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Factors that are Related to The Condition of Passenger Ship Sanitation in Tanjung Perak Port Surabaya

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Article Info

ABSTRACT

Sanitation is an effort to prevent disease and environmental risk factors that become a chain of disease transmission. Ship sanitation applies to all types of ships both passenger ships and goods from within and outside the country. The purpose of the study was to analyze the factors related to the sanitary conditions of passenger ships at the Port of Tanjung Perak Surabaya, in 2019.

The type of this research is correlational analytic with cross sectional design. The population is all passenger ships that dock at the port of Tanjung Perak Surabaya, with a total sample of 49 samples. The sampling method is by questionnaire and direct interview with respondents. Statistical tests using the Chi-Square Test.

The results showed the average passenger ship leaning at the Port of Tanjung Perak Surabaya had a low risk sanitation level of 83.67% and a high level of risk of 16.33%. The relationship between the skipper's leadership style (p_{value} = 0,0001), knowledge (p_{value} 0.047), leaning time (p_{value} = 0,0001), maintenance funds (p_{value} = 0,0001), facilities and infrastructure (p_{value} = 0,0001) with the level of health risks of the ship. From the results of the study it can be concluded that there is a relationship between the sanitary conditions of the ship and the leadership style of the skipper, the level of knowledge of the crew, the time of the ship berth, maintenance funds, facilities and infrastructure.

The conclusion is that there is a relationship between the sanitary conditions of the ship and the leadership style of the skipper, the level of knowledge of the crew, the time the ship rests, maintenance funds, facilities and infrastructure. Passenger ships are expected to have good Standard Operating Procedures and are applied in maintaining vessel cleanliness.

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1. INTRODUCTION

Port is a place consisting of land and / or waters with certain limits as a place of government and business activities used as a place for ships to lean on, up and down passengers, and / or loading and unloading of goods, in the form of terminals and berths equipped with ships shipping safety and security facilities and port support activities as well as a place for intra-and intermodal transportation. The operation of a healthy port is aimed at realizing port conditions that can prevent the potential risk of spreading diseases, health problems, security and dynamic order so as to create a healthy port. Therefore, as the entrance of the state in carrying out its activities, the port needs to pay attention to the management of a clean and healthy environment so that it grows and develops a sense of security, comfort, orderliness and health which is a form of excellent service as a center of economic growth. One of the requirements for ships to be able to dock at the port is to be free from environmental risk factors by maintaining the health of the ship so that it is not used as a breeding ground for infectious vectors [1].

In the 1969 International Health Regulation (IHR) for controlling disease risk factors only focused on securing cholera, bubonic plague and yellow fever. Then in 2005 the scope of IHR in 1969 was expanded into new emerging and re-emerging diseases and other health risks of international concern, both due to infectious and non-infectious diseases which are often called PHEIC (Public Health Emergency of International Concern) [2].

The action of erasing rats on a ship is one form of sanitation measures even an important item in the Maritime Declaration of Health (MDH). One of the questions in the Maritime Declaration of Health (MDH) is about indications of bubonic plague both arising among the crew (ABK) or between mice. Ownership of Ship Sanitation Exemption Control Certificate (SSCEC) also pays close attention to the Mouse Erase Certificate (SKHT), meaning that ownership of the Ship Sanitation Exemption Control Certificate (SSCEC) absolutely must pay attention to overall vessel sanitation [3].

Tanjung Perak Port is one of the most crowded ports serving domestic and international shipping, so many ships are leaning both passenger and cargo ships. According to data from the supervision of sanitation of transport equipment / passenger ships at the port carried out by officers of the Port Health Office (KKP) Class I Surabaya in 2018 as many as 1200 ships including passenger ships, Motor Sailboats (KLM), Motor Tanker (MT), Motorboats (KM), Crew Boat (CB), Tug Boat (TB) and military ships. Based on these data each has different sanitation, both high-risk sanitation and low-risk sanitation. If ship sanitation is not considered, the possibility of vector-borne disease transmission is also quite large [4].

Efforts to realize sanitary sanitation of ships or not, including high-risk vessels involving all components in the ship, commitment of Ship Men (ABK), availability of adequate sanitation facilities such as food management equipment for Ship Men (ABK), availability of clean water, and the existence of Standards Operational Procedure (SOP) of ship owners regarding ship sanitation, such as Standard Operational Procedure (SOP) for providing hygiene food, managing waste on ships, controlling insects, and rodents as well as supervision from the Port Health Office [5].
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2. RESEARCH METHOD

This type of correlational analytic research with cross sectional design. This study analyzes how the relationship between ABK Knowledge, Captain Leadership, ABK Attitude / Behavior, Number of HR / ABK, Ship Management, Supporting Factors (facilities and infrastructure, materials, time, funds / budget) with the sanitary conditions of passenger ships at the Port of Tanjung Perak Surabaya

Population is all subjects or objects with certain characteristics to be studied [6]. The population in this study were all passenger ships in the Tanjung Perak Work Area Port of Health Office (KKP) Class I Surabaya for fourteen days, namely from 1 July 2019 to 14 July 2019 as many as 49 ships. If there are vessels that have visited more than once during the study, only one sample will be taken.

The sample is part of the population to be studied or part of the total characteristics of the population [7]. In this study samples were taken from passenger ships at the Port of Tanjung Perak Surabaya during the study on 1 July 2019 to 14 July 2019

3. RESULTS AND DISCUSSIONS

a. Distribution of ABK characteristics according to age group on passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Age Group (Years)	Totals	Percentage (%)
1.	20-30	13	26,53
2.	30-40	23	46,94
3.	> 40	13	26,53
	Totals	**49**	**100,0**

b. Distribution of crew characteristics according to length of service on passenger ships in the Port of Tanjung Perak in Surabaya in 2019

No	Years of Work (Years)	Totals	Percentage (%)
1.	< 1	6	12,25
2.	1-3	15	30,61
3.	> 3	28	57,14
	Totals	**49**	**100,0**

c. Distribution of ABK characteristics according to education level on passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Level of Education	Totals	Percentage (%)
1.	Middle School	14	28,57
2.	High school	35	71,43
	Totals	49	100,0

d. Distribution of sanitation of passenger ships at the Port of Tanjung Perak Surabaya in 2019

No	Boat Sanitation	Totals	Percentage (%)
1.	Low risk	41	83,67
2.	High risk	8	16,33
	Totals	**49**	**100,0**

e. Distribution of SOP implementation on passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Application of SOP	Totals	Percentage (%)
1.	Positive	43	87,76
2.	Negative	6	12,24
	Totals	**49**	**100,0**

f. The distribution of the captain's leadership style on passenger ships in the Port of Tanjung Perak in Surabaya in 2019

No	Leadership Style	Totals	Percentage (%)
1.	Positive	38	77,55
2.	Negative	11	22,45
	Totals	**49**	**100,0**

g. ABK knowledge level distribution on passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Knowledge	Totals	Percentage (%)
1.	Good	34	69,39
2.	Not Good	15	30,61
	Totals	**49**	**100**

h. Distribution of ABK attitudes to passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Attitude	Totals	Percentage (%)
1.	Positive	45	91,84
2.	Negative	4	8,16
	Totals	49	100,0

i. Distribution of ABK actions on passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Action	Totals	Percentage (%)
1.	Positif	45	91,84
2.	Negatif	4	8,16
	Totals	**49**	**100,0**

j. Distribution of passenger ship berths at the Port of Tanjung Perak in Surabaya in 2019

No	Time Rests	Totals	Percentage (%)
1.	Enough	35	71,43
2.	Not enough	14	28,57
	Totals	**49**	**100,0**

k. Distribution of funds for maintaining passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Maintenance Funds	Totals	Percentage (%)
1.	Positive	37	75,51
2.	Negative	12	24,49
	Totals	**49**	**100,0**

l. Distribution of facilities and infrastructure of passenger ships in the Port of Tanjung Perak Surabaya in 2019

No	Facilities and infrastructure	Totals	Percentage (%)
1.	Positive	32	65,31
2.	Negative	17	34,69
	Totals	**49**	**100,0**

m. Relationship between ship sanitation conditions and SOP Implementation, Leadership, Knowledge, Attitudes, Actions, Lean Times, Maintenance Funds, Facilities and Infrastructure

No	Variable	Category	Vessel Health Risks				Totals		P_{Value}
			Low risk		High Risk				
			N	%	n	%	n	%	
1	Application SOP	Positive	37	75,5	6	12,2	43	87,7	0,250
		Negative	5	8,2	1	4,1	6	12,3	
2	Leadership The master	Positive	40	81,6	3	6,1	43	87,8	0,0001
		Negative	1	2,0	5	10,2	6	12,2	
3	Knowledge	Good	31	63,3	3	6,1	34	69,4	0,047
		Not Good	10	20,4	5	10,2	15	30,6	
4	Attitude	Positive	39	79,6	6	12,2	45	91,8	0,120
		Negative	2	4,1	2	4,1	4	8,2	
5	Action	Positive	39	79,6	6	12,2	45	91,8	0,120
		Negative	2	4,1	2	4,1	4	8,2	
6	Time Rests	Enough	35	71,4	0	0	35	71,4	0,0001
		Not enough	6	12,2	8	16,3	14	28,6	
7	Fund Maintenance	Positive	37	75,5	0	0	37	75,5	0,0001
		Negative	4	8,2	8	16,3	12	24,5	
8	Facilities and infrastructure	Positive	32	65,3	0	0	32	65,3	0,0001
		Negative	9	18,4	8	16,3	17	34,7	

4. CONCLUSION

The conclusions obtained from this study are:

a. Management characteristics which include the application of SOP and the skipper leadership style related to the sanitary conditions of the ship are the skipper leadership styles. This can be seen from the chi-square test results obtained P_{value} = 0.0001 (P < 0.05%). This shows that there is a relationship between the leadership of the skipper and the sanitary conditions of the ship. For the application of SOP from the chi-square test results obtained P_{value} = 0.250 (P > 0.05%). This shows that there is no relationship between the application of SOP with ship sanitation conditions.

b. Characteristics of human resources that include knowledge, attitudes and actions related to ship sanitation conditions are knowledge. This can be seen from the chi-square test results obtained P_{value} = 0.047 (P_{value} < 0.05%). This shows that there is a relationship between knowledge and ship sanitation conditions. For attitudes from the results of the chi square test obtained P_{value} = 0.120 (P_{value} > 0.05%). This shows that there is no relationship between attitude and sanitary conditions of the

ship. For the actions of the chi square test results obtained $P_{value} = 0.120$ ($P_{value} > 0.05\%$). This shows that there is no relationship between the action and the sanitary condition of the ship.

c. Supporting characteristics which include berth, maintenance fund, facilities and infrastructure all relate to the sanitary conditions of the ship. This can be seen from the results of the chi-square test all obtained $P_{value} = 0.0001$ ($P_{value} < 0.05\%$). This shows that there is a relationship between leaning time, maintenance funds, facilities and infrastructure with the sanitary conditions of the ship

d. From the results of the study it can be concluded that there is a relationship between the sanitary conditions of the ship and the skipper's leadership, level of knowledge, leaning time, maintenance funds, facilities and infrastructure. This can be seen from the results of the chi-square test with a $P_{value} < 0.05\%$ which means that H_0 is rejected means there is a relationship. For the implementation of SOP variables, attitudes, actions have no relationship with the sanitary conditions of the ship. This can be seen from the results of the chi-square test with $P_{value} > 0.05\%$ which means that H_0 is accepted means there is no relationship.

2. SUGGESTION

Suggestions obtained from this study are:

a. Each shipping agent / ship owner should always pay attention to the sanitary conditions of the ship, because if the sanitation conditions of the ship are bad and high risk it can result in a source of disease transmission.

b. For ship owners to provide ship sanitation SOPs as a guideline for vessel crews or skipper to maintain vessel cleanliness and monitor it in its application.

c. Conducted training for personnel in charge of ship sanitation hygiene to understand and understand the basic concepts of ship sanitation.

d. So that the attitudes and actions of vessel crews are always considered in maintaining ship sanitation

e. Carrying out supervision activities, and fostering crew members, among others, the captain, and all crew members regarding ship sanitation in the Port of Tanjung Perak, Surabaya.

f. The need for socialization of ship sanitation standards, in this case organized by the Port Health Office.

g. Strict sanctions are needed for ABK if they do not participate in maintaining sanitary vessels.

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