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The Effect of Digital Flipbook on the Behavior of Using Light Fire Extinguisher in X Hospital Workers

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ABSTRACT

Based on data from the Indonesian National Police, there were 5,336 fire cases from May 2018 to July 2023. In October 2021 Hospital X experienced a fire in the Pharmacy Building. The easiest fire protection tool to use is light fire extinguisher. In order for workers to understand the use of light fire extinguisher, it is necessary to carry out training. Light fire extinguisher training can be carried out by providing digital flipbooks via WhatsApp. This study aims to determine the effect of digital flipbooks on fire extinguisher use behavior in X Hospital workers. The research method is True Experiment Design. The sample in this study were 44 workers and used total sampling. Data analysis in this study using the independent T test and Mann Whitney Test which obtained a Sig value. 0.000 less than 0.05 which means that there is an influence of digital flipbooks on knowledge, attitudes, and skills in the use of fire extinguishers. It is hoped that light fire extinguisher training will be carried out evenly to every worker in the hospital, if a fire occurs workers can extinguish the fire using light fire extinguisher.

1. Introduction

Based on data from the National Fire Protection Association (NFPA) in 2022, local fire departments reported approximately 1.5 million fires in the United States. These fires caused 3,790 civilian fire deaths and 11,350 civilian fire injuries. The damage to buildings caused by these fires was approximately $18 billion (Hall, 2023). Based on data from the Indonesian National Police, there were 5,336 fire cases from May 2018 to July 2023. Of this data, 24.79% or 1,323 fire cases occurred at the beginning of 2023 until July 19, 2023. Fire cases in Indonesia have increased. The highest fire case occurred in June 2023, which was 133 cases (Mustajab, 2023).

One of the places at risk of fire is a hospital. Hospitals are at risk of large-scale fires, in line with Syam et al. (2023) who explain that hospitals are at high risk of large-scale fires because hospital activities use enormous electrical power because they operate non-stop, use gas cylinders that have pressure, and use chemicals with flammable and explosive characteristics. In October 2021 Hospital X experienced a fire which was predicted to be due to an electrical short circuit. This fire occurred in the Pharmacy Building, to be precise in the 2nd floor Logistics Warehouse which contains personal protective equipment, health materials, and medical devices. There were no fatalities in the fire, but there were a lot of material losses due to the fire. There have been many cases of fires occurring in hospitals. On January 26, 2018 there was a fire at Sejong Hospital, Miryang, South Korea. The death toll in this fire was 37 people and hundreds of other people were injured in this incident. On October

24, 2017 there was a fire at Fatmawati Hospital, South Jakarta, the fire was predicted due to a short circuit (Astrianti & Elwindra, 2019).

The risk of fire in hospitals is high. Fire disasters can cause losses in a short time, both losses in the form of material and loss of life because the fire can spread quickly (Mulya, 2019). Radiology room is a place that is at risk of fire, because in the radiology room there are various kinds of tools that use electricity. If there is a fire in the radiology room, it will not only cause huge material losses but also loss of life (Salvaraji et al., 2022). The casualties in this fire are not only workers, patients, and patients' families can become casualties if there is a fire in the radiology room. Laboratories are at risk of fire because there are various types of chemicals that have flammable characteristics, oxidizing chemicals, explosives can cause fires (Umar, 2020).

Hospitals are equipped with a full range of electrical equipment. This equipment differs according to its location and function. Hospitals are well known for their biological hazards, but recent hospital fires have highlighted that electrical hazards are a major crucial issue in hospital environments (Salvaraji et al., 2022). This is because fires are life-threatening and damage to assets is costly (Umar, 2020). Electrical hazards can cause losses to hospitals and are known to be the main cause of fire incidents. This can be seen from most of the reports of fire and rescue teams that damaged or shorted cables are the main cause of fires. Hospitals are at high risk of fire because they are equipped with flammable materials such as oxygen, reagents for laboratory tests, materials made of plastic, and others. Large amounts of electricity are used in radiology departments such as X-ray machines, computerized tomography, and magnetic resonance imaging which are used to determine the diagnosis of patients (Salvaraji et al., 2022).

The impact of losses arising from fires is not only material, but there are losses of life, and the environment. Fire disasters can be caused by several things, including the community's lack of understanding and awareness of the dangers posed by fires, low worker competence, people who are less alert in dealing with fires, inadequate fire protection facilities and systems, and the absence of a good fire handling system (Abdullah et al., 2021). In the Peraturan Menteri Kesehatan Republik Indonesia Nomor 66 Tahun 2016 on Hospital Occupational Safety and Health (K3RS), the government obliges that each hospital organize Hospital Occupational Safety and Health (K3RS), which one of them is related to fire prevention and management by fulfilling fire extinguishers, fire protection facilities, means of rescue and the presence of a fire management team (Saputra et al., 2022). One of the easiest fire protection tools to use is the light fire extinguisher. All workers in the hospital must know and understand the use of light fire extinguisher in the hospital (Sholeh et al., 2021).

Workers' behavior towards light fire extinguisher is related to the use of light fire extinguisher, this is in line with research by Wardani et al. (2023) which states that workers who have good behavior towards light fire extinguisher will be able to extinguish fires using light fire extinguisher when a fire occurs. Behavior is divided into three domains according to Benjamin Bloom, namely cognitive (knowledge), affective (attitude), and psychomotor (practice) which are interrelated with each other (Pandelaki et al., 2021). Workers' knowledge regarding the use of fire extinguishers is very important. Not only knowledge, attitude is important in shaping a person's behavior. Knowledge is related to attitude, this is in line with Wardani et al. (2023) research which states that there is a correlation between light fire

extinguisher knowledge and the attitude of using light fire extinguisher. Nurses who have good knowledge have a positive attitude towards using light fire extinguisher. In order for workers to be able to extinguish fires using light fire extinguisher when a fire occurs, it is necessary for workers to have sufficient knowledge on the use of light fire extinguisher, have a positive attitude towards the use of light fire extinguisher, and have the skills to use light fire extinguisher (Wardani et al., 2023). If workers have good knowledge, attitudes, and skills in using fire extinguishers, then when a fire disaster occurs workers can be alert and skilled in using fire extinguishers (Zulkifli & Mangindara, 2020). If workers in hospitals are able to use light fire extinguisher, the risks arising from fires such as loss of life, material, and the environment can be avoided.

In order for workers to understand the use of light fire extinguisher, it is necessary to carry out training. Light fire extinguisher training aims to train workers to be alert and skilled if they are in a fire emergency at any time, so if a fire occurs workers can decide on actions that can be taken to reduce losses due to fire (Zulkifli & Mangindara, 2020). In the event of a fire, it is expected that all elements in the hospital, especially workers in the radiology and laboratory sections who are at high risk of fire, will be able to extinguish the fire immediately so that the impact caused by the fire can be minimized. Training can improve workers' knowledge, attitudes and skills (Supardi, 2019). In the era of globalization, the field of technology and information is developing rapidly, the flow of globalization can greatly affect life (Setyaningsih, 2023).

Training that can be used in this era of globalization is by utilizing learning media in digital form. One of the learning media in digital form that can make it easier for workers to understand learning materials is by using digital flipbooks (Sulastri & Hilman, 2023). Digital flipbooks only require devices to read such as smartphones, laptops, computers, and other devices. In the learning process, the use of digital flipbook can be opened anytime and anywhere which allows users to learn more freely and flexibly (Sulastri & Hilman, 2023). Digitally designed books can be an alternative to increase interest in reading and can be stored on each worker's smartphone as personal reading and learning material. Digital flipbooks as a form of product from this research are compiled and made by researchers. This digital flipbook is different from e-books in general, e-books are often only shared in PDF format which has a lot of pages, thus reducing workers' reading interest. This digital flipbook uses new technology so that it can increase respondents' reading interest (Setiawati & Andayani, 2022). Therefore, by utilizing current technology, researchers create interactive and efficient digital flipbooks to convey material about light fire extinguisher. Often light fire extinguisher training is carried out directly to workers as in research conducted by Purwanto (2023). In research by Hillah et al. (2022) light fire extinguisher training was conducted using poster media. In research by Fransysca et al. (2024) and research by Purba et al. (2023) light fire extinguisher training was conducted using video media. Light fire extinguisher training using digital flipbooks has never been done. Therefore, digital flipbooks are expected to be a novelty in this study. Based on the description above, research is needed to determine the effect of digital flipbooks on the behavior of using light fire extinguishers consisting of knowledge, attitudes, and skills in using light fire extinguisher in X Hospital workers. This study aims to determine the effect of digital flipbooks on light fire extinguisher use behavior consisting of knowledge, attitudes, and skills in using light fire extinguisher in Hospital X workers. The existence of training using this digital flipbook can be a preventive measure to prevent fires in hospitals, especially in radiology and laboratories that are at high risk of fire.

2. Method

This study uses an experimental research method that uses True Experiment Design. In this study, researchers divided the population into two groups, there was a control group (without being given digital flipbook intervention) and a treatment group (given digital flipbook intervention). The posttest scores between the control group and the experimental group will be compared. The research was carried out at X Hospital from December 2023 to January 2024. The population of this study were all workers in the radiology and laboratory departments of Hospital X totaling 44 workers. The research was conducted in the radiology department and laboratory because the radiology room is a place at risk of fire, because in the radiology room there are various kinds of equipment that use electricity. If there is a fire in the radiology room, it will not only cause huge material losses but also loss of life (Salvaraji et al., 2022). The casualties in this fire are not only workers, patients and patients' families can become casualties if there is a fire in the radiology room. Laboratories are at risk of fire because there are various types of chemicals that have flammable characteristics, oxidizing chemicals, explosives can cause fires (Umar, 2020). This study uses total sampling because the total population is less than 100 people (Sugiyono in Husna & Narulita, 2021). The control group in this study amounted to 22 workers involving laboratory workers and workers in the radiology section. The experimental group in this section amounted to 22 workers involving laboratory workers and workers in the radiology section.

The experimental group was given a training intervention by providing a digital flipbook related to light fire extinguishers on a link provided via WhatsApp workers. This intervention was carried out to determine whether the provision of digital flipbooks could improve the knowledge, attitudes, and skills of using fire extinguishers in X Hospital workers. This digital flipbook only contains 12 pages, which consists of various colors, text, and images that can attract workers' attention to read the information in it. The content of this digital flipbook contains a summary of all aspects of light fire extinguisher related material, starting from the definition of fire, classification of fire classes, understanding light fire extinguisher, types of light fire extinguisher, light fire extinguisher parts and their functions, light fire extinguisher placement, to procedures for using light fire extinguisher.

This research is a quantitative study and uses primary data obtained from measuring knowledge, attitudes, and skills in using fire extinguishers on workers before and after the intervention. Data collection was carried out using questionnaires to determine the level of knowledge and attitudes of workers and observation checklists to measure workers' skills. In this study, a questionnaire administered via google form containing questions regarding knowledge and attitudes regarding the use of fire extinguishers and an observation checklist containing the steps of using fire extinguishers was given before the intervention with a pretest and after the intervention with a posttest. Pretest and posttest were given by researchers by giving questionnaire questions via WhatsApp to find out differences in knowledge and attitudes, as well as observation checklists filled out by researchers to find out differences in workers' fire extinguisher use skills. The independent variable in this study is digital flipbook. The dependent variables in this study are knowledge, attitudes, and skills in the use of fire extinguishers. The questionnaire given has gone through the validity and reliability test stages carried out by expert lecturers and respondents in the nutrition section (kitchen) in the same hospital. The validity test was conducted on nutrition workers, because nutrition workers work in the hospital kitchen, the kitchen is a place with a high risk of fire in the hospital. The results of the validity test of knowledge and attitudes that have been done to 15 nutrition

workers get a pearson correlation value> 0.514, which means that the knowledge and attitude questionnaire gets valid results. The results of the knowledge reliability test >0.60 are 0.879 and the results of the attitude reliability test >0.60 are 0.877, which means that the knowledge and attitude questionnaires get reliable results. Data analysis in this study used univariate analysis with descriptive statistics and bivariate analysis with independent T test and Mann Whitney test.

Researchers have submitted an ethical feasibility test before research at RUMKITAL dr. Mintohardjo with number: B/47/EC/LKS/I/RSMTH/2024. After the ethical feasibility test, the researcher gave informed consent to workers who would become research respondents. After the researcher gave informed consent, the researcher asked the respondent to fill out a questionnaire and the researcher filled out an observation checklist by asking the worker to simulate how to use light fire extinguisher. The data that has been obtained will be analyzed using descriptive analysis, independent T test and Mann Whitney test, and then draw conclusions.

3. Result and Discussion

3.1 Univariate Analysis

Univariate analysis commonly referred to as descriptive analysis, is a statistic used to describe statistical data obtained from survey or research results but is not used or intended to draw broader conclusions (Setyawan, 2022). Descriptive analysis is carried out based on mean, standard deviation, maximum, minimum, category, frequency, and percentage. Table 1 show about descriptive analysis of knowledge.

Table 1. Descriptive Analysis of Knowledge of the Use of Light Fire Extinguisher

Class	Group	N	Min	Max	Mean	SD	Category	Frequency	Percentage
Pretest	Control	22	4	10	7,05	1,704	Good	0	0,00%
							Sufficient	10	45,45%
							Less	12	54,55%
	Experiment	22	3	10	7,18	1,842	Good	0	0,00%
							Sufficient	10	45,45%
							Less	12	54,55%
Posttest	Control	22	3	10	7,09	1,875	Good	0	0,00%
							Sufficient	13	59,09%
							Less	9	40,91%
	Experiment	22	10	14	12,23	1,378	Good	19	86,36%
							Sufficient	3	13,64%
							Less	0	0,00%

Source: Primary Data, 2024

Table 1 shows that the pretest value of knowledge of the control group found that there were no workers in the good category, for the sufficient category there were 10 workers who had a percentage of 45.45%, and in the less category there were 12 workers who had a percentage of 54.55%. The pretest value of knowledge in the experimental group found that there were no workers in the good category, for the sufficient category there were 10 workers who had a percentage of 45.45%, and in the less category there were 12 workers who had a percentage of 54.55%. The posttest value of knowledge in the control group found that there

were no workers in the good category, for the sufficient category there were 13 workers who had a percentage of 59.09%, and in the insufficient category there were 9 workers who had a percentage of 40.91%. The posttest scores of the experimental group who got the good category were 19 workers who had a percentage of 86.36%, in the sufficient category were 3 workers who had a percentage of 13.64%, and there were no workers who scored in the less category.

The average obtained from the pretest results of knowledge in the control group was 7.05 and in the posttest was 7.09, the average knowledge of the control group increased by 0.04. For the average obtained from the pretest results of the experimental group's knowledge, namely 7.18 and on the posttest, namely 12.23, the average knowledge of the experimental group increased by 5.05. The average posttest results of the experimental group are higher than the average posttest results of the control group, so the digital flipbook has an effect on knowledge of the use of light fire extinguishers. Table 2 show about descriptive analysis of attitude.

Table 2. Descriptive Analysis of Attitude of the Use of Light Fire Extinguisher

Class	Group	N	Min	Max	Mean	SD	Category	Frequency	Percentage
Pretest	Control	22	37	53	45,36	4,215	Good	12	54,55%
							Sufficient	10	45,45%
							Less	0	0,00%
	Experiment	22	36	54	43,14	4,714	Good	7	31,82%
							Sufficient	15	68,18%
							Less	0	0,00%
Posttest	Control	22	37	53	45,09	4,482	Good	11	50%
							Sufficient	11	50%
							Less	0	0,00%
	Experiment	22	48	60	54,73	3,881	Good	19	86,36%
							Sufficient	3	13,64%
							Less	0	0,00%

Source: Primary Data, 2024

Table 2 shows that the pretest value of the attitude of the control group who got the good category was 12 workers who had a percentage of 54.55%, in the sufficient category was 10 workers who had a percentage of 45.45%, and there were no workers who scored in the less category. The pretest value of the attitude of the experimental group who got a good category was 7 workers who had a percentage of 31.82%, in the sufficient category were 15 workers who had a percentage of 68.18%, and there were no workers who scored in the less category. The posttest value of attitude in the control group who got the good category was 11 workers who had a percentage of 50%, in the sufficient category was 11 workers who had a percentage of 50%, and there were no workers who scored in the less category. The posttest value of the attitude of the experimental group who got a good category was 19 workers who had a percentage of 86.36%, in the moderate category were 3 workers who had a percentage of 13.64%, and there were no workers who scored in the less category.

The average obtained from the pretest results of the attitude in the control group was 45.36 and in the posttest was 45.09, the average result of the attitude of the control group decreased by 0.27. For the average obtained from the pretest results, the attitude of the experimental group was 43.14 and on the posttest was 54.73, the average attitude of the experimental group increased by 11.59. The average posttest results of the experimental group are higher than the average posttest results of the control group, so the digital flipbook has an

effect on the attitude of using light fire extinguisher. Table 3 show about descriptive analysis of skills of the use of light fire extinguisher.

Table 3. Descriptive Analysis of Skills of the Use of Light Fire Extinguisher

Class	Group	N	Min	Max	Mean	SD	Category	Frequency	Percentage
Pretest	Control	22	1	3	1,73	0,703	Good	3	13,64%
							Sufficient	10	45,45%
							Less	9	40,91%
	Experiment	22	1	3	1,68	0,568	Good	1	4,55%
							Sufficient	13	59,09%
							Less	8	36,36%
Posttest	Control	22	1	3	1,77	0,685	Good	3	13,64%
							Sufficient	11	50%
							Less	8	36,36%
	Experiment	22	2	3	2,82	0,395	Good	18	81,82%
							Sufficient	4	18,18%
							Less	0	0,00%

Source: Primary Data, 2024

Table 3 shows that the pretest value of the skills of the control group who got the good category was 3 workers who had a percentage of 13.64%, in the sufficient category were 10 workers who had a percentage of 45.45%, and in the less category were 9 workers who had a percentage of 40.91%. The pretest value of skills in the experimental group who got the good category was 1 worker who had a percentage of 4.55%, in the sufficient category was 13 workers who had a percentage of 59.09%, and in the insufficient category was 8 workers who had a percentage of 36.36%. The posttest value of skills in the control group who got the good category was 3 workers who had a percentage of 13.64%, in the sufficient category were 11 workers who had a percentage of 50%, and in the insufficient category were 8 workers who had a percentage of 36.36%. The posttest value of skills in the experimental group who got a good category was 18 workers who had a percentage of 81.82%, in the sufficient category was 4 workers who had a percentage of 18.18%, and there were no workers who scored in the less category.

The average obtained from the pretest results of skills in the control group was 1.73 and in the posttest was 1.77, the average skill of the control group increased by 0.04. For the average obtained from the pretest results of the experimental group skills, namely 1.68 and on the posttest, namely 2.82, the average skill of the experimental group increased by 1.14. The average posttest result of the experimental group is higher than the average posttest result of the control group, so the digital flipbook has an effect on the skills of using light fire extinguisher.

3.2 Normality Test

Based on the results of the normality test, the knowledge and skills test results are not normally distributed, while the attitude test results are normally distributed.

3.3 Mann Whitney Test

The Mann Whitney test is a non parametric test, used to analyze whether or not there are differences in unrelated populations. In the knowledge and skills test results, the data was not normally distributed, so the Mann Whitney test was used. Table 4 show mann whitney test.

Table 4. Mann Whitney Test Results

Variable	Mann Whitney U	Z	Asymp. Sig (2 Tailed)
Knowledge	1.500	-5.692	0,000
Skills	61.000	-4,619	0,000

Source: Primary Data, 2024

3.4 The Effect of Digital Flipbook on Knowledge

Based on table 4 of the Mann Whitney test results, the results of the knowledge posttest between the control group and the experimental group get a significance value (sig.) 0.000, then the sig value <0.05 which gets the conclusion that there is a significant average difference between the posttest knowledge of the control group and the experimental group. The average results of the knowledge posttest that have been obtained in the experimental group are higher than the control group. This means that there is an effect of giving digital flipbooks on knowledge of the use of light fire extinguisher.

3.5 The Effect of Digital Flipbook on Skills

Based on table 4 of the Mann Whitney test results, the posttest skill results between the control group and the experimental group get a significance value (sig.) 0.000, then the sig value <0.05, which means that there is a significant average difference between the posttest skill scores in the control group and the experimental group. The average posttest skills of the experimental group were higher than the control group. This means that there is an effect of giving digital flipbooks on the skills of using light fire extinguisher.

3.6 Independent T Test

Table 5 show about independent T test. The independent T test is used to know whether there is a difference in the average of two groups that are not related to each other (Prameswari & Rahayu, 2020). In the attitude test results, the data is normally distributed, so the data analysis uses the independent T tes

Table 5. Independent T Test Results

Variables	F	t	Sig (2 Tailed)
Attitude	0,305	-7,623	0,000

Source: Primary Data, 2024

3.7 The Effect of Digital Flipbook on Attitude

Based on table 5 of the Independent T test results, the attitude posttest results between the control group and the experimental group get a significance value (sig.) 0.000, then the sig value <0.05 which concludes that there is a significant average difference between the attitude posttest scores in the control group and the experimental group. The average results of the attitude posttest that have been obtained in the experimental group are higher than the control

group. This means that there is an effect of giving digital flipbooks on the attitude of using light fire extinguisher.

The results obtained from the Mann Whitney test and the Independent T test are that the average posttest in the experimental group given a digital flipbook is greater than the control group that was not given a digital flipbook, there is a significant average difference between the control group and the experimental group. There was an increase in knowledge, attitudes, and skills in the use of fire extinguishers in the experimental group that had been given treatment or training intervention with digital flipbooks. This shows that training with digital flipbook has an effect on light fire extinguisher use behavior, namely knowledge, attitudes, and skills in using light fire extinguisher. The results of research that have been conducted by researchers are in line with the "Precede-Proceed Model" theory developed by Lawrence Green in 1980. Lawrence Green suggests that human behavior is determined by three factors, namely predisposing factors, enabling factors, and reinforcing factors (Rachmawati, 2019). These three factors can shape the behavior of using light fire extinguisher. In this theory Lawrence Green states that health promotion, namely health education, can influence the behavior of using light fire extinguisher. Providing interesting and appropriate information using digital flipbooks can support the improvement of knowledge, attitudes, and skills in the use of fire extinguishers. Training using digital flipbooks can provide information to workers about fire extinguishers, thus influencing the behavior of using fire extinguishers because workers' knowledge, attitudes and skills increase. With training, respondents can develop ideal mindsets, behaviors, skills, knowledge and attitudes (Wardani et al., 2023).

Based on the results of the Mann Whitney test, the knowledge variable gets a significant value (sig) of 0.000, which means the sig value. < 0,05. So there is a significant difference in the average posttest between the posttest value of knowledge in the control group and the experimental group. Training with the provision of digital flipbooks can affect knowledge in the experimental group that has been given training interventions with the provision of digital flipbooks getting an average posttest value of knowledge greater than the control group. Fire extinguisher training can affect the knowledge of the use of fire extinguishers in X Hospital workers. If there is no training related to light fire extinguisher, then workers do not understand and know how to use light fire extinguisher. In line with Ginting et al., (2023) research which suggests that the knowledge of nurses in the inpatient room at RSU Sembiring Delitua about the use of light fire extinguisher has poor knowledge. This is because many respondents did not receive education and training related to the use of light fire extinguisher, so that nurses did not know or even understand at all about light fire extinguisher such as benefits, types of light fire extinguisher, objectives, procedures for using light fire extinguisher, and effects when using light fire extinguisher incorrectly.

Knowledge is a very influential variable in the behavior of using light fire extinguisher, in line with Umar & Margatama (2019) research conducted by which states that there is a significant correlation between knowledge and behavior in using light fire extinguisher in workers at PT Adhi Persada Gedung Bekasi 2018, workers who have good behavior in using light fire extinguisher tend to have high knowledge. Behavior based on knowledge will be more consistent than behavior that is not based on knowledge Nursalam in Rachmawati, (2019). If the worker gains knowledge, the worker behaves according to his knowledge. So, light fire extinguisher training is very helpful to increase knowledge about light fire extinguisher. Therefore, light fire extinguisher training must be carried out regularly so that workers always

remember and increase workers' knowledge about light fire extinguisher. According to Notoatmodjo's theory, education is closely related to knowledge. If individuals are highly educated, they will gain extensive knowledge, but if individuals with low education do not necessarily have low knowledge (Wardani et al., 2023). According to Wardani et al., (2023), the knowledge obtained by nurses is not only from formal education, but by participating in training on the use of fire extinguishers, nurses get sufficient knowledge about the use of fire extinguishers because nurses can get lessons about fire extinguishers. Information obtained with formal or informal education can increase knowledge (Sutriningsih et al., 2021).

Information about light fire extinguisher is obtained by workers through training that can be carried out by utilizing internet technology in the current era of globalization. Training can be carried out using a digital flipbook which contains the definition of fire, classification of fire classes, definition of light fire extinguisher, types of light fire extinguisher, light fire extinguisher parts and their functions, light fire extinguisher placement, and procedures for using light fire extinguisher. The advantages of digital flipbooks are that this book can be opened anytime and anywhere because it is not limited by distance and time and the content of this digital flipbook contains a summary of material about light fire extinguisher. This digital flipbook uses new technology so that it can increase respondents' interest in reading. Therefore, by utilizing current technology, researchers create interactive digital flipbooks to convey material about light fire extinguisher. According to Bloom, knowledge involves the ability to recall material that has been previously taught (Wardani et al., 2023). Workers who have received training on the use of fire extinguishers have good knowledge related to the use of fire extinguishers. This is because these workers are able to recall the material about light fire extinguisher that they have previously learned in training. Research by Jajuli et al. (2023) suggests that there is an increase in maternal knowledge about diarrhea in toddlers after the implementation of health promotion using flipbooks. Research by Setiawati & Andayani (2022) explained that there is a difference in the average value of knowledge of FKM USU students about physical activity between before and after being given flipbook media, flipbooks are more effective in increasing knowledge than video media in FKM USU students about physical activity. Research by Sulastri & Hilman (2023) explained that knowledge about pregnancy planning in women of childbearing age increased after provided education with flipbook media.

Based on the results of the independent T test, the attitude variable gets a significant value (sig) of 0.000, which means the sig value. < 0,05. So there is a significant difference in the average posttest between the posttest values of attitudes in the control group and the experimental group. Training with the provision of digital flipbooks can affect attitudes, in the experimental group who have been given training interventions with the provision of digital flipbooks get an average posttest value of attitude that is greater than the average in the control group. Light fire extinguisher training affects the attitude of using light fire extinguisher on Hospital X workers. In line with Wardani et al. (2023) who stated that nurses who have received light fire extinguisher training have a more positive attitude towards the use of light fire extinguisher than nurses who have not received training on light fire extinguisher. Individuals with low knowledge affect attitudes and actions when responding to something (Ginting et al., 2023). It is important for workers in hospitals to know how to use light fire extinguisher so that if a fire occurs workers can understand the actions that must be taken if a fire occurs. To get a positive attitude, sufficient information is needed. Providing sufficient information is a way that can be used to change individual behavior to get a positive attitude

(Wulan, 2020). In this study, workers in the experimental group who had been given a digital flipbook had a positive attitude towards using fire extinguishers because they had obtained information about fire extinguishers.

Notoatmodjo in Sutriningsih et al. (2021) states that the attitude in fire management is the level of readiness of individuals in dealing with fires. Individual experience and educational institutions can build knowledge because knowledge can influence a person's attitude to dealing with fire. Highly knowledgeable individuals will respond if the environment provides stimuli if there is danger in the area. Information obtained from mass media can influence attitudes. A person's personal experience can influence attitudes because it can shape a person's attitude. The role of knowledge and personal experience on how to cope with fires can be an aspect that should not be ignored because it is an aspect of the formation of attitudes to cope with fires (Sutriningsih et al., 2021). Personal experience can be obtained when individuals participate in training which ultimately affects the formation of a person's attitude (Wardani et al., 2023). Digital flipbooks provided via WhatsApp can provide a lot of information about fire extinguishers so as to influence the attitude of using fire extinguishers. In line with Wardani et al. (2023) research which explains that communication tools such as mass media have a significant influence on a person's beliefs and subsequently have an impact on attitude formation. Providing interventions in the form of training with digital flipbooks regarding fire extinguishers gets a positive response from workers so as to encourage workers to carry out changes to a more positive attitude to prevent fires in hospitals.

Based on the results of the Mann Whitney test, the skill variable has a significant value (sig) of 0.000, which means the sig value. < 0,05. So there is a significant difference in the average posttest between the posttest value of skills in the control group and the experimental group. Training conducted through the provision of digital flipbooks can affect skills, in the experimental group who have been given training interventions by providing digital flipbooks get an average posttest value of skills that is greater than the control group. Light fire extinguisher training using digital flipbooks can affect the skills of using light fire extinguisher on Hospital X workers.

Regular training is a mandatory activity to improve the skills of fire extinguisher use among workers (Kurniawan, 2023). The purpose of fire training is to improve the quality and competence to prevent fires. Skills improvement can be realized by training. Training can make workers' abilities increase in concepts, morals, theories, and how to use fire extinguishers. The skills and abilities of workers as a preventive effort in dealing with fires can be supported by training (Wardani et al., 2023). Training is learning that focuses on skills. Training is the foundation of the application of individual skills. Training should be carried out routinely, which is used to remember and improve knowledge and skills that have been previously owned. The development of knowledge can be known from individual abilities that can be applied in the form of skills (Ramadia et al., 2021). Providing training on fire extinguishers using digital flipbooks can improve skills in workers, in line with Mu'minin et al., (2022) research that explains the existence of training on fire extinguishers can improve a person's skills to extinguish a fire when a fire occurs. Based on Mu'minin et al. (2022) security who have participated in training have better skills and knowledge than security who have not participated in training. Research by Novitasari et al. (2023) suggests that flipbooks are an effective tool for improving the narrative writing skills of fifth grade students of SDN 03 Madiun Lor. Research by Utari et al. (2024) shows that flipbook in Indonesian language learning can

improve the skill of writing fairy tales for elementary school students. Research by Maryatin et al. (2024) suggests that flipbook can improve reading skills of students of class XII IPS 2 at SMA Negeri 4 Balikpapan. In order for workers to be able to extinguish fires using light fire extinguisher when a fire occurs, it is necessary for workers to have sufficient knowledge about the use of light fire extinguisher, have a positive attitude towards the use of light fire extinguisher, and have the skills to use light fire extinguisher. If the availability of fire extinguishers is not supported by good knowledge, attitudes, and skills in using fire extinguishers, then workers cannot use fire extinguishers in the event of a fire. If workers in hospitals are able to use fire extinguishers, the risks caused by fires such as loss of life, material, and the environment can be avoided.

4. Conclusion

Based on the data analysis that has been carried out, it can be concluded that there is a significant difference in the average posttest score between the control group and the experimental group. The average posttest in the experimental group was higher than the average posttest in the control group. Digital flipbooks have a significant effect on increasing knowledge, attitudes, and skills in the use of fire extinguishers in X Hospital workers. It is recommended for this hospital to conduct training on fire extinguishers using digital flipbooks evenly to every worker in the hospital, so that in the event of a fire all workers can extinguish the fire using fire extinguishers to minimize losses due to fire. It is also recommended to hospital workers in the event of an electrical short circuit to immediately take light fire extinguisher so that the fire can be extinguished immediately to prevent large scale fires. It is recommended that future researchers when collecting data using an observation checklist not be filled in by researchers, but filled in by field assistants.

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