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Occupational Health and Safety (OHS) Towards Employee Performance: The Mediating Role of Work Motivation

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Abstract: The purpose of this research is to examine and explain the effect of Occupational Health and Safety (OHS) towards employee's performance of construction and the mediating role of work motivation. The research opted for a quantitative study with explanatory research approach, so, data were collected by cross-sectional using the instrument in the form of questionnaires. The population this study is all construction employees in laino market building project, Muna Regency. Thus, survey data was collected from 86 employees located at laino market building project in Muna Regency, through questionnaire. Sample withdrawal method is random sampling using formula Slovin. Analysis equipment used for testing the hypothesis was Partial Least Square (PLS). The research shows that OHS has a positive significant effect on work motivation and employees performance. In addition, the high of work motivation proved to give positive significant effect on improvement of employee's performance. Finally, work motivation as partial mediation effects between OHS and employees performance. This means that OHS has a significant effect work motivation and work motivation significantly affect on employee performance, next the OHS has a significant effect on employee performance.

Key words: OHS, work motivation, employee performance, quantitative, employees, improvement

INTRODUCTION

Human Resources (HR) play an important role for the operation of all functions in the organization to achieve its purpose. It is one of the functions of the management of HR is important in the company is improving the performance of the motivation and OHS program. It is important for the company to always pay attention to the protection of the employees of first on the problem of OHS, when no attention can cause against the low motivation and performance of employees. The United Nations (UN) and International Labor Organization (ILO) present global data during the period 2007 until 2015 that the unemployment rate rose from 170-204 million. In 2030 this number is estimated to reach 470 million (Anonymous, 2014, 2016). Furthermore, ILO estimates in the entire world there are 6000 employees lost their lives each day as a result of an accident, wounds and diseases caused by the risk of work. Each year 270 million employees suffer terrible injuries and 160 million others had long term disease or related with short employees.

Higher awareness of the importance of OHS will need to be grown on all sides whether the government of labor and entrepreneurs. Especially, in the management of construction projects, one of the main objectives that everything is to create a climate of work that support both in terms of the means, working conditions, safety and mutual communication that is open between the supervisors and subordinate (Norine *et al*., 2016). This condition because more than 270 million work accidents and 160 million work illnesses that affect the employees each year. Alan Boulton, Director of the ILO Office in Indonesia, said the death, accident and pain in the workplace can be prevented by promoting the "new" safety culture in the workplace that are supported by the policy and the national program (Markkanen, 2004). Based on data from PT. Jamsostek mentions that the number of cases of OHS in Indonesia is still high in the time frame of the last 5 years there has been increased an average of 2.16%.

Improving the performance of employees is theoretically and empirical can be influenced by several factors, good as universal and contingency. OHS program related to work motivation, when someone has a high level of motivation, then will have an impact on the performance of the employees. The statement is supported by the opinion of Mangkunegara (2010) stated

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that OHS aims to improve the jealousy, harmony of the work and the participation of the employee. With increasing jealousy, harmony of the work and the participation of the work of employees so you can be assured that the motivation of the employees will increase. Consistent with the opinion of the Suma'mur (2009) stated that OHS is a series of efforts to create working atmosphere safe havens in an effort to improve the performance of employees. Mathis and Jackson (2011) stated that one of the factors that affect employee's performance is OHS.

Research results by Paramita and Wifayanto (2012), Rozy and Anisah (2013), Hedianto *et al*. (2014), Fironika (2014), Munandar *et al*. (2014), Mamarimbing (2014), Soufiatik (2015) and Frans (2015) find OHS have positive and significant impact on the work motivation. However, there is still a gap between the results of research by Denik *et al*. (2017) find safety effect is not significant for employee work motivation. Further research results Paramita and Wijayanto (2012), Rozy and Anisah (2013), Munandar *et al*. (2014), Anjani *et al*. (2014), Frans (2015), Angelica and Sintaasih (2015), Norine *et al*. (2016), Kaynak *et al*. (2016) and Gopang *et al*. (2017) also find OHS have positive and significant impact on employee's performance. Different from the results of research by Kasan (2013) and Soufiatik (2015) find OHS not significant effect on employee's performance. The existence of the debate the concept of measurement indicator OHS, work motivation and employee's performance, so that, this research is important to be done in order to test the apparent contradiction of earlier research findings.

Improving the employee's performance is high did not escape from the work motivation. Robbins and Judge (2008) stating that employees with a high level of motivation will do the work with seriously, so that, its performance continues to increase. Kreitner and Kinicki (2008) suggested conceptual model that explains the effect of motivation affect the behavior and work achievement. The research results have proved that work motivation have positive and significant impact on employee's performance by Paramita and Wijayanto (2012), Munandar *et al*. (2014), Idrees *et al*. (2015), Yousaf *et al*. (2015), Soufiatik (2015), Frans (2015) and Leea and Raschkeb (2016). There is a gap between research findings by Mamarimbing (2014) find work motivation negative effect and not significant impact on employee's performance. Arifin (2014) find that work motivation effect not significant impact on employee's performance. The results of the test the influence of work motivation on employee's performance, there is still a contradiction and a crevice tool to perform the testing of the relationship work motivation to the performance of employees.

The purpose of this study also to test the role of work motivation in mediating the influence of OHS to employee's performance is based on the perspective of contingency. Therefore, in testing the mediating role refers to the theory of contingency by Thompson (1967) that designing an organization can be done either as universal and contingency. Earlier researchers who have proved work motivation role as mediation between OHS influence on employee's performance by Paamita and Wijayanto (2012), Munandar *et al*. (2014) Soufiatik (2015) and Frans (2015) find that the role of work motivation as mediation influence of OHS with employee's performance. But, there is still a gap between researchers Mamarimbing (2014), find that work motivation cannot play as mediation between OHS on employee's performance.

Based on theoretical studies and the results of the earlier research turns to the influence of OHS, of work motivation and performance of the employees are very contradictory either directly or indirectly (mediation). Therefore, researchers are interested to perform the test again, so the key research question: whether OHS affect work motivation and employees performance of construction? Does work motivations had an influence on employee's performance of construction? Does work motivation role as mediation influence between OHS with employee's performance. Based on explanation background and the formulation of the problem, then the objectives to be achieved in this research is to test and explain the influence of OHS work motivation and employee's performance of construction in laino market building project, Muna Regency. Then to explain the influence of work motivation on employee's performance and the role of work motivation as mediation the influence between OHS on employees' performance.

Literature review

Occupational Health and Safety (OHS): In the era of globalization and the free market the WTO and GATT that will occur in the year 2020 future OHS is one of the prerequisites specified in the economic relations of trade in goods and services between countries that must be met by all member countries including Indonesian nation. In OHS philosophy is an attempt to ensure the integrity and the perfection of both the physical and spiritual workers in particular and the people in general, the results of the study and culture toward a fair and prosperous. Malthis and Jackson (2006) stated that salvation is referring to the protection of the physical welfare of a person of injury related to the work. While health were referring to general condition physically, mentally and emotional stability in general. Next, Mangkunegara (2010) stated that OHS is thought and efforts to ensure the integrity and the perfection of both the physical and cultural work for toward fair and prosperous.

OHS is a science anticipation, recognition evaluation and control of the andger that arise in the workplace that can interfere with the health and welfare of the workers

and have impact on surrounding communities and the environment (Joshi *et al*., 2011). Furthermore, Rivai (2004) stated that OHS refers to the conditions of the fiscal year and psychological physiological effects of labor caused by the working environment provided by the company. From the definition of the theory of OHS on the researchers concluded that the OHS is a method to apply themselves or set themselves on a work in order to be able to work with secure and healthy both physically and spiritually related to the work process and work environment.

OHS aims to improve the jealousy, harmony of the work and the participation of the employee. With increasing jealousy, harmony of the work and the participation of the work of employees so you can be assured that the motivation of the employees will increase Mangkunegara (2010). Consistent with Notoatmodjo (2009) stated that OHS proved to be able to create a sense of safe and comfortable and can minimize work accidents. The taste of comfortable and have no fear of an accident will make employees more motivated in the work and will improve the performance of employees. Furthermore, Malthis and Jackson (2011) stated that, one of the factors that affect employee's performance is OHS. Consistent with the opinion of Mangkunegara (2010) stated that OHS is an attempt to ensure the integrity and the perfection of the work or performance. Furthermore, Suma'mur (2009) that OHS is a series of efforts to create a working atmosphere safe havens in an effort to improve the employees performance.

The study results have proved that OHS have positive and significant impact on work motivation and employee's performance by Paramita and Wijayanto (2012), Rozy and Anisah (2013), Anjani *et al*. (2014), Mamarimbing (2014) and Frans (2015).

Next, Hidyanto *et al*. (2014), Frionoka (2014) and Soufiatik (2015) find safety have positive and significant impact on work motivation and Anjani *et al*. (2014), Angelica and Sintaashi (2015), Norine *et al*. (2016), Kaynak *et al*. (2016) and Gopany *et al*. (2017) find work health have positive and significant impact on work motivation. However, there are still contradictions research results by Denik *et al*. (2017) find safety effect is not significant for employee work motivation. Research results by Kasan (2013) and Soufiatik (2015) find OHS effect not significant impact on employee's performance. The ineffectiveness consistent findings of the research provide a reproach to test the influence of OHS against the work motivation and employee's performance, next the hypothesis proposed in this research is as follows:

- H_1: H_{1a}; work safety have significant influence on work motivation
    - H_{1b}: occupational health has a significant effect on work motivation
- H_2: H_{2a}; work safety has a significant influence on employee's performance
    - H_{2b}: occupational health has a significant influence on employee's performance

Work motivation and employees performance: The motivation is formed from the attitude of the employees in the face of the work situation. The motivation is a condition that move themselves employees lead to efforts to achieve the goal of the organization. According to Henry (2006) proposed that work motivation is a function from the hope of the individuals that specific efforts will produce the level of performance which in turn will initiate the reward or the desired results. Furthermore, Robbins and Judge (2015) work motivation is a process to determine how much effort is being poured out to do the work. Work motivation is a series of the attitudes and values that affect the individual to reach a specific target according to the purpose of the individual by Ella (2010). Based defines above can be deduced work motivation is encouragement that there are in themselves a person as a result of the influence that comes from within and outside himself and then encouragement produces, direct and organize the behavior for conducting the research.

The performance is the result of a quality and quantity that can be achieved by an employee in carrying out the tasks in accorandce with the responsibility given to him. The performance is stated as note outcomes resulting from the activity for a specific period of time (Bernadian and Russel, 1993). According to Malthis and Jackson (2011), the performance evaluation process is how well the employees work compared with a set of standard and then communicate it with employees. According to Silalahi (2004) performance is the expression of intervention skills, skills and expertise in order to increase the productivity can be measured and evaluated. The employee's performance is quality and quantity is achieved by an employee in carrying out their tasks in accorandce with the responsibility given to him (Mangkunegara, 2010). The employees performance is the ability of the employees completed its obligations in accorandce with the time and the expected plan (Abdullah, 2014). Refers to the definition presented it can be concluded the employees performance is the evaluation process of the organization to qualify the implementation of individual work how well the employees working on the tasks entrusted.

Robbins (2003) stated that, employees with a high level of motivation will do the work with seriously, so that, its performance continues to increase. Consistent by Kreitner and Kinicki (2008) suggested conceptual model that explains the effect of motivation affect the behavior and work achievement. Then, the results of research has proved that work motivation have positive and significant impact on the performance of the employees

by Paramita and Wijayanto (2012), Munandar *et al.* (2014), Idrees *et al.* (2015), Yousaf *et al.* (2015), Soufiatik (2015), Frans (2015) and Leea and Raschkeb (2016). But there is still a contradiction research results by Ismulyaty and Etty and Olivia find work motivation negative effect and not significant impact on employee performance. Arifin (2014) find work motivation effect not significant impact on employee performance. The results of the test the influence of work motivation to employee performance from earlier researchers, there is still a contradiction and a crevice tool to perform the testing of the relationship work motivation to the performance of employees. From the arguments and theoretical contradiction of earlier research results, then the hypothesis proposed in this research is:

- H_3: work motivation has a significant impact on employee's performance

Finally, this study also examines the role of work motivation in mediating the effects of OHS on employee performance based on a contingency perspective. Refer to the theory of contingency, Thompson (1967) explained that the method can be applied in all conditions but is not the best way to design an organization, so that, it can be done either as universal and contingency. Then, the theory that became the reference model testing the influence of mediation work motivation is the theory HRM by Dessler (2009), Decenzo and Robbins (2009) and Malthis and Jackson (2011). Equipped with the theory organizational behavior by Griffin and Moorhead (2014) and Robbins and Judge (2015). The results of earlier researchers who have proved work motivation role as mediation between OHS influence on employee's performance by Paramita and Wijayanto (2012), Munadar *et al.* (2014), Soufiatik (2015) and Frans (2015) find work motivation role as mediation influence OHS on employees performance. But there is still a gap between the findings of the researchers Mamrimbing (2014) find that work motivation cannot play as mediation between OHS influence on employees performance. Based on theoretical arguments and the gap between the results of research, then the hypothesis proposed in this research is as follows:

- H_4: H_{4a}; work motivation plays as a mediating influence between work safety and employee performance
  - H_{4b}: work motivation plays as a mediating influence between occupational health and employee performance

Based on the theoretical review and the results of previous research, the conceptual framework and hypothesis of this research is designed using four latent variables are OHS, work motivation and employees performance, presented in Fig. 1.

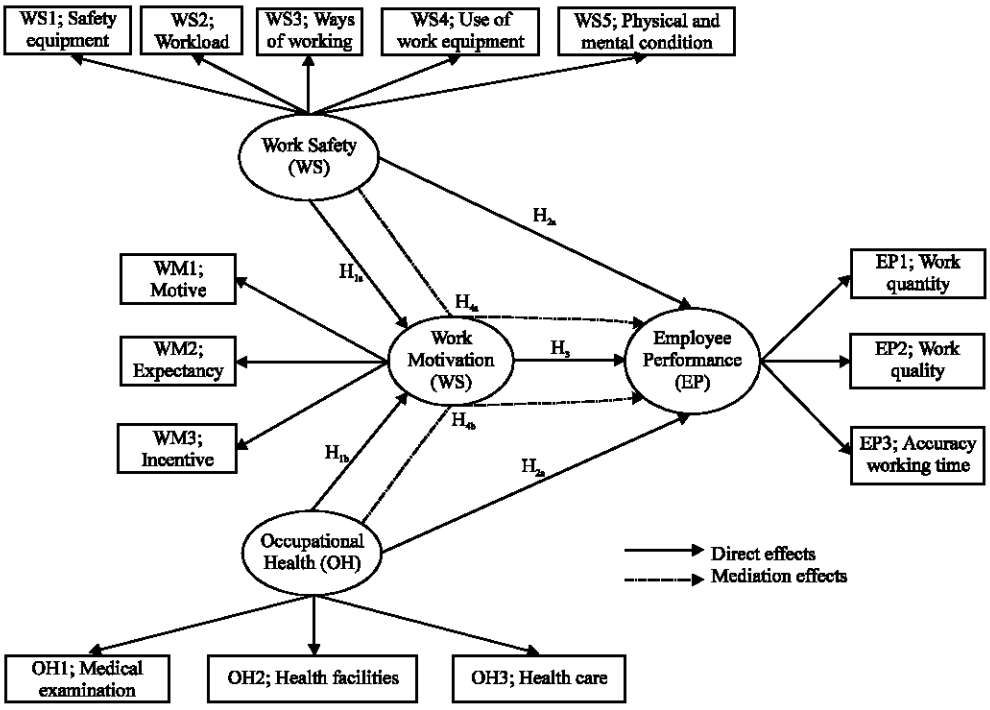

Fig. 1: Conceptual framework and hypothesis research

MATERIALS AND METHODS

Explanatory research is intended to explain the causal relationship between variables through hypothesis testing or aim to obtain the appropriate test results to draw conclusions that are causality between variables and subsequently choose the alternative action (Cooper and Schindler, 2006). The underlying reasons for using explanatory research for the purpose of this study examines and explains the OHS on work motivation and employees performance, either directly or indirectly (mediation) on employees performance.

Furthermore, the method of this research is the survey because in the collection of data using questionnaires. Seen from the aspect of time data collection, this research uses the design of the cross section where data only once collected (Sekaran, 2006) namely research done on a specific time to explain the condition of respondents.

The population and samples: This research was carried out with the analysis unit construction employees at laino market building project in Muna Regency, executing PT. Bintang Fajar Gemilang. Therefore, the population of this study was all construction employees at laino market building project in Muna Regency as much as 110 people. The sample size of this study was determined by using equation Slovin (Sekaran, 2006) as follows:

$$n = \frac{N}{1+N(e)^2} = \frac{110}{1+110(0.05)^2} = 86.27 \text{ or } 86 \text{ people}$$

Where:

n = Sample size
N = Population size
e = Percentage of inaccuracy tolerance due to sampling error 10%

The technique of the withdrawal of the sample used is the random sampling. On the precision level of 5% of population are 110 peoples, next obtained the greatness of samples as much as 86 people. Furthermore, the data type that used this research is the primary data that includes data related to the statement of respondents against OHS variable, work motivation and performance of employees. The primary data derived from the respondents by visiting employees directly and performing in-depth interviews. Further data collection in this research using survey methods with through questionnaires. Questionnaires made is closed which is a question that is created in such a way as to respondents are limited to give an answer to a number of alternatives only or to one choice only answer. Furthermore, interview done by contacting some respondents who are considered to have the knowledge and skills that both in giving an explanation to the study of this research in order to get a more complete information for data analysis.

Operational variables and measurements: Based on the conceptual framework and operational definitions and measurement of the variables of this research as follows:

Occupational Health and Safety (OHS): The system of the program designed by the company or the method to apply themselves or set themselves on the work mandated to work with secure and healthy both physical and spiritual that related to the work process and work environment. Construct OHS in research consists of two sub variables namely Work Safety (WS) and Occupational Health (OH) who adopted from the theory of OHS by Malthis and Jackson (2011), Mangkunegara (2002), Suma'mur (2009) and Rivai (2004). Operational definitions of both sub OHS variable as follows.

Work Safety (WS): An effort made by a construction company to prevent the occurrence of conditions that are interfere with work safety, resulting in accidents. Indicators of safety measurements in this study are: WS1. Safety equipment, WS2. Workload, WS3. Ways of working, WS4. Use of work equipment, WS5. Physical and mental condition that adopted from Rivai (2004), Moenir (2006), Mathis and Jackson (2011), Suma'mur (2009), Joshi *et al.* (2011) and the results of research Kasan (2013), Anjani *et al.* (2014), Frans (2015), Norine *et al.* (2016), Kayanak *et al.* (2016) and Gopang *et al.* (2017). The indicators for each variable work safety were generated through a comprehensive literature review, that represented by 5 indicators and 13 items using a 5-point Likert scale with "1" indicating "strongly disagree" and "5" indicating "strongly agree" adopted from Malhotra and Dash (2010).

Occupational Health (OH): The condition where there is no disruption of both physically, mentally and emotions caused by the working environment uncomfortable. Health measurement indicators include: OH_1. Medical examination, OH_2. Health facilities, OH_3. Health care, adopted by Manullang (2006), Moenir (2006), Malthis and Jackson (2011), Mangkunegara (2009), Suma'mur (2009) and the results of research Rozy and Anisah (2013), Mamrimbing (2014), Anjani *et al.* (2014), Angelica and Sintaasih (2015), Kaynak *et al.* (2016) and Gopang *et al.* (2017). The measurement of occupational health variable indicator using Likert scale, a range of the scale that is used is the numbers from 1-5 by Malhotra and Dash (2010) and Cooper and Sehindler (2006).

Work Motivation (WM): An encouragement within the employee as a result of the inward and external influences which leads, directs and organizes behaviors to carry out the tasks it carries. Motivation theory that is considered relevant to this research, namely Mc. Cleland's achievement motivation theory, quoted by Kreitner and Kinicki (2008). Measurement of work motivation in this research consists of three indicators, namely: WM1: Motive; WM2: Expectancy; WM3: Incentive, adopted by Kreitner and Kinicki (2008), Winardi (2007), Robbin and Judge (2009) and Lutti (2011) and research results by Frionika (2014), Idrees *et al.* (2015), Yusuf *et al.* (2015) and Denik *et al.* (2017). As such, in this study work motivation measure includes three indicators and 9 items has a 5-point scale Likert, where "1" indicates "strongly disagree" and "5" indicates "strongly agree".

Employee Performance (EP): The work achieved in certain time related to the implementation of good job tasks from the aspect of quantity, quality and timeliness of work based upon the level of quality and standards that have been assigned. Therefore, the performance of the employees in this study is measured by three indicators, namely: EP1. Work quantity, EP2. Work quality, EP3. Working time. The indicators for shipbuilders variable employee performance, were generated through a comprehensive literature review, screened represented by 3 indicators using heading a 5-point Likert scale installation design with "1" indicating "strongly disagree" and "5" indicating "strongly agree" adopted by Malhotra and Dash (2010).

Data collection in this research using questionnaires, then the seriousness or the seriousness of the respondents in answering the questions is an important element in research. The instrument is said if it meets the three main requirements: valid, reliable and practical by Cooper and Sehindler (2006). Therefore, to test questionnaires as a research instrument used test of validity and test of reliability. Testing the validity of the instrument which is calculating the correlation coefficient between the item score and total score with equal significance $\alpha = 0.5$ with correlation method product moment Pearson. The validity of the done with testing criteria said valid if the value of $r \geq 0.30$ (cut of point) Sugiyono (2010). Further, testing was done on the reliability statement items with the Cronbach alpha method. Cut of point that received for Cronbach alpha level is ≥ 0.60 (Sekaran, 2006).

Test results are the validity and reliability of the instruments before the questionnaires used in data collection, researchers test on 30 people from practitioners and senior construction employees. Test results are the validity and reliability of the instrument against the item on the statement of this research variable indicator is served. The test result can be deduced that all items statement which is used to measure the variables analyzed, namely: OHS, work motivation and performance of the employees is valid and reliable that proved the value of correlation coefficient (r) all the items in the statement of this research variable consecutive patients 0.30 with significance value smaller than $p<\alpha = 0.05$. Then, the value of Cronbach's alpha all variables tested in this research is ≥ 0.60. Thus, the questionnaires used can be said is valid and trusted or have the level of reliability that can be accepted as an instrument to perform the measurement of each variable indicator.

Data analysis methods: This study used data analysis Partial Least Square (PLS) with the help of the software SmartPLS. SmartPLS can be used to assess convergence, discriminated validity and reliability of the instrument. PLS method is a method of analysis that power full and multivariate analysis techniques that allow the analysis a series of multiple simultaneous latent variables, so that, provide statistical efficiency. Furthermore, PLS is a method of analysis that can be applied to all the scale data, do not require many assumptions and sample size does not have to be large. From the point of view of Structural Equation Modeling, Partial Least Path Squares Modeling (PLS-PM) is a component-based approach (Esposito *et al.*, 2008; Henseler *et al.*, 2016). PLS is suitable for research and explorative confirmatory (Westland, 2010). PLS can be used as a confirmation of the theory can also be used to recommend that relationship exists or not and also suggested the next testing proposition.

PLS method of SEM has advantages for integrating various statistics process for assessment of parameters and testing the hypothesis simultaneously (Esposito *et al.*, 2008; Henseler *et al.*, 2016) and allows the researchers to test or modify the theory and model (Hair *et al.*, 2010). PLS-SEM allows researchers to assess Smart casual relationship between the indicator and the relationship between the latent constructions. PLS algorithm allows each indicator vary in how much contribution to the value of the combination of latent variables (Chin *et al.*, 2003). PLS algorithm is useful to achieve the goal of research in order to know the extent to which the exogenous latent variables predict the endogenous latent variables (Hair *et al.*, 2010) but SEM based variant better. Because this research is trying to test the OHS variables that predict work motivation and

performance of the employees either directly or through mediation work motivation, PLS-SEM applied. SmartPLS software (Ringle *et al*., 2015) used for research at this time to measure the PLS analysis of SEM. With these methods the PLS produced by SmartPLS can test the model hypothesized in this research.

RESULTS AND DISCUSSION

A sample of this research is the employees of construction company that is working at laino market building project in Muna Regency as many as 86 people. From 86 questioners given to all respondents returned and entirely can be used. Table 1 summarizes the demographic information of the sample population in this study. Description of the characteristics of respondents aims to explain the characteristics of the employees who made the sample according to gender, age, education work experience and the status of marriage.

The results of the survey in Table 1 show some respondents male 68.60%, compared with respondent's women only by 31.40%. The characteristics of respondents based on the age of the majority between 26-45 years (82.56%) overall age was the productive. Furthermore the majority of respondents have high school education/equivalent of 47.67%. The characteristics of respondents viewed from work experience shows most have work experience have not been regulatory between 1-5 years (53.49%). Finally, the characteristics of respondents based on the status of marriage most respondents are married or 76.74%.

Evaluation of chaired the model: Chaired the testing model in this research aims to assess the observed variables which reflect a change or latent variables that cannot be measured directly. Furthermore, chaired the model aims validate model and the reliability of the change which reflects the parameters on the latent variable that was built based on the theory and empirical studies. An evaluation of the measurement model latent variables with reflective indicator analyzed in view of the convergent validity each indicator. Convergent validity testing on PLS can be seen from the massive outer loading each of the latent variables indicator. Outer loading above the 0.70 is highly recommended, however, the value of the factor loading 0.50-0.60 still can be tolerated (Ghozali, 2010; Solimun, 2012). Outer model is an evaluation of the validity and reliability of the research variables. There are three criteria to assess the discriminated model chaired the validity, composite reliability and convergent validity can be described as follows.

Table 1: Summary demographic statistics of respondents

Factors/Demographic characteristics	Frequency	Percentage
Gender		
Male	59	68.60
Female	27	31.40
Age (yeass)		
17-25	6	6.98
26-35	32	37.21
36-45	39	45.35
46-51	9	10.47
Education level		
Primary school	11	12.79
Junior high school	34	39.53
High School	41	47.67
Work experience (years)		
1-5	46	53.49
6-10	18	20.93
11-15	15	17.44
16-20	7	8.14
No. of dependents (people)		
1-2	22	25.58
3-5	53	61.63
6-7	11	12.79
Marital status		
Married	66	76.74
Single	8	9.30
Widower/Widow	12	13.95

n = 86

Table 2: AVE, √AVE and correlations of the latent variables

Vriables	AVE	$\sqrt{AVE}$	WS	OH	WM	EP
WS	0.893	0.945	1.00			
OH	0.938	0.969	0.901	1		
WM	0.809	0.899	0.721	0.744	1	
EP	0.883	0.940	0.837	0.855	0.802	1

Work Safety (WS), Occupational Health (OH), Work Motivation (WM), Employee Performance (EP)

Discriminant validity: Testing the discriminant validity in research using the value of the square root of Average (AVE) and cross loading with the purpose of checking whether the research instrument valid in explaining or reflect the latent variable. More details test of discriminant validity as follows.

Discriminant validity using the square root of Average Variance Extracted (√AVE). If the value of √AVE each variable is greater than the value of the AVE and correlation between the latent variables with other latent variables, it can be said is valid discriminant. Table 2 shows all the instruments used in the measurement of the research variables valid said this is because the value of discriminant √AVE each variable is greater than the value of the AVE and correlation between the latent variables with other latent variable.

Discriminant validity using the value of the cross loading. If the value of the cross loading every good variable indicator if it is larger than the cross loading other variables, then the indicator said valid. The results of PLS program computing the value of the cross loading in this research is presented in Table 3 shows that the overall value of cross loading OHS variable indicator of

Table 3: Cross loadings

Latent variables	Reflective indicators			
	WS	OH	WM	EP
WS1	0.935	0.930	0.730	0.791
WS2	0.965	0.880	0.761	0.761
WS3	0.966	0.853	0.677	0.761
WS4	0.930	0.847	0.671	0.773
WS5	0.929	0.849	0.719	0.792
OH1	0.728	0.961	0.650	0.724
OH2	0.630	0.969	0.666	0.686
OH3	0.710	0.975	0.672	0.741
WM1	0.390	0.453	0.890	0.444
WM2	0.388	0.460	0.917	0.489
WM3	0.333	0.404	0.890	0.435
EP1	0.556	0.616	0.563	0.957
EP2	0.519	0.617	0.547	0.946
EP3	0.417	0.510	0.558	0.916

Value of cross loading of each latent variable indicator is greater than that of other variable loading, then the indicator is said to be valid and cross loading values recommended = 0.50; Work Safety (WS), Occupational Health (OH), Work Motivation (WM), Employee Performance (EP)

work motivation and performance of the employees are located at the top of the value of the cross loading from other latent variable and is located in a threshold tolerance >0.50, so, research instrument valid by discriminate said.

Convergent and composite validity: Convergent validity measures the validity of the indicators as measuring the change that can be seen from the outer loading. The indicator is considered valid if it has the value of the outer loading above the 0.70 with value $p<0.05$ (Hair *et al*., 2010). The results of the measurement model computing data and composite reliability in Table 4 shows that the five measurement indicator work safety variable, three indicators measuring the work health, three indicators work motivation and three performance indicators overall employees is valid because the outer loading all the variables have the value of consecutive patients 0.70. Reflecting the correlation between the entire measurement indicator is positive and significant in the reflect work safety variable, work health, work motivation and performance of employees. Furthermore, composite reliability tests the value of reliability between the indicators of the change. The results of composite reliability said good if the value consecutive patients 0.70. It can be concluded that all the instruments used in this research has been meet the criteria or worthy to be used in the measurement of the overall latent variable safety, health, work motivation and performance because employees have compliance and high reliability.

The results of the data analysis in Table 4 shows that the value of the outer loading indicators of 0.966 way of working is the most important or dominant in reflect safety variable. These results confirm the ability of employees in the implementation of the work has been through technical training mastery operates the tool and the needs of facilities in doing the work. Then the value of the outer loading health facility indicator of 0.969 works is the most important or dominant in reflect safety variable. This results confirm that the condition of the employees in the implementation of construction spending are met work with the availability of clean water and the availability of adequate bathroom facilities and the availability of the clinic in the company.

The value of the estimates of the outer loading is 0.917 expectancy indicator is the most important or dominant in reflect work motivation variable. This result confirm that the existence of an additional opportunity wages from leadership because of the good work achievement, the establishment of a good relationship between the direction of the subordinate and the existence of the team work in carrying out the tasks. Finally, the value of outer loading indicator of the quantity of work of 0.957 is the most important or dominant in reflecting employee performance variables. These results confirm that the ability of the employees to the implementation of the work is according to the standard of the quality of the ability employees in completing tasks are technically and comparison of the results of the standard work had been assigned.

Evaluation goodness of fit model: Structural models are evaluated by looking at predictive relevance (Q2) Model that measure how well the value of observation produced by the model. Hair *et al.* (2016) suggest that in addition to describing the yew of the participating, researchers solution also report the greatly enhanced of determination (R^2), effect size (F^2) and predictive relevance (Q2). Q^2 coefficient is based on the determination of all endogenous variables. Massive Q^2 with a range of $0<Q^2<1$, closer to the value of 1 means the model the better. Structural model of R^2 values for the work motivation = 0.567 and employee performance = 0.805. Based on the greatly enhanced of determination (R^2) can be known Q^2 with the services as following calculation:

$$Q^2 = 1-(1-R21)(1-R22) = \{(1-0.567)(1-0.805)\}$$
$$= 1-0.0844 = 0.9156$$

Based on the results of the calculation of the value of the predictive relevance (Q^2) = 0.9156 or 91.56%. This means that the accuracy or the accuracy of the model of this research can explain the diversity of OHS variables

Table 4: Mean, outer loadings and cdomposite reliability

Latent variable and Reflective indicators	Mean	Outer loading	SD	t-statistic	p-values/t-Sig.	Construct reliability
Work Safety (WS)	4.16					0.977
WS1; Safety equipment	3.92	0.935	0.012	80.604	0.000	
WS2; Workload	4.34	0.965	0.009	106.258	0.000	
WS3; Ways of working	4.20	0.966	0.010	100.764	0.000	
WS4; Use of work equipment	3.91	0.930	0.020	46.687	0.000	
WS5; Physical and mental condition	4.41	0.929	0.028	33.134	0.000	
Occupational Health (OH)	4.16					0.978
OH1; Medical examination	4.16	0.961	0.010	95.314	0.000	
OH2; Health facilities	4.33	0.969	0.008	124.362	0.000	
OH3; Health care	4.12	0.965	0.008	115.864	0.000	
Work Motivation (WM)	4.67					0.927
WM; Motive	4.62	0.890	0.028	32.111	0.000	
WM2; Expectancy	4.63	0.917	0.053	17.412	0.000	
WM3; Incentive	4.74	0.890	0.075	11.869	0.000	
Employee Performance (EP)	4.61					0.958
EP1; Work quantity	4.56	0.957	0.019	49.863	0.000	
EP2; Work quality	4.53	0.946	0.019	50.895	0.000	
EP3; Accuracy working time	4.74	0.916	0.041	22.085	0.000	

p-value = significant at 0.001 level

Table 5: Path coefficients and hypothesis testing

Hypothesis	Relationship (direct effects)	Coefficient	t-values	p-values	Results
H_{1a}: work safety	Work motivation	0.270	2.222	0.029*	Accepted
H_{1b}: occupational health	Work motivation	0.501	4.547	0.000**	Accepted
H_{2a}: work safety	Employee performance	0.264	2.416	0.018*	Accepted
H_{2b}: occupational health	Employee performance	0.363	4.547	0.001**	Accepted
H_3: work motivation	Employee performance	0.341	2.416	0.036*	Accepted
Mediation effects (indirect effects)					
Hypothesis/Exogenous	Mediation	Endogenous	Coefficient	Mediation of nature	Result
H_{4a}: work safety	Work motivation	Employee performance	0.092	Partial mediation	Accepted
H_{4b}: ccupational health	Work motivation	Employee performance	0.171	Partial mediation	Accepted

*p<0.05; **p<0.001

of work motivation and employees performance of 91.56%. The remaining 8.44% explained by other variables which are not in the model of this research. Therefore the model of this research can be said well or model is said to have the value of the estimation is very good because in over 60%. At the end of the model can be used for testing the hypothesis.

Structural model and hypothesis research: The structural model (inner model) is evaluated by looking at the coefficient value of the path lane parameter between the latent variables. The results of the tests are presented in Fig. 2 and Table 5 and 6 show from the five direct effect $H_{1a, b}$, $H_{2a, b}$ and H_3 can be accepted as a whole have positive and significant. Safety have positive and significant impact on the work motivation is proved by the value of the estimate coefficient 0.270 with the $p = 0.029 < \alpha = 0.05$, the first hypothesis ($H_{1a}$ accepted). Work health have positive and significant impact on the work motivation is proved by the value of the estimate coefficient 0.501 and $p = 0.000 < \alpha = 0.05$ (H_{1b} accepted). Safety have positive and significant impact on the performance of the employees can be proved with the value of the estimate coefficient 0.264 and $p = 0.018 < \alpha = 0.05$ (H_{2a} accepted). Work health and positive effect on the performance of the employees can be proved with the value of the estimate coefficient 0.363 and the $p = 0.001 < \alpha = 0.05$, ($H_{2b}$ accepted). Furthermore, work motivation have positive and significant impact on the performance of the employees is proved by the value of the estimate coefficient 0.341 line and the value of the value = 0.036 $p < \alpha = 0.05$ (H_3 accepted).

Finally, the test of the influence of the OHS variable on the employee's performance on the initial model involving the work motivation mediation variable showed that the OHS directly had significant effect on work motivation and employee performance, the direct path coefficient estimation value of 0.092 for occupational safety and occupational health was 0.171. Then, work motivation also has a significant effect on employee performance. The mediated nature of the effects of OHS on performance through work motivation is partial mediation. Thus, there is ample evidence empirically to accept the hypothesis (H_{4a} and H_{4b} accepted). This means that the OHS results directly can affect the performance of the employees can also through work motivation. This means that OHS has a significant effect on work motivation and work motivation significantly affect on employees performance. Next, OHS has a significant effect on employee's performance.

Table 6: Test results validity and reliability data

Latent variable/Reflective indicators	Items	Coefficient correlation (r)	Sig.	Results	Cronbach' s alpha	Results
Work Safety (WS)						
WS1; Safety equipmaent	WS1.1	0.901**	0.000	Valid	0.976	Reliable
	WS1.2	0.898**	0.000	Valid		
	WS2.1	0.937**	0.000	Valid		
WS2; Workload	WS2.2	0.910**	0.000	Valid		
	WS2.3	0.909**	0.000	Valid		
WS3; Ways of Working	WS3.1	0.917**	0.000	Valid		
	WS3.2	0.872**	0.000	Valid		
WS4; Use of work equipment	WS4.1	0.889**	0.000	Valid		
	WS4.2	0.916**	0.000	Valid		
WS5; Physical and mental conditions	WS5.1	0.878**	0.000	Valid		
	WS5.2	0.874**	0.000	Valid		
	WS5.3	0.799**	0.000	Valid		
	WS5.4	0.849**	0.000	Valid		
Occupational Health (OH)						
OH1; Medical examination	OH1.1	0.886**	0.000	Valid	0.956	Reliable
	OH1.2	0.929**	0.000	Valid		
	OH1.3	0.888**	0.000	Valid		
OH2; Health facilities	OH2.2	0.722**	0.000	Valid		
	OH2.3	0.831**	0.000	Valid		
OH3; Health care	OH3.1	0.908*	0.000	Valid		
	OH3.2	0.906**	0.000	Valid		
	OH3.3	0.926**	0.000	Valid		
Work Motivation (WM)						
WM1; Motive	WM1.1	0.3080	0.980	Valid	0.646	Reliable
	WM1.2	0.623**	0.000	Valid		
	WM1.3	0.703**	0.000	Valid		
WM2; Expectancy	WM2.1	0.594**	0.000	Valid		
	WM2.2	0.704**	0.000	Valid		
WM3; Incentive	WM3.1	0.784**	0.000	Valid		
	WM3.2	0.395**	0.031	Valid		
Employee performance (EP)						
EP1; Work quality	EP1.1	0.927**	0.000	Valid	0.945	Reliable
	EP1.2	0.927**	0.000	Valid		
	EP1.3	0.905**	0.000	Valid		
EP2; Work quality	EP2.1	0.891**	0.000	Valid		
	EP2.2	0.891**	0.000	Valid		
	EP2.3	0.870**	0.000	Valid		
EP3; Accuracy working time	EP3.1	0.760**	0.000	Valid		
	EP3.2	0.663**	0.000	Valid		
	Ep3.3	0.760**	0.000	Valid		

**Correlation is significanty at the 0.01 level 2-tailed; *Correlation is significant at the 0.05 level 2-tailed

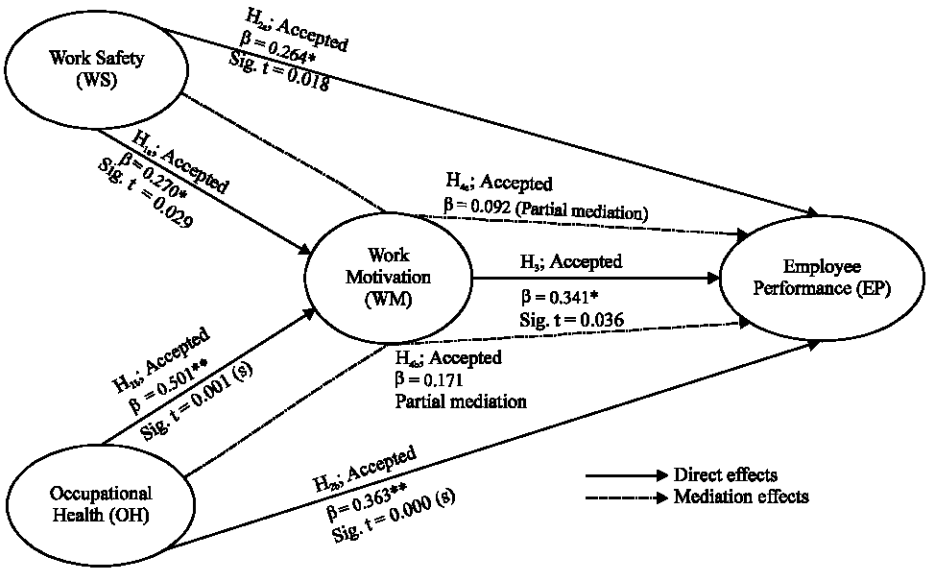

Fig. 2: Structural model and hypothesis testing, p<0.05; p<0.001

The results of this research shows OHS have positive and significant against the employee work motivation. This means that the change is reflected OHS improvement through changes to the program that is made by the company or the method to apply themselves or set themselves on the work entrusted to work with secure and healthy, both physical and spiritual that related to the work process and work environment. Then the meeting improvement work safety program that better reflected the availability of safety equipment, work load, how, usage of the equipment as well as physical and mental condition has a positive and significant contribution to the improvement of work motivation is reflected through the aspects of the motif employee's work, hope and incentives. Increased work motivation cannot be separated from the health conditions of work reflected through health checks, health facilities and health care. The results of this research showed that the OHS good employees have a positive and significant contribution to the improvement of employee work motivation.

The results of this research showed that OHS have positive and significant impact on the work motivation. Is supported the opinion of Mangkunegara (2010) that OHS aims to improve the jealousy, working harmony and work participation. With increasing jealousy, harmony of the work and the participation of the work of employees so you can be assured that employee work motivation will increase. The results of this research are also consistent with the opinion (Notoatmodjo, 2009) stated that OHS proved to be able to create a sense of safe and comfortable and can minimize the likelihood of an accident. The taste of comfortable and have no fear of an accident will make employees more motivated in the work and will improve the performance of employees.

The results of this research is consistent and strengthen the findings Paramita and Wijyanto (2012), Rozy and Anisah (2013), Munandar *et al.* (2014), Mamarimbing (2014) and Frans (2015) find OHS have positive and significant impact on the work motivation. Furthermore, Hidyanto *et al.* (2014), Fironika (2014) and Soufiatik (2015) find safety significant positive effect of work motivation and Anjani *et al.* (2014), Angelica and Sintaasih (2015), Norine *et al.* (2016), Kaynak *et al.* (2016) and Gopang *et al.* (2017) find work health have positive and significant impact on work motivation. However, there are differences in the research findings by Denik *et al.* (2017) find work safety not significant effect for work motivation.

The result of this research shows that OHS have positive and significant impact on employees performance. This means that the change of OHS improvement significant effect toward improving the employees performance. Therefore, the findings of this research showed that the implementation of OHS program is high having significant contributions to improvement the employee's performance. The results of this research is consistent with the performance theory used to explain the change the performance of the suggested by Armstrong (2003), Robbins (2003), Friend and Kohn (2007), Dessler (2009) and Sedarmayanti (2009).

The results of this research are supported by OHS theory according to Malthis and Jackson (2011) one of the factors that affect the performance of the employees is OHS. Mangkunegara (2009) stated that OHS is an attempt to ensure the integrity and the perfection of the work or performance. Furthermore, Suma'mur (2009) stated that OHS is a series of efforts to create working atmosphere safe havens in an effort to improve the performance of employees. Then the results of this study supported the research results by Paraminta and Wijayanto (2012), Rozy and Anisah (2013), Munandar *et al.* (2014), Mamamrinbing (2014), Anjani *et al.* (2014), Fironka (2015), Angelica and Dash (2015), Norine *et al.* (2016), Gopang *et al.* (2016) and Miskeen *et al.* (2017) also find OHS have positive and significant impact on the performance of the employees. The end result of this research is not consistent with Kasan (2013) and Soufiatik (2015) find OHS not significant effect on the performance of the employees.

The results of this research showed that work motivation have positive and significant employees performance. This result indicates that the higher the work motivation and the higher performance of employees. Motivation work is an impulse contained in the construction employee as a result of the influence that comes from within him and from outside which raises, directs and organizes the behavior to carry out the tasks it carries. The basis of the theory that is used to test and measurement work motivation variables on the performance of the employees which is the theory of motivation that are considered relevant to the condition of the object of this research is the theory of achievement motivation Mc. Clelland's quoted by Kreitner and Kinicki (2008).

The results of this research can prove the theory put forward motivation by Robbins and Judge (2008) stated that employees with a high level of motivation will do the work with seriously, so that, its performance continues to increase. Consistent with the opinion of Kreitner and Kinicki (2008) suggested conceptual model that explains the effect of motivation affect the behavior and work achievement. Then the results of this research are supported by Leea and Raschkeb (2016) find high motivation to increase the performance of the employees.

The results of this research are also consistent with Paramita and Wijayanto (2012), Munandar *et al.* (2014), Idrees *et al.* (2015), Yousaf *et al.* (2015) and Soufiatik (2015) find work motivation has positive and significant impact on employee's performance. However, the results of this research are not supported with Mamarimbing (2014) find work motivation negative effect and not significant impact on employee's performance. Next, Arifin (2015) find work motivation not significant impact on employees performance.

The results of the test the role of the work motivation as mediation between OHS influence with employee's performance. The results of the evaluation tests the influence of OHS variables on employees performance on the first model with involves the mediation variable work motivation, shows OHS directly affect the significant impact on work motivation and employees performance. Then the variables work motivation is also a significant influence on employee's performance. Thus, the nature of mediation the influence of OHS on employee's performance through the work motivation is partial mediation. The results of this research testing can confirm the view from the perspective of contingency by (Thompson, 1967). The results of this research is also supported by researchers Paramita and Wijayanto (2012), Munandar *et al.* (2014), Soufiatik (2015), Frans (2015), find work motivation role as mediation effect OHS with employee's performance. However, this research is not consistent with research findings by Mamarimbing (2014), that work motivation cannot play as mediation relationship between OHS and employees performance.

CONCLUSION

Occupational Health and Safety (OHS) has positive and significant contribution to the improvement of work motivation and employees performance. The result proved that the better implementation of OHS program, significant work motivation and employees performance of increased. This means that the changes improved OHS program, which includes safety is reflected through the ubiquitous work safety equipment, work load, how, usage of the equipment as well as physical and mental condition. Then work health that reflected from the aspects of health examination, health facility and health care has a positive and significant contribution to the improvement of work motivation is reflected through the aspects of the motif of employees in work, hope and incentive. Further improvement of OHS program is reflected through the indicator how to work for the safety and health facility indicator which is a reflection of the health of the work have a positive and significant contribution to the increased quantity of work is the ability employees to implementation of the work according to the standard of the quality of the work is technically and standard comparison the results of the research.

Work motivation has positive and significant effect on employee's performance. This means that the higher the work motivation and performance of employees increased. Work motivation encouragement that there are in themselves employees as a result of the influence that comes from within himself and outside which cause, direct and organize the behavior to carry out the tasks that reflected through the motif indicator, hope and incentives have a significant contributions against the improvement of employees performance. Finally, mediating role work motivation proven can mediate between OHS influence with the performance of. This result shows that the OHS significant effect on work motivation and on employees performance. Therefore, work motivation is also a significant influence on employee's performance, so that, the nature of mediation the influence of OHS on employee's performance through the work motivation is partial mediation. This means that work motivation significantly influenced by OHS and work motivation significantly affect on employees performance, then OHS significantly affect on employees performance.

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