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Relationship of Unsafe Behavior With Work Accident Events on Patorani Fishing Ship Crawings

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ABSTRACT

Background. Health and safety hazards are common among workers in the informal sector. This is due to the lack of information obtained by workers in the informal sector regarding the application of safe behavior (safe action) and safe conditions (safe conditions) at work. Unsafe conditions refer to unsafe environmental conditions that are at risk of causing work accidents. This study aims to determine whether there is a relationship between unsafe behavior and the incidence of work accidents in patorani fishing boat builders. **Methods**. This type of research is a quantitative research using a cross sectional design. The location of this research is Palalakkang Village, Galesong District, Takalar Regency. The sampling technique used exhaustive sampling with a total population and a sample of 50 workers. **Results**. The results of the bivariate study showed that there was a significant relationship between smoking habits while working with the incidence of work accidents on fishing boat craftsmen Patorani Takalar Regency (p = 0.04), there was no significant relationship between eating and drinking habits while working with the incidence of work accidents on ship craftsmen. Patorani fishermen in Takalar Regency (p=0.27), there is a significant relationship between the use of PPE when working with the incidence of work accidents on fishing boat craftsmen in Patorani Takalar Regency (p=0.00), there is a significant relationship between work posture and the incidence of work accidents on ship craftsmen fishermen in Patorani Takalar Regency (p=0.02). **Conclusion**. It is expected that the Patorani fishing boat craftsmen will work professionally and pay attention to safe behavior at work.

Keywords: unsafe behavior; work accidents; ship craftsme

ABSTRAK

Latar Belakang. Bahaya kesehatan dan keselamatan sering terjadi pada kalangan pekerja di sektor informal. Hal ini terjadi karena kurangnya info yg didapatkan pekerja pada sektor informal terkait ihwal penerapan perilaku safety (safe action) dan kondisi aman (safe condition) saat bekerja. Kondisi tidak safety mengacu pada kondisi lingkungan tidak aman yang beresiko mengakibatkan kecelakaan kerja. Penelitian ini bertujuan buat mengetahui apakah ada korelasi antara perilaku tidak aman dengan kejadian kecelakaan kerja di pembuat kapal nelayan patorani. **Metode**. Jenis penelitian ini artinya penelitian kuantitatif menggunakan memakai desain cross sectional. Lokasi penelitian ini di Desa Palalakkang Kecamatan Galesong, Kabupaten Takalar. Teknik pengambilan sampel menggunakan exhaustive sampling menggunakan jumlah populasi dan sampel sebanyak 50 pekerja. **Hasil**. Hasil penelitian bivariat memaparkan bahwa terdapat korelasi yang signifikan antara norma merokok ketika bekerja dengan peristiwa kecelakaan kerja pada Pengrajin kapal nelayan Patorani Kabupaten Takalar (p=0.04), tidak terdapat hubungan yang signifikan antara kebiasaan makan serta minum ketika bekerja dengan kejadian kecelakaan kerja di Pengrajin kapal nelayan Patorani Kabupaten Takalar (p=0.27), ada korelasi yang signifikan antara penggunaan APD ketika bekerja dengan kejadian kecelakaan kerja di Pengrajin kapal nelayan Patorani Kabupaten Takalar (p=0.00), terdapat korelasi yang signifikan antara postur kerja dengan kejadian kecelakaan kerja pada Pengrajin kapal nelayan Patorani Kabupaten Takalar (p=0.02). **Kesimpulan**. Studi ini menyarankan kepada pekerja kapal nelayan Patorani untuk bekerja secara professional serta memperhatikan perilaku safety pada bekerja.

Kata Kunci: perilaku tidak aman; kecelakaan kerja; pengrajin kapal

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INTRODUCTION

Work accidents are work environments due to unsafe working conditions or human error. Occupational accidents not only cause casualties and material losses to workers and employers, but also disrupt all production processes, damage the environment, and affect the wider community. (Transiska, 2016). The International Labour Organization (ILO) states that ±6,000 fatal workplace accidents occur every day in global work. In 2018, the International Labour Organization (ILO) estimated that two .78 million people died from occupational accidents (86.three%) or occupational diseases (13.7%) worldwide. In terms of micro data, 2 thirds of work-related deaths in the world occur in Asia, and there are more than 1.8 million work-related deaths in the Asia-Pacific region each year (ILO, 2018).

International Labour Organization (ILO) in 2017, worldwide 860,000 workers experienced accidents and occupational diseases. Every day 6300 people die due to work accidents or work-related illnesses, which translates to 1.8 million occupational deaths per year (ILO, 2019).

From the data compiled by BPJS Ketenagakerjaan, the trend of industrial accidents in Indonesia is still fluctuating. Data in the last five years shows 110,285 work accidents in 2015, decreasing to 8,918 in 2016. In 2017 it continued to increase to 123,041 work accidents, and in 2018 it increased significantly by 173,105. at the same time, there were 77,295 work-related accidents in 2019, down 33.05% year-on-year (Employment, 2020). It is still difficult to find standards for presenting accident data in various formal and informal sectors, especially the informal work sector which is the main sector of employment energy absorption in Indonesia which contributes 57.27% or 74 million people (Sakernas, 2019).

Based on preliminary general news that has been carried out through observation and interviews with 50 workers, it was obtained that work accidents and occupational diseases in the Patorani fishing boat manufacturer still often occur such as incision wounds from work materials / tools as many as 32 workers, back pain by 10 workers, upper respiratory tract infections (ARI) by 7 workers, to severe injuries similar to legs exposed to chainsow (sensong) as many as three workers.

Smoking norms can form a splash of cancer in a storage area that is simple to burn, which can cause an explosion or fire. According to research conducted (Rizka Pisceliya &; Mindayani, 2018). Occupational accidents in this study can be caused by workers who do not use work clothes provided by the workshop boss and are not careful at work because the worker smokes at work. Similar to the research conducted (Pujiani &; Siwiendrayanti, 2017), most workers smoke while working because it has been accustomed to being done. There are some workers who were previously non-smokers but after becoming waste paper packing workers they smoked even though the intensity of smoking was mild. This happened because of an invitation from his friend.

METHODS

This type of research is quantitative research using a cross sectional design. The location of this research is in Palalakkang Village, Galesong District, Takalar Regency. The sampling technique uses exhaustive sampling using a population and a sample of 50 workers.

Data processing is carried out using a computerized event, namely SPSS (System Package Social Science). SPSS is used to process data from questionnaire results and to test the correlation of dependent variables and independent variables. According to the observations, researchers concluded that there is still a lack of attention from the local government to the requirements of workers on the use of PPE and education related to the importance of K3 in the workplace. so that workers still ignore the use of PPE and do not pay attention to the attitude of the work done.

This research has gone through an ethical review procedure and was declared to have passed ethics by the Research and Public Health Service Ethics Commission UIN Alauddin Makassar with Number: B. 128/KEPK/FKIK/VIII/2021 and will be carried out in Palalakkang Village, Galesong District, Takalar Regency.

RESULTS

Table 1 shows the types of work accidents that occurred to Patorani fishing boat craftsmen, with 32 cuts, Musculoskeletal Disorders (MsDs) 10 people, Ispa 7 people and chainsaw 3 people. The characteristics of respondents in this study are presented in table 2. Based on individual factors, the majority are aged 17 – 25 years, (48%), with a working period of < 1 year (74%), do not smoke (64%), eating and drinking habits (52%), do not use PPE (60%), ergonomic work posture (60%), and have experienced a work accident (54%).

Tabel 2 show the statistical test, Fisher obtained a smaller value of p = 0.04 as long as the value = 0.05 shared that those who had experienced work accidents and had smoking habits were 13 respondents (72.22%) and respondents who did not have smoking norms and had experienced work accidents by 14 respondents (43.75%).

Table 1.
Characteristics of Respondents

Variable	Frequency	%
Types of Work Accidents		
Shipyard	32	61,54
Musculoskeletal Disorders (MsDs)	10	19,23
Respiratory Tract Infections	7	13,46
Affected by *chainsow*	3	5,77
Age		
17-25 years	24	48,00
26-35 years	14	28,00
36-45 years	8	16,00
46-55 years	4	8,00
Period of Work		
< 1 year	37	74,00
1 year – 3 years	5	10,00
> 3 years	8	16,00
Smoking Habits		
Yes	18	36,00
No	32	64,00
Eating and Drinking Habits		
Yes	26	52,00
No	24	48,00
Use of PPE		
Yes	20	40,00
No	30	60,00
Work Posture		
Ergonomic	30	60,00
Not Ergonomic	20	40,00
Work Accident Incident		
Ever	27	54,00
Never	23	46,00

So it can be interpreted that there is a significant correlation between smoking habits when working using the incidence of work accidents on Patorani fishing boat craftsmen, Takalar Regency. The PR value (CI = 95%) is produced as much as 3.three which means that smoking habits are risk factors for work accidents and the risk is 3.3 times greater than using no smoking norms. Based on Fisher's statistical test, a value of p = 0.27 greater than the value = 0.05 shows that respondents have a norm of eating and drinking using having experienced a work accident as many as 12 respondents (46.15%) and respondents who do not have a norm of eating and drinking using have experienced a work accident by 15 respondents (62.50%).

The PR value (CI = 95%) is obtained as much as 0.5 which means that eating and drinking norms are protective factors for work accidents and the risk of 0.five times those who do not have eating and drinking habits can reduce the incidence of work accidents. So it can be interpreted that there is no significant correlation between the norms of eating and drinking when working with the incidence of work accidents in Patorani fishing boat craftsmen, Takalar Regency. According to the Chi-Square statistical test, a value of p = 0.00 is obtained smaller as long as the value = 0.05 about the distribution of respondents based on the correlation between the use of PPE when working using work accident incidents on Patorani fishing boat craftsmen, Takalar Regency shared that in general, they are controlled by using PPE using 6 respondents (30%) and respondents who do not use PPE using have experienced work accidents as many as 21

respondents (70%). The PR value (CI = 95%) is obtained at 0.1 which means that the use of PPE is a protective factor for work accidents and the risk of 0.1 times wearing PPE when working can reduce the incidence of work accidents. According to Fisher's statistical test, the value of p = 0.27 is greater than the value = 0.05 gives that the dominant has a non-ergonomic work posture by having experienced work accidents by 15 respondents (75%) and respondents who have ergonomic work posture using have experienced work accidents as many as 12 respondents (40%). So it can be interpreted that there is a significant relationship between work posture using work accident incidents in Patorani fishing boat craftsmen, Takalar Regency. The PR value (CI = 95%) is obtained as much as 4.5 which means that a work posture that is not ergonomic is a risk factor for work accidents and the risk is 4.5 times greater than an ergonomic work posture.

Table 2.
The Relationship between Unsafe Behavior and Occupational Accidents

Variable	Work Accident Incident				Total		*P-Value*	PR
	Ever		Never					
	n	%	n	%	N	%		
Smoking Habits								
Yes	13	72,22	5	27,78	18	100	0.04	3.3
No	14	43,75	18	56,25	32	100		
Eating and Drinking Habits								
Yes	12	46,15	14	53,85	26	100	0.27	0.5
No	15	62,5	9	37,5	24	100		
Use of PPE								
Yes	14	70	6	30	20	100	0.00	0.1
No	9	30	21	70	30	100		
Work Posture								
Ergonomic	12	40	18	60	30	100	0.02	4.5
Not Ergonomic	15	75	5	25	20	100		

DISCUSSION

Smoking attitude is a behavior that is evaluated as very detrimental in terms of many points of view both for oneself and others around him. The content of cigarettes results in a person not easily quitting smoking for two reasons, namely dependence or addiction factors to nicotine and psychological factors that feel the loss of an exclusive activity if quitting smoking. (Besta Rizaldy et al., 2016).

The statistical results of bivariate analysis using Fisher's statistical test, obtained a value of p = 0.04 (p < 0.05) then it can be interpreted that there is a significant correlation between smoking habits when working using work accidents in Patorani fishing boat craftsmen, Takalar Regency. This is in line with research conducted (Mashlahat, 2020) with a value of p = 0.007 (p < 0.05) stating that there is a significant relationship between smoking norms using work accidents.

This is in line with research conducted (Fadel et al., 2015) with a value of p = 0.010 (p < 0.05) stating that there is a relationship between smoking norms and work fatigue in fuel transportation drivers at PT Pertamina Pare-Pare TBBM. Similarly, research conducted by (Astri, 2019) obtained that will occur p = 0.039 (p <0.05) states that there is no relationship between smoking norms using work fatigue in fuel tanker truck drivers at PT X in 2019. Drivers with heavy smoking norms (≥10 cigarettes/day) were more likely to experience moderate work fatigue than those with light smoking norms (<10 cigarettes/day).

In contrast to the research conducted (Februyanto et al., 2019) the results of statistical tests produced a value of P-Value 0.349 (P-value > 0.05) there was no relationship between smoking norms and work fatigue.

From Croasmun to Zulfiqor smoking habits will reduce lung capacity, as a result of which the ability to consume oxygen will decrease. If the person is required to perform tasks that require energy exertion, they will easily get tired because of the low oxygen content in the blood (Octaviani, 2017).

Smoking norms can affect work fatigue, smoking can heighten the heart's workload and raise blood pressure. Nicotine in cigarettes is very dangerous to health, because nicotine can increase blood clots in blood vessels and can cause calcification of blood vessel walls (Lidya et al., 2017)

Smoking at an intensity that is often or obsolete will produce a smoking habit in workers. The length of smoking can also be one of the influential factors. This shares that there is a procedure where smoking will cause respiratory circulation disorders resulting in abnormal lung vital capacity. This condition if supported by other factors such as smoking duration, environment, nutritional intake, and other dust images will result in high severity caused to health (Alamsyah, 2017).

Smoking norms are supporting factors for health conditions that may affect a worker while doing work. Researchers concluded that smoking habits mean that the error of one part of a person's behavior, if as a negative behavior in the work environment, can result in the occurrence of an unintended condition, one of which is a work accident (Savitri et al., 2015).

Eating and drinking habits can affect a person's energy availability (Almatsier, 2009). The habit of eating and drinking can maintain the body's resistance to work properly.

As a result of interviews with workers, rumors were obtained that in general they had work accidents caused by not concentrating at work. They carry out other activities that can shape the occurrence of work accidents. Eating and drinking habits shape their work less aporism, similar opinions (Barker, 2007) prove the effects of eating and drinking will cause a loss of work productivity by 15%.

Not aligned using research conducted (Lubis, 2020) statistical test results obtained a p value value = 0.0001, where p value <0.05 states that there is no correlation between drinking habits and fatigue. Officers consume drinking water only when thirst arises, when they do not feel thirsty, do not consume drinking water. So that what happens is that the average drinking water consumed is only 8 glasses, even though if you work in a hot work environment, you must consume 11 glasses of drinking water.

This is different from the research conducted (Akbar et al., 2016) statistical test results obtained a value of p = 0.0001 where p < 0.05 states that there is a correlation between eating and drinking with the ability to concentrate (speed, constancy, and accuracy).

It is also not in line with the research conducted (Wenny, 2018) states that there is a relationship between eating and drinking using fatigue levels. Holistically, workers often feel thirsty because of a fairly dense work pattern. The activities carried out earlier can cause the body to lose body fluids because poly sweats causing thirst in workers.

Not aligned using research (Sihotang, 2019) states that there is a relationship between drinking coffee and the level of concentration. This study shows respondents consume coffee every day in 1-two cups per day during work because respondents are more excited about doing activities after drinking coffee.

The habit of not eating breakfast for workers who linger will also cause nutritional income to be reduced and unbalanced as a result of which workers can experience fatigue and work processes as disrupted (Akbar et al., 2016).

The norms of eating and drinking also play a role in protecting the body against the negative consequences of an empty stomach for hours. Because blood sugar levels can only last up to two hours. After that, the person concerned must fill his stomach again so that his body is able to move optimally. If not, then the supply of glucose energy to the brain can be disrupted. This can reduce the degree of one's health, low ability to concentrate, fatigue, especially in facilitating work accidents (Suma'mur, 2009).

If the working capacity of a worker is well maintained due to balanced eating and drinking, work fatigue can be minimized. Lack of food and drink consumed by the worker daily will have a negative impact on the body, such as the body's defense against disease decreases, physical ability decreases, weight loss, lack of enthusiasm and lack of motivation, reacts slowly and apathetically. In such a situation, it cannot be necessary to achieve optimal work efficiency and productivity (Wigjosoebroto, 2000).

The use of Personal Protective Senses (PPE) is the last alternative as an effort to prevent work accidents. The use of Personal Protective Equipment (PPE) in the office is adjusted to the exposure to hazards faced in the work area. For this reason, the use of the sense of Personal Protection (PPE) is very important in preventing work accidents (Antara et al., 2016).

The statistical results of bivariate analysis using Fisher's statistical test, obtained a value of p = 0.009 (p <0.05) then it can be interpreted that there is a significant correlation between the use of PPE when working using the incidence of work accidents in Patorani fishing boat craftsmen, Takalar Regency. In line with research by (Aswar, 2016) using p value < α as a result there is a relationship between the use of PPE using work accidents, where the 2nd value of the variable correlation is medium value (phi = 0.418).

This is also in line with research conducted (Sa'adah, 2017) using p value = 0.015 < 0.05 which means there is a significant relationship between the use of personal protective senses and work accidents in penderes workers at PTPN III Kebun Sei Silau in 2017. In line with research (Sulhinayatillah, 2017) using the results of Chi-Square calculations, a P value of 0.000 (P value < 0.05) was obtained, thus it can be decided that there is a relationship between the use of PPE and the incidence of work accidents in employees. In line with research (Suak et al., 2018) with what will happen Chi Square is produced, namely the value of p = 0.011 using the value of α = 0.05 that there is a relationship between the use of PPE and the incidence of work accidents.

Work accidents in this study are due to unsafe actions of workers similar to the habit of wearing PPE and their experience and skills at work cannot be said to be good as a result of which the potential for work accidents can be said to be large. Possible factors affecting the occurrence of work accidents mean factors of working environment conditions such as a safety work environment, machinery, tools, materials, work processes and the nature of the work that is appropriate.

A working atmosphere with the tranquility of the workplace and the comfort of facilities (PPE requirements) will increase the work performance of each worker, as a result of which using it requires every facility or work equipment that causes peace of use will be used by workers optimally. The act of using personal protective equipment is very crucial because it can prevent occupational diseases and accidents due to work (Anugerah &; Berjaya, 2020).

According to the Regulation of the Minister of Manpower and Transmigration of the Republic of Indonesia Number Per.08 / MEN / VII / 2010 states that the sense of Personal Protection is a sense that has the ability to protect someone at work whose function is to isolate work energy from hazards in the office. Employers are required to provide PPE for employees / workers free of charge and must be used at work during work to avoid work accidents (Purba, 2015).

Ergonomic principles in work are adjusting work with Personal Protective Equipment (PPE) in accordance with the conditions of workers in order to protect workers from the risk of work accidents, which has been stated in the Qur'an, namely Q.S Al-Baqarah / 2:195 which translates:

"Be in the way of Allah, do not plunge yourselves into perdition, and do good. Verily God loves those who do good."

The above verse explains that Muslims should not be desperate to do something that can endanger themselves, including in terms of striving, worshiping and working

Normal work posture is a behavior in the work process that is in accordance with the anatomy of the body, so that there is no shift or emphasis on crucial parts of the body such as nerves, tendons, and bones so that the state as relaxed and does not cause musculoskeleta complaints, attitudes and work positions that are not ergonomic can cause several health problems, including muscle fatigue, pain, and vascularization disorders (Briansah, 2018).

The statistical results of bivariate analysis using Fisher's statistical test, obtained a value of p = 0.02 (p <0.05) then it can be interpreted that there is a significant correlation between work posture using the incidence of work accidents in Patorani fishing boat craftsmen Takalar Regency. This is in line with the research conducted by (Prastika et al., 2019) according to the results of bivariate analysis using the spearmank rank test of work posture variables with work fatigue in furniture workers in Seranan Village obtained a sig value (p-value) of 0.000 < 0.05 then Ho was rejected. The results provide that there is a relationship between work posture and work fatigue in furniture workers in Serenan Village.

This is also in line with the research conducted by (Tiara et al., 2017) on sanding the finishing parts of PT. Ebako Nusantara Semarang where obtained p-value = 0.02 so that Ho was rejected, it can be concluded that there is a significant relationship between work posture and work fatigue.

In line with research (Dharmawirawan et al., 2019) based on bivariate results using the Pearson bivariate correlate test. Obtained value p = 0.029 (p > 0.05) which is there is a relationship between work posture using back muscle fatigue.

In line with research (Rumangu et al., 2021) statistical test results using the Pearson Moment product test produced values (p = 0.004), p values < 0.05 illustrate the correlation between work positions using musculoskeletal complaints in palm sugar farmers in Rumoong Atas Village, Tareran District.

In line with research (Mallapiang, Azriful, et al., 2021) based on the results of research conducted on 42 respondents who work as Lipa' weavers Sa'be Mandar that there is a significant correlation between work postures using MSDS with a value of p < 0.005, complaints that are often complained about are elbows, neck, hands and buttocks.

Work posture means the error of a concept that is crucial to be applied in a work environment, a good work environment, safety, adequate, and quiet. In essence, the concept was not given much attention, so that it could cause dangerous risks both in terms of danger, physical environmental requirements, work behavior and work methods (Tarwaka, 2015).

From the pheasant and Ariyanto who explained that a good work posture at work is a posture that contains the minimum static muscle power, or in general, it can be said that variations in posture when working are better than one posture when working (Prasetya, 2020).

Stretching the neck, tilting the neck, tucking the chin, stretching the sides, and twisting the body means that the recommended exercises for the neck and body surface, shrugging and twisting it, twisting and stretching the wrist flexors/extensors are some exercises for the upper extremities, hugging to the 2 legs, lengthening the legs, and ankle pumps are some exercises for the lower body. Stretching exercises have similar psychological benefits to increasing mental alertness while reducing work accidents (Mani, 2018).

CONCLUSION

The results of the study found that there was a significant relationship between smoking norms while working with the incidence of work accidents in Patorani fishing boat craftsmen, Takalar Regency. There was no significant relationship between the norms of eating and drinking at work using the incidence of work accidents in Patorani fishing boat craftsmen, Takalar Regency. There is a significant correlation between the use of PPE while working and work accidents in Patorani fishing boat craftsmen, Takalar Regency. There is a significant relationship between work posture and the incidence of work accidents in Patorani fishing boat craftsmen, Takalar Regency. This study advises workers not to smoke or reduce smoking activities while working, not to eat and drink while working and to wear PPE in this case gloves, glasses and others while working. For the local government, it is advisable to always pay attention to the informal sector and empower the K3 unit at the local puskesmas to convey an introduction to workers regarding factors that can cause work accidents.

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