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The Relationship Between Employee Characteristics and Unsafe Actions in Sukosari Workshop Employees at PT Rekaindo Global Jasa Madiun 2024

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ABSTRACT
Based on work accident data at the Sukosari Workshop of PT Rekaindo Global Jasa Madiun, there is one case of work accident every year, starting from 2020 to 2022, which is caused by unsafe actions by workers. The purpose of this study was to determine the relationship between employee characteristics, namely age, education level, length of service, knowledge, attitudes, and workload with unsafe actions in Sukosari Workshop employees of PT Rekaindo Global Jasa Madiun. This type of research is quantitative research with a cross-sectional approach and analytically studied. The sample in this study were Sukosari Workshop employees with a total of 54 people. The sampling method is total sampling. Data collection by means of a survey through filling out questionnaires, then analyzed analytically using the Chi-Square and Contingency Ciefficient tests. The results of the analysis between age and unsafe action (pvalue= 0.667), education with unsafe action (pvalue= 0.793), tenure with unsafe action (pvalue= 0.851), knowledge with unsafe action (pvalue= 0.001), attitude with unsafe action (pvalue= 0.008), and workload with unsafe action (pvalue= 0.035). Knowledge, attitude, and workload have a significant relationship with unsafe action. Researchers suggest that similar research needs to be carried out with different research methods in order to find out the main factors of employee characteristics that cause unsafe actions.

Keywords: Knowledge, Attitude, Workload, Unsafe Action, Work Accident

INTRODUCTION

In this era of the industrial revolution 5.0, the increase in industrialization and company technology is often followed by an increase in risks and hazards in the workplace. Workplace accidents can occur due to hazards that may occur in the workplace. Workforce safety must be prioritized because they are an important component of a company or industry. Safety protection efforts are steps taken by companies to protect the workforce as they carry out their daily tasks and can prevent work accidents from occurring (Herno et al., 2023).

The number of work accidents is one of the safety indicators of a company or industry. When there are no work accidents, the industry is considered to have zero accidents. The national program for acculturation of Occupational Safety and Health (K3) has a Zero Accident Award aimed at encouraging companies that have implemented Occupational Safety and Health and have achieved zero accidents within a certain period. The zero accident rate aims to prevent accidents in the workplace without reducing the number of working hours spent (Salimi, 2015).

In order to strengthen the protection of labor and improve the role and welfare of workers, the Law of the Republic of Indonesia Number 11 of 2020 concerning Job Creation was enacted which amended and abolished the previous regulation, namely Law of the Republic of Indonesia Number 13 of 2003 concerning Manpower. In accordance with the Job Creation Law in Chapter IV article 88 paragraph 1, it is

stated that every worker has the right to a decent livelihood. So with this regulation, workers do not need to be afraid of threats to their safety and health while working. Because every company is obliged to protect the safety of workers to realize optimal work productivity.

Companies in various industries and sectors must implement an Occupational Safety and Health Management System (SMK3) in accordance with Government Regulation No. 50 Year 2012 in order to create a safe, efficient and productive work environment. SMK3 is an integral part of a company's overall management system that aims to manage risks associated with work activities. Based on statistical data from Social Security Organizing Agency (BPJS) Employment, the number of work accident cases in Indonesia seems to have increased significantly in the last five years. The following is a graph of work accident cases in Indonesia from 2019 to 2023.
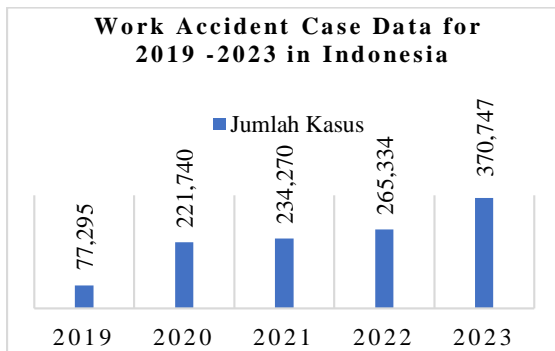

Figure 1. Graph of Work Accident Cases in Indonesia 2019 -2023

Based on the graph above, the number of work accident cases in 2019 has not touched the hundreds of thousands, namely 77,295 cases. Then in 2020 the cases jumped, namely 221,740 case findings. In 2022 there were 265,334 cases, this number increased by 13.26% from 2021, which was 234,270 case findings. Until 2023, work accident cases touched 370,747 cases. East Java Province is the province with the second highest number of cases, namely 56,603 cases of work accidents occurred from a total of 34 provinces in Indonesia (Ministry of Manpower, 2024).

According to Suma'mur (2018), there are two main factors that cause accidents in the workplace, namely human actions that do not comply with safety standards and unsafe work environment conditions. According to the results of research conducted by Heinrich, as many as 88% of accidents in the workplace are caused by unsafe actions of workers (unsafe action), 10% are due to unsafe work environment conditions (unsafe condition), and 2% are due to unavoidable events. Therefore, it can be concluded that unsafe action is the main factor causing work accidents (Salim, 2019).

This is supported by a study conducted by Abeng and Pratiwi, (2021) regarding the Relationship between Unsafe Action and Unsafe Condition to Work Accidents in Nurses at the Makassar Hajj Hospital in 2021, based on the results of the analysis obtained a p-value of 0.001 ($\alpha \leq 0.05$). This proves that there is a relationship between (unsafe action) and work accidents.

A study conducted by Ula and A. Jamratul, (2022) regarding the Relationship between Characteristics and Unsafe Action of Production Workers at PT Putra Flora Rimba Tani Tanjung Morawa in 2021 found a significant relationship between education level and unsafe action with a p-value of 0.000 ($\alpha \leq 0.05$). In the same study, there was a significant correlation between attitude and unsafe action with a p-value of 0.012 ($\alpha \leq 0.05$). So it can be concluded that there is a significant correlation between education level and attitude with unsafe action.

A similar study was also conducted by A. R. Ristantya et al., (2022) regarding the Relationship between Worker Characteristics and Supervision of Unsafe Behavior in PT X Aircraft Hangar Maintenance Technicians in 2022, based on the results of the analysis between attitudes and unsafe behavior resulting in a p-value of 0.000 ($\alpha \leq 0.05$). This shows that there is a significant correlation between

attitude and unsafe behavior (unsafe action).

PT Rekaindo Global Jasa was established on November 25, 1998 located at Jalan Candi Sewu Number 30, Madiun. It is a company that is jointly owned by PT. INKA (Railway Industry), focusing on the field of engineering consulting services and train component support. Most of its products are used to support PT. INKA's train production process. Products and support components produced by PT Rekaindo Global Jasa include 3D drawing design, electrical control panel, driver desk panel, signal lamp (side lamp and tail lamp), and passenger seat.

PT Rekaindo Global Jasa has two workshop units, namely the workshop located at Jalan Candi Sewu Number 30 Madiun which is the main office and the Sukosari workshop. Most of the work done by workers, especially in the Sukosari workshop, is to produce metal manufactures such as train harmonica, electrical control panels, and signal lamps (side lamps and tail lamps). The products produced are components that enable the interior and exterior of trains. Where in the process of making products, employees are not at all far from the use of tools that have a great risk of accidents such as Laser Fiber Machine, Pipe Bending Machine, Metal Laser Cutting, Pipe Metal Laser Cutting, Press Brake Bending Machine, Spring Former Machine, CNC Router Machine, and Orbital Welding Machine.

Based on secondary data on the incidence of work accidents at PT Rekaindo Global Jasa Madiun, in 2020 there was one case of work accident in the Sukosari Workshop, namely a hand hit by a sharp object resulting in a cut hand. The reason is that employees ignore the use of hand gloves and consider the work done does not require the use of hand gloves. In 2021, there was one case of work accident in the laser cutting plate area, where the sole of an employee's foot stepped on a sharp object, namely a nail. The cause was that the employee ignored wearing safety shoes and there should not have been nails scattered in the area. And in 2022 there was one employee who sat in an unsafe area because there was still a work process as a result of which his eyes were exposed to grinding brush debris. This phenomenon shows that every job and work location has the potential for work accidents. This is caused by workers who tend to engage in unsafe behavior in the work environment.

Based on the results of interviews with two HSE Staff of PT Rekaindo Global Jasa, unsafe behavior by workers is one of the causes of work accidents. Every HSE Staff urges workers to wear PPE (Personal Protective Equipment), but there are still workers who are disobedient and reluctant to wear PPE while working. Thus they ignore their own safety at work, so this is the cause of work accidents.

Yusril et al., (2020) stated that unsafe actions can trigger a work accident. Unsafe actions can occur due to several causal factors. According to Multiple Factor Theory and Domino Theory in the journal (Winarsunu, 2008) regarding the theory of the causes of unsafe actions caused by many factors, including age, gender, education level, length of service, worker status, level of knowledge, worker attitudes, training, skills and abilities, physical balance, use of PPE, workload, motivation, and human error.

Hazardous actions taken by workers become a habit that will change and form unsafe behavior. So that unsafe actions are at risk of causing work accidents in Sukosari workshop workers with various worker factors underlying the creation of these actions. So the researcher is interested in conducting a study entitled The Relationship between Employee Characteristics and Unsafe Action in Sukosari Workshop Employees at PT Rekaindo Global Jasa Madiun in 2024..

RESEARCH METHOD

The purpose of this study was to determine the relationship between employee characteristics including age,

education level, length of service, knowledge, attitudes, and workload with unsafe actions in Sukosari Workshop employees at PT Rekaindo Global Jasa Madiun in 2024. This research is a type of quantitative research with a cross-sectional approach and analytically studied. The sample in this study were employees of the Sukosari Workshop with a total of 54 people. The sampling method is total sampling. The method used in data collection is a survey technique using an instrument in the form of a questionnaire, then analyzed analytically using the Chi-Square and Contingency Ciefficient tests.

RESULT AND DISCUSSION

Table 1. Frequency Distribution of Employee Characteristics of Sukosari Workshop Employees PT. Rekaindo Global Jasa Madiun 2024

Variable	Frequency (n)	Percentage (%)
Age		
Young (18-24 years old)	23	42.6
Early Worker (25-34 years)	31	57.4
Level of education		
Graduation from high school/vocational school	37	68.5
Higher Education	17	31.5
Years of service		
New (< 6 years old)	33	61.1
Long (6-10 years)	21	38.9
Knowledge		
Good	41	75.9
Less	13	24.1
Attitude		
Good	39	72.2
Less	15	27.8
Workload		
Heavy	32	59.3
Light	22	40.7

Source: Data of SPSS Application Test Results

Respondents according to age are grouped into two categories, namely respondents with a young age category of 18-24 years and respondents with an early worker age category of 25-34 years. Based on table 1, it can be seen that 23 people (42.6%) with a young age category of 18-24 years and 31 people (57.4%) with an early worker age category of 25-34 years.

Respondents according to education level are grouped into two categories, namely respondents with high school/vocational high school education and respondents with university graduates. Based on table 1, it can be seen that 37 people (68.5%) have a high school / vocational high school education and 17 people (31.5%) have a university education.

Respondents according to tenure are grouped into two categories, namely respondents with a new tenure category < 6 years and respondents with a long tenure category of 6-10 years. Based on table 1, it can be seen that 33 people (61.1%) with a new working period category < 6 years and 21 people (38.9%) with a long working period category of 6-10 years.

Respondents according to the level of knowledge are grouped into two categories, namely respondents with good knowledge and respondents with less knowledge. Based on table 1, it can be seen that respondents with good knowledge level were 41 respondents (75.9%) and respondents with poor knowledge level were 13 respondents (24.1%).

Respondents according to attitude were grouped into two categories, namely respondents with good attitudes and respondents with poor attitudes. Based on table 1, it can be seen that respondents with good attitudes were 39 respondents (72.2%) and respondents with poor attitudes were 15 respondents (27.8%).

Respondents according to workload are grouped into two categories, namely respondents with heavy workload and respondents with light workload. Based on table 1, it can be seen that respondents with heavy workload were 32 respondents (59.3%) and respondents with light

workload were 22 respondents (40.7%).

Table 2. Frequency Distribution of Unsafe Action in Sukosari Workshop Employees PT Rekaindo Global Jasa Madiun 2024

Unsafe Action	Frequency (n)	Percentage (%)
Low	30	55,6
High	24	44,4
Total	**54**	**100**

Source: Data of SPSS Application Test

Results

Respondents according to unsafe action are grouped into two categories, namely respondents with low unsafe action and high unsafe action. Based on table 2, it can be seen that respondents with low unsafe action were 30 respondents (55.6%) and respondents with high unsafe action were 24 respondents (44.4%).

Table 3. Results of Cross Tabulation between Employee Characteristics and Unsafe Action in Sukosari Workshop Employees PT Rekaindo Global Jasa Madiun 2024

Variable	Unsafe Action		Total	p-value	r
	Low	High			
Age					
Young (18-24 years old)	12 40%	11 45,8%	23 42,6%	0,667	0,059
Early Worker (25-34 years)	18 60%	8 54,2%	31 57,4%		
Level of education					
Graduation from high school/vocational school	21 70%	16 66,7%	37 68,5%	0,793	0,036
Higher Education	9 30%	8 33,3%	17 31,5%		
Years of service					
New (< 6 years old)	18 60%	15 62,5%	33 61,1%	0,851	0,025
Long (6-10 years)	12 40%	9 37,5%	21 38,9%		
Knowledge					
Good	28 93,3%	13 54,2%	41 75,9%	0,001	0,414
Less	2 6,7%	11 45,8%	13 24,1%		
Attitude					
Good	26 86,7%	13 54,2%	39 72,2%	0,008	0,339
Less	4 13,3%	11 45,8%	15 27,8%		
Workload					
Heavy	14 46,7%	18 75%	32 59,3%	0,035	0,275
Light	16 53,3%	6 25%	22 40,7%		

Source: Data of SPSS Application Test Results

The relationship between age and unsafe action found that young respondents (18-24) years old as many as 12 respondents (40%) with low unsafe action and as many

as 11 respondents (45.8%) with high unsafe action. Respondents of early worker age (25-34) years as many as 18 respondents (60%) with low unsafe actions and as many as 8 respondents (54.2%) with high unsafe actions.

The relationship between education level and unsafe action was found that respondents with high school / vocational high school education were 21 respondents (70%) with low unsafe action and 16 respondents (66.7%) with high unsafe action. Respondents with tertiary education were 9 respondents (30%) with low unsafe actions and 8 respondents (33.3%) with high unsafe actions.

The relationship between tenure and unsafe action shows that respondents who have a new tenure (<6 years) are 18 respondents (60%) with low unsafe action and 15 respondents (62.5%) with high unsafe action. Respondents who have a long working period (6-10 years) years as many as 12 respondents (40%) with low unsafe actions and as many as 9 respondents (37.5%) with high unsafe actions.

The relationship between knowledge and unsafe action showed that 28 respondents (93.3%) had good knowledge with low unsafe action and 13 respondents (54.2%) had good knowledge with high unsafe action. Respondents with poor knowledge were 2 respondents (6.7%) with low unsafe actions and 11 respondents (45.8%) had poor knowledge with high unsafe actions.

The relationship between attitude and unsafe action showed that 26 respondents (86.7%) had a good attitude with low unsafe action, while 13 respondents (54.2%) had a good attitude with high unsafe action. Respondents had a poor attitude as many as 4 respondents (13.3%) with low unsafe actions and as many as 11 respondents (45.8%) had a poor attitude with high unsafe actions.

The relationship between workload and unsafe action showed that 14 respondents (46.7%) had a heavy workload with low unsafe action and 18 respondents (75%) had a heavy workload with high unsafe action. Respondents had a light workload as many as 16 respondents (53.3%) with low unsafe actions and as many as 6 respondents (25%) had a light workload with high unsafe actions.

The results of statistical tests on bivariate analysis between age and unsafe action using the Chi-Square test obtained a p-value = $0.667 > \alpha$ (0.05), it can be concluded that there is no significant relationship between age and unsafe action. Based on the results of the Contingency Coefficient test, the p-value = 0.059 means that the value of C = 0. This reinforces that there is no relationship between age and unsafe action.

The results of statistical tests on bivariate analysis between education level and unsafe action using the Chi-Square test obtained a p-value = $0.793 > \alpha$ (0.05), it can be concluded that there is no significant relationship between education level and unsafe action. Based on the results of the Contingency Coefficient test, the p-value = 0.036 means that the value of C = 0. This reinforces that there is no significant relationship between the level of education and unsafe actions.

The results of statistical tests on bivariate analysis between tenure and unsafe action using the Chi-Square test obtained a p-value = $0.851 > \alpha$ (0.05), it can be concluded that there is no significant relationship between tenure and unsafe action. Based on the results of the Contingency Coefficient test, the p-value = 0.025 means that the value of C = 0. This reinforces that there is no relationship between length of service and unsafe actions.

The results of statistical tests on bivariate analysis between knowledge and unsafe actions using the Chi-Square test obtained a p-value = $0.001 < \alpha$ (0.05), it can be concluded that there is a significant relationship between knowledge and unsafe actions. Based on the results of the Contingency Coefficient test, the p-value = 0.414 means that the value of C $\neq$ 0. This

shows that there is a weak relationship between knowledge and unsafe actions. Then to find out how much the relationship between knowledge and unsafe action can be seen from the OR value, it is known that the OR value is 11.846 in the confident interval 2.289-61.312. This can be interpreted that respondents who have less knowledge have the potential to take unsafe actions 11.846 times compared to respondents who have good knowledge.

The results of statistical tests on bivariate analysis between unsafe action and attitude using the Chi-Square test obtained a p-value = 0.008 < α (0.05), it can be concluded that there is a significant relationship between attitude and unsafe action. Based on the results of the Contingency Coefficient test, the p-value = 0.339 means that the value of C ≠ 0. This shows that there is a weak relationship between attitude and unsafe action. Then to find out how much the relationship between attitude and unsafe action can be seen from the OR value, it is known that the OR value is 5.500 in the confident interval 1.463-20.670. This can be interpreted that respondents who have a poor attitude have the potential to take unsafe actions 5,500 times compared to respondents who have a good attitude.

The results of statistical tests on bivariate analysis between attitudes and unsafe actions using the Chi-Square test obtained a p-value = 0.035> α (0.05), it can be concluded that there is a significant relationship between attitudes and unsafe actions. Based on the results of the Contingency Coefficient test, the p-value = 0.275 means that the value of C ≠ 0. This shows that there is a weak relationship between attitude and unsafe action. Then to find out how much the relationship between attitude and unsafe action can be seen from the OR value, it is known that the OR value is 0.292 in the confident interval 0.091-0.939. This can be interpreted that respondents who have a heavy workload have the potential to take unsafe actions 0.292 times compared to respondents who

have a light workload.

Employee Characteristics
Age

Age refers to the time span from the birth of the respondent to the time the research was conducted. In this study, age is categorized into two categories, namely respondents with a young age category of 18-24 years and respondents with an early working age category of 25-34 years (Bappenas, 2018). Based on the results of filling out the questionnaire by 54 respondents, 53 people (98.1%) were male and 1 person (1.9%) was female.

In this study, there were 23 people (42.6%) with a young age category of 18-24 years and 31 people (57.4%) with an early worker age category of 25-34 years. So that the most dominant age is the age of early workers with an age range of 25-34 years as many as 31 people (57.4%). As a person gets older, awareness of work accidents tends to increase. Older workers tend to show more rational thinking patterns, are able to control emotions better, and show intellectual and psychological maturity. In contrast, younger workers often have unstable emotions and tend to underestimate the dangers and risks in the workplace, resulting in less caution at work.

Education Level

Education level refers to the highest level of education completed by the respondent prior to the research. A person's education has a significant impact on the understanding and perspective of individuals in carrying out and completing their tasks. In this study, the level of education is grouped into two categories, namely respondents with high school / vocational high school education and respondents with university graduates.

Based on the results of filling in the respondent's identity in the form of education level in the questionnaire, it was found that the lowest level of worker education was high school / vocational high school graduates with 37 respondents (68.5%) and the highest level of worker education was college with 17 respondents

(31.5%). Education has a very important role in motivating individuals and providing personal guidance in the learning process. A person's level of education has a significant influence on the knowledge possessed and the character and behavior possessed by that individual. A person with low education will have difficulty in accepting new innovations, thus hindering their ability to achieve the expected changes.

Period of Employment

According to Supriyatna, (2020) tenure is the total time an employee spends working in a company or institution. A person's work experience in the workplace greatly affects their ability to carry out tasks safely and avoid work accidents (Swastiko, 2017). New workers or workers with a short working time may not understand the work being done and how to avoid work accidents. When workers have more years of service, they are less likely to commit unsafe action. Conversely, when workers have less tenure, they are more likely to not know their work environment well, which means they lack experience in working safely (Agustiya et al., 2020).

In this study, tenure is categorized into several categories, namely the new tenure category < 6 years and the old tenure category 6-10 years. Based on the results of filling in the respondent's identity in the form of tenure in the questionnaire, the results showed that of the 54 respondents, there were 33 people (61.1%) with a new tenure category < 6 years and there were 21 people (38.9%) with a long tenure category of 6-10 years.

In this study, it is assumed that the longer a person works, the more experience he has. Conversely, the shorter the working period, the less experience gained. In addition, as a person gets older, experience regarding hazards in the workplace will also get better. Therefore, workers who have a long working period will be more familiar with danger points and can be more effective in minimizing errors. Length of service is also closely related to a person's ability to carry out and understand their work. Experienced workers are considered more capable in carrying out their duties.

Knowledge

According to Notoatmojo, (2020) knowledge is the result of the process of knowing, which occurs after individuals perceive certain objects. This sensing is done through the five human senses, namely the senses of sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. Knowledge, or the cognitive domain, is a very important aspect in shaping a person's behavior.

Meanwhile, according to Green in Purnamasari, (2015) increased knowledge does not always result in changes in behavior, but knowledge is still important to provide before individuals take an action. Actions will be in accordance with knowledge when individuals receive cues that are strong enough to motivate them to act in accordance with their knowledge.

The method of measuring the knowledge variable uses a questionnaire method with a tool in the form of a questionnaire given to respondents to assess the level of knowledge of respondents regarding unsafe actions. Respondents according to the level of knowledge are grouped into two categories, namely respondents with good knowledge and respondents with less knowledge.

Of the 54 respondents studied, respondents with a good level of knowledge were 41 respondents (75.9%) and respondents with a poor level of knowledge were 13 respondents (24.1%), indicating that respondents with a poor level of knowledge about unsafe actions were smaller than respondents with a good level of knowledge. Various factors that can affect the level of human knowledge have been described previously. However, the level of knowledge depends on how the worker responds with his mind, feelings, and thoughts to recognize something they have never seen before and make himself have better knowledge than before.

Attitude

Attitude according to Notoatmojo in

Shinta, (2019) is a response or response that is still hidden from a person to certain stimuli or objects. Attitude is not part of action or activity, but rather a behavioral tendency. Attitudes are still closed and not open, but attitudes are also a readiness to respond to objects in certain environments as an appreciation of these objects. The method of measuring attitudes uses a questionnaire method with a tool in the form of a questionnaire sheet given to respondents to determine the attitude of workers towards unsafe actions.

Respondents according to attitude were grouped into two categories, namely respondents with good attitudes and respondents with poor attitudes. Of the 54 respondents studied, respondents with good attitudes were 39 respondents (72.2%) and respondents with poor attitudes were 15 respondents (27.8%). The results of research on attitude variables show that respondents with poor attitudes regarding unsafe actions are smaller than respondents with good attitudes.

Individual attitudes have a significant impact on safe behavior in the workplace. Individuals who have a positive attitude tend to show safe behavior when carrying out their duties. This safe behavior is very important to prevent work accidents. In addition, individuals with positive attitudes will respect every work rule and various regulations regarding work safety that are designed to provide consistent protection, so as to increase work productivity. Thus, this study provides additional support for the importance of considering attitude as a factor influencing unsafe behaviors in all workplaces.

Workload

According to Soelton et. al, (2019) workload refers to the difference between the capacity or ability of a worker and the work demands he must face. In this case, it is important for a person to have physical abilities that are appropriate or balanced with the demands of the work he faces, as well as considering the limitations possessed by the individual. The method of measuring workload uses a questionnaire method with a tool in the form of a questionnaire sheet given to respondents to determine the burden of workers on unsafe actions.

Respondents according to workload were grouped into two categories, namely respondents with heavy workload and respondents with light workload. Of the 54 respondents studied, respondents with heavy workloads were 32 respondents (59.3%) and respondents with light workloads were 22 respondents (40.7%). The results of research on workload variables show that respondents with heavy workloads are greater than respondents with light workloads.

If the physical workload received by workers is high, it has the potential to cause unsafe behavior. This is due to the high demands in the work that can have an impact on psychological, physical, and behavioral. These impacts can result in a lack of work concentration, indifference to the surrounding environment, and a lack of vigilance which leads to unsafe behavior.

Unsafe Action

Unsafe actions are dangerous or unsafe behaviors that can cause work accidents, leading to injury or death. It is caused by human failure to comply with the correct work requirements and procedures, thus causing work accidents. Heinrich stated that as many as 88% of work accidents are caused by individual unsafe behavior, 10% by unsafe conditions, and 2% by other factors that cannot be predicted (Muda et al., 2022). In this study, unsafe actions are grouped into two categories, namely respondents with low and high unsafe actions.

The results of the analysis of the 54 respondents studied, respondents with low unsafe action were 30 respondents (55.6%) and respondents with high unsafe action were 24 respondents (44.4%). So it can be concluded that the majority of workers carry out low unsafe actions. Although unsafe action is still classified in the low

category, it is necessary to pay serious attention to the unsafe actions taken by these workers. This is because unsafe actions have the potential to cause accidents that can cause both material and non-material losses to the company.

Relationship between Employee Characteristics and Unsafe Action

Relationship between Age and Unsafe Action

Based on J. Preston, (2021) the increasing age of a person will cause a decrease in physiological function, psychological function, and physical, so that the ability to learn also decreases when compared to younger age groups. The results of the analysis in this study, it was found that unsafe actions in workers were the majority of lower not potentially unsafe actions by workers of early age (25-34) years of 31 respondents (57.4%). This can occur because advanced age does not have an impact on unsafe behavior, as age also increases knowledge and work experience, so that workers have identified points of error that may occur in the workplace.

The results of the Chi-Square test obtained a p-value = 0.667 > α (0.05) which shows the p-value is greater than the alpha value, it can be concluded that there is no significant relationship between age and unsafe action. The findings of this study show a difference with the theory which states that younger workers will psychologically tend to be faster, aggressive, hasty, and rushed at work, so they tend to perform unsafe actions that can reduce performance and even cause work accidents. Although age can influence unsafe action, it should be noted that age is only one of the individual characteristics that can influence unsafe action, although there are still several other factors that are more dominant in the emergence of unsafe action. Both young and old workers have a tendency towards unsafe behavior.

This research is in line with the opinion of Simanjutak in Listyandini, (2018). which states that age naturally has an influence on a person's physical condition, there is a certain age where a person can achieve maximum performance but there is a time when there is a decrease in performance. The level of work performance begins to increase with age, but then decreases towards old age. In this case, increased achievement occurs when workers are young and decreases when they are old (Listyandini *et al.,* 2018).

Relationship between Education Level and Unsafe Action

Work accidents often occur due to various causes. One of the most common causes is unsafe action. This unsafe act can be caused by a lack of knowledge and skills, as well as unsafe actions. Therefore, a person's education is very important and must be considered so that awareness of the importance of occupational health and safety can increase (Permana, 2015).

According to Green in Wade (2014), the level of education plays an important role in shaping a person's behavior. Education is a key factor in motivating a person's behavior or providing a personal foundation in the individual learning process. Therefore, a person's level of education can affect the level of knowledge possessed and the way the individual behaves. A person with low education may have difficulty accepting new innovations, which will make the process towards change more complicated than desired (Wade et al., 2014).

Gueech in Prasetya (2018), revealed that education is also one of the steps to maintain worker and workplace safety. This is done through a safety program supported by management. With this basic program, it is expected that workers can play an active role in creating and maintaining safety in the workplace (Prasetya, 2018).

The results of the analysis in this study, it was found that unsafe actions in workers were actually the majority of the lower not potentially unsafe actions by high school / vocational high school graduates as many as 37 respondents (68.5%). The results of the Chi-Square

statistical test obtained a p-value = 0.793> α (0.05), so it can be concluded that there is no significant relationship between education level and unsafe actions.

Based on existing theory, it can be concluded that a person's level of education can influence their behavior to be better and wiser in acting. However, the results of this study show that there is no correlation between the last level of education and unsafe behavior. This may be due to the lack or absence of discussion on Occupational Safety and Health in the formal education received by workers.

Relationship between Length of Service and Unsafe Action

According to Robbins, (2016) tenure can be defined as the work experience a person has. Work experience is closely related to the knowledge gained by individuals during their duties, where experienced workers are considered more competent in carrying out and understanding their work. In accordance with the theory proposed by Robbins, 10% of workers who have little work experience tend to be more prone to unsafe action than workers who have worked for a longer period of time due to their lack of knowledge and experience in the workplace.

The results of the analysis in this study, it was found that unsafe actions in workers were actually the majority of the lower potential for unsafe actions by respondents who had a new working period (< 6 years) as many as 33 respondents (61.1%). The results of statistical tests on bivariate analysis between tenure and unsafe action using the Chi-Square test obtained a p-value = 0.851> α (0.05), it can be concluded that there is no significant relationship between tenure and unsafe action.

This can occur because there are several causal factors found in the field. One of them is that when an accident occurs, the workers involved tend to immediately quit their jobs and look for safer jobs. In addition, another influencing factor is the uncertainty of the working period. They calculate the working period from the start of work to the present, but in the middle of the working period, some of them do not work fully (Agustiya et al., 2020).

This is also in line with research conducted (Agustiya et al., 2020) that workers who have worked for a long time and are experienced do not always avoid unsafe action because they are too confident in their work environment. They tend to be less careful, especially if they have never had an accident in a long period of time so they feel that the danger is not as scary as what they have heard or said by their superiors.

Relationship between Knowledge and Unsafe Action

Knowledge is the result of the human ability to sense or know an object through their senses, such as eyes, nose, ears, and so on. A worker can identify hazards through these sensory abilities. Therefore, workers who have good knowledge can prevent unsafe actions, both for themselves and others (Notoatmojo, 2020).

Based on the results of the analysis of the relationship between knowledge and unsafe actions, it was found that 28 respondents (93.3%) had a good level of knowledge with low unsafe actions, while 13 respondents (54.2%) had a good level of knowledge with high unsafe actions. Respondents had a poor level of knowledge as many as 2 respondents (6.7%) with low unsafe actions, while as many as 11 respondents (45.8%) had a poor level of knowledge with high unsafe actions.

The percentage of respondents who took unsafe actions decreased as the respondents' knowledge increased. This shows that the higher the respondent's knowledge, the higher the safe behavior performed by the respondent. Conversely, the lower a person's knowledge, the less likely the respondent is to behave safely.

Based on the results of statistical tests on bivariate analysis between knowledge and unsafe action using the Chi-Square test,

the p-value = 0.001 < α (0.05), it can be concluded that there is a significant relationship between knowledge and unsafe action. However, based on the results of the Contingency Coefficient test, the p-value = 0.414, which means that there is a weak relationship between knowledge and unsafe actions. In addition, between knowledge and unsafe action has an OR value of 11.846 in the confidence interval 2.289-61.312.

This study supports Green's view that knowledge is an important factor in motivating individuals to act. Knowledge-based behaviors tend to be more enduring than behaviors without the basis of knowledge. The more positive the practiced behavior, the more likely individuals can avoid unwanted events (Waryana, 2016).

This finding is in line with research conducted by Siregar, (2014) which shows a correlation between knowledge and unsafe behavior. This research is also in line with the opinion of D. Darsini, (2019) which states that the deeper a person's knowledge, the more likely the behavior shown is positive. Positive behavior can increase the accumulation of information obtained by a person through the process of perception of certain objects. In addition, the level of behavior also has an impact on a person's cognitive ability to remember, understand, synthesize, and evaluate an object.

According to Notoatmodjo, (2020) behavior based on knowledge, awareness, and positive attitudes will be long lasting. That is, if the behavior is not based on knowledge and awareness, then the behavior will not last long. Workers must have awareness of the dangers that threaten so that the risk of work accidents can be minimized. Awareness of hazards can be realized by using safety equipment properly, complying with applicable regulations and procedures, and working in accordance with their responsibilities (Rambe, 2019).

Relationship between Attitude and Unsafe Action

Attitude is an individual's tendency to act, but does not always lead to action (Pakpahan et al., 2021). Attitude is an internal factor that encourages individuals to act, influenced by awareness, emotions, motivation, past experiences, and habits (Gunawan et al., 2016). According to Notoatmodjo, (2014) attitude is a syndrome or collection of symptoms that appear in response to a certain stimulus or object, which involves thoughts, feelings, attention, and other psychological symptoms.

Based on the results of the analysis of the relationship between attitudes and unsafe actions, it was found that 26 respondents (86.7%) had a good attitude with low unsafe actions, while 13 respondents (54.2%) had a good attitude with high unsafe actions. Respondents had a poor attitude as many as 4 respondents (13.3%) with low unsafe actions, while as many as 11 respondents (45.8%) had a poor attitude with high unsafe actions. The percentage of respondents who took unsafe actions decreased as the respondents' attitudes increased. This shows that the better the respondent's attitude, the higher the safe behavior performed by the respondent. Conversely, the less a person's attitude, the less likely the respondent is to behave safely.

Based on the results of statistical tests on bivariate analysis between unsafe action and attitude using the Chi-Square test, the p-value = 0.008 < α (0.05), it can be concluded that there is a significant relationship between attitude and unsafe action. However, based on the results of the Contingency Coefficient test, the p-value = 0.339 means that there is a weak relationship between attitude and unsafe action. In addition, unsafe action with attitude has an OR value of 5.500 in the confident interval 1.463-20.670. These two variables have a positive or unidirectional correlation direction, which indicates that the better the worker's attitude, the worker's actions will tend to be safe in carrying out their duties.

This is in accordance with research conducted by Ariyana, (2019) workers who have a positive attitude tend to see that occupational safety and health procedures and regulations are designed to protect them and also increase productivity. On the other hand, workers who have a negative attitude tend to feel that every procedure and regulation is only made for the benefit of the company and is considered a burden for them. Therefore, workers with positive attitudes are more likely to comply with occupational safety and health rules, while workers with negative attitudes are more likely to engage in unsafe behaviors that could potentially lead to workplace accidents.

Relationship between Workload and Unsafe Action

Workload refers to the process undertaken by individuals to complete tasks in a particular job or group of positions within a specified period of time. Workload consists of two types, namely physical workload and mental workload. Physical workload refers to the human physical response to external physical work performed (Sari, 2020).

Based on the results of the analysis of the relationship between workload and unsafe actions, it was found that 14 respondents (46.7%) had heavy workloads with low unsafe actions, while 18 respondents (75%) had heavy workloads with high unsafe actions. Respondents had a light workload as many as 16 respondents (53.3%) with low unsafe actions, while as many as 6 respondents (25%) had a light workload with high unsafe actions. This implies that the greater the workload carried by workers, the higher the unsafe actions taken by workers.

Based on the results of statistical tests on bivariate analysis between workload and unsafe actions using the Chi-Square test, the p-value = 0.035 < α (0.05), it can be concluded that there is a significant relationship between workload and unsafe actions. However, based on the results of the Contingency Coefficient test, the p-value = 0.275 means that there is a weak relationship between workload and unsafe actions. In addition, workload with unsafe action has an OR value of 0.292 in the confidence interval 0.091-0, 939. These two variables have a positive or unidirectional correlation direction, which indicates that the lighter the worker's workload, the worker's actions will tend to be safe in carrying out their duties.

The results of this study are consistent with Syamtiningrum, (2017) who studied the development of a relationship model between personal factors and OHS management on unsafe action in workers of PT Yogya Indo Global which showed a p-value = 0.003 confirming the correlation between workload and unsafe action in workers of PT Yogya Indo Global. The high physical workload received by workers can cause unsafe behavior. This is due to the high demands in work that can have psychological, physical, and behavioral impacts. This impact can result in a lack of work concentration, indifference to the surrounding environment, and a lack of worker vigilance which leads to unsafe behavior.

CONCLUSION AND RECOMMENDATION

The results of the analysis between age with unsafe action (p-value = 0.667), education with unsafe action (p-value = 0.793), tenure with unsafe action (p-value = 0.851), knowledge with unsafe action (p-value = 0.001), attitude with unsafe action (p-value = 0.008), and workload with unsafe action (p-value = 0.035).

Knowledge, attitude, and workload have a significant relationship with unsafe action. The researcher suggested that similar research be conducted with different research methods in order to find out the main factors of employee characteristics that cause unsafe action to occur.

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