The construction industry is one of the most at risk to worker safety. The number of work accidents in Indonesia continues to increase so that by 2021 the number of work accidents will reach 234,270 cases. Therefore, in-depth research is needed to maintain the safety of all workers. Recognizing the factors that cause work accidents helps stakeholders take preventive action. It is necessary to increase worker safety behaviour by identifying its factors. Both those that occur in casual workers and permanent workers. Therefore, it is important to see whether employment status affects the safety behaviour of construction workers so that preventive measures can be taken as a form of prevention of work accidents. The research objective was to analyze the status of workers on the safety behaviour of construction workers. Data was collected through a survey method of 300 construction workers in the cities of Surabaya, Malang, and Batu in East Java, Indonesia. The results of the study show that worker status has a positive effect on construction work safety behaviour. This means that the higher the Employee Status will increase the Safety Behavior variable, with a path coefficient of 0.390. Among the indicators that are dominant in measuring the ES Worker Status construct is the Type of Worker, with the highest loading factor of 0.842. Thus, if the management wants to raise the value of the variable Safety Behavior through improving aspects of Employee Status, what need to be evaluated as a top priority is the Employee Type. The results of this study can be used as a reference in setting policies related to worker safety. Project management can determine what strategic steps need to be taken for construction workers with different types of employee statuses. so as to increase worker awareness of a culture of safety behavior

Keywords: employee status, contractual worker, daily workers, outsourcing worker, permanent workers, safety behaviour, PLS-SEM

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ANALYSIS OF THE EFFECT OF EMPLOYEE STATUS ON CONSTRUCTION WORKER'S SAFETY BEHAVIOR USING STRUCTURAL EQUATION MODEL

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1. Introduction

The construction industry is one of the foremost in danger to employee safety. International labour organizations state that construction sites have one in six fatal workplace accidents. In addition, non-fatal accidents square measure calculable to affect 374 million workers annually, and plenty of those accidents have serious consequences on the earning capability of employees [1].

Meanwhile, based on [2], the number of work accidents in Indonesia continues to increase. In 2015, the number of work accidents that occurred in Indonesia reached 110,285 cases. This number decreased in 2016 to 101,367 cases but increased again in 2017 to 123,040 cases. A surge in the number of work accidents occurred in 2018 and 2019, with a total of 173,415 work accidents and 182,835 cases. The work accident figures that have been mentioned are the registered work accident numbers, while the conditions in the field show that there are work accidents that the company has not registered with various considerations. Although there is no data that specifically mentions the number of accidents in the construction sector, this sector is the largest contributor to the number of work accidents. [3] states that 30 % of the number of work accidents that occur are work accidents in the construction sector.

[4] argues that work safety is a state of being safe and protected from suffering, damage, and loss in the workplace, both when using tools, materials, and machines in the processing process, as well as in maintaining and securing the workplace and the environment. According to [5], safety behaviour supports safety practices and activities in the workplace, and workers must accept both as work requirements to avoid accidents in the workplace. This safety behaviour is also inseparable from the status of construction workers, including freelancers and permanent workers.

Therefore, studies that are devoted on the effect of worker status on the safety behavior of construction workers are scientific relevance.

2. Literature review and problem statement

There have been many studies related to work accidents with worker behaviour. The two personnel directly involved

are thought to be to blame for the unsafe behaviour [6]. Behavioural factors are human aspects, and these factors pay less attention to environmental factors. Unsafe behaviour is the most fundamental cause of near misses and accidents in the workplace [7]. 88 % of work accident reasons were operational errors; the most common type of error, inadequate safety facilities, malfunctioning equipment, untrained staff, and violations of rules, are all factors in operational errors [8].

Behaviour is an activity displayed by a person, which can be observed directly, or indirectly [9]. Safety behaviour is an action or activity related to work safety factors. [10] stated that a behaviour carried out by several people that can minimize the occurrence of work accidents for all employees.

Because they indicate a problem with the organization's safety management system, accident rates are frequently employed as the major outcome measure of safety performance. As a result, those who almost solely use accident rates to gauge their success in improving safety are more likely to take a reactive approach to safety. On the other hand, regular attention to real safety behaviour is proactive because it enables additional safety-related problems in the accident causative chain to be discovered and resolved before an event. Since "safety behaviour" serves as the unit of measurement, a cooperative, problem-solving strategy, including management and staff, is implemented to pinpoint crucial clusters of safe and hazardous behaviours and use these findings to create "Safety Behavior Inventories." [11]. That is the reason why it's necessary to analyze safety behaviour

Technical safety intervention, managerial safety intervention, and human safety intervention are the three interventions shown by [12] to impact the safety behaviour of construction workers. As a result, technical safety intervention shows the highest effect value. However, if to take a deeper look at this technical safety intervention, it must be supported by the other two interventions to implement optimally. So humans still play a major role here.

[13] conducted a study on the correlation between the dimensions considered to have an influence on safety performance. These dimensions include leadership, people, policy, behaviour, values, strategy, contract system, process and behaviour. The results of the research show that leadership and people significantly influence other dimensions. This research also shows that humans have an important role in safety. So, research on the influence of workers on safety has relevance to be carried out.

[14] conveyed in their study that in improving safety behaviour, safety training is needed, especially training that emphasizes the emotional attachment of workers. In addition, this paper states that gender, age and educational background also have an influence in improving safety behaviour through safety training. However, this research is limited to the number of samples used and does not attempt to test the correlation between the variables. So a better statistical approach should be used in research development.

A study by [15] showed an effect of the age and gender of construction workers on intrusion behaviour, which is one of the unsafe behaviour. It is shown that the demographics of workers, namely age and gender, have a role in intrusive behaviour or entering dangerous areas. However, the researcher revealed that there are still unresolved problems related to the limitation of worker demographics only involved two types of demographics without looking at other demographics of workers such as education level, personality type etc., which might also influence the intrusion behaviour. This may be due to the research being conducted in an open project site, which has certain limitations. An option to overcome the difficulties is to make observations and include other factors that may influence intrusion behaviour.

[16] analyze employee's knowledge, attitudes, and actions in relation to occupational health and safety. Comparison of age, education, and experience are used as an evaluation tool. According to the study, age, education, and experience are all related to safety behaviour. The research conducted only did the average test, which was not sufficiently able to show how much these variables had a significant influence.

In addition, [17] shows the effect of the type of worker with a certain contract on the quality of work of workers in Europe. While the quality of work is a worker's behaviour that can be observed. Using almost the same logic, it is assumed that the status of workers is related to the safety behaviour of construction workers.

Meanwhile, [18] conducted a study on the demographic impact of construction workers on safety awareness. The workers' demographics included gender, age, level of education and length of experience of 532 construction workers to determine the effect of these variables on safety awareness. The results showed that there was a significant difference between the demographic variables on safety awareness. But unfortunately, this research has limitations in terms of the analytical method used, namely the data coding process. However, this paper is constrained by data processing problems. So it is necessary to do the right analysis method. According to the author, the right method to overcome this is the use of SEM-PLS.

In addition, [19] conducted research with the object of temporary construction workers as the object of research. The study argues that safety behaviour is influenced by personal values. The analytical method used is the SEM-PLS method. The use of SEM-PLS is considered suitable because this method is able to better analyze the relationship between variables.

[20] have studied how employment status affects job stress, affective commitment, and job satisfaction. Temporary workers scored lower on job control, according to one study. Low education negatively moderates the link between employment status and job stress, but it's positive when education is high. This was partially accepted because high education did have a substantial positive moderating effect on the interaction, but so did low education. From this paper, it can say that employment status, which is divided into temporary and permanent workers, has an influence on job satisfaction and job stress. Besides that, it is also possible to say that the level of education also plays a role in employment status. However, there are some limitations found in this study. Temporary work is defined differently in different nations, making generalization problematic. In Europe, it's transitory, non-permanent, and fixed-term; in the US and Canada, it's contingent. Distinct definitions have the same meaning but different categorizations, according to the literature. There are numerous sorts of temporary work, hence the finding cannot be applied outside European research. So as a solution to be applied in the current research is the use of employee status with indicators of age, education, experience and employee type according to conditions in Indonesia.

Employment type refers to aspects of the employment contract and employment (e.g. distinguishing between wages and self-employment and between the employment contract term), as well as the number of hours worked (e. g. separat-

ing part-time and full-time work). Meanwhile, in Indonesia, the workforce status is legally regulated into 3: permanent employees, contract employees and outsourcing. The main difference between the status of contract workers and permanent workers is the legal force of the status of the workers themselves [21]. Permanent employees usually have far more secure rights (regarding job security) than non-permanent employees. Temporary employees are only appointed when the company requires additional workers. Usually, the company can dismiss them when they no longer need additional employees. In addition, if the permanent employee does not have a term of office, then the contract employee has a term of office. In the work agreement and contract, it is also stated that the worker will be given a work agreement for a particular time, so the employment relationship has an expiration date, while the permanent worker is stated in the work agreement for an indefinite period. Therefore, contract workers have an employment relationship with the employer based on an employment agreement for a particular time. Outsourced employees can be permanent or contract employees, depending on the work's nature and the outsourcing policies. The grouping of permanent workers refers to workers who routinely work full-time and participate in managing business activities. However, in reality, the type of worker is not only divided into 3. However, based on the type of contract, there are also known as wholesale workers and daily workers in addition to the existing types of workers.

Through a preliminary study, the position of workers also contains a relationship with the safety behaviour of construction workers in Indonesia. The problem that arises is how significant the influence of employee status is on the safety behaviour of construction workers.

Therefore, research on the effect of worker status on the safety behaviour of construction workers in Indonesia needs to be carried out to see whether this worker status really has an influence on safety behaviour. Besides that, to overcome the problems in the analysis process that were encountered in previous studies, the researcher tried to use SEM-PLS analysis. The application of this technique is predicated on SEM PLS's capacity to examine several variables' relationships simultaneously. In addition, this approach can handle very small sample sizes, examine several indicators for each construct, and assess all measurement and structural paths in one analysis.

3. The aim and objectives of the study

The aim of the study is to analyze the effect of employee status on the safety behaviour of construction workers in Indonesia.

To achieve this aim, the following objectives are accomplished:

– to study the employee status and safety behaviour of construction workers;

– to conduct PLS-SEM analysis to see the correlation between employee status and safety behaviour.

4. Materials and methods of research

The objects in this study were construction workers in the cities of Surabaya, Malang, and Batu in East Java, Indonesia, with various types of workers. Data was collected through a survey method of 300 construction workers in those cities. Interviews were used to supplement questionnaires that respondents could complete on their own. Sampling during this study uses a purposive sampling technique. The sample is based on an assessment of the characteristics of the members. The criteria used in this study are:

1. Types of workers are types of workers based on contracts entered into with construction companies, with sub-criteria for permanent workers, contract workers with non-permanent contracts, contract workers with specific contracts, outsourcing workers and daily workers.

2. Age of workers, with sub-criteria age <30 years, 30–45 years, and >45 years.

3. Experience is the length of time someone has worked in the field with sub-criteria <2 years, 3–6 years, >6 years.

4. Education, with the sub-criteria did not complete formal education, Junior High School, Senior High School, Diploma/Bachelor.

The number of projects studied was 10 high-rise building construction projects with designation as hotels, offices, hospitals, apartments and malls. The consideration in the selection of this high-rise project is that at this level of work, there are quite a number of workers involved in one project activity audit that lasts for a long period of time, so in this process, an assessment of the Behavior of project workers can be comprehensive. The construction projects used as research objects are located in three East Java cities: Surabaya, Malang, and Batu. Therefore, representing various city levels will increase the objectivity of the analysis results.

The following is the hypothesis in this study:

– H_0: employee status has no significant effect on safety behavior;

– H_1: employee status has a significant effect on safety behavior.

When to held this survey let's assume that all workers have attended work safety training which held by construction management. In addition, it is also assumed that workers also understand safe and unsafe behavior in the workplace.

Three hundred construction employees were given questionnaires to complete as part of the survey. The Likert scale has a 5-point scale, and this study's scoring of the respondents' responses uses that scale [22]. Accordingly, the highest respondent's answer value is 5, and the lowest is 1. The number of categories or classes used to prepare these criteria is adjusted to the scale, which is 5 classes; hence, the class interval is (5–1):5=0.8. In contrast, the primary interpretation of the average value employed in this study is the score interpretation offered by [23]. Thus, the following criteria can be used to define the mean value that has been achieved for each item, indicator, and variable in Table 1.

Inferential analysis in this study uses SEM-PLS (Partial Least Square) analysis using SmartPLS software version 3.3.3.

Table 1

Interpretation of Indicator Scores in Research Variables

No.	Average	Significance
1	1–1.8	Very low
2	>1.8–2.6	Low
3	>2.6–3.4	Moderate
4	>3.4–4.2	High
5	>4.2–5.0	Very High

In this study, a quantitative approach was used. Quantitative research requires the study of a sample of the population and relies heavily on numerical data and statistical analysis. Researchers typically do quantitative research by identifying intriguing themes in terms of observable Behavior.

The authors used quantitative research based on the research objective to determine the relationship between the variables of employee status and safety behaviour. The design in this study uses the PLS analysis technique, part of the SEM (Structural Equation Modeling) analysis. Likewise, with this study where the independent and dependent variables can be measured through variable indicators.

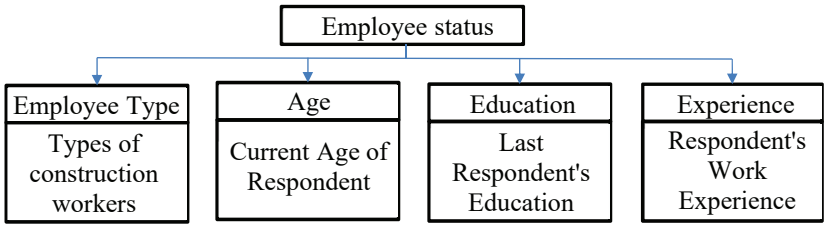

Fig. 1. Employee status factors and indicators

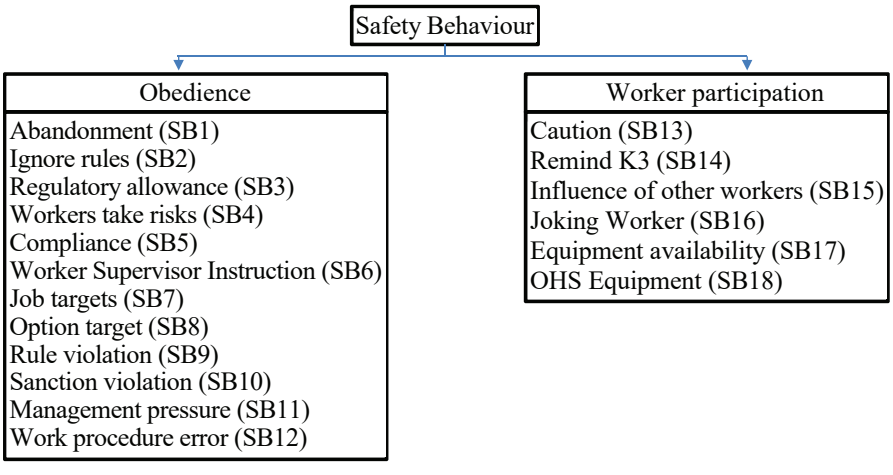

Fig. 2. Safety behaviour factors and their indicators

5. Results of study analyze the effect of employee status on construction worker's safety behavior using structural equation model

5. 1. Employee status and safety behavior of construction workers

In this study, questionnaires were distributed to the sample of respondents to obtain primary data. In addition, the demographics of the respondents in this study are necessary to find out the respondents' background, which can be used to explain the results obtained from the research. The respondent's data consisting of Employee Type (ES1), Age (ES2), Education (ES3) and Experience (ES4) were then synthesized into a construct as the Employee Status (ES) variable. Fig. 1 below is an overview of the Employee Status (ES) variable.

The safety behavior of construction workers in this study is divided into two variables, namely Obedience and Participation. Both of them consists some indicator. Obedience consist 12 indicators, meanwhile Participation only consist 8 indicators. Fig. 2 below is an overview of the Safety Behavior variable.

This section gives the frequency and means of distribution for each item. This study used criteria with class intervals derived from the computation results to characterize the mean value of each item, indicator, and variable.

intervalclasslength=
=((highestweight–lowestweight))/numberofclasses.

There are 12 indicators used to measure the obedience variable (SBO). Each response is assigned a score, which is then used to classify variables based on the average responses of respondents. The frequency distribution of the Obedience variable is provided in Table 2. The sum of all item responses for the obedience variable (SBO) equals 4.18. Typically, the obedience variable (SBO) falls into the category of "high."

Table 2

Distribution of respondents' responses to obedience variables (SBO)

No	Items on compliance (SBO)		Alternative answer					Mean	Category
			SS	S	N	TS	STS		
1	I ignored the safety rules to hit the target	F	0	0	51	154	95	4.15	High
		%	0.0	0.0	17.0	51.3	31.7		
2	I ignored some rules	F	0	0	24	130	146	4.41	Very High
		%	0.0	0.0	8.0	43.3	48.7		
3	I loosen the rules to achieve work targets	F	0	0	65	163	72	4.02	High
		%	0.0	0.0	21.7	54.3	24.0		
4	I take shortcuts that involve little or no risk	F	0	0	63	170	67	4.01	High
		%	0.0	0.0	21.0	56.7	22.3		
5	I work following all safety procedures	F	96	152	52	0	0	4.15	High
		%	32.0	50.7	17.3	0.0	0.0		
6	I followed all instructions from my boss	F	146	126	28	0	0	4.39	Very High
		%	48.7	42.0	9.3	0.0	0.0		
7	I achieve my work targets better when I obey the rules	F	72	165	63	0	0	4.03	High
		%	24.0	55.0	21.0	0.0	0.0		
8	I make choices at work to achieve targets	F	69	168	63	0	0	4.02	High
		%	23.0	56.0	21.0	0.0	0.0		
9	Incentives push me to break the rules	F	0	0	51	154	95	4.15	High
		%	0.0	0.0	17.0	51.3	31.7		
10	I broke the rules because my co-workers did the same thing	F	0	0	26	130	144	4.39	Very High
		%	0.0	0.0	8.7	43.3	48.0		
11	I broke the rules because of management pressure	F	0	0	41	165	94	4.18	High
		%	0.0	0.0	13.7	55.0	31.3		
12	I violated work procedures	F	0	0	35	157	108	4.24	Very High
		%	0.0	0.0	11,7	52.3	36.0		
Accumulation of respondents' answers to Obedience (SBO)								4.18	High

While six indicators are used to evaluate the participation variable (SBP), first, each response is assigned a score; then, the scores are aggregated and entered into categorical variables. Table 3 displays the frequency distribution of respondents' responses to the participation variable (SBP).

Table 3

Distribution of Respondents' Responses to Participation Variables (SBP)

No.	Participation Items (SBP)		Alternative answer					Mean	Category
			SS	S	N	TS	STS		
1	I reported the accident that happened	F	93	160	47	0	0	4.15	High
		%	31.0	53.3	15.7	0.0	0.0		
2	I remind other workers about the dangers and safety in the workplace	F	95	164	41	0	0	4.18	High
		%	31.7	54.7	13.7	0.0	0.0		
3	The conditions at work that allow me to work are not in accordance with the regulations	F	0	0	36	155	109	4.24	Very High
		%	0.0	0.0	12.0	51.7	36.3		
4	I joke with my coworkers at work	F	0	0	45	162	93	4.16	High
		%	0.0	0.0	15.0	54.0	31.0		
5	I put the materials and equipment in the designated place after finishing the job	F	94	166	40	0	0	4.18	High
		%	31.3	55.3	13.3	0.0	0.0		
6	I use safety equipment	F	110	153	37	0	0	4.24	Very High
		%	36.7	51.0	12.3	0.0	0.0		
Accumulated answers of respondents								4.19	High

Table 3 shows that the most important indicators are in questions three and six, with the highest average (Mean) of 4.24 (the Participation value is in the very high range), especially in statement three about "Conditions in the location that allows ME to break the rules. "The majority of respondents, 155 people or 51.7 %, answered Disagree, as well as in statement 6 regarding "I use work safety equipment", where the bulk of respondents, as several as 153 individuals or fifty-one, answered Agree. Whereas the weakest indicator is in question number one, with the bottom average (Mean) of 4.15 (the Participation price is within the high category), specifically the statement, "I report Associate in Nursing accident that occurred". Most respondents, one hundred sixty individuals or fifty 3.3 %, answered Agree.

The results showed that the average number of answers to each question in the Participation variable (SBP) was 4.19. The participation variable (SBP) is included in the High category.

5. 2. Analysis using SEM-PLS

The first step in conducting an analysis using SEM-PLS is to form the inner and outer models of the observed variables. The outer model or outer relation is identified for each indicator block connected with its latent variable. The outer model tests the validity and reliability of the research instrument (questionnaire).

Fig. 3 is a conceptual framework of the research or a path diagram in SEM-PLS. This conceptual framework of the research is based on chart Fig. 2.

Model validity test measurement can be done by looking at the estimated factor load. The results of the validity and reliability tests can be seen in Table 4.

Based on Table 4, all reflective indicator Loading factor values are 0.50 (Valid), and the AVE value is 0.50 (Valid), therefore all indicators that measure them are valid, while the reliability calculation results show the Composite Reliability (CR) value is 0.70 (Reliable). All hidden variables have good, realistic indicators.

Assessing the structural equation model with PLS starts with the R-Square value for each endogenous latent variable. The predictive capability of the structural model is the same as OLS (Ordinary Least Square) regression. Changes in R-Square can explain the impact of exogenous latent factors on endogenous latent variables. Table 5 shows the PLS r-square results for the model's constructs.

Table 5 shows that the coefficient of determination (r-square) obtained from the employee status model (ES) on safety behaviour (SB) is 0.152, so it can be explained that the accuracy of measuring employee status (ES) on safety behaviour (SB) is 15.18 % and other variables outside the study affect the rest of 84.82. The coefficient of determination (r-square) obtained from the model of safety behaviour (SB) for Obedience (SBO) is 0.976, so it can be explained that the accuracy of the measurement of safety behaviour (SB) for Obedience (SBO) is 97.61 % and the remaining 2.39 influenced by other variables outside the study.

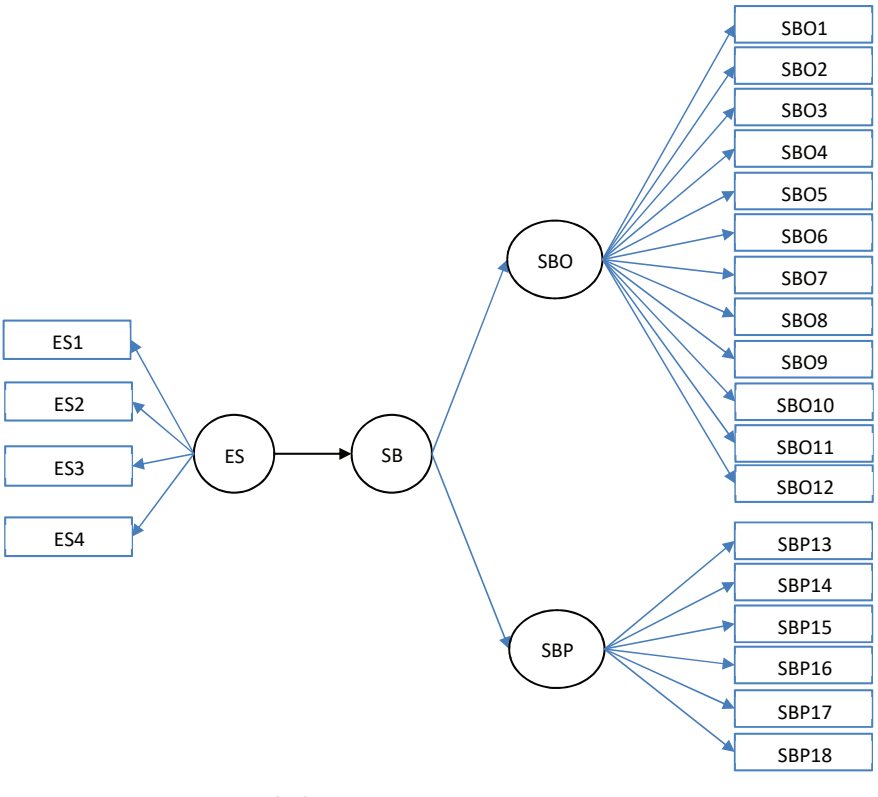

Fig. 3. Conceptual framework of research

Table 4

Outer Model Stage 1 (1st Order Outer Model)

Latent Variable	Observed Variables	Partial Validity (Per Indicator) (LF>0.5=Valid)		Rank	Overall Validity (Per Construct) (AVE>0.5=Valid)		Composite Reliability (CR>0.7)	
		Outer Loading	Status		AVE	Status	CR	Status
Employee Status (ES)	ES.1	0.842	Valid	1	0.517	Valid	0.808	Reliable
	ES.2	0.601	Valid	4				
	ES.3	0.753	Valid	2				
	ES.4	0.656	Valid	3				
Obedience (SBO)	SBO.01	0.904	Valid	3	0.751	Valid	0.973	Reliable
	SBO.02	0.820	Valid	11				
	SBO.03	0.903	Valid	4				
	SBO.04	0.890	Valid	6				
	SBO.05	0.907	Valid	1				
	SBO.06	0.825	Valid	9				
	SBO.07	0.898	Valid	5				
	SBO.08	0.880	Valid	7				
	SBO.09	0.906	Valid	2				
	SBO.10	0.822	Valid	10				
	SBO.11	0.830	Valid	8				
	SBO.12	0.799	Valid	12				
Participation (SBP)	SBP.13	0.905	Valid	1	0.809	Valid	0.962	Reliable
	SBP.14	0.892	Valid	5				
	SBP.15	0.904	Valid	2				
	SBP.16	0.902	Valid	4				
	SBP.17	0.891	Valid	6				
	SBP.18	0.903	Valid	3				

Table 5

Evaluation Results PLS R-Square

Effect			R-Square	1-R-Square
Employee status	->	Safety behaviour (sb)	0.152	0.848
Safety behaviour (sb)	->	Obedience (sbo)	0.976	0.024
Safety behaviour (sb)	->	Participation (sbp)	0.921	0.079

The coefficient of determination (r-square) obtained from the safety behaviour model (SB) on Participation (SBP) is 0.921, so it can be explained that the accuracy of the measurement of safety behaviour (SB) on Participation (SBP) is 92.09 % and the remaining 7.91 influenced by other variables outside the study.

The goodness of fit model check is dispensed exploitation the constant of total determination (Q^2), wherever the check results will justify what quantity the trail model fashioned will represent the ascertained knowledge. The constant of total determination can have a value between 0 and 100.0 %. Here are the results of figuring out the constant of total determination.

$$Q^2 = 1-\left(1-R_1^2\right)\times\left(1-R_2^2\right)\times\left(1-R_3^2\right)= \\ =1-\left(1-0.152\right)\times\left(1-0.967\right)\times\left(1-0.921\right)= \\ =0.998=99.8\,\%. \quad (1)$$

The structural model's coefficient of total determination (Q^2) is 0.998. It means that the trial model can explain 90.9 % of the data, and factors can explain the other 0.2 % outside the study. It is known that the total constant of determination is 0.998, with values between 0.700 and 1.000. Based on the standard R-Square test criteria, the designed model is strong enough to prove the hypothesis, so it is assumed that the development path can be used and that the hypothesis can be tested. While this was going on, the GoF SEM-PLS [24] was supported:

$$\text{GoF}=\sqrt{\left(AVE\times R^2\right)}= \\ =\sqrt{\left(729\times 0.152\right)}=0.334. \quad (2)$$

The GoF criterion is said to be small if it is 1.0, moderate if it is 0.25, and high if it is 0.38. Based on the above calculation, the measurement of safety behaviour (SB) has a GoF value of 0.334, which is higher than 0.25 and close to a value of 0.38. The GoF value (model accuracy test) states that it is quite good and feasible for hypothesis testing.

Table 6 below is the result of the Path Analysis using SEM-PLS. This result presents the effect of Employee Status on the Safety Behavior of constructions worker.

From Table 6, it is known that the work standing variable (ES) incorporates a positive result on work safety behaviour (SB), which means that the upper the worker standing (ES), the upper the worth of the security behaviour variable (SB), wherever the trail constant is 0.390 (39 % effect). With a worth of 7.351 as a result of the t price being larger than the important price (7.351>1.96), the applied mathematics hypothesis states that h0 is rejected, which means that the variable of employment standing (ES) incorporates an important result on the security behaviour variable (SB).

Fig. 4 shows the path diagram measurement model and the structural model. It shows the path coefficients and variable weight values in the structural model.

Table 6

Results of SEM-PLS Path Analysis

Effect between latent variables			Path Coeff	T-Value	P-Value	Conclusion
Cause Variable	->	Consequence Variable				
Employee status (ES)	->	Safety behaviour (SB)	0.390	7.351	0.000	Significant (hypothesis accepted)

Based on the above path diagram, it can be seen that the variable Safety Behavior (SB) is affected by Employee Status (ES), which has the highest path coefficient of 0.390. which has the highest loading factor of 0.842, is one of the most important measures of its role in building Employee Status (ES).

6. Discussion of hypothesis testing results (path analysis)

Fig. 4 shows that Employee Status (ES) affects the Safety Behavior (SB) variable, with the highest path coefficient of 0.390. Among the indicators, ES.1 (Employee Type) plays the most important role in measuring the Employee Status (ES) construct, with a loading factor of 0.842. In addition, it can be seen that Obedience explains safety behaviour slightly better than Participation. As a statistical recommendation, it is necessary to evaluate strategic policies by construction management regarding the status of workers, with the main priority being the ES.1 indicator (Employee Type).

Compared to [15], which emphasizes the relationship between the age and gender of construction workers and unsafe Behavior, this study has the peculiarity of including the age of workers as one of the indicators of the 4 variable indicators of employee status. Meanwhile, when compared with studies [8, 15, 18], This study uses a better statistical approach, namely SEM-PLS, which can overcome the limitations of these papers. So it can be seen from the results of the path analysis in Fig. 4 that there are differences in the effect of type of worker, age, last education and length of experience on safety behaviour.

The limitation of this study lies in the results of the research, which only serve as the basis for determining policy by project management but do not provide an absolutely precise safety procedure. It is related to the limitations of the research location and the limited gender proportion of construction workers in Indonesia.

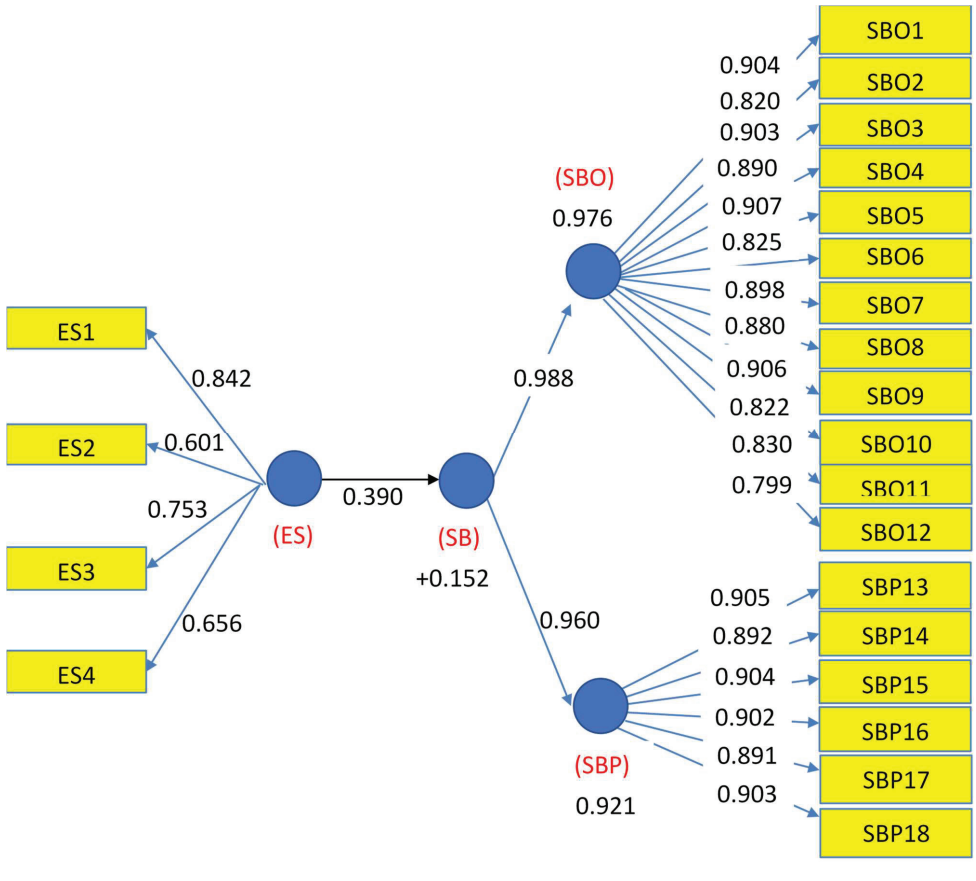

Fig. 4. Path diagram for the measurement model and the structural model

The weakness in this study was the implementation of research that occurred during the implementation of different policies related to the conditions of the spread of COVID-19. This results in a bias in the perspective of construction workers, which may be influenced by other factors, such as the increased understanding of workers' personal safety and health after the COVID-19 pandemic. So for further research, other external factors that might influence the Behavior of construction workers can be considered.

What might be developed from this research is to focus more on non-permanent construction workers as the object of research. In addition, a model can be developed to see the relationship between employment status and other factors that also affect safety behaviour. It is possible to obtain a more complex and precise model in determining where the position or influence of employee status on the safety behaviour of construction workers themselves.

7. Conclusions

1. Safety Behavior is an action or activity related to work safety factors. One of the factors that play a role in safety behaviour is the status of the construction workers themselves. This can be seen from the development of a conceptual model to see the relationship between work status and worker safety behaviour. Employee status itself consists of employee demographics, namely the type of worker, age, educational level and experience.

2. The study results illustrate that the Employee Status of construction workers positively influences the workers' safety behaviour. It is shown by the fact that ES.1 (Employee Type), which has the highest loading factor of 0.842 and the highest path coefficient value of 0.390, plays the most important role in measuring the Employee Status (ES) construct. In addition, the best aspect in forming the Safety Behavior (SB) variable is the Obedience dimension (SBO), with the highest loading factor of 0.988. Further from the analysis done, the structural equation got is.

Conflict of interest

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

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Data availability

Manuscript has no associated data.

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