated that Covid-19 data processing activities were carried out and 48 percent (73 percent) stated that officers at El Tari Airport and Kupang Tenau Ferry Port carried out Covid-19 data analysis activities.

Health workers' data processing and analysis activities are beneficial for knowing the progression of COVID-19 incidents and their risk factors in a precise and accurate manner so that the information released can be used to combat COVID-19 and be on target. Similarly, in terms of covid-19 information dissemination activities, all respondents in this study stated that health workers had carried out covid-19 information dissemination activities using various media. The sources of information used by respondents to learn about covid-19 are listed in the table below.

Table 12
Respondent learning sources used by people

No	Resources	Amount	(%)
1	Social media	51	81,5
2	Television	6	9,2
3	More than one source of information	6	9,2
Total		65	100

According to the table above, respondents' social media is the most frequently accessed source of information about COVID-19. According to the findings of this study, social media is the most effective information medium for conveying health information, not only about covid-19 but also about other public health issues.

The study results on the covid-19 simultaneous factors (comorbid) obtained data from 65 respondents, with only nine respondents having a history of congenital diseases that could be a covid-19 simultaneous factor. Five of these nine people have hypertension, three have diabetes mellitus, and one has asthma. A person with a history of disease that is a concurrent factor in COVID-19 requires special attention because comorbidities increase the risk of infection with certain diseases, preventing healing. This can cause the disease to worsen or become more severe.

4. Conclusion

Based on the results of the study, it is stated several points as follows. First, most respondents are between the ages of 41 and 45, with as many as 20 people falling into this category (30.77 percent). Second, all passengers, a total of 65 people, wear masks (100 percent). Third, the E-HAC application has been used by 90.9 percent of respondents. Fourth, according to 60% of respondents, logistics for handling covid-19 are not available at El Tari Airport or the Kupang Tenau Ferry Port. Fifth, only 35 people (53.8 percent) of the 65 respondents observed are willing to collect data. Sixth,

according to 83 percent of respondents, health officers performed data processing activities for covid-19. Seventh, 48 respondents (73 percent) stated that health workers had performed data analysis activities for COVID-19. Next, 65 respondents (100%) stated that health workers had participated in covid-19 information dissemination or dissemination activities. The last, only nine (13.8 percent) of the 65 people interviewed had a history of illness or concurrent factors from the occurrence of covid-19.

Viewing the discussion and conclusion stated above, it is suggested that the local government should increase logistics supplies, particularly at ports and airports, to optimize screening activities for suspected COVID-19 incidents. Next, the government should also increase the uses of social media to disseminate COVID-19 information to the public. Furthermore, they should pay close attention to the sustainability of the national surveillance system so that it is always ready and responsive to global health problems in the future, notably the COVID-19 pandemic.

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