



ANALYSIS OF MAIN FACTORS AFFECTING COMMUNITY SAFETY IF A FIRE OCCURS IN DKI JAKARTA

SUBEJO

BPSDM Provinsi DKI Jakarta

Email: josh.jakfire@gmail.com

Jl Abdul Muis No. 66 Jakarta Pusat

Article history:	Abstract:
<p>Received: 1st January 2022 Accepted: 1st February 2022 Published: 4th March 2022</p>	<p>The high frequency of fires and the magnitude of losses indicate that Jakarta is still prone to fires so that it is still a problem for the city of Jakarta. Although it is increasingly complex and difficult because it is still facing various obstacles, fire prevention efforts must still be carried out to reduce the risks posed. Effective fire prevention requires the support of adequate human resource competencies for the realization of community safety. The purpose of this paper is to determine and analyze the competence of human resources, both as members of the SKKL, as members of MKKG and as members of firefighters, considering that human resource competence is the main factor affecting public safety in the event of a fire. The method used is descriptive-explanative with a qualitative approach. Data were obtained through literature review, observation and interviews. The results showed that: (1) of the 291 SKKL formed, there were 233 or about 80% inactive; (2) of the 993 buildings inspected, there were 733 or 73.8% that met the fire safety requirements, and 260 or 26.2% did not meet the fire safety requirements; (3) of the 307 Incident Commander respondents, there are 278 people or 90.8% who have adequate professionalism competence, and there are still 29 people (8.2%) whose it is not sufficient. The results of this study indicate that the competence of human resources is not adequate because the education on fire prevention carried out by SKKL, MKKG and Jakarta Fire Service have not been maximized. This condition can affect public safety in the event of a fire in Jakarta. Increasing individual competence in fire prevention can be done through: community empowerment/revitalizing SKKL activities, optimizing MKKG monitoring and evaluation, and intensifying education and training. In addition, it is necessary to support the availability of adequate facilities and infrastructure, as well as overcome various obstacles faced in order to ensure public safety.</p>

Keywords: Community empowerment, Building Fire Safety Management, Environmental Fire Safety System, Competence, Community or Public Safety.

INTRODUCTION

As a modern metropolis, Jakarta can be equated with big cities in the world with a high and diverse level of activity for its citizens. This condition triggers the acceleration of the development of the city of Jakarta which is directed vertically in the form of the rise of high-rise buildings due to the limited land available. In addition, Jakarta has also become a magnet for residents from other regions to come to try their luck in Jakarta, resulting in an increase in the number and density of the population, which in turn can increase the complexity of the problems faced by the city of Jakarta. One of the problems facing the city of Jakarta is the level of vulnerability to fire hazards. Based on data from the DKI Jakarta Provincial Fire and Rescue Service, it turns out that the frequency of fires in Jakarta is relatively high, making Jakarta a city that is still prone to fire hazards. During the last 5 years (2015-2019) an accumulation of 2,183 fires occurred, causing a loss of Rp. More than 1,628 billion, with an affected area of 2,929,287 m², scorched 12,149 residential buildings, and as many as 2,995,752 people or 17,664 families lost their homes. (Source: DPKP DKI Jakarta Province)

The magnitude of the losses due to fires shows that the fire prevention efforts are not optimal, due to several things that become obstacles or obstacles, including: 1) the ineffectiveness of building fire safety management, so there are still high-rise buildings whose fire protection systems are not functioning properly (today it is more of 100 tall buildings/more than 8 floors; source: Wikipedia); 2) there are still dense residential/slum areas (almost 49% of the total kelurahan or 118 of 267 kelurahan have slum areas; source: Kompas.com/27/5/2019); 3) access to narrow environmental roads and heavy traffic flow at certain times---that is, during rush hour in the morning when people go

to work and in the afternoon when they come home from work---which hinders the mobility of firefighters when they leave to the location of the fire (extending response time=response time); 4) the availability of water sources for extinguishing operations is inadequate because city hydrants are minimal in number and water discharge (there are 1,347 city fire hydrants; data source: DPKP DKI Jakarta Province); 5) the number of fire stations is also not sufficient compared to the area that must be protected; there are 129 fire stations, 29 sector offices, and 5 sub-departmental offices (data source: DPKP DKI Jakarta Province). Meanwhile, the area of Jakarta is 661.5 km², consisting of 44 sub-districts and 265 urban villages. So that there are still some areas/areas that have not been effectively protected by fire extinguishers, because the distance from the fire stations is far enough to increase the response time for firefighters to arrive in the area.

Recognizing the condition of the city of Jakarta which is quite prone to fire hazards, as described in the previous description, the Provincial Government of DKI Jakarta continues to carry out various efforts/programs to overcome fire hazards and/or efforts to reduce fire risk in the city of Jakarta, namely:

1) Preventive:

- a) Regulation of fire prevention by issuing DKI Jakarta Provincial Regulation Number 8 of 2008 concerning Prevention and Management of Fire Hazards; and Governor Regulation 224 of 2015 concerning Amendments to Governor Regulation Number 93 of 2014 concerning Community Participation in fire prevention and control;
- b) Inspection of the completeness and readiness of the installation of fire protection systems and life-saving facilities; including investigations into violations of Regional Regulation No. 8 of 2008;
- c) Increasing the community's capacity in fire prevention by facilitating the establishment of an SKKL (Environmental Fire Resistant System or Environmental Fire Safety System) and supervision of MKKG (Building Fire Safety Management); including coaching members of the fire brigade and counseling on fire hazard prevention to the public;

2) Fire emergency response

- a) Acceleration of response time to less than 15 minutes;
- b) Optimizing the implementation of Concignus Jaga and its supervision;
- c) Development of a Fire Command and Control Center that is connected to the Call Center 112 and other parties as needed in operations;
- d) Preparation of SOPs and implementation of rehearsals for fire prevention posts/fields; including rehearsal for operational planning, both for densely populated areas, medium/tall buildings, and industrial & trade areas, as well as special authority areas;
- e) Provision of water sources as fire fighting materials, such as: city fire hydrants, independent fire hydrants and water reservoirs/tanks;
- f) Increasing cooperation and coordination with relevant agencies, such as the National Police/TNI, Dishub, Satpol PP, PLN, and other parties as needed;
- g) Increasing the capacity of personnel through education, training, and technical guidance on fire prevention, including the Incident Command System (ICS);
- h) Community empowerment in early/early fire fighting by providing fire prevention facilities in the community, including: portable fire pump motors and fire extinguishers, early warning systems, independent fire hydrants, along with training on how to operate, including assistance in fire drill simulation/training;

One important aspect that needs attention to be discussed further is how to strive for public safety when a fire occurs in their environment. Given that public safety is a matter of high priority in fire prevention, it is necessary to identify the main factors that affect public safety in the event of a fire. The results of the analysis of the main factors can be used as input in carrying out fire prevention efforts, especially reducing the risk of fire in order to realize public safety in the event of a fire in the environment. There are several previous studies, including: (1) research that analyzes factors related to the implementation of fire emergency response at the Jombang Regency General Hospital (Zurimi, Suardi, 2017); (2) research that analyzes factors related to the preparedness of gas station operators in dealing with fires in the gas station area of North Indralaya District. (Marlina, Nineng & Trisnaini, Inoy, 2018); (3) research that analyzes natural factors on the occurrence of wetland fires in Ogan Ilir Regency, South Sumatra Province (Faturrahma, Nyayu Zaskia & Lestari, Mona; 2019); (4) research that analyzes the factors that affect the preparedness of fire emergency response to the occupants of the mess PT. Sango Indonesia Semarang (Mahendra L, Ryan & Catur Yuantari, 2015).

The four previous studies seem to prioritize the relationship (correlation) between the independent variable and the dependent variable, where the locus and the research sample/respondent are very limited to one particular location or community. Thus research on the analysis of the main factors that affect public safety in the event of a fire has a broader perspective of coverage so that it has novelty. This is the background for the need to conduct research to determine the main factors that affect public safety in the event of a fire.

THEORETICAL STUDY

Safety is an important thing that is the hope of every person or society wherever they are. All forms of human activity in daily life must really want safety, both soul, body / physical and also property. So important is the meaning of safety, so that everyone in thinking, acting and acting will pay attention to normative provisions/rules, standards and guidelines as a reference in order to obtain safety. According to the Big Indonesian Dictionary, the word "safety" is

defined as a matter of safety. While the word "safe" is defined as "freed or protected from danger, catastrophe, disaster; nothing less; not get disturbed; damage, and so on. Safety or the condition of being safe from the consequences of a fire is the focus of discussion in this study. In fire science, the term safety or the condition of surviving a fire is identified with the term fire safety. In Wikipedia it is stated that fire safety is a set of measures aimed at reducing fire damage. Fire safety measures include those that aim to prevent the occurrence of uncontrolled fires, and those that are used to limit the development and consequences of fires that occur. ("Fire safety is the set of practices intended to reduce the destruction caused by fire. Fire safety measures include those that are intended to prevent ignition of an uncontrolled fire, and those that are used to limit the development and effects of a fire after it starts"). To be able to realize fire safety or conditions that are safe from fire events, an effective management or management is needed. Therefore, management functions in an effort to realize safe conditions from fire events are important so that they become one of the branches of management science, namely fire safety management.

The meaning of management according to Robbins & Coulter (2016) is the process of coordinating work activities so that the work is completed effectively and efficiently through other people. (people). While the opinion of Terry in Hasibuan (2014), that what is meant by management is a typical process consisting of planning, organizing, moving and controlling actions to determine and achieve goals through the use of human resources and other resources. Meanwhile, Armstrong in Kaswan (2016) states that management means causing something to happen, completing it, having a responsibility to do it. Management is the process of deciding what to do, and then getting it done using resources effectively. In simple terms, fire safety management means a set of governance systems on how to realize the safety aspects of fire hazards. In the perspective of fire safety management, there are several factors that affect public safety due to fires, including: (1) human factors, especially their competencies which include understanding or knowledge, attitudes and behaviors regarding fire prevention. ; (2) building factors, including structures and installed protection systems; (3) the cultural factor of the local/local community (local culture factor); (4) stipulation/rule/standard factor (normative factor); and (5) climate/weather.

Based on the results of the survey/research that has been carried out, it was found that the most influential factor on fire safety of the five factors is the human resource (HR) factor, especially their concern for fire hazards and their ability or competence to deal with them. There are 3 (three) classifications of HR that are required to have competence in tackling fires, namely: first, HR as members of the SKKL, namely community-based fire prevention organizations, especially in densely populated residential areas; both HR as members of the MKKG; and third: HR as members of firefighters in firefighting agencies,

Individual care and competence in dealing with fire hazards can basically grow and develop better if supported by education or human resource development as a non-structural mitigation effort carried out by SKKL, MKKG and DPKP DKI Jakarta Province in order to realize community safety in the event of a fire. This is in accordance with the Regulation of the Minister of Public Works Number 20/PRT/M/2009 concerning Technical Guidelines for Fire Protection Management in urban areas, that one of the mitigations of fire risk is the development of SKKL. Furthermore, the Minister of Public Works also states that the implementation of fire protection management functions in urban areas, including the development of the SKKL/Fire Volunteer Unit (SATLAKAR) is the responsibility of the IPK (Fire Department). SKKL is a mechanism to utilize all components of society in preventing and overcoming fires in a community/environment.

The Provincial Government of DKI Jakarta (in this case the DPKP of DKI Jakarta Province) is making efforts to develop SKKL in order to outline the provisions of the Minister of Public Works Regulation Number 20/PRT/M/2009, by facilitating the formation of SKKL in 5 city areas and the Thousand Islands Administrative District, in accordance with the mandate Governor Regulation 224 of 2015 concerning Amendments to Governor Regulation Number 93 of 2014 concerning Community Participation in fire prevention and control. The DKI Jakarta Provincial Government (in this case the DKI Jakarta Province DPKP) uses the term / acronym SKKL as an Environmental Fire Safety System, which is a system for managing environmental resources in order to realize environmental safety and security from fire hazards.

In general, the Pergub regulates SKKL, which consists of the following aspects: (1) SKKL organization; (2) Balakar as a component of HR/personnel; (3) SKKL/Balakar facilities and infrastructure; and (4) SKKL standard work procedures are prepared and determined by the Service as a guide in the implementation of SKKL activities.

Efforts to develop SKKL carried out by DPKP DKI Jakarta Province in the form of support ranging from planning aspects, for example assistance in the context of environmental assessment and mapping, organizing SKKL, facilitating the provision of facilities and infrastructure that may not be provided independently by the community, to the implementation of simulations or fire prevention training, as well as assistance efforts (partnerships) in the context of community empowerment (public empowerment). Community empowerment is an effort to improve or develop the ability of the community so that they can be more independent to overcome the problems faced in their environment and have more authority to manage development in their environment. This is in line with the opinion as stated by Edy Suharto (2017) which states that conceptually, empowerment or empowerment comes from the word 'power' which means power or empowerment. Therefore, the main idea of empowerment relates to the concept of power, which is often associated with our ability to get other people to do what we want, regardless of their desires and interests.

In addition to regulating community empowerment in fire prevention through the application of SKKL, the Minister of Public Works also regulates the application of Fire Protection Management in Buildings, which in the implementation context of Jakarta is translated into MKKG, which is part of building management to realize the safety of building occupants from fires by seeking always good and ready to use. The implementation of this MKKG is

mandatory (mandatory) for the owner/person in charge of the building, because it includes requirements for fire safety aspects to realize the feasibility of the building.

The supporters of the MKKG are the Fire Protection System, namely building protection/security system equipment from fires and life-saving facilities installed in buildings such as:

1. Light Fire Extinguisher (APAR) is a tool for extinguishing fires which includes light fire extinguishers; and Heavy Fire Extinguisher (APAB) which uses wheels;
2. Fire Alarm System is a tool to notify early stage fires which includes manual fire alarms and/or automatic fire alarms;
3. Upright Pipe and Fire Hose System or commonly known as Fire Hydrant System is a fire extinguishing system located in the building and yard hydrants located outside the building;
4. Automatic Sprinkler System is a water transmitter system that works automatically when the room temperature reaches a certain temperature;
5. Smoke Control System is a natural or mechanical system that functions to remove smoke from buildings or parts of buildings to a safe limit when a fire occurs;
6. Exit or Life Saving Facilities, such as: fire stairs, corridors, exit signs, fire doors, compartmentization, and fire retardant/fire stopper.

In addition to the availability of the supporting facilities mentioned above, MKKG also has an obligation to develop HR competencies in dealing with fires in the building environment. The implementation of continuous HR/personnel development is an indication of the effectiveness of the MKKG implementation.

In addition to the competence of HR as members of the SKKL and MKKG, which are elements of the community, there is still competence from the classification of HR as members of the fire department, namely the Incident Commander who leads fire fighting operations at the location. The existence of the Incident Commander and his/her duties of authority cannot be separated from the incident command system implemented at the fire location.

At the operational tactical level, the disaster emergency response command system is strengthened by the implementation of the Incident Command System (ICS). This is in accordance with what was stated by the Head of the Deputy for Prevention and Preparedness of the National Disaster Management Agency, Wisnu Widjaja during the "ICS" training for "Incident Commander", in Sentul, West Java. It is said that the "Incident Command System" (ICS) is a management applied at the operational tactical level to strengthen the disaster emergency response command system. (Sentul – Detakpos 5/2). He also added that the adaptation process of ICS into our disaster emergency management system must also involve local parties. This is motivated by the fact that they are basically the holders of the main command and control functions in the event of a disaster or incident.

The Incident Command System (ICS) is an operational command system developed in Southern California, United States as a result of the 1970 wildfire disaster. This system has proven successful in dealing with and managing incidents both small or large by involving large resources, which include: 1) routine events, such as: celebrations, parades/parades, and music concerts; 2) fire, B3 (hazardous materials), and other dangerous events; 3) other trans-regional disasters, such as: earthquakes, hurricanes, floods and blizzards; 4) missions/rescue operations/SAR; 5) pest eradication program; 6) prevention of infectious disease/pandemic diseases; and 7) acts of terrorism. SKI (ICS) has the flexibility to make adjustments to the internal needs of the organization, so that the management of the crime scene situation becomes more effective and efficient. There are five main management functions in SKI (ICS) along with job descriptions and responsibilities, namely: (1) the Command function, which has overall duties and responsibilities for the continuity of operations; (2) Operations function, which is in charge and responsible for providing operational tactical action direction; (3) Planning function, which is in charge and responsible for the preparation of operational plans, resource maintenance & situation status; (4) Logistics function, which has duties and responsibilities in providing logistical support; and (5) the Financial/Administration function, which has duties and responsibilities in calculating costs, time and purchasing operational needs

In the organizational structure of SKI (ICS), an Incident Commander has an important and strategic role in dealing with incidents that occur, which include: (1) acting or managing all aspects of the organization; (2) has full authority based on the delegation of authority or assignment given to him in writing from the regional authority, and the Incident Commander will be responsible for carrying out his duties to the party giving the delegation of authority; (3) play a role in regulating the deployment of resources and operational tactics, including overall supervision of operations.

In order to carry out its overall incident management duties, an Incident Commander is given the responsibility to: (1) ensure that safety aspects are prioritized in incident handling operations; (2) providing information services for both internal and external parties; (3) appoint a liaison officer between relevant agencies involved in handling incidents. An Incident Commander may also be accompanied by one or more Deputy Incident Commanders (Deputy Incident Commanders) and several special commander staff (Command' Staffs).

The Incident Commander may consist of a single command, specifically for minor/minor incidents. Meanwhile, for larger and more complex incidents, a Unified Command is used, which acts as a unit but involves two or more individuals who share the authority in giving orders.

An Incident Commander is required to meet the criteria or high qualification requirements and be trained in certain related fields, namely:

- (1) have knowledge and skills in the field of disaster or other relevant fields and/or can support the field of disaster/incident;

- (2) have attended training on incident/disaster handling;
- (3) have effective communication skills and can make decisions quickly;
- (4) preferably those who have experience/involved in handling incidents or disasters;
- (5) having a strong soul, courageous, honest, responsible and unyielding, high spirit/commitment of service;
- (6) have experience as a leader or coordinator of a team/group or task force.

In handling fire emergency response or carrying out fire fighting and rescue operations in Jakarta, DPKP DKI Jakarta Province refers to the guidelines contained in the Standard Operating Procedure (SOP) according to the type of fire fighting operation based on the object being burned. However, the requirements for the ability or competence of the Incident Commander can still refer to the SKI (ICS) as described previously. Those who act as Incident Commanders in fire fighting and rescue operations are those who occupy structural positions or officers assigned as team heads or platoon heads and based on the level/scale of the fire incident encountered, starting from echelon II (Head of Service) acting as Incident Commander in the highest/complex fire scale, and so on to the lower level, namely echelon III (Head of Sub-department), then to echelon IV (Head of District Sector Section), and then Platoon Head and Team Head.

The duties and functions of the Incident Commander are very strategic as a party representing the state or government (in this case the DKI Jakarta Provincial DPKP) to be present to serve the needs of the community, considering the existence of the DKI Jakarta Province DPKP, which was formed based on DKI Jakarta Provincial Regulation Number 5 of 2016 concerning the Establishment and the composition of the Regional Apparatus (article 7 point h) is as the Regional Apparatus Work Unit (SKPD) of the DKI Jakarta Provincial Government and the implementing element that "organizes government affairs in the field of peace and public order as well as community protection in the fire sub-sector". As a further elaboration of the Regional Regulation, Governor Regulation Number 264 of 2016 concerning the Organization and Work Procedure of the DKI Jakarta Province DPKP has been issued, where in article 3 paragraph (1) it is stated that DPKP has the task of carrying out fire prevention and control and rescue.

To carry out its main tasks and functions, the DKI Jakarta Province DPKP requires the availability of resources that have adequate competence, in addition to other operational infrastructure and facilities. To realize the effectiveness of fire fighting operations, employees are needed, especially Incident Commanders who have competence according to the required standards. The ineffectiveness of fire fighting and rescue operations that have been felt so far, shows that the performance of employees, especially the Incident Commander, has not been optimal, and this is due to the inadequate competence they have in addition to other factors. Whereas as an Incident Commander, he has very strategic duties and functions in supporting the success of fire fighting and rescue operations at the crime scene, so it is necessary to prioritize improving his competence. This is in accordance with the opinion of Flamholtz (2011), which suggests that human capital is an important factor in supporting the success of the organization, so that investment in the form of training and human resource development so that their performance increases is an important thing to do and becomes something "crucial" in achievement of this success.

The role of the Incident Commander is very important, as they are responsible for the success of firefighting and rescue operations at the crime scene; including ensuring the safety of officers as a top priority that must be considered, in addition to other aspects such as the deployment of the number and type of units, forecasting the development of events (pre-size up) and anticipating the escalation of the development of the incident situation (size up). They are also required to be able to make quick and appropriate decisions in critical/critical situations, be able to control the development of crime scenes, ensure the flow of communication between officers goes smoothly without interruption, and be swift in coordinating with related parties as needed to support the success of firefighting and/or rescue operations. This is part of the Incident Commander's professional competence which is very much needed in leading fire fighting operations. There are several reasons why it is necessary for an Incident Commander to have professional competence, namely: (1) the Incident Commander's professional competence plays an important and strategic role in supporting fire fighting operations at the scene; (2) an analysis of the professionalism of the Incident Commander needs to be carried out to determine the level/level of professionalism of the Incident Commander in fire fighting operations; (3) the results of the competency analysis can be used as a reference for the development of the next Incident Commander's professional competence.

In order to support the implementation of emergency management, which is related to risk and risk transfer (Haddow & Bullock, 2013), it is necessary to have human resources, especially Incident Commanders who have competent or adequate professional competence, considering that almost all types of emergency or disaster events happen without warning. Situations and conditions that occur can range from small fires or small incidents to facing large fires or major disasters that require the involvement of various agencies to overcome them (Molino, 2019). The professional competence possessed by the Incident Commander greatly determines the success or optimal operation of handling emergency situations such as fire incidents.

In general, the definition of competence is an ability or skill possessed by a person in carrying out a job or task in a particular field, in accordance with the position he holds (Prawiro, M: 2019). There is another opinion that defines competition as a skill, knowledge, basic attitude, and value in a person which is reflected in his ability to think, behave and act consistently. Thus, it can also be stated that competence does not only talk about aspects of individual knowledge or abilities, but also about the willingness to do what is known so as to bring benefits to individuals and society at large. Meanwhile Emron, Yohny, Imas (2016) stated that competence is an individual's ability to carry out a job correctly and has advantages based on matters relating to knowledge, skills and attitudes.

In addition to the several definitions of competence mentioned above, several normative provisions can also be found in the definition of competence. Law No. 13/2013 concerning Manpower: article 1 paragraph (10) states that competence is the work ability of each individual which includes aspects of knowledge, skills and work attitudes that are in accordance with established standards. Then in the Decree of the Head of the State Civil Service Agency Number 46A of 2003 dated November 21, 2003, the definition of competence is stated, namely the abilities and characteristics possessed by a Civil Servant in the form of knowledge, skills, and behavioral attitudes needed in carrying out their duties, so that Civil Servants can carry out their duties professionally, effectively and efficiently.

Based on some of the definitions described above, it can be concluded that competence is defined as a representation of a person's abilities and capacities in the form of a combination of characteristics/natures/personality (personality), motives, knowledge (knowledge), skills (skills), and behavior (attitude). required in carrying out work tasks in a professional, effective and efficient manner. The existence of these important aspects is an integrated unit and forms employee competencies that are manifested in a person's ability or capacity in carrying out work that can be observed, measured and evaluated.

Human resource competencies cover three domains as proposed by Benjamin Bloom and friends in 1956 in Bloom's Taxonomy. Bloom's taxonomy is the concept of three hierarchical models used to classify educational development objectively, namely cognitive, affective and psychomotor. Cognitive is the main domain in many educational curricula and becomes a benchmark for assessing individual learning development. Cognitive comes from the Latin *cognitio* which means introduction, which refers to knowledge and the knowledge process itself. Cognitive is a domain related to reasoning or thought processes, namely the ability and activity of the brain to develop the ability to think rationally

Affective is the domain that bases everything related to emotions such as appreciation, values, feelings, enthusiasm, interests, and attitudes towards something. While psychomotor is a domain that includes movement behavior and physical coordination, motor skills and physical abilities of a person. The three domains of competence play a major role in individual education, because they are used to measure or evaluate the success of the learning process, namely the extent to which the material can be absorbed by students and also the effectiveness of the teaching methods used. The three domains are closely related and cannot be separated. Before arriving at the stage of the psychomotor domain, the individual will first experience the stages of the cognitive and affective domains.

The three classifications of HR as members of the SKKL, as members of the MKKG, and as members of the firefighters (incident commander) should be equipped with these three areas of competence, so that they have the ability to deal with fires effectively in order to realize public safety in the event of a fire. For HR competence as MKKG members, it is necessary to prove that they have attended fire fighting training and passed the competency test. As for HR as members of firefighters, besides having competence from the three domains, they must also meet the requirements as mandated in the SKKNI (Indonesian National Work Competency Standards), which formulates work abilities covering aspects of knowledge, skills, and/or expertise and work attitudes. relevant to the implementation of the assigned duties and job requirements.

RESEARCH METHODS

The method used in this paper is descriptive-explanative with a qualitative approach. This paper describes and at the same time explains the main factors that affect public safety in the event of a fire in Jakarta. The data were obtained through literature studies/study as well as through observations/observations and interviews with key figures related to the topic of discussion in question.

RESEARCH RESULTS

Research on the main factors that affect public safety in the event of a fire, namely:

a. Ability/competence of individuals or communities as members of the SKKL;

In this case, there is a link between HR competencies and SKKL activities that have been formed in their environment. The activity of the SKKL also shows the activeness of HR or the local community in dealing with fire hazards, because in an active SKKL there are educational activities or competency development of its members in tackling fires. Thus, if the SKKL is active, it means that the community has competence in dealing with fires in their environment. Vice versa, an inactive SKKL means that efforts to increase community competence in tackling fires are also not running as they should, so that the community's ability to deal with fires is also not optimal. As a consequence, if a fire occurs in the environment, the safety of the community and their property will be threatened because the community does not have the ability to cope with the fire.

As of December 2019, the Provincial Government of DKI Jakarta (in this case the DPKP of DKI Jakarta Province) has facilitated the formation of 291 SKKL, and after an evaluation is carried out based on several criteria that can be taken into consideration in assessing active SKKL, namely: 1) completeness of the composition of the management; 2) there are activities/work programs and mechanisms for monitoring and evaluating activities/programs; 3) the availability of adequate and well-maintained operational infrastructure and facilities so that they are ready for use; and 4) implementation of Simulation/Fire Drill periodically (at least once a year), and as explained by the DKI Jakarta Provincial DPKP officer, the results show that there are 2 (two) categories, namely active SKKL and inactive SKKL as stated in the following table

Table 1. Recapitulation of Number of SKKL (2019)

No	Region	SKKL Active	SKKL Not Active	Total
1	Jak-Pus	12	29	41
2	Jak-Ut	24	7	31
3	Kep. 1000	3	0	3
4	Jak-Bar	6	30	36
5	Jak-Sel	6	15	21
6	Jak-Tim	7	152	159
	Amount	58	233	291

Data source: DPKP Prov. DKI Jakarta.

b. Ability/competence of individuals or communities as members of the MKKG;

In this case, there is also a link between the effectiveness of the implementation of the MKKG and the competence of HR as members in it. The effective implementation of the MKKG will succeed in maintaining the fire protection system and egress facilities installed in buildings in good condition and ready to function reliably. In addition, MKKG also makes efforts to develop or improve the competence of its members so that they are always ready and skilled in dealing with fire hazards in these buildings. Even those who act as managers or leaders of the MKKG must have a certificate as the Head of the MKKG (Fire Safety Manager) so that they are eligible to lead as the head/manager of the MKKG.

From the results of document research and interviews with DPKP Prevention officers for the DKI Jakarta Province, data on buildings that have been inspected or inspected in order to assess the proper functioning of the buildings from a fire safety perspective are obtained, with the results according to the following table:

Table 2. Data on Tall Buildings inspected (Until November 2021)

No	Description	Amount	%
1	Recommendation SLF	146	14,7
2	Recommendation SKK	531	53,5
3	LHP (plus)	56	5,6
	Sub Total (A)	733	73,8
4.	LHP (minus)	88	8,9
4	Suspension of recommendation SLF	5	0,5
5	Suspension of recommendation. SKK	9	0,9
6	Warning letter	19	1,9
7	Supervision	139	14
	Sub Total (B)	260	26,2
	Total (A+B)	993	100

(Data source: DKI Jakarta DPKP)

Notes:

1. SLF: Function Eligible Certificate
2. SKK: Fire Safety Certificate;
3. LHP : Inspection Result Report

c. Individual ability/competence as a member of the firefighters;

In this case, it can be represented from the professional competence condition of the Incident Commander, namely the official who leads the extinguishing operation at the fire location. Based on document research and interviews with employees of the DKI Jakarta Provincial PKP Office, the following results can be obtained:

- 1) There are 615 officials who can act as Incident Commanders at the TKP, namely: Head of Service, Head of Sub-dept., Head of Sector Section at Sub-Department, Head of Platoon, and Head of Team, as shown in the table below:

Table 3. Position Composition

No	Position	Amount
1	Head of Department	1
2	Head of Sub Department	5
3	Head of Sector Department	43
4	Head of Platoon	121
5	Head of Group	445
	Amount	615

Source : DPKP DKI Jakarta

- 2) of the 615 officials who became respondents as many as 307 people who filled out the questionnaire, with the results as shown in the following tables

Tabel 4. Jumlah Responden

No	Position	Amount (%)
1	Head of Department	-
2	Head of Sub Department	4 (1,3 %)
3	Head of Sector Department	27 (8,8 %)
4	Head of Platoon	86 (28 %)
5	Head of Group	190 (61,9 %)
	Amount	307

3) of 307 respondents, there is a composition based on the place of work, according to the following table:

Table 5. Number of Respondents according to their place of work

No	Place of Duty	Amount
1	Central Jakarta Sub-dept.	38 (12,4 %)
2	North Jakarta Sub-dept.	17 (5,5 %)
3	West Jakarta Sub-dept.	84 (27,4 %)
4	South Jakarta Sub-dept.	33 (10,7 %)
5	East Jakarta Sub-dept.	135 (44 %)
	Amount	307

1) from 307 respondents, there is a composition based on education according to the following table:

Table 6. Number of Respondents according to education

No	formal education	Amount
1	Doctoral (S3)	0
2	Postgraduate (S2)	36 (11,7 %)
3	Bachelor (S1)	146 (47,6 %)
4	Diploma	5 (1,6 %)
5	SLTA	120 (39,1 %)
	Amount	307

There are 5 (five) aspects of professional competence that the Incident Commander must possess and the results of his research can be presented as follows:

- 1) Competency (KP) aspect 1: ability or mastery of the environment around the scene (availability and water sources, nearest fire station, road access and fire development forecasts (pre-size up):

Table 7. KP Aspect 1/Average

No	TK	I/1	I/2	I/3	I/4	I/5	Rt2
1	4	139	233	132	156	148	162
2	3	135	57	150	132	126	120
3	2	31	16	22	17	29	23
4	1	2	1	3	2	4	2

2) Description:

3) I/1 = Item one, and so on

4) Kindergarten (Competency Level):

5) 1 = less

6) 2 = medium

7) 3 = enough

8) 4 = good

9) 2) Competence (KP) aspect 2: the ability to anticipate the development of crime scene situations, including the application of strategies and tactics for fire fighting operations

Table 8. KP Aspect 2/Average

No	TK	I/6	I/7	I/8	I/9	I/10	I/11	Rt2
1	4	174	203	200	197	146	152	179
2	3	120	92	97	99	136	137	113
3	2	11	10	8	9	22	16	13
4	1	2	2	2	2	3	2	2

Competence (KP) aspect 3: ability or mastery of fire protection facilities and life-saving facilities in buildings:

Table 9. KP Aspect 3/average

No	TK	I/12	I/13	I/14	I/15	I/16	Rt2
1	4	132	151	115	123	82	121
2	3	121	131	149	146	169	143
3	2	47	23	36	31	45	36
4	1	7	2	7	7	11	7

Competency (KP) aspect 4: the ability or mastery of the communication process and inter/inter-agency coordination related to fire fighting operations;

Table 10. KP Aspect 4/Average

No	TK	I/17	I/18	I/19	I/20	I/21	Rt2
1	4	236	165	149	115	114	156
2	3	62	115	132	151	133	119
3	2	8	21	22	33	40	24
4	1	1	6	4	8	20	8

Competence (KP) aspect 5: ability or mastery of report preparation:

Table 11. KP Aspect 5/Average

No	TK	I/22	I/23	I/24	I/25	I/26	Rt2
1	4	170	134	180	153	129	153
2	3	105	138	105	123	134	121
3	2	25	27	17	25	37	25
4	1	7	8	5	6	7	8

Overall (307 respondents), the average results of the Incident Commander professionalism competence are as shown in table 12 below:

Tabel 12. Hasil Rata2 Kompetensi Professionalisme

No	TK	KP 1	KP 2	KP 3	KP 4	KP 5	RT 2
1	R1	2	2	7	8	8	5
2	R2	23	13	36	24	25	24
3	R3	120	113	143	119	121	123
4	R4	162	179	121	156	153	155

Information:

Kindergarten = Competency Level

KP1 to KP5 = Professionalism Competence aspect 1 to aspect 5

R1 = Less competency level range

R2 = Medium competency level range

R3 = Enough competency level

R4 = Range of competency levels Good

a. Competency Analysis of individuals or communities as members of SKKL (Environmental Fire Safety System);

Based on the data in Table 1 above, it appears that of the 291 SKKLs recorded, there are 233 or around 80% of the SKKLs that are inactive. This number is quite large and has an impact on the ability or competence of community members, so that the fire prevention efforts are not optimal, even this condition can endanger the safety of the community in the event of a fire.

From the explanation given by the officer in the field of Prevention who handles SKKL development, it is known that the inactivity of SKKL is mostly due to the absence of a work program that is routinely carried out within 1 year. In fact, there are also SKKL whose management structure is incomplete because the previous management changed their address or died and a replacement has not been appointed. The incompleteness of the management and the SKKL work program has not been prepared resulted in the existing facilities and infrastructure being neglected and not maintained so that they are not ready to be operated, and cannot carry out fire drill simulations. The condition of the inactive SKKL has the consequence that community-based fire prevention efforts cannot run optimally so that the ability or competence of community members in dealing with fire hazards is also inadequate and this condition will affect the safety of the community if a fire occurs in their environment at any time.

On the other hand, if the SKKL that has been formed in dense residential areas is in an active condition, because the management is complete and active in carrying out fire prevention efforts, such as assisting in checking the condition of electrical installations including the behavior of their use at home, checking the feasibility of gas stoves so that they are safe to use, and also socializing fire prevention including implementation simulation of fire fighting in the environment. The next activity is the maintenance of the available fire fighting operation infrastructure, including: light fire extinguishers, bicycle units and fire engines, mobile fire pump units and independent fire hydrants, so that these facilities and infrastructure are maintained in good condition and ready to be used at any time to deal with fires that occur in the environment before reporting a fire incident and fire brigade units arriving at the fire scene. Because fire fighting is most effective and relatively easy if it is done at the beginning of the incident when the fire is still small. And this fire fighting can only be done by the local community where the fire occurs. Even Balakar members who are part of SKKL will immediately report fire incidents using the 112 call center hotline while extinguishing fires and helping evacuate occupants and property to safer places. Members of the SKKL Balakar will also assist in the execution of firefighting operations carried out by firefighters, so that extinguishing operations can take place effectively.

b. Analysis of individual or community capabilities/competencies as members of MKKG (Building Fire Safety Management);

Based on the data listed in Table 2 previously, it is known that:

- 1) A total of 993 buildings have been inspected in order to assess the fulfillment of building fire safety requirements;
- 2) A total of 146 buildings obtained SLF Recommendations, which means that the buildings in question have met the building fire safety requirements and are ready to receive SLF so that the buildings can be inhabited or/or activities carried out in them safely and safely;
- 3) A total of 531 buildings obtained the SKK Recommendation so that the buildings were also considered to have met the fire safety requirements and could be inhabited and/or used as a place for community activities.
- 4) A total of 56 new buildings received a plus Inspection Result Report, meaning that the building has also met the fire safety requirements so that it can be inhabited and/or used as a safe and secure place for community activities.
- 5) A total of 88 buildings received a minus Inspection Result Report, and it was stated that they did not meet the fire safety requirements, because there were several aspects of fire safety/protection that were not functioning properly. Thus, these buildings are considered less safe to be inhabited or/or used as places of activity. Building Fire Safety Management must make efforts to make repairs so that the building is re-inhabitable and/or used as a place of activity;
- 6) A total of 5 buildings have been suspended. Recommendation for Eligible Functional Certificates, because these buildings do not or have not met the requirements for fire safety and other aspects of the feasibility of buildings, and the MKKG has not been able to make repairs to conditions that have not met the requirements within the allotted time. In this case the building can also be categorized as a building that is not safe and safe to be inhabited and/or used as a place for community activities;
- 7) A total of 9 buildings were suspended. Recommendation for Fire Safety Certificates because there are aspects of fire protection and/or life-saving facilities that have not been installed or do not meet the requirements so that SKK cannot be issued, and consequently the buildings are not suitable for habitation and/or used as places for community activities;
- 8) A total of 19 buildings received warning letters because they did not meet the fire safety requirements and the MKKG had to make improvements to aspects of fire protection facilities and life-saving facilities as well as other related aspects in order to meet the predetermined fire safety requirements. This warning letter starts from the first to the next stage which allows the revocation of the SLF or SKK if within a certain time limit repairs are not carried out properly;
- 9) A total of 139 buildings are included in the category under supervision because they are undergoing repairs to the fire protection system and life-saving facilities as well as other fire safety aspects. Consequently, these buildings include those that are less safe to inhabit and/or serve as places for community activities.

In other words, it can be stated that of the 993 buildings that were inspected, there were 733 buildings or 73.8% that had met the fire safety requirements, which consequently the buildings were suitable for habitation and/or used as places for community activities, and there were as many as 260 buildings or 26.2 % that do not meet the requirements for fire safety, as a consequence the building is unfit for habitation and/or used as a place for community activities. This means that the ability or competence of individuals as members of the MKKG of 260 buildings (26.2%) is not sufficient so that this condition can affect public safety in the event of a fire in the building.

c. Analysis of individual abilities/competencies as members of the firefighters;

Based on the results of research on the professional competence of the Incident Commander as listed in tables 7 to 11 previously, the following discussion or analysis can be submitted:

1) Professional competence aspect 1 (KP1): ability or mastery of the environment around the crime scene, including the availability of water sources, the nearest fire station, road access and fire development forecasts (pre-size up):

Of the 307 respondents, the results showed that on average there were 2 people who had KP1 in the less category (Range < 36 %); 23 people had a medium KP1 category (Range 37-56%); 120 people have KP1 category enough (Range 57-76%); and 162 people have KP1 in good category (Range 77-100%). (Table 7)

According to the results of the research on aspect 1 of professionalism competence, it is seen that not all incident commanders who lead extinguishing operations have it comprehensively or completely, because some of these aspects of competence 1 are still lacking, and this can result in the extinguishing operations being carried out unable to take place effectively, for example. the unit arrived late at the location, it was difficult to get a backup water source for extinguishing so that the fire was already large and quite difficult to control due to the inability to carry out the pre-size-up.

2) Professionalism Competency aspect 2 (KP2): the ability to anticipate the development of the situation and condition of the fire location, including the application of strategies and tactics for fire fighting operations:

Of the 307 respondents, the results showed that on average there were 2 people who had KP2 in the less category (Range < 36 %); 13 people have a medium category KP2 (Range 37-56%); 113 people have KP2 in the sufficient category (Range 57-76%); and 179 people have a good KP2 category (Range 77-100%). (Table 8)

The results showed that not all of the Incident Commander respondents had this aspect 2 professionalism competence, so that the firefighting operations they led could not take place optimally. If this happens, the fire that occurs will endanger the safety of the community.

3) Professional Competence aspect 3 (KP3): ability or mastery of fire protection system facilities and life saving facilities in buildings:

Of the 307 respondents, the results showed that on average there were 7 people who had the KP3 category less (Range < 36 %); 36 people have a medium category KP3 (Range 37-56%); 143 people have sufficient KP3 category (Range 57-76%); and 121 people had a good KP3 category (Range 77-100%). (Table 9). According to Table 9, it is known that not all of the respondents (Incident Commanders) have professional competence in aspect 3. This can have consequences that are quite dangerous for the safety of the community as residents if the building is on fire, because the incident commander who leads the firefighting operation lacks knowledge of fire protection systems and life-saving facilities installed in buildings, so that extinguishing operations cannot run effectively and efforts to save or evacuate occupants cannot take place smoothly and may experience obstacles due to ignorance/lack of understanding of the incident commander. Preferably with mastery of fire protection systems and life-saving facilities installed in buildings, Incident Commanders can use these two facilities as supporters in implementing tactics and strategies for fire fighting operations and efforts to rescue/evacuate occupants so as not to cause a lot of loss and casualties.

4) Professionalism Competency aspect 4 (KP4): ability or mastery of inter/inter-agency communication and coordination processes related to fire fighting operations;

Of the 307 respondents have shown the results that on average there are 8 people who have a KP4 category less (Range < 36 %); 24 people had a moderate KP4 category (Range 37-56%); 119 people have sufficient KP4 category (Range 57-76%); and 156 people had a good KP4 category (Range 77-100%). (Table 10). Based on the results of the research in Table 10, it is known that not all Incident Commanders have professional competence aspect 4, namely regarding the communication and coordination process with relevant agencies in complete/comprehensive fire fighting operations. This of course can hamper fire fighting operations because it is not supported by a communication process and coordination with relevant agencies that can be involved in the operation, for example: PMI, PLN, Police, TNI, regional apparatus and other parties whose involvement is needed to support operations. As a consequence, the firefighting operation will face obstacles or obstacles that will endanger the safety of the community.

5) Professionalism competence aspect 5 (KP5): ability or mastery of report preparation:

From 307 respondents, on average there are 8 people who have KP5 in the less category (Range < 36 %); 25 people have a medium category KP5 (Range 37-56%); 121 people have KP5 in the sufficient category (Range 57-76%); and 153 people have KP5 in good category (Range 77-100%). (Table 11)

From table 11 it shows that there are still some Incident Commanders who are not yet complete with competency aspect 5. This will cause the reports that are prepared to be incomplete and less valid in providing field data, so that they can provide inaccurate information about the fire incidents they handle and have an impact on the ineffectiveness of post-event evaluation as a material to gain valuable lessons (lessons learned) from the fire incident.

Based on table 12 above, it can be seen that from 307 respondents, on average there are 5 people who have professional competence in the less category (Range < 36 %), 25 people who have professional competence in the

medium category (Range 37-56 %), 124 people who have sufficient professional competence category (Range 57-76 %), and 155 people who have good category professionalism competence (Range 77-100%). In other words, there were 278 people or 90.8% of respondents who had adequate professional competence in fire fighting operations, namely in the category of moderate to good (Range 57-100%). Meanwhile, as many as 29 respondents or 9.2% have professional competence in the category of less to moderate or inadequate. Although the Incident Commanders who have less-moderate/inadequate level of professional competence are not so many (29 people or 9.2%) but if they lead fire fighting operations, of course they cannot be optimal so that fires can affect or threaten public safety.

Based on the discussion or analysis of the research results above, it appears that the competence of human resources as members of the SKKL, as members of the MKKG, or as members of firefighters, is the main factor affecting public safety in the event of a fire. The competence factor of human resources as members of the three communities plays an important role in creating a safe and safe environment from the dangers of fire so that it is suitable for habitation and/or as a place for community activities.

In addition, efforts need to be made to overcome several obstacles that can hinder the effectiveness of the implementation of human resource competencies in fire prevention, for the realization of public safety, namely:

1. There is a public perception that fire incidents are fate and cannot be prevented;
2. Community reluctance to become members of Balakar or to be active in SKKL, because it is not attractive and does not provide incentives, while some social activists, such as FKDM (Community Early Awareness Forum) and mosquito larvae monitors (jumantik) receive coaching or operational fees;
3. There is still a sectoral ego and considers that fire prevention matters are the sole responsibility of the DKI Jakarta Provincial DPKP;
4. Coordination and collaboration between related agencies has not been established effectively, because each agency focuses more on the role of its own agency;
5. There are still MKKG whose operational activities have not been effective, due to the low commitment of the leadership and/or building managers;
6. There are still DPKP firefighters for DKI Jakarta Province, especially non-regular ones, who generally have basic and minimal fire management competencies;
7. The implementation of annual training to increase the ability or competence of personnel is still limited and cannot meet the needs of all DPKP employees of DKI Jakarta Province, which number more than 4,000 personnel;

CONCLUSION

- 1) From the facts as described above, it appears that the city of Jakarta is prone to fires from a fire perspective;
- 2) To create conditions that are safe and secure from fire events, an effective fire safety management or management is needed;
- 3) Public safety is a priority in fire prevention, therefore it is necessary to identify factors that affect public safety in the event of a fire;
- 4) In the perspective of fire safety management, there are 5 (five) factors that affect public safety in the event of a fire, namely: (1) human factor; (2) the building factor (building factor); (3) the cultural factor of the local/local community (local culture factor); (4) stipulation/rule/standard factor (normative factor); and (5) climate/weather factor;
- 5) Based on the research conducted, the results show that the main factor that has the most influence on public safety in the event of a fire is the human resource factor, in this case competence in fire prevention;
- 6) Based on the analysis of the main factors, namely the competence of human resources as members of the three communities (SKKL, MKKG, and firefighters), it is seen that the competence of human resources is a factor that plays a very important role and can affect community safety in the event of a fire. In other words, the competence of human resources is a factor that plays a major role in creating a safe and secure environment to be inhabited and/or used as a place for community activities.

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