

THE NUMBER OF AVIATION SECURITY PERSONNEL ON SECURITY CHECK POINT 2 SERVICES

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ABSTRACT

Minangkabau International Airport is one of the air transportation gateways in Padang Pariaman Regency, West Sumatra. When the author conducted research during On the Job Training at Minangkabau International Airport, the author saw that the number of Aviation Security personnel at Security Check Point 2 was not in accordance with existing regulations. Effective and efficient security services at the airport are very important to maintain passenger safety and prevent threats to flight safety. One factor that affects the quality of security services is the number of personnel available to carry out security tasks at the Security Check Point. The purpose of this study was to determine the effect of the number of Aviation Security personnel on Security Check Point 2 services at Minangkabau International Airport which is important to support passenger safety and comfort and realize excellent service quality for Minangkabau International Airport. This research method uses a quantitative descriptive method by making observations at Minangkabau International Airport, then obtaining data by distributing questionnaires to organic Aviation Security Personnel and service users. The results of this study indicate that service users agree that the number of Aviation Security personnel affects service. The problems in this study are expected to be used to make policies in improving the quality of security services at the airport.

Keywords: *Aviation Security; Service Users; Security Check Point; Airport; Security Personnel.*

1. INTRODUCTION

Indonesia is a geographical area that is an archipelago that has various regions. To reach one region to another, people need transportation facilities. Some areas in Indonesia are difficult to reach using land and sea transportation. Therefore, air transportation is the right choice for service users because it can reach between one region and another quickly.

Airports are built scattered throughout Indonesia to create an effective air transportation system. Airports are the gateway to business and trade nationally and internationally. One of the elements of the airport is to provide airport administration and provide security and comfort efficiently.

Minangkabau International Airport (ICAO Code: WIEE; IATA Code: PDG) is an international airport located in Katapiang, Padang Pariaman Regency, West Sumatra. The airport is under the auspices of PT Angkasa Pura II and has approximately 1,460,730 passengers per year.

Passenger density makes airports more secure. Therefore, Aviation Security (AVSEC) officers are required who are aviation security personnel who have a license or Officer Proficiency Certificate (STKP) who are given duties and responsibilities in the field of aviation security. This is done to maintain airport security to prevent the entry of prohibited items that can make illegal acts and disrupt flight security.

Aviation Security (AVSEC) is a work unit responsible for aviation security to prevent the entry of goods that can make illegal acts, dangerous goods and prohibited items into civil aircraft. [1] [2]. At the operational level, a human being takes on the role of a person screening passengers and their luggage as well as patrolling airport premises in search of people who might have unlawfully entered the restricted area at an airport. At the tactical level, a human being assumes the role of the organiser and controller (supervisor) of the activities carried out by all services, whereas at the strategic level, he or she establishes regulations and legal standards. On the other hand, it is also the human being that constitutes

the main source of risk, which is to be counteracted by airport security [3] [4] [5]. The main objective of Aviation Security is the safety of passengers, crew, personnel and the general public against unlawful acts by preventing the transport of items that could endanger aviation. [6] [7]

Onboard security threats have been a major concern for airlines and aviation security (AVSEC) professionals throughout the world. Despite the increase in security over the years, attacks against commercial aviation remains a top goal of terrorists. The international nature of air travel, the potential for mass casualties and the media spectacle an attack on aviation produces will continue to make commercial aviation an attractive target [8]. As an important subsystem of the airport, the terminal is not only a place where departure passengers can buy tickets, check in, have luggage checked, complete security check, board flights, but also a place for passengers' entertainment and shopping. Its main task is to satisfy the needs of aviation passengers. In the process of passengers entering and leaving the airport, the process of check-in and security check is relatively complicated, which has a strong influence on the efficiency of airport terminal service. After finishing check-in, departure passengers need to pass the security check, where it is easy to form bottlenecks in front of these functional facilities due to its limited service capacity [9] [10] [11].

Aviation personnel, performing their target function, carry out professional activities to ensure security, the problem of achieving an acceptable level of aviation security. On the other hand, personnel, being a human component in the ergonomic aviation security management system, due to their physiology may allow some deviations from the established algorithm of activity, and not necessarily intentionally. This led to the emergence of the paradox of duality, when the staff simultaneously performs positive and negative functions. In the end, the ratio of positive and negative aspects in the production activities of personnel ensures an acceptable level of airport aviation security [12] [13].

An acceptable level of aviation security is achieved as a result of the confrontation between the security system (object protection system) and a set of security threats, external and internal in relation to the system. In this case, the result can be considered positive only when a consensus is reached between all types of security [14] [15].

Therefore, to maintain security and safety at the airport, aviation security personnel are required to check all people and goods at security check point 2 with x-ray machines, Hand Held Metal Detector (HHMD), Walk Through Metal Detector (WTMD) and other supporting facilities. Aviation Security equipment is an airport security facility used for security that serves as a tool for airport security personnel in carrying out checks on

prospective aircraft passengers, including their luggage (cabin, baggage and cargo) quickly without opening the packaging [16]. Whenever a security-related incident occurred, weaknesses of the security system were identified, resulting in the adaptation of existing measures or the addition of new ones to improve aviation security [17] [18] [19]. Security Check Point (SCP) 2 is the second security checkpoint in the entrance area to the waiting room (before boarding) every second security checkpoint. Security Check Point (SCP) 2 must be provided with a closed place for special inspection and adequate transparent and locked boxes to store prohibited items. [20] [21] After the author conducted On the Job Training activities, the author found a lack of Aviation Security personnel which led to a lack of airport security. Therefore, the author formulated a problem, namely "Is there an effect of the number of Aviation Security personnel on Security Check Point (SCP) 2 services at Minangkabau International Airport?".

2. METHODS

Research methodology is a discussion of the theoretical concepts of various methods, advantages and disadvantages in scientific work followed by the selection of the method used. It can be concluded that the definition of methodology is an assessment of the steps in using a method [22].

2.1 Research Design

Research activities begin with research design to the desired research objectives. The steps that the author chooses include determining the research design which must be based on the problems and objectives of the study. In this writing, the author takes a quantitative strategy that will be more appropriate if direct observation and observation are carried out at the location.

This research uses quantitative descriptive methods. The quantitative analysis should assess the quality and reliability of the information obtained in this study [23]. In this research, there are several steps, namely: observation, questionnaires, and literature study.

a. Observation

Observation is a data collection method used to collect research data through observation and sensing. In this case, the author made observations at Minangkabau International Airport when the author conducted On the Job Training (OJT) activities on January 09 - March 31, 2023.

b. Questionnaires

A questionnaire is a research that contains several questions and statements that are distributed to selected groups to get responses. In this case, the authors distributed a questionnaire containing a list of statements regarding the problem under study to the Aviation

Security unit as well as several passengers to find out the services of the Aviation Security personnel.

c. Literature Study

The literature study conducted by the author includes security regulations to review matters that can affect the number of Aviation Security personnel on services at Security Check Point (SCP) 2 contained in the discussion of the problem, including an explanation of the title of the problem raised along with several opinions according to experts edited from several sources.

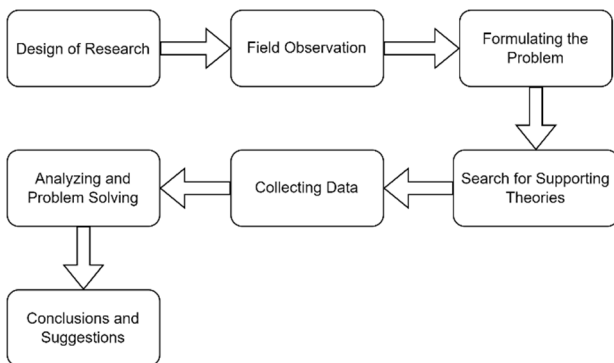


Figure 1 Flowchart of Research Methods

2.2 Research Variables

Research variables are anything in the form of anything that is determined by the researcher to be studied so that information is obtained about it, then conclusions are drawn [24].

Independent variables are variables that affect other variables. Meanwhile, the dependent variable is an independent variable, dependent and influenced by the independent variable. In this study, the variables can be described as follows:

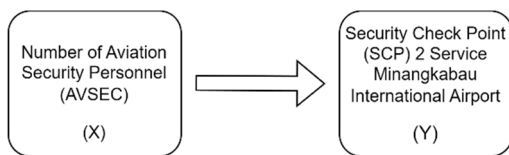


Figure 2 Research Variable

2.3 Data Analysis Method

The method used is quantitative research and obtains data in the form of numbers. While the descriptive method emphasizes on natural description and what it is. So, its nature requires direct involvement in the field by making observations. Then, if the data has been collected, data analysis is carried out using Likert scale techniques, validity tests, and reliability tests.

a. Likert Scale

Likert scale is a measurement method used to measure the attitudes, opinions and perceptions of a person or group of people about a phenomenon. In this

study, the authors used a Likert scale research instrument to determine the effect of the number of Aviation Security personnel on services that focus on Security Check Point (SCP) 2.

The data analysis technique in this study uses the Likert Scale below:

Table 1 Likert scale options

Number	Description	Score
1.	Strongly Agree	4
2.	Agree	3
3.	Disagree	2
4.	Strongly Disagree	1

Furthermore, the questionnaire was distributed on a Likert scale in order to get the overall answer from the number of respondents. The data is processed by multiplying each answer point by the weight adjusted to the value weight table. So, the results of the calculation of the respondent's answer are:

- 1) Respondents who answered strongly agree (4) = 4 x n = n
- 2) Respondents who answered agree (3) = 3 x n = n
- 3) Respondents who answered disagree (2) = 2 x n = n
- 4) Respondents who answered strongly disagree (1) = 1 x n = n

Total Score = n

Information: n = the value obtained from the respondent's answer

In order to get the interpretation results, you must know the highest score (X) and the lowest number (Y) for the assessment item using the following formula:

X = Likert highest score x number of respondents (Highest number 4)

Y = Likert lowest score x number of respondents (Lowest number 1)

If the total score value has been found, the next step is to determine the respondent's interpretation assessment using the Index % formula.

Furthermore, the data from the calculation of the number of indices is entered into a table of percentage values whether it is on a scale of strongly agreeing or on other parts of the scale.

$$\text{Index Formula \%} = \frac{\text{Likert Scale Score} \times 100}{x}$$

Furthermore, the data from the calculation of the number of indices is entered into a table of percentage values whether it is on a scale of strongly agreeing or on other parts of the scale.

Table 2 Likert Scale Response Index

Percentage	Description
25% - 43,75%	Strongly Disagree
43,76% - 62,5%	Disagree
62,6% - 81,25%	Agree
81,26% - 100%	Strongly Agree

3. RESULTS AND DISCUSSION

From the results of the study it is known that the lack of Aviation Security personnel on duty at Security Check Point 2. the procedures that have been carried out are observation, distributing questionnaires with a Likert scale and calculating the index formula, and literature study. then processed again to determine the effect of the results of the questionnaire processed by the validity test, reliability test, and pearson correlation test.

a. Questionnaire

Methods Data collection through questionnaires on 43 respondents of variable X and 43 respondents of variable Y. Respondents of variable X were taken from organic Aviation Security personnel of Minangkabau International Airport and variable Y was taken from passengers who had passed the Security Check Point (SCP) 2.

- Variable X

In this variable X, the questionnaire was distributed to organic Aviation Security personnel, where the questionnaire respondents in this variable were organic Aviation Security personnel at Minangkabau International Airport.

The number of Aviation Security personnel in accordance with the rules can provide good service to passengers

43 respondents

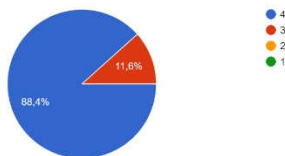


Figure 3 Diagram Responds Variable X

- Variable Y

In this Y variable, the questionnaire was distributed to Minangkabau International Airport passengers to find

The number of Aviation Security personnel at Security Check Point 2 has not been able to overcome passenger problems properly and quickly.

43 respondents

out the services provided by Aviation Security personnel, especially at Security Check Point (SCP) 2.

Jumlah personel Aviation Security pada Security Check Point 2 belum dapat mengatasi permasalahan penumpang dengan baik dan cepat
43 jawaban

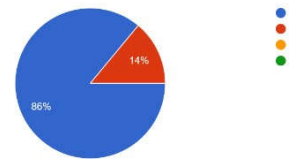


Figure 4 Diagram Responds Variable Y

b. Validity test

The validity test uses the pearson correlation method, from the SPSS value, the pearson correlation value is seen in the total table and compared to the r table. It is said to be valid if the pearson correlation > r table. The higher the pearson correlation value, the more correct it is (positive or negative signs can be ignored because these signs only show the relationship between indicators). By using the r table (df = 45-2 = 43; alpha = 5%) 0.294, all pearson correlation values > r table all ratios are declared valid (r-table is attached). This means that all indicators used in this study are valid and can be used.

Table 3 Validity Test Results (Variable X)

STATEMENT	r - Count	r - Table	DECISION
1	0,748964	0,3008	VALID
2	0,890229	0,3008	VALID
3	0,890229	0,3008	VALID
4	0,795183	0,3008	VALID
5	0,847002	0,3008	VALID

The table above shows that the manual results of each indicator produce r count > r table. So, it can be concluded that the indicators used in this study are valid.

Table 4 Validity Test Results (Variable Y)

STATEMENT	r - Count	r - Table	DECISION
1	0,88299	0,3008	VALID
2	0,88619	0,3008	VALID
3	0,88493	0,3008	VALID
4	0,94263	0,3008	VALID

5	0,88247	0,3008	VALID
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The table above shows that the manual results of each indicator that produce $r_{count} > r_{table}$. So, it can be concluded that the indicators used in this study are valid.

c. Pearson correlation test

Pearson correlation test is used to determine the correlation or relationship between two metric variables (internal or ratio). To determine the correlation or relationship between the number of aviation security personnel and security check point (SCP) 2 services at Minangkabau International Airport. The following SPSS results were obtained:

Table 5 Pearson Correlation Test Variable X

		Correlations				
		X1	X2	X3	X4	X5
X1	Pearson Correlation	1	.572**	.572**	.482**	.547**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	43	43	43	43	43
X2	Pearson Correlation	.572**	1	.846**	.497**	.759**
	Sig. (2-tailed)	.000		.000	.001	.000
	N	43	43	43	43	43
X3	Pearson Correlation	.572**	.846**	1	.670**	.572**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	43	43	43	43	43
X4	Pearson Correlation	.482**	.497**	.670**	1	.691**
	Sig. (2-tailed)	.001	.001	.000		.000
	N	43	43	43	43	43
X5	Pearson Correlation	.547**	.759**	.572**	.691**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	43	43	43	43	43
Tot alX	Pearson Correlation	.749**	.890**	.890**	.795**	.847**
	Sig. (2-tailed)	.000	.000	.000	.000	.000

N	43	43	43	43	43	Y3	Pearson Correlation	.759**	.659**	1	.901**	.705**
**. Correlation is significant at the 0.01 level (2-tailed).												
Table 6 pearson Correlation Test Variable Y												
Correlations												
		Y1	Y2	Y3	Y4	Y5						
Y1	Pearson Correlation	1	.727**	.759**	.842**	.635**						
	Sig. (2-tailed)		.000	.000	.000	.000						
	N	43	43	43	43	43						
Y2	Pearson Correlation	.727**	1	.659**	.732**	.799**						
	Sig. (2-tailed)	.000		.000	.000	.000						
	N	43	43	43	43	43						
Y3	Pearson Correlation	.759**	.659**	1	.901**	.705**						
	Sig. (2-tailed)	.000	.000		.000	.000						
	N	43	43	43	43	43						
Y4	Pearson Correlation	.842**	.732**	.901**	1	.783**						
	Sig. (2-tailed)	.000	.000	.000		.000						
	N	43	43	43	43	43						
Y5	Pearson Correlation	.635**	.799**	.705**	.783**	1						
	Sig. (2-tailed)	.000	.000	.000	.000							
	N	43	43	43	43	43						
Tot alY	Pearson Correlation	.883**	.886**	.885**	.943**	.882**						
	Sig. (2-tailed)	.000	.000	.000	.000	.000						

N	43	43	43	43	43
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** . Correlation is significant at the 0.01 level (2-tailed).

4. CONCLUSION

After the author distributes questionnaires, validity tests, reliability tests and correlations, it can be seen that the effect of the number of Aviation Security personnel on Security Check Point (SCP) 2 services is 0.92%. So it can be seen that variable X affects variable Y and the rest affects other variables. Therefore, it can be concluded that the influence of variable X is very strong in influencing variable Y, so that there is a relationship between the influence of the number of Aviation Security personnel on Security Check Point (SCP) 2 services.

Based on the research results from data analysis, it can be concluded that :

1. To increase the number of good and appropriate personnel to make good and efficient services and reduce the buildup of passenger flow at Security Check Point (SCP) 2.

2. It is recommended to provide Service Excellence training to Aviation Security personnel in order to improve service quality and excellent security for good service for service users.

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