PROFESIONAL HEALTH JOURNAL
Volume 6, No. 1, May 2024 (Page 1-8)
Available Online at https://www.ojsstikesbanyuwangi.com/index.php/PHJ/index
E-ISSN 2715-6249

FACTORS RELATED TO FIRE EMERGENCY RESPONSE PREPAREDNESS IN DR. RSUD EMPLOYEES. DRADJAT PRAWIRANEGARA SERANG REGENCY IN 2023

Puji Eka Mathofani*
[a] Public Health Study Program, Faletehan University
*Corresponding Author: pujimathofani @gmail.com

ARTICLE INFORMATION

Article history
Received 06 May 2024
Revised 08 may 2024
Accepted 11 May 2024

Keywords
Fire emergency response preparedness, fire training, knowledge, fire protection facilities and infrastructure, attitudes

ABSTRACT

The high annual number of fire cases makes fire disasters a major threat to human life. A building's emergency response preparedness refers to a set of procedures used to alert occupants to potential threats, offer a safe haven for escape, contain fires, and put them out. The description and relationship of fire emergency response preparedness, knowledge, attitudes, fire protection facilities and infrastructure, and training are the main goals of this study. Cross-sectional research is used in this design. 85 employees participated in the accidental sampling method, which was used to determine the sample. The analysis's findings indicate that 62.4% of workers are aware of their readiness for a fire emergency, 51.8% have positive attitudes, 52.9% have solid knowledge, 62.4% have received training, and 55.3% have well-maintained infrastructure and facilities for fire safety. The findings demonstrated that infrastructure and fire safety facilities (P value = 0.00), knowledge (P value = 0.00), training (P value = 0.111), and attitudes (P value = 0.00). This research suggests that code blue training on fire emergency response preparedness needs to be improved.

Introduction

Hospitals are community-based health service providers, specializing in medical services that are preventive, curative, and rehabilitative. Hospitals must not only offer high-quality care and services, but they also need to create and implement occupational health and safety programs (K3RS). This is due to the fact that working in Indonesian hospitals is considered to pose a significant risk to the health and safety of physicians, nurses, and technicians, which in turn affects patients and the local community, including tourists. (Ministry of Health of the Republic of Indonesia, 2012).

According to Law Number 24 of 2007 of the Republic of Indonesia, preparedness, early warning, and disaster mitigation are the three ways that disaster management can be implemented in circumstances where a disaster is possible. Being prepared involves a number of actions taken in advance of emergencies through planning and well-executed measures. (Oktaviana, 2018).

The risk of building fires still poses a significant threat to residents and economic activity. One of the important standards set. National Standardization Body in the Indonesian National Standard regarding protection against fire hazards in multi-storey buildings. The fire prevention system must be planned from the start of building construction, especially for passive fire protection systems which include the type of building materials used, room compartmentation and other elements such as the layout of building placement, environmental roads, construction of exits, placement of hydrants. Handling fires in buildings still relies on the

PROFESIONAL HEALTH JOURNAL
Volume 6, No. 1, December 2024 (Page 1- 8)
Available Online at https://www.ojsstikesbanyuwangi.com/index.php/PHJ/index
E-ISSN 2715-6249

alertness and equipment of the local fire department. Often the preparedness of the building fire brigade is sometimes still inadequate (Saputra et al, 2019).

Meanwhile, the results of the 2008 National Safety Council (NSC) report showed that the occurrence of accidents in hospitals was 41% greater than for workers in other industries (Dwiari & Muliawan, 2019). A fire that hit a hospital in Beijing, China in 2023 caused 29 people to die (Arny, 2023). And hospitals in several areas in Sejong, South Korea in 2018 caused 37 people to die. In 2017, a fire occurred at a Sibu hospital, Malaysia, where at least around 1,000 people were evacuated from the hospital including patients, staff and visitors. Meanwhile, in 2013, a fire occurred at the Moscow Psychiatric Hospital, which caused 36 people to die (Saputra et al., 2019). In Indonesia from 1997 to 2018 there were 2,929 fire incidents (10% of disaster incidents). The fire caused 12,206 damage to houses, 333 people died, and 28 health service facilities suffered serious damage (National Disaster Management Agency, 2019). Based on data from Dr. Dradjat Prawiranegara experienced a fire disaster in 2020, the fire occurred due to an electrical short circuit caused by the dispenser and in 2022 an AC fire occurred due to overload (outdoor fuse burned). However, these two fires did not result in any casualties, the fires only resulted in material losses such as replacement of electrical cable installations.

The main and key factor in fire emergency preparedness is knowledge. Knowledge influences concern for preparedness. Knowledge about disasters, symptoms, causes and what to do if a fire occurs is a basic indicator of knowledge in preparing fire preparedness. According to research results by (Santosa, 2022), the results of respondents (49%) who had a research level showed that of the 48 high level of knowledge, there were 20 respondents (20%) who had a high level of preparedness and 28 respondents (29%) had a low level of preparedness. . Meanwhile, of the 50 respondents (51%) who had a low level of awareness, there were 3 respondents (3%) who had a high level of preparedness and 47 respondents (48%) had a low level of preparedness. So based on the results of the Chi Square statistical test analysis, a value of 0.000 was obtained. These results indicate that there is a relationship between the level of knowledge of disaster preparedness and fire emergency response among final year students at University X.

Attitude is a person's reaction that is still closed to an object or stimulus. It can also be called a person's attitude. Attitude is a predisposition to a person's action or behavior so that attitude is not yet an action (Qirana, 2018). According to the results of research by (Manik et al, 2020), it was found that 17.1% of respondents had unfavorable attitudes and 82.9% of respondents with good attitudes, so based on the results of statistical tests between the attitude variable and the preparedness variable, p=0.028 (≤0, 05) which shows that there is a relationship between attitude and preparedness.

The availability of fire protection facilities and infrastructure can be an enabling factor that can increase preparedness behavior against fire hazards. Based on previous research (Ika, 2016), it was found that 85.2% thought that the availability of fire protection facilities and infrastructure at Airport Terminal X was quite good. And it was found that 9.3% of respondents thought that the availability of fire protection facilities and infrastructure at Airport Terminal X was classified as poor. With this, based on statistical tests using the Spearman Rank test, a p value of 0.19 (≤0.05) was obtained, which can be concluded that statistically it shows that there is a relationship between the availability of facilities and infrastructure.

Fire training is a strengthening factor because it can increase the preparedness of team members in facing fires so that they are able to work to overcome fires effectively and efficiently. This is in line with research conducted by (Ika, et al. 2016) which states that fire training is significant at p 0.02 (p≤0.05), which means that this shows that there is a relationship between fire training and fire emergency response preparedness.

Dr. Hospital Prawiranegara, Dr. As a referral center for hospitals in the Banten province area—which includes the areas of Lebak, Pandeglang, Serang Regency, Serang City, and Cilegon City—Serrang Regency is a Class B non-educational hospital that must offer professional services. Where Dr. Dradjat Prawiranegara of RSUD is located Since Serang Regency is situated in the heart of Serang City, getting there by public or private transportation is quite simple. In Banten Province and its environs, RSUD Dr. Dradjat Prawiranegara is now easily accessible to the general public as a referral hospital. Patients from Pandeglang, Lebak, Cilegon, and Tangerang also visit Dr. Hospital Dradjat Prawiranegara because it is conveniently located in the Banten province. Consequently, a visit to RSUD doctor Dradjat Prawiranegara can be considered to have a high volume of both inpatient and outpatient visits, leading to a notable rise in the patient base.

Based on the findings of an initial study on ten employees of RSUD Dr. Dradjat Prawiranegara Serang District, it was discovered that 50% of respondents were unprepared to handle fire disasters. This included 20% of respondents who lacked training and 30% of respondents who lacked knowledge and attitude regarding fire emergency preparedness. With this background in mind, the purpose of this study is to identify the variables that will affect RSUD Dr. Dradjat Prawiranegara Serang Regency staff members' readiness for a fire in 2023.

Methods

This study used a cross-sectional design approach and quantitative research to examine the dynamics of correlation between factors and effects. It also used an observation approach and a point-in-time approach to collect data (Notoatmodjo, 2012). The information, attitudes, fire safety training, and fire protection infrastructure were the independent variables examined in this study. The fire emergency response system at RSUD DR. Dradjat Prawiranegara, on the other hand, is the dependent variable.

Interviews were the data collection method employed in this study. At RSUD Dr. Dradjat Prawiranegara in Serang Regency, 2023, this study was conducted from April to June of that year. All RSUD Dr. Dradjat Prawiranegara employees make up the study's population. Serang District has eighty-five workers. This study's sampling strategy is called Accidental Sampling, which allows any respondent who happens to cross paths with the researcher to be used as a sample if it is determined that the individual is a good source of data.

In order to investigate the dependent variable in this study—fire emergency response preparedness—respondents were directly interviewed while a questionnaire was also used. Alertness and non-alertness are two categories for fire emergency response readiness. Ignore the response if the respondent gave the questionnaire a score of less than 10. The independent variables studied were attitudes, knowledge, training, and fire protection facilities and infrastructure. The attitude variable explores information about employee responses in dealing with fires. Attitudes in this study were categorized as poor attitudes if the score was < 33, good if the score was ≥ 33. The knowledge variable explored information about respondents' understanding of fire emergency preparedness. Knowledge in this research is categorized as less alert if the score is < 8, alert if the score is ≥ 8. The training variable explores process information designed to maintain and improve employees' skills in dealing with fire emergency response preparedness. Training in this research is categorized as never if the score is < 3, never if the score is ≥ 3. The variable pertaining to fire protection facilities and infrastructure delves into the details of these resources that are readily accessible in the event of a fire. In this study, Fire Protection Facilities and Infrastructure were classified as good if their score

PROFESIONAL HEALTH JOURNAL
Volume 6, No. 1, December 2024 (Page 1- 8)
Available Online at https://www.ojsstikesbanyuwangi.com/index.php/PHJ/index
E-ISSN 2715-6249

was ≥ 6 or as poor if it was < 6. The relationship between the independent and dependent variables was examined univariately and bivariately using the Chi-Square test at a significance level of 5% (p value = 0.005). The Health Research Ethics Committee of the Faculty of Health Sciences at Faletehan University, with number 376/KEPK.UF/VI/2023, has certified this study as ethically sound.

Results

Table 1 Description of Fire Emergency Response Preparedness, Attitudes, Knowledge, Training, and Fire Protection Facilities and Infrastructure.

Variable	N	%
Fire Emergency Response Preparedness		
Less alert	32	37.6
Spry	53	62.4
Attitude		
Not good	41	48.2
Good	44	51.8
Knowledge		
Less alert	40	471
Spry	45	52.9
Training		
Never	32	37.6
Once	53	62.4
Fire Protection Facilities and Infrastructure		
Not good	38	44.7
Good	47	53.3

Variable N% Being ready for a fire emergency Kurana Alert 32 37.6 Never 53 62.4 Fire Protection Facilities and Infrastructure Poor 38 44.7 Good 47 535.3 Attitude Poor 41 48.2 Good 44 51.8 Knowledge Poor Alert 40 471 Alert 45 52.9 Training Never 32 37.6 Never 53 62.4 primary data as of 2023 According to Table 1, 44 respondents had a positive attitude (51.8%), 45 respondents had good knowledge (52.9%), 53 respondents (62.4%) were alert in their fire emergency response preparedness, and 47 respondents (55.3%) had good fire protection facilities and infrastructure. Table 2 indicates that the elements include infrastructure and facilities for fire protection as well as knowledge, attitude, and training.

Discussion

Being prepared involves planning ahead, being aware of potential threats, and being able to react quickly. As per the provisions of Law No. 24 of 2007 on disaster management preparedness, preparedness refers to a sequence of actions taken by organizations in anticipation of disasters and the taking of appropriate and efficient measures (Law No. 24 of

PROFESIONAL HEALTH JOURNAL
Volume 6, No. 1, May 2024 (Page 1-8)
Available Online at https://www.ojsstikesbanyuwangi.com/index.php/PHJ/index
E-ISSN 2715-6249

2007). Results from 85 respondents in a study conducted in 2023 on RSUD Dr. Dradjat Prawiranegara Serang Regency employees revealed that 53 (62.4%) of the respondents were aware of the importance of being prepared for a fire emergency, while 32 (37.6%) were not.

This is in line with research (Manik, 2020) which states that there were 70 respondents who were good at fire emergency response preparedness, there were 43 respondents (61.4%) who were good at fire emergency response preparedness, while there were 27 respondents (38.6%) poor fire emergency preparedness.

The assessment of fire emergency response preparedness in this study showed variations in the answers to the questions that had been designed, as many as 100% of respondents with preparedness for evacuation routes and gathering points for evacuation, as many as 100% of respondents with the installation and placement of APARs were placed in positions that were easy to see, as many as 100% of respondents with emergency door preparedness must be easy to open and in the same direction as the evacuation route to the gathering point, as many as 98% of respondents with preparedness APAR (Light Fire Extinguisher) and hydrants need to be provided on every floor, as many as 87% of respondents with preparedness in case of fire contact the fire management team, as many as 19% of respondents with preparedness in the event of a fire move to the location of the fire via the nearest road carrying an APAR, and as many as 18% of respondents with preparedness APARs and hydrants need to be placed in open spaces and must be protected with safety covers.

Table 2. Relationship Between Attitudes, Knowledge, Training, and Fire Protection Facilities and Infrastructure With Preparedness Responsive Emergency Fire On Employee Dr. Hospital Dradjat Prawiranegara Serang Regency

Variable	Preparedness and Response Emergency Fire				Total		P Value	OR
	Not enough Spry		Spry					
	N	%	N	%	N	%		
Attitude								
No Good	32	78.0%	9	22.0%	41	100	0,000	-
Good	0	0.0%	44	100.0%	45	100		
Knowledge								
Not enough Spry	32	80.0%	8	20.0%	40	100	0,000	-
Spry	0	0.0%	45	100.0%	45	100		
Training								
Never	16	50.0%	16	50.0%	32	100	0.111	-
Once	16	30.2%	37	69.8%	53	100		

PROFESIONAL HEALTH JOURNAL
Volume 6, No. 1, December 2024 (Page 1- 8)
Available Online at https://www.ojsstikesbanyuwangi.com/index.php/PHJ/index
E-ISSN 2715-6249

	Means And Infrastructure Protection Fire								
Good	Not enough	30	78.9%	8	21.1%	38	100	0,000	84,375
	Good	2	4.3%	45	95.7%	47	100		

Source: Data Primary 2023

Attitude

Attitudes in this study were categorized as good ≥ 33. As many as 73% of employees responded to fires. A total of 59% of respondents reported that they had come across objects or conditions that could start a fire, 58% of respondents saved themselves and their belongings in a fire by following the evacuation signs to the gathering point, 58% of respondents felt that it was important to know the evacuation signs, 53% of respondents felt that it was necessary to participate in fire extinguishing training held at the workplace, and 5% of respondents were unwilling to accept punishment if they broke fire prevention regulations. Attitudes in this study were classified as poor < 33 and respondents with an attitude of helping officers provide first aid to victims. The analysis's findings indicate a strong correlation between attitudes and readiness for a fire emergency response. This is consistent with research (Qirana, et al., 2018) that demonstrates the association between preparedness and attitude among Salatiga City Regional General Hospital IPSRS (Hospital Facilities Maintenance Installation) officers. A caring attitude will inspire enthusiasm for doing good preparedness actions for oneself and the people around them. This is how attitude and fire emergency preparedness are related. According to the Theory of Reasoned Action, which holds that attitudes affect behavior through the process of making decisions—in this case, the officer's decision to be ready for the possibility of fire in hospitals—attitudes can have an impact on a person's behavior throughout their life (Qirana et al, 2018).

Knowledge

In this study, "knowledge" refers to the respondents' comprehension of fire emergency response readiness. In this study, knowledge was divided into two categories: alert ≥ 8 and less alert < 8. Up to 98% of respondents were aware of the gathering place; up to 96% were aware of APARs (light fire extinguishers); up to 90% were aware of the possibility of a fire; up to 87% were aware of the definition of fire; up to 82% were aware of fire extinguishers; up to 51% were unaware of the warning signs of a fire; and up to 46% were unaware of the three elements of fire: oxygen, fuel, and heat.

The analysis's findings indicate a strong correlation between knowledge and readiness for a fire emergency response. This is consistent with research by Qirana et al. (2018), which found that there is a relationship between IPRS officers at Salatiga City Regional General Hospital's knowledge and preparedness.

There is a connection between knowledge and readiness for a fire emergency response; knowledge is the primary component and essential to readiness. Attitudes and readiness-related concerns are influenced by knowledge. Understanding of disasters, symptoms.

The fundamentals of preparing for a fire include knowing its causes and what to do in its event. Since knowledge is the primary and most important component of preparedness, the frequency with which someone acquires knowledge or information about it is significant. Attitudes and readiness-related concerns are influenced by knowledge. Understanding disasters, their signs and symptoms, their causes, and what to do in the event of a fire is a fundamental component of fire preparedness knowledge. Regularity (Qirana et al, 2020).

Training

Training in this research is defined as a process designed to maintain and improve employees' skills in fire emergency response preparedness. Training in this study was categorized as never

< 3 and categorized as ever ≥ 3. As many as 90% of respondents had attended APAR training, as many as 87% of respondents had never attended hydrant training, as many as 86% of respondents had never attended chair evacuation training, as many as 85% of respondents had never taken stretcher training, as many as 62 % have taken part in simple fire extinguishing training (wet burlap sacks, sand, etc.), 60% have taken part in fire simulation training,

and as many as 56% had attended fire evacuation training.

The results of the analysis show that there is no significant relationship between training and fire emergency response preparedness, this is because training is not a risk factor for fire emergency response preparedness. The other risk factors are knowledge, attitudes, and fire protection facilities and infrastructure. This is in line with research conducted by (Fitriani, et al. 2019) which can be concluded that there is no relationship between training and preparedness.

Fire Protection Facilities and Infrastructure

Fire Protection Facilities and Infrastructure in this research are defined as fire protection facilities and infrastructure that are available and easy to obtain when a fire occurs. Fire Protection Facilities and Infrastructure in this study were categorized as poor < 6 and categorized as good ≥ 6. As many as 100% of respondents had APAR available, as many as 99% of respondents had gathering points available, as many as 79% of respondents had emergency stairs available, 78% of respondents had evacuation routes available As many as 93% of respondents did not have a flame detector available, and as many as 87% of respondents did not have a heat detector available.

The results of the analysis show that there is a significant relationship between fire protection facilities and infrastructure

with fire emergency response preparedness. This is in line with research conducted by (Manik, et al, 2020) which can be concluded that statistically it shows that there is a significant relationship between the availability of fire protection facilities and infrastructure and emergency response preparedness in Aviation Security for the danger of fire at Airport Terminal X.

The existence of a relationship between fire protection facilities and infrastructure and fire emergency response preparedness means that it can be said that the availability of fire protection facilities and infrastructure can be an enabling factor that can increase preparedness behavior for fire hazards (Manik, 2020).

Conclusion

This research concludes that many employees are alert in dealing with fire disaster situations. What is not a risk factor for emergency response preparedness is training. Future researchers are expected to be able to examine socialization variables, length of service, age, and supervision of K3 officers

References

Ari, D., & Mulyawan. (2019). Faktor Yang Berhubungan Dengan Pelaksanaan Keselamatan dan Kesehatan Kerja di Rumah Sakit Umum Kota Denpasar. Journal arc.com.health Vol. 6 No. 2 : 17- 29.

Akhmad Yanuar Fahmi; Rudiyanto; Annisa, N. N. (2020). Pengaruh aplikasi sidimes berbasis android terhadap pengetahuan ibu balita tentang stunting. 12(4).

Akhmad, Yanuar Fahmi; Rudiyanto; Annisa, Nur Nazmi;Badrul, M. (2019). Pendidikan dan Pelatihan Mindfulness Spiritual Islam pada Penghuni LAPAS Banyuwangi Tahun 2019. Jurnal STIKES Pemkab Jombang, 39–42.

Arifuddin, Y. W., Yanuar, A., & Pamungkas, F. (2018). The Effect of Ruqyah Syar ' iyyah Therapy o n Anxiety , Stress and Depression Among Health Science Students. 1.

Badan Nasional Penanggulangan Bencana. (2019, Desember, 29). Dalam Article BNPB: Kerugian Kebakaran Hutan dan Lahan Sepanjang 2019 Capai 75 Triliun. https://bpbd.kulonprogokab.go.id/detil/358/undang-undang-no-24-tahun- 2007. Desember, 29, 2019.

Fitriyana, I., Ekawati, & Kurniawan, B. (2016). Faktor-Faktor Yang Berhubungan Dengan Kesiapsiagaan Tanggan Darurat Pada Aviation Security Terhadap Bahaya Kebakaran Di Terminal Bandara X. Jurnal Kesehatan Masyarakat Volume 4, Nomor 3, Juli 2016 421-422.

Irawan. (2015, November 4). Jalan Keluar/Akses Evakuasi.Retrieved from https://surabaya.proxsisgroup.com/jal an-keluarakses-evakuasi/Artikel Safety.

Manik, W. O., Kurniawan, D., & Wahyuni, I. (2020). Hubungan Pengetahuan, Sikap, dan Dukungan Pengelola Terhadap Kesiapsiagaan Pedagang Dalam Upaya Pencegahan Kebakaran Di Pasar Semawis Kota Semarang. Jurnal Kesehatan Masyarakat Volume 8, Nomor 4 Juli 2020, 486-487.

Moenir (2021, Juli, 12). Pentingnya Sarana dan Prasarana Retrieved from https://www.kompasiana.com/anisanrlft rr/60ebed741525102be10a7502/penting nya-sarana-dan-prasarana-pendidikan. 14 Kompasiana Database.

Oktaviana. (2018). Fakktor-Faktor Yang Berhubungan Dengan Kesiapsiagaan Tanggap Darurat Kebakaran Pada Mahasiswa Tingkat 3 Prodi Kesehatan Masyarakat di Universias Faletehan Serang Tahun 2018. Serang: Skripsi.

Peraturan Menteri Pekerjaan Umum. (2008). Peraturan Menteri Nomor 26/PRT/M/2008 Tentang Persyaratan Teknis Sistem Proteksi Kebakaran Pada Bangunan Gedung dan Lingkungan. Jakarta: Direktorat Jendral Cipta Karya.

Salsabila, N. M. (2021). Pencegahan dan Kesiapsiagaan Penanggulangan Bencana Kebakaran Pada RSIA Siti Khadijah 1 Muhammadaiyah Cabang Makassar Tahun 2021 . Makassar: Skripsi.

Saputra. (2019). Studi Analisis Manajemen dan Sistem Proteksi Kebakaran di Rumah Sakit X Jakarta Timur. Jurnal Kesehatan Masyarakat. Vol. 3 No. 1 April 2019

Tupulu, P. N. (2015). Sistem Proteksi Kebakaran Kawasan Permukiman danPerkantoran. Jakarta: PT. Alumni.

Wirawan, & W. (2008). Penegakan Peraturan Keselamatan dan Kesehatan Kerja Rumah Sakit (K3RS) dan Peran Dinas Kesehatan. Journal Global Health Science Volume 2 Issue 1. Maret, 2017

Pamungkas, A. Y. F., Budi, Y. S., Seftianingtyas, W. N., Salanti, P., Devi, T. E. R., Muninggar, M., Hakiki, M., Amin, M. Al, Rahmawati, A. N., Handayani, P. A., & Rudiyanto, R. (2023). Family support and coping strategies among female inmates: a cross-sectional study in penitentiaries. Healthcare in Low-Resource Settings. https://doi.org/10.4081/hls.2023.11736

Pamungkas, A. Y. F., Trianita, D., Damayanti, F. E., Qomariyah, A., Wahyuni, L. E. T., Munif, B., & Wirawati, W. A. (2021). A study on the relationship between banyuwangi government policy mall orang sehat mall of health people with the acceptance of the coronavirus disease 2019 vaccine in indonesian – implications for vaccination implementation policies. Open Access Macedonian Journal of Medical Sciences, 9, 1021–1025. https://doi.org/10.3889/oamjms.2021.7388

Yanuar, A., Dwidiyanti, M., & W, D. Y. (2018). Effectiveness of Mindfulness on Decreasing Stress in Health Professional Students : A Systematic Review. 1.

Yanuar, A., & Pamungkas, F. (2019). Hubungan Dukungan Sosial dengan Tingkat Stres pada Warga Binaan Pemasyarakatan Perempuan di Lembaga Pemasyarakatan. 2(2), 42–47.

Yanuar, A., Pamungkas, F., Trianita, D., & Wilujeng, A. P. (2022). Pengaruh OTOF (One Team Student One Family) terhadap Pengetahuan Ibu dengan Balita Mencegah Stunting. In Journal of Holistic Nursing and Health Science (Vol. 5, Issue 2). https://ejournal2.undip.ac.id/index.php/hnhs