



The Correlation Between Adherence to Personal Protective Equipment and Incidents Involving Construction Workers at the Bali Hospital Project

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ABSTRACT:

Work accidents are unwanted events that harm people, cause damage to property, and work processes. In the construction sector, the work accident rate in Indonesia reaches 32%. This research aims to determine the relationship between compliance with the use of personal protective equipment (PPE) with the incidence of work accidents in construction sector workers at Bali International Hospital Sanur managed by PT PP (Persero) Tbk. This research used a quantitative method with a cross-sectional design. The research population was all construction workers in the Bali International Hospital Sanur project as many as 286 people, with random sampling techniques. The instrument used in data collection was a questionnaire, and data analysis was carried out univariate and bivariate using the Chi-square test. The results showed a relationship between the use of safety helmets and the incidence of occupational accidents in construction workers at Bali International Hospital Sanur by PT PP (Persero) Tbk ($p = 0.11$). The implication of this research is the importance of compliance with the use of PPE in preventing work accidents in the construction sector.

Keywords: Compliance, Personal Protective Equipment, Workplace Accident.

INTRODUCTION

Occupational Health and Safety Assessment Series (OHSAS) is a means to prevent Occupational Accidents, which can cause losses in the form of injuries or injuries, disabilities or death, property losses, and damage to equipment or machinery and the environment at large (Rambe, 2019). The purpose of implementing OHSAS is to make the work environment more comfortable so that the risk of accidents and diseases due to work can be reduced as low as possible (Dyrborg et al., 2024). The OHSAS profession in the company has a function to assess the picture of worker behavior and the implementation of the OHSAS program in the work environment and the company. This assessment is used as the basis for corrective action so that every worker and the community always avoids hazards due to work (Kuswana, 2014).

An accident is an unwanted event that causes losses to humans, processes, and property damage in an industrial work process. The occurrence of work accidents occurs due to the existence of previous factors. If one part of these factors is eliminated, the occurrence of work accidents will not occur (Martiwi et al., 2017). According to (Yuliandi & Ahman, 2019), there are two causes of work accidents: those caused by unsafe conditions and unsafe actions. Unsafe conditions will occur if during the implementation of worker activities in the work environment do not comply with the rules and procedures that have been set, while those caused by unsafe actions will occur if a worker does not know, is incapable, and does not want to carry out the work procedures and regulations that have been set. This unsafe act is one of the factors contributing to the highest accident rate (Monalisa et al., 2022). Therefore, it can be concluded that the main factor in the occurrence of work accidents is caused by the human factor itself. According to Lawrence Green's theory, actions or behaviors are influenced by several factors, namely predisposing, supporting, and driving factors. The predisposing factors in question are such as education, knowledge, working period, attitude, motivation, and others. Supporting factors are facilities and driving factors, include colleagues and promotion of occupational safety and health.

The consequences of work-related accidents are direct losses or costs and indirect losses or costs (Pérez et al., 2024). Direct losses or costs are losses that can be calculated directly from the beginning of the event to the rehabilitation stage, for example, medical expenses and treatment due to accidents. Meanwhile, indirect losses or costs are losses in the form of costs incurred including something that is not visible at the time or sometime after the accident, for example the loss of working hours of workers who have had work accidents (Putra, 2017).

According to the International Labour Organization (ILO), every year, there are more than 250 million workplace accidents and more than 160 million occupational illnesses. This is an increase based on the ILO estimate that around 2.78 million workers die every year due to work accidents and work-related illnesses. About 2.4 million (86.3%) of these deaths are due to occupational diseases, while more than 380,000 (13.7%) are due to occupational accidents (ILO, 2018). Meanwhile, based on data from the Ministry of Manpower in the first quarter of 2018, there were 5,318 cases of work accidents with fatalities of 87 workers, 52 workers were disabled, and 1,361 workers recovered after receiving treatment (Ridasta, 2020). The number of work accident cases in Indonesia is still very high, this is based on data from the Social Security Administration Agency (BPJS, *Badan Penyelenggara Jaminan Sosial*) Employment in 2021 stating that the number of work accident cases continues to increase every year. In 2019 there were 182,835 cases, and in 2020 the number of reported work accidents continued to increase to 221,740 cases; throughout 2021, it reached 234,270 cases.

Work accidents are often encountered in work activities in the industrial sector or related to it (Pertiwi & Widyanti, 2021). The construction services industry is an industrial sector with a

high rate of accidents due to work. The high number of occupational accident in the construction sector is still often ignored and considered unimportant. Construction construction contains a greater risk of work accidents compared to other fields of work (Handari & Qolbi, 2019). According to data from the Ministry of PUPR in 2018, in the last two years there have been fourteen cases of work accidents in construction projects. Cases of work accidents in the construction sector in Indonesia are 32% (Huda et al., 2021). This is in accordance with data from the Ministry of Public Works and Spatial Planning (2019) that there have been 130,923 work accidents and the most incidents of work accidents are in construction projects (Ihsan et al., 2020).

According to the results of (Rambe, 2019) research on workers at PT. Global Permai Abdi Medan Timur North Sumatra is known that as many as 57 (66.3%) people have experienced work accidents at their workplaces, while there are 29 (33.7%) people who have never had work accidents at work and there is a relationship between compliance with the use of personal protective equipment (PPE) and work accidents. This is supported by the results of research by (Handari & Qolbi, 2021) that of the 110 workers at PT. X Serpong – Cinere Toll Road Project has 82 (74.5%) people who have experienced work accidents, while 28 (25.5%) people who have never experienced work accidents. The number of work accidents in this research is quite large because there are 70.9% of workers do not use PPE at work. The high number of work accidents in construction activities can interfere with worker productivity, so it will hinder the development carried out.

Control of work accident risk factors that can be done to minimize the number of work accidents is technically and administrative. Technical control that can be carried out in construction is repairing, adding, and installing safety on equipment, such as installing noise detectors on noisy machines so as to reduce noise figures (Jawat, 2017). Meanwhile, administrative control that can be carried out during construction is the provision of rewards, training, and the implementation of Standard Operating Procedures (SOP). However, many companies refuse to carry out these controls on the grounds that they add to the cost of expenses that are quite expensive (Barizqi, 2015). Therefore, the use of Personal Protective Equipment (PPE) is the last alternative to risk control in work accidents if technical and administrative control still leaves risks that cannot be reduced.

The use of Personal Protective Equipment in construction projects has a very important role in protecting workers from work accidents (Hartanto, 2017). The use of PPE cannot perfectly protect the body from the risk of harm, but it can minimize the severity that may occur. However, the great benefits of using Personal Protective Equipment at work do not guarantee that all workers will wear it. In reality, the use of PPE by workers has not been fully implemented. This occurs due to several factors, such as the presence of PPE, lack of knowledge about PPE and lack of worker compliance in using PPE. The results of research conducted by (Rambe, 2019) on

workers at PT. Global Permai Abadi Medan Timur stated that out of 86 workers, there were 33 (38,4%) people who were obedient in using personal protective equipment when working, while workers who were less compliant in using personal protective equipment when working were 53 (61.6%) workers. Meanwhile, the results of a research conducted by Sulhinayatillah (2017) showed that of the 86 people who worked at PT. PP London Sumatra Indonesia Tbk, more workers who are incomplete use personal protective equipment, namely 54 (62.8%) workers, while workers who use complete personal protective equipment are 31 (37.2%).

Based on research conducted by (Barizqi, 2015) on construction workers of PT. Adhi Karya Tbk project of Telogorejo Hospital Semarang, OHSAS, has provided PPE in the form of safety helmets and safety shoes for construction workers to use while working. The results of the research that has been conducted by (Barizqi, 2015) showed that of the 59 respondents who did not comply with using PPE in the form of safety helmets, there were 33 (50.8%) workers who experienced work accidents, and of 56 respondents who did not comply with PPE in the form of safety shoes, there were 32 (49.2%) workers who experienced work accidents. The reason for the non-compliance of construction workers in using PPE is due to various reasons such as uneven distribution of PPE, uncomfortable use of PPE at work, and lack of awareness of workers on the importance of using PPE when doing work (Barizqi, 2015).

PT. PP (Persero) Tbk is one of the companies engaged in the construction services sector. This company is part of a State-Owned Enterprise (BUMN) which is currently a contractor to build one of the projects, namely Bali International Hospital Sanur, which is located in the Sanur Tourism Area, Denpasar City, Bali. The purpose of the development of Bali International Hospital Sanur is to improve services in the health sector in Indonesia and become an international standard hospital. This project can be said to be one of the big projects that are running. This can be seen from the number of project workers, as many as 286 people, and the work process, which uses a lot of heavy equipment such as excavators, cranes, compactors, and other heavy equipment. Thus, it can be ascertained that the potential for work accidents in this project is quite large.

Based on the above background, it can be seen that the use of PPE in construction project workers is very important to pay attention to so as not to interfere with the work productivity of workers who can hamper these construction activities. Therefore, this research aims to determine and analyze the relationship between compliance with the use of personal protective equipment (PPE) with work accidents in workers in the construction sector of the construction of Bali International Hospital Sanur by PT. PP (Persero) Tbk. So that the benefit in this research is to provide information that can be used as a basis for improving compliance with the use of personal protective equipment (PPE) in the construction work environment. This research is expected to make a practical contribution to project management in designing more effective work safety policies, as well as increasing workers' awareness of the importance of PPE to reduce the risk of

work accidents. In addition, the results of this research are also expected to be a reference for other construction companies in an effort to create a safer work environment and support worker productivity.

RESEARCH METHOD

This research is a quantitative analytical research with a cross-sectional design, focusing on the Bali International Hospital Sanur Construction Project PT workers. PP (Persero) Tbk. Data collection was carried out from March to April 2023, involving 286 workers as a population. The research sample was taken by simple random sampling with the help of Microsoft Excel, resulting in 70 respondents who met the inclusion and exclusion criteria. The research instrument was in the form of a paper-based questionnaire consisting of questions about the identity of the respondents, the incidence of work accidents, compliance with the use of safety helmets and safety shoes, and the availability of personal protective equipment. Primary data is collected directly from respondents, while secondary data is obtained from various supporting sources such as research articles, journals, and internal project data.

Data analysis is carried out through several stages ranging from checking and coding the data to processing and compiling the data for further analysis. Univariate analysis was used to describe the characteristics of the research variables, while bivariate analysis with the Chi-square test was used to evaluate the relationship between compliance with the use of personal protective equipment (PPE) and the incidence of work accidents. This research also ensures compliance with research ethics by seeking approval from the Research Ethics Committee of FK Unud/RSUP Sanglah and ensuring the confidentiality of respondent data through a questionnaire consent sheet (informed consent).

RESULT AND DISCUSSION

Occurrence of Work Accidents in Workers

Based on the results of the research that has been carried out, the distribution of work accident incidents among Bali International Hospital construction workers was obtained. Data on the incidence of work accidents was obtained by distributing questionnaires to workers. For more details, please see Table 1.

Table 1. Occurrence of Work Accidents in Workers

Occurrence of Work Accidents	Frequency (n)	Proportion (%)
Ever	48	68.7
Never	22	31.3

Based on data on work accidents in Bali International Hospital construction workers from 70 respondents, as many as 48 (68.7%) people have experienced work accidents, while those who have never experienced work accidents are 22 (31.3%) people.

Overview of Predisposition Factors in Workers

Based on the results of the research that has been carried out, the results of predisposing factors in construction workers at Bali International Hospital were obtained. The predisposing factors of workers measured in this research are age, working period, and education of workers. For more details, please see Table 2.

Table 2. Overview of Predisposition Factors in Workers

Predisposition Factors	n	%	Min	Max	Mean
Age			17	59	32
≤ 40 Years	55	78.6			
> 40	15	21.4			
Working Period			1	44	12
< 6 years	27	38.5			
6-10 years	15	21.5			
> 10 years	28	40			
Education					
SD	11	15.7			
Junior/Senior High School	23	32.9			
Vocational School	35	50			
S1/D3	1	1.4			

Based on data from research results from construction workers at Bali International Hospital, workers' age is classified into 2 categories, namely ≤ 40 years old and > 40 years old. Based on table 2 regarding predisposition factors, it can be seen that the most age range in workers is in the category ≤ 40 years old, as many as 55 (78.6%) people. The youngest respondents in this research were 17 years old, and the oldest was 59 years old, while the average age of the respondents was 32 years old. Furthermore, for the working period that has been taken by the respondents during their first time working as a construction worker, it is known that the working period of the respondents is dominated by workers with a working period of >10 years, namely 28 (40%) people out of a total of 70 respondents. The shortest working period that has been carried out by the respondents is for 1 year, and the longest working period is for 44 years, while the average working period of the respondents is for 12 years. Based on the formal education background of the respondents from 70 research respondents, it was found that the education level was dominated by high school/vocational school graduates, which was as many as 35 (50%) people. The lowest education graduates in this research were from elementary school as many as 11 (15.7%) people, while the highest education graduates were S1/D3 as many as 1 (1.4%) people.

Overview of the Availability of Personal Protective Equipment (PPE) for Workers

In this research, a research was conducted on the availability of PPE provided by the company. Data on the availability of PPE for construction workers at Bali International Hospital was obtained by distributing questionnaires to workers. For more details, please see Table 3.

Table 3. Overview of the Availability of Personal Protective Equipment (PPE) for Workers

PPE Availability	Frequency (n)	Proportion (%)
Complete	20	28,6
Incomplete	50	71.4

Based on the data from table 3 above, describing the availability of PPE for construction workers at Bali International Hospital, there are 2 categories in describing the level of PPE availability, which is complete and incomplete. Of the total 70 respondents, 20 (28.6%) were complete with PPE and 50 (71.4%) were incomplete with PPE.

Compliance with the Use of Safety Helmets and Safety Shoes for Workers

Compliance with the use of safety helmets and safety shoes referred to in this research is workers who are compliant in using safety helmets and safety shoes consistently while in the project area. For clearer data results, see table 4.

Table 4. Compliance with the Use of Safety Helmets and Safety Shoes for Workers

Types of PPE	Compliant (n)	Proportion (%)	Non-Compliance (n)	Proportion (%)
Safety Helmet	32	45.7	38	54.3
Safety Shoes	64	91.4	6	8.6

Based on the data from the research, it can be seen that 38 (54.3%) people are non-compliant in the use of PPE (Safety Helmet) at Bali International Hospital, while 32 (45.7%) respondents are compliant in the use of PPE (Safety Helmet). Meanwhile, 6 (8.6%) respondents at Bali International Hospital Construction did not comply with the use of PPE (Safety Shoes), while 64 (91.4%) respondents did not comply with the use of PPE (Safety Shoes).

The Relationship between the Use of PPE and the Incidence of Work Accidents in Workers

The Relationship between the Use of PPE (Safety Helmet) and the Incidence of Work Accidents in Workers

Based on data obtained from the research of the relationship between compliance with the use of safety helmets and the occurrence of work accidents in Bali International Hospital construction workers, it can be seen in table 5.

Table 5. Cross-tabulation between the Use of PPE (Safety Helmet) and the Incidence of Work Accidents in Workers

Safety Helmet Usage Compliance	Occurrence of Work Accidents				Total I	P
	Ever		Never			
	Frequency (n)	Proportion (%)	Frequency (n)	Proportion (%)		
Non-Compliance	31	44,3	7	10	38	0,11

Safety Helmet Usage Compliance	Occurrence of Work Accidents				Total I	P
	Ever		Never			
	Frequency (n)	Proportion (%)	Frequency (n)	Proportion (%)		
Obedient	17	24,3	15	21,4	32	
Total	48	68,6	22	31,4	70	

Based on table 5. It can be seen that 38 respondents who did not comply with PPE (safety helmet) there were 31 (44.3%) workers experienced work accidents and of the 32 respondents who complied with PPE (safety helmet) there were 17 (24.3%) workers who experienced work accidents. Meanwhile, of the 38 respondents who did not comply with PPE (safety helmet), 7 people (10%) had never experienced a work accident and of the 32 respondents who complied with using PPE (safety helmet), there were 15 (21.4%) workers who did not experience a work accident. Based on the results of testing using the chi-square test, the compliance of the use of safety helmets with the occurrence of work accidents shows that there is a relationship between compliance with the use of safety helmets and the occurrence of work accidents, because the result of p- value calculation is $0.011 < 0.05$.

The Relationship between the Use of PPE (Safety Shoes) and the Incidence of Work Accidents in Workers

Based on data obtained from the research of the relationship between compliance with the use of safety helmets and the incidence of work accidents in Bali International Hospital construction workers, it can be seen in table 6.

Table 6. Cross-tabulation between the Use of PPE (Safety Shoes) and the Incidence of Work Accidents in Workers

Safety Shoes Usage Compliance	Occurrence of Work Accidents				Total	P
	Ever		Never			
	Number (f)	Proportion (%)	Number (f)	Proportion (%)		
Non-Compliance	4	5,7	2	2,9	6	0,916
Obedient	44	62,9	20	28,6	64	
Total	48	68,6	22	31,4	70	

Based on table 6, it can be seen that of the 6 respondents who did not comply with PPE (safety shoes), there were 4 (5.7%) workers who experienced work accidents and of the 64 respondents who complied with PPE (safety shoes), there were 44 (24.3%) workers who experienced work accidents. Meanwhile, of the 6 respondents who did not comply with the use of PPE (safety shoes), there were 2 (2.9%) workers who had never experienced a work accident and of the 64 respondents who complied with using PPE (safety shoes), there were 22 (31.4%) workers who did not experience a work accident. The results of the test using the chi-square test, the compliance of the use of safety shoes with the occurrence of work accidents showed that there was no relationship between compliance with the use of safety shoes and the occurrence of work accidents, because the p-value result was $0.0916 > 0.05$.

Occurrence of Work Accidents in Workers

Based on the results of research that has been carried out on 70 respondents who work at Konstruksi Bali International Hospital, the highest proportion is in respondents who have experienced work accidents, namely 48 (68.7%) people. This research is in line with the results of respondents in Hasibuan's research (2020) that the highest proportion is also in respondents who have experienced work accidents, which is 29 (72.5%) people. The types of work accidents experienced by construction workers at Bali International Hospital can be seen in the following table 7.

Table 7. Occurrence of Work Accidents in Workers

Types of Work Accidents	Frequency (n)	Proportion (%)
Bumped	20	28.6
Fall	6	8.6
Stuck	11	15.7
Injured/Scratched	9	12.9
Hit	2	2.9
Total	48	68.7

Based on table 7. Above that the most dominating types of work accidents are the types of work accidents that are hit, which are as many as 20 (28.6%) people. The type of work accidents experienced by workers is caused by labor factors motivated by a lack of compliance in using safety helmets. The impact or loss of work accidents that will be experienced by workers is minor or severe injuries. However, it did not cause death, because the type of work accident experienced by the construction workers of Bali International Hospital was a minor work accident or nearmiss.

Research conducted by (Barizqi, 2015) on construction workers of PT. Adhi Karya Tbk Semarang Telogorego Semarang Hospital Project shows that there are differences in the types of work accidents. The development carried out by PT. Adhi Karya Tbk Semarang The Telogorego Semarang Hospital Project also experienced work accidents such as falling, being crushed/falling objects, being pinched, being hit by a hammer, and being scratched. However, in the research, respondents experienced more types of work accidents that were hit/fell objects, namely 14 (42.4%) people who were negligent in using personal protective equipment in the form of safety helmets.

Predisposing Factors in Workers

The predisposing factors analyzed in this research were the age of the worker, the length of service, and the level of education. Based on the results of the analysis of age predisposing factors carried out on construction workers at Bali International Hospital, it is known that the average age is 32 years. In table 5. Regarding the predisposing factors of workers, it can be seen that in this research, the age of the dependency is more dominant ≤ 40 years old, which is as many as 55 (78.5%) people. This is in line with research conducted by (Abidah & Hasan, 2023)

respondents in the research also stated that there were more in the young age category ≤ 40 years, which was as many as 62 (84%) people. According to the (Jeje et al., 1998), the incidence of work accidents is influenced by several factors, one of which is the age factor.

The working period in this research was calculated when the respondents first worked as a construction worker until this research was conducted. The average working period in 70 respondents in this research was 12 years. Based on the results of the research that has been conducted, the most dominant category of working period in experiencing work accidents is in the category of < 6 years as many as 19 (39.6%) people. This is in accordance with the research of Chelsia R et al (2019) on ship construction workers who often experience work accidents, namely as many as 34 (95%) people who have a working period of > 10 years. Therefore, it can be concluded that a worker who has a longer working period has more experience and will affect the behavior of workers at work.

The level of education is a variable in this research showing the level of formal education that has been taken by the respondents. The level of education can affect a person's behavior and work. Based on the results of the research, the level of education that most often experienced work accidents was in low education, namely not in junior high school as many as 23 (47.9%). This is in line with the research with the research of (Kartini et al., 2023), namely the education level of research respondents who often experience work accidents, namely junior high school workers as many as 16 (54%) people. The higher a person's education, the higher the knowledge of the benefits of using personal protective equipment to prevent work accidents and can affect attitudes at work (Suhardi, 2021).

Availability of Personal Protective Equipment (PPE) for Workers

The availability of Personal Protective Equipment (PPE) analyzed in this research includes the availability of safety helmets, safety glasses, earplugs, safety vests, gloves and safety shoes as well as routine checks on the feasibility of PPE and replacement of PPE that has been damaged by the company. It can be seen in table 5. regarding the availability of PPE, the proportion of workers with the availability of PPE is dominated by workers who are not equipped with PPE, which is 50 (71.4%). Based on the results of respondents in the research in the project, there are still many workers who have not received complete PPE to work. This is due to the difference in the type of work so that there is no need for other PPE, and neither the PPE needed from the foreman or the subcontracted company has been distributed to the workers. If the distribution of PPE is not distributed properly, there is a high probability of an increase in work accidents, because the use of complete PPE can reduce the incidence of work accidents. The results of this research are not in line with the results of research by Rahman (2018), namely the availability of PPE in Manhole project workers, that the availability of PPE to workers is relatively complete, namely as many as 48 (66.7%) people, but there are still obstacles in distributing PPE from the head office to the project so that it becomes an obstacle to get to the project.

Compliance with the Use of PPE (Safety Helmet and Safety Shoes) on Workers

The compliance with the use of PPE analyzed in this research is compliance in the use of safety helmets and safety shoes. Based on the results of the research on compliance with the use of PPE from 70 research respondents, it was found that the level of compliance with the use of PPE in safety shoes was higher than the level of compliance with the use of PPE in safety helmets. This is because construction workers feel uncomfortable when using PPE when working. Data from the research results regarding compliance with the use of Personal Protective Equipment can be seen in the following table 8.

Table 8. Compliance with the Use of PPE (Safety Helmet and Safety Shoes)

Types of PPE	Compliant (n)	Proportion (%)	Non-Compliance (n)	Proportion (%)
Safety Helmet	32	45.7	38	54.3
Safety Shoes	64	91.4	6	8.6

The results of the research are presented in table 8. showed that of the 70 construction workers, 38 (54.3%) workers did not comply in using safety helmets. Meanwhile, 6 (8.6%) workers did not comply with the use of safety shoes. Research conducted by (Barizqi, 2015) on house builders at Telogorejo Hospital Semarang found that 59 (90.8%) non-compliant respondents used safety helmets, but there were different results in the level of compliance with the use of safety shoes, which was 55 (84.6%). Most workers are not compliant in using PPE when working on projects. Various reasons expressed by workers include feeling uncomfortable in using PPE while working. Compliance in using PPE has an important role in promoting safety in the workplace and can reduce the incidence of work accidents.

The Relationship between PPE use Compliance and the Incidence of Work Accidents in Workers ***The Relationship between Compliance with the Use of PPE (Safety Helmet) and the Incidence of Work Accidents***

Safety Helmet or safety helmet is one of the safety tools used by workers to protect their heads from impacts or falling objects. The Safety Helmet is a mandatory safety tool to be used when entering the project area. Based on the results of the hypothesis test using the chi-square test, it is known that there is a relationship between compliance with the use of PPE in the form of a safety helmet and the incidence of work accidents in construction workers at Bali International Hospital Sanur by PT. PP (Persero) Tbk, obtained a value of $p = 0.011$. This research's results align with the research conducted by (Barizqi, 2015) on construction workers of PT. Adhi Karya Tbk in the Telogorejo Hospital Semarang Project, the research stated that there was a relationship between the use of safety helmets and the incidence of work accidents ($p = 0.011$). This research is in line with (Saraswati, 2021) research on construction workers of PT. Adhi Persada Building in the MTH 27 Project that there is a relationship between compliance with the use of personal protective equipment in the form of helmets and work accidents.

In this research, it can be concluded that some still do not use personal protective equipment in the form of helmets. Helmets are a useful head protection devices to protect the head from the impact of objects and maybe hit by materials that can hit the head. The rules that have been set by the company in the use of PPE in the project area are very clear and detailed that workers are required to use PPE in the form of safety helmets when entering the project area. However, there are still many workers who do not wear safety helmets when resting in the project area. Based on research, many construction workers do not wear safety helmets while resting even though they are in the project area because they think that the area where they work is safe from danger. In fact, in the area, there is a tower crane that is operating in transporting heavy materials and there is scaffolding used by other workers. Workers feel safe even though there is a physical danger of falling materials from above in the project area. In addition, some workers do not use safety helmets per established procedures, such as not using safety helmets properly and correctly, namely, not attaching the chin straps. This has the potential for danger, namely that the safety helmet will easily come off while working because it is not used properly.

The Relationship between the Use of PPE (Safety Shoes) and the Incidence of Work Accidents in Workers

Safety Shoes or safety shoes are one of the personal safety devices used to protect the feet. Safety shoes used by workers have a very hard toe and a thick sole with the aim that the feet of the workers are protected from heavy materials that can fall on the feet of workers and objects that can injure the feet of workers. Based on the results of hypothesis testing using the chi-square test, it is known that there is no relationship between compliance with the use of PPE in the form of safety shoes and the incidence of work accidents in construction workers at Bali International Hospital Sanur by PT. PP (Persero) Tbk, with a value of $p = 0.916$. This result is in line with the research of (Derosari, 2020) on workers of the State University of Malang lecture building construction project, that there is no relationship between the use of PPE and work accidents (0.684).

It can be concluded that this research is dominated by workers who are obedient in using safety shoes so as to avoid work accidents. The use of safety shoes at work has become a habit factor and does not feel disturbed at work; workers feel comfortable when using safety shoes which function to minimize the risk of work accidents that can occur at any time. Workers who are compliant with using PPE will always behave safely to work so that they can reduce the number of work accidents.

CONCLUSION

Based on the results of research and discussion regarding the relationship between compliance with the use of Personal Protective Equipment (PPE) with the incidence of work accidents in construction workers at Bali International Hospital Sanur conducted by PT PP (Persero) Tbk, several conclusions can be drawn. First, 48 workers experienced work accidents, while 22 workers never experienced the incident. The most common type of accident found in this research was accidents due to collisions. Second, there is a significant relationship between compliance with the use of safety helmets and the incidence of work accidents among workers in the construction sector at Bali Sanur International Hospital, as indicated by a p-value of 0.11. However, there is no relationship between compliance with the use of safety shoes and the incidence of work accidents, as indicated by a p-value of 0.916. In terms of advice, it is recommended that construction workers increase compliance with the use of safety helmets and safety shoes in accordance with the standard operating procedures set by the company to minimize the occurrence of work accidents. Workers should also remind each other to consistently use safety helmets and safety shoes at the work site. For PT PP (Persero) Tbk, it is recommended to increase supervision regarding the use of PPE by workers while in the project area and provide stricter sanctions for workers who do not comply. The company must also ensure the availability of adequate PPE for all workers. This research makes an important contribution to efforts to improve work safety in the construction sector, especially through increasing compliance with the use of PPE. In addition, further research can examine the effectiveness of interventions implemented by companies in increasing workers' compliance with the use of PPE and reducing the incidence of work accidents.

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