Analysis of the Role of Leadership and Risk Early Warning in Minimizing Human Errors and Work Accidents of Police Officers

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Abstract

Police officer is one of the professions whose duties tend to be dangerous. Some police officers have even had to sacrifice themselves for doing their duties, while the procedures for carrying out their duties, including on-duty procedures, have been made. This is why it is important for police officers to have good risk management. This is besides the fact that the leadership in a police organization also plays a role. This study analyzes leadership and risk management by involving 159 police officers as respondent subjects. Subjects were obtained by distributing leadership and risk management questionnaires to be processed. This study found that there is a linear correlation between leadership and risk management. A police officer can have good risk management, one of which is because their leaders are equally good at exemplifying risk management. This confirms the idea that leaders are supposed to be role models for their subordinates. Future research can further explore risk management and add perspectives from other variables to complete the results obtained.

Keywords: Leadership; Police Officer; Risk Management; Work Accident

Introduction

Police officer is a profession with many duties. One of their most difficult duty is to fight against crimes (Silver, 2011). In doing so, the police must do their best to eradicate crime at its deepest roots. Sometimes a police officer must dare to enter a risky area of operation. This condition has great potential to make him encounter things related to the risk of work accidents or even death (Garner in Shjarback & Nix, 2020). For the on-duty police officers, firearms can be a factor in these risks. On the other hand, have we all thought that in a raid or arrest, they often come in an area vulnerable to deadly dangerous chemicals, many kinds of stuff that may be infected with various kinds of dangerous viruses, as well as animal attacks that possibly cause serious injury to them (Gaines & Kappeler, 2011), which can bring the on-duty police officer pretty near to the risk of work accidents and even death.

There was a case several years ago that the police officer, who initially wanted to catch criminals, turned into a 'sitting duck' to be attacked, resulting in a fatal mistake (Stoughton, 2014). In 2016, a police officer was also killed for doing an arrest in a narcotics case in an area of East Jakarta. The police officer received counterstrike treatment, and finally turned into a victim, and was found dead (Asfar, 2016). Do

you still remember the book bomb case, which a police officer initially wanted to 'defuse', but made himself a victim of an explosion instead? (Qodir, 2011) Now as our earth is experiencing an epidemic called the coronavirus, police officers have more duties, that is protecting the community from the virus, including bringing order to the community to prevent them gather in a certain place. In this case, the police officers have to work extra which potentially makes them exhausted leading to a weakened immune system and the risk of being exposed to the coronavirus itself (Amriel, 2021). Is there any possibility that this incident was not preceded by an action of the risk analysis management? Crime is not only part of conventional cases, but recently also of progressive forms. Crime has a significant counterstrike power (Dothan, 2018).

This condition may not directly cause accidents, but it can cause a loss of performance, both mentally and physically (Nisar & Rasheed, 2019). Basically, police officers with these duties tend to be vulnerable to work accidents (Klinger, 2020). However, other cases show the opposite, the police officers also make mistakes during their raids, pursuits, and shootings. There were cases where the police officer made mistake in shooting their target, missed the shot and by accident shot people who had nothing to do with the pursuit (eg the surrounding community where criminals hide) (Ferguson, Coulson, & Barnett, 2011; Taylor, 2019). The authority for using a firearm will greatly allow the misuse of it (Osse & Cano, 2017). Instead of knocking out the criminals, firearm kills them (died). The police officer was faced with an option whether he dared to shoot or lost his nerve that makes him get shot at the end (Stoughton, 2014).

Based on the principled concept, in each case and handling, the police should have a handling procedure, in the form of work instructions (Putra, 2021). But in its implementation for some cases, mishandling of work procedures is still found. Many cases in the industrial field reveal that one of the causes is sleep deprivation. Long working hours can cause sleep disorders, which in turn lead to work accidents (Blake, 2014). Working as a police officer means dealing with long working hours that end up with sleep deprivation (Scullin, Hebl, Corrington, & Nguyen, 2020). By having an operating system, are all handling be based on the program which is part of the system? This question arises since work accidents still happen. Again, the causative factors of this issue become a subject of study for the researchers. Assuming that the handling is programmed, police officers should have enough sleep, free their minds from stress, and have no constraint on physical ability and work skills.

Bone, Normore, & Javidi (2015) explain the role of leaders in maintaining the work accuracy of their members. Officers who perform critical activities in which they have the risk of serious injury or death will benefit from recognizing how human performance relates to their work. Leaders have an important role in implementing programs into the actions of the members. The goal is to achieve success and avoid errors at work. Meanwhile, another opinion argues that an error happens due to many factors certainly of the personnel themselves which the leaders do not recognise due to lack of data and information. Trying to blame, leaders with no ability to implement the program start being against the conditions of their subordinates who are at high risk of making errors. A research result provides information that determines the monthly police work schedule is complicated and has its own challenges as apparently still not optimal. No software-assisted work scheduling system has been found (Todovic, Makajic-Nikolic, Kostic-Stankovic, & Milan, 2015).

Regarding the absence or imperfection of the software system, the work scheduling system is done manually. As a consequence, there is no proper arrangement on time division and the determination of the personnel on duty, or in other words, it tends to be unorganised. The police officer who lead the operation and the one who carry out the operation apparently need a reminder system in the form of a managerial pattern that will provide four (4) information, namely risk early warning, level of risk potentially causing the police not to perform work instructions, risk of decreased concentration, and the risk of human error and work accident. Before the police conduct an operation, the software will provide initial information about the level of risk of human error and work accidents of each personnel. A study

has shown that the average amount of sleep is negatively correlated with subjective symptoms of fatigue (Agarwal, Mosquera, Ring, & Victorson, 2020).

Research Methods

This research will involve 159 police officers who serve in the scope of duties that require a large amount of energy and concentration. For example, those work in criminal investigation and traffic units. The subject will be given a questionnaire for data collection, including a measurement scale and a questionnaire so that there are two forms of questionnaires to be filled out by the research subjects. The research involves two variables. The dependent variable is risk management, dealing with how the subject manages his/her duties to avoid the risk of work accidents. The independent variable is leadership, with which the leadership perceived by the subject towards his superiors will be measured within a 1-5 interval scale model.

Before the distribution, the questionnaire will be tested on 50 police officers. This is a necessary test to see the validity and reliability of the measuring instruments, whether they conform or not with the objects tested. The trial data obtained will go through item discrimination power test, which is a statistical analysis using the coefficient value of the item-total correlation (Azwar, 2017). This measuring instrument for risk management variables is based on Habibi & Pouya (2015) which consists of 1) understanding the process, 2) guidelines evaluations, 3) determining the critical, 4) task analysis, 5) affecting performance, 6) estimating overall probability, 7) providing cognitive demands, 8) quantitative assessment, 9) initial report, I0) experts comment, and 11) final report. According to the trial, the reliability value was 0.923 and the validity value was in the range of 0.596-0.813. Meanwhile, the leadership variable measuring instrument is a measuring tool made refers to aspects defined by (Ancok (2002). He describes some aspects, namely 1) future orientation, 2) synergizing all units and resources, 3) moving personnel to achieve goals, 4) inviting personnel to move forward together, 5) treating personnel according to their level of maturity, and 6) being able to ensure competence and motivation of their personnel. Based on the test results, the reliability value was 0.942 and the validity value ranged from 0.448 to 0.901. Furthermore, we will use correlated items as research data collection items for analysis. Statistical test is the main method used to carry out the analysis process in this study. This test will measure the influence of the independent variable towards the dependent variable by employing regression analysis.

Data Analysis and Discussion

Overview of Research Subjects

This study uses several analyzes to see the results of the leadership and risk management variables. First, we analyse the subject description to identify the distribution of the subject description as illustrated in Table 1.

Table 1. Subject Description

		Amount	Percentage (%)
Sex	Female	6	3,8
	Male	153	96,2
Rank	Bhayangkara (Enlisted)	99	62,3
	Brigadir (Non Commissioned Officer)	56	35,2
	Perwira (Officer)	4	2,5
	TOTAL	**159**	**100**

Table 1 provides a description of the subjects, which as seen in the description, are divided into two (2) groups based on sex and police rank group. There are six (6) female subjects (3.8%) and 153 male subjects (96.2%). The police rank group show there are 99 subjects (62.3%) of the Bhayangkara, 56 (35.2%) of the Brigadir and 4 (2.5%) of the Officer. After obtaining a description of the subject, the next thing to analyze is the distribution of the subject based on the categorization values presented in Table 2.

Table 2. Subject Categorization Frequency

	Categorization	Categorization Value	Amount of Subjects	Percentage (%)
Leadership	Low	<28	0	0
	Medium	28-44	40	25,2
	High	>44	119	74,8
Risk Management	Low	<25,7	0	0
	Medium	25,7-40,3	5	3,1
	High	>40,3	154	96,9

The frequency of subjects based on categorization values is given in Table 2. For the leadership variable, the categorization values were grouped into three (3), namely low (<28), medium (28-44), and high (>44). Regarding the number of subjects, 40 people (25.2%) have moderate leadership, 119 people (74.8%) have high leadership, and no subject has low leadership. Meanwhile, the risk management variable has three (3) groups of categorization values, covering low (<25,7), moderate (25.7 – 40.3), and high (>40.3) risk management. There are 5 subjects with moderate risk management (3.1%), 154 subjects with high-risk management (96.9%) and no subject with low-risk management. In conclusion, subjects on average have high leadership and risk management.

Assumption Test

After examining the description of the subject, the next step is the assumption test analysis. This test is required to determine the next analysis technique by using either parametric analysis or non-parametric analysis (Orcan, 2020) as presented in Table 3.

Table 3. Assumption test results (Normality and Linearity)

	Normality	**Linearity**
Leadership	0,000	0,000
Risk Management	0,000	0,000

Table number 3 provides the assumption test results. The normality value is 0.000, both in the leadership and risk management variables. This explains that the two variables are not normally distributed (> 0.05). The linearity values of the two variables are also respectively at 0.000. This indicates that the variables of leadership and risk management are linear (<0.05). Based on the results, we can determine that the next analysis technique will use non-parametric data.

Test the Relationship and Its Effect

After the analysis technique is determined, then the relationship test (correlation) and influence test will then be carried out. In this study, we will look at the relationship and influence of the leadership variable on the risk management variable, where the results are presented in Table 4.

Table 4. Correlation Test Result and Effect Size

	Leadership			Risk Management		
	Correlation	Sig	R²	Correlation	Sig	R²
Leadership				0,362	0,000	0,115
Risk Management	0,362	0,000	0,115			

Table 4 explains the results of the correlation test and the effect test. As seen in the table, the correlation significance value of the leadership and risk management variables is 0.000, indicating that the two variables have a significant correlation (<0.05). The correlation value is 0.362 indicating the positive relationship of the two variables (positive can also be interpreted as a unidirectional correlation). This positive correlation means that the high leadership of an individual is proportional to the high-risk management he/she has. Vice versa, the low leadership an individual possesses will be proportional to his/her risk low management. Column R2 shows the results obtained are 0.115, indicating that leadership affects risk management by 11.5% while the rest can be by other variables not analyzed in this study.

Discrimination Test

In this study, a different test was conducted to explore further the variables of leadership and risk management. In this different test, two (2) groups were analyzed, namely based on gender and based on their rank in the subject's profession as members of the police. The data to be analyzed is the total score of the research subjects' answers that have been averaged, while the results are presented in Table 5.

Table 5. Discrimination Test

		Average Value of Leadership	Sig	Average Value of Risk Management	Sig
Sex	Female	89,75	0,594	71,67	0,622
	Male	79,62		80,33	
Rank	Bhayangkara (Enlisted)	80,70	0,743	83,11	0,479
	Brigadir (Non Commissioned Officer)	79,99		75,18	
	Perwira (Officer)	62,75		70,50	

The results of the analysis of the discrimination can be seen in Table 5. In the category by sex, the significant value of the discrimination test on the leadership variable is 0.594 and on the risk management variable is 0.622. This indicates no significant difference between males and females in terms of their leadership and risk management (> 0.05). As viewed from the average value, women have a higher leadership than men (89.75 > 79.62). However, men have better risk management than women (80.33 > 71.67). According to their ranks, the significant value for the leadership variable is 0.743 and the risk management variable is 0.479. It also indicates no significant difference among police officers of the bhayangkara, brigadir and perwira ranks in their leadership and risk management. Yet, by taking a look at the average value, the bhayangkara police officers have higher leadership than ones of brigadir and the perwira (80.70 > 79.99 > 62.75). Based on the average value of the risk management variable, the results show that police officers of the bhayangkara have better risk management compared to police officers of the brigadir and perwira (83.11 > 75.18 > 70.50).

Discussion

Police officer is one of the civil service professions whose duty is to maintain order, security, and also law enforcement in an area (Gill, 2018). In performing their duties, the police tend to encounter dangerous risks. This study has discussed the results of the analysis of the police officers' risk management related to their leadership. The results show a positive correlation between risk management and leadership. When a police officer has high leadership, his/her risk management also increases. Otherwise, low leadership is proportional to low-risk management. The result has confirmed previous research which conveyed that leadership is important in risk management so that work safety can continue to improve (Fernández-Muñiz, Montes-Peón, & Vázquez-Ordás, 2014; Alston, 2017). We can measure leadership by examining how capable a leader can manage the risks faced by his organization (Indra et al., 2021). A good leader will continue to carry out further learning and constant self-evaluation, in other words, a leader can actively perform his duties properly (Indra et al., 2021). Being a leader means being a role model for others since their behaviour will be an example for their subordinates (Susilo & Kaho, 2018). Therefore, high leadership will be proportional to the high-risk management of the organization and cause few accidents at work (Mohammadfam, Soltanzadeh, Arsang-Jang, & Mohammadi, 2019).

Leadership and risk management regarding their correlation and effect are previously discussed. Thus, is there any difference in leadership and risk management in terms of sex and police rank? The results found no significant difference between both. However, the results show that women have better leadership. A stereotype that considers women leaders as something special has encouraged women to lead better than men (Alqahtani, 2019). Risk management by men has higher outcomes than the women'. Different from women, although men like to put their souls at hazard, they have a more careful and systematic plan for dealing with danger (Calvert, 2017). Apart from the gender factor, police officers of the bhayangkara have better leadership and risk management than those of the brigadir and perwira.

Conclusion

This study concludes that there is a significant positive correlation between leadership and risk management. When individuals have high leadership, their risk management will also increase, and vice versa. The description of subject categorization concludes that the average research subjects have high leadership and high-risk management. This indicates that members of the police in this study tend to have fewer work accidents while on duty. Police personnel know well what to prepare and how to carry out their duties properly and correctly. However, this research is still limited to proving a theory. We suggest that future research can further explore what leadership style is more effective in shaping risk management for each police personnel, and also add other mediator variables to expectedly provide more complete result.

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