



The influence of occupational safety and health on work engagement

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Abstract

This study is conducted based on low work engagement in companies, possibly due to a lack of application of Occupational Safety and Health (OSH). This paper aims to determine the effect of Occupational Safety and Health (OSH) on employee work engagement. This research uses a quantitative approach to the type of ex post facto. The sampling technique in this research is purposive sampling, while the samples in this research were 96 employees. The instruments of this research used two psychological scales, namely the OSH scale and the work engagement scale. The data were analyzed using descriptive analysis and simple linear regression analysis. The results of the regression analysis score are $0,000 < 0,05$. It can be concluded that there is a positive influence of Occupational Safety and Health (OSH) on work engagement. The coefficient determination or R Square is 0,498 or 49,8%, meaning that OSH influences 49,8% of employees' work engagement. The remaining 50,2% is influenced by other factors not examined in this study.

Keywords: *Occupational Safety and Health (OSH), work engagement, employee*

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Introduction

According to Law Number 13 of 2003 concerning Manpower, a company is an organization whose ownership can be owned by an individual, partnership, or legal entity, whether it is a private business entity or a state-owned company, which has employees or employees through payment of wages or benefits in another form. The company's goal is to gain profitability and business continuity in running it. To achieve profitability and the wheels of the organization continue to move to achieve the expected goals, it takes good capital to make it happen. The best capital is human resources or more often referred to as employees.

Employees, or employees in industrial and organizational settings, are one of the essential elements for realizing industrial and organizational success. An uncomfortable work environment will make employees change quickly and find it difficult to adapt. When carrying out their work, employee engagement is defined as how an employee thinks, feels, and acts in a way that aligns with organizational goals and consequently predicts many positive outcomes for the organization. One of the essential things in the management challenge is how the company involves employees, commonly called work engagement.

Schaufeli and Bakker (2002) state that employees have a positive, meaningful, and constantly work-related state of mind. For management, it is not surprising that companies have developed their engagement concept and ownership survey tools and claim that employee engagement drives business success.

Work engagement is a positive, satisfying state of mind characterized by strength, dedication, and absorption. Schaufeli and Bakker (2006) stated that in determining work engagement, it can be seen from three aspects: vigour, dedication, and absorption.

Based on the results of an initial survey conducted by researchers in April 2021 through an open-ended questionnaire, information was obtained that six (6) out of eleven (11) employees felt tired due to a lot of unfinished work, thus significantly affecting the workload. Thought. Some employees feel a gap when completing work, and some are passive in looking for solutions to find an answer. Employees with many tasks will find it difficult to break away so they must finish immediately to be able to complete the target. Five (5) out of eleven (11) employees feel engaged with their work. They said that being able to work is an honour because they have to undergo a challenging selection process, so they feel proud to be accepted as an employee. They also said that the salary given was commensurate with the work and

the facilities provided were satisfactory. They say they are always passionate about their work and concentrate fully when doing it. Employees involved in their work tend to have high enthusiasm and are active so that individuals with high engagement can achieve their work goals (Bakker & Leiter, 2010). HR said that some employees looked enthusiastic when doing their jobs, so completing them didn't take long.

A preliminary study in April 2021 also found that each employee will have good strength when the work environment is comfortable. Still, some employees also feel that the work environment is not conducive, which is related to the employee's low desire to complete work tasks. Regarding the company's support for the work environment, the interview with HRD PT X Yogyakarta branch showed that the implementation of OSH was carried out by the company's internals and by internal and external teams. Internal parties are employees and business colleagues, while external parties are other parties who enter a particular area. Although the implementation of OSH has been implemented, some employees still are negligent in their work. Three (3) out of ten (10) employees feel that the lack of infrastructure for OSH equipment and some tools have not been updated, while seven (7) out of ten (10) employees think that the available facilities are good and can help complete their work. The work environment also has good lighting, can control work tools, and minimize workplace accidents. In addition, PT X Yogyakarta branch has the principle of "Good Corporate Governance", where there are principles of good corporate governance,

namely transparency, accountability, responsibility, independence, and fairness to develop and maximize the abilities of each employee regardless of background. Background such as religion, gender, position, and others. Employees can also convey complaints to colleagues, superiors, and HRD.

Based on the results of previous research, it was found that work engagement is influenced by several factors, namely organizational support, self-efficacy, and work environment (Firnanda & Wijayanti, 2021). Companies must pay attention to factors such as job resources and work environment. Job resources refer to work's physical, social, and organizational aspects to reduce job demands, physiological and psychological costs, and personal development. A good work environment encourages employees to be more confident in completing tasks according to their abilities (Rofiana, 2014). The work environment is crucial for employees because if the setting feels connected, safe, comfortable, and healthy, the perception of occupational health and safety or called Occupational Safety and Health (OSH), will also improve.

The high demands of work have begun to be balanced with the work safety provided by the company to employees. This can be seen from data from the International Labor Organization (ILO), which states that 4% of the total world gross domestic product is lost every year due to occupational accidents and diseases, health expenditures, pensions, absenteeism, and rehabilitation (Mekkodathil et al., 2016; ILO, 2017). A work accident is generally defined as an unexpected event. Along with the increasing demands of the workplace and anticipate it, companies often require the application of OSH in every activity carried out in hazardous locations and conditions that can impact comfort, health and safety. One of the skills companies need to apply is paying attention to the work environment and the safety system used. OSH problems and low employee involvement can be suppressed, one of which is if employees have good work engagement.

The perception of OSH with work engagement will significantly determine the company's progress because maximum worker conditions will affect the sense of employee involvement, especially in companies that can provide comfort, guarantee safety, and adequate facilities. Mathpati (2012) explains that many companies are starting to realize satisfied employees in increasing loyalty and productivity, but only employees who are intellectually and emotionally involved can engage with the company and are committed to the goals and values of a company.

Employee involvement can be increased by creating positive employee perceptions of the organization by providing support and concern for welfare (Saks, 2006). Employees will automatically increase their engagement, when they believe that their organization cares about what they do and cares about their welfare. Jobs and high job demands can cause employees to feel anxious, bored, and result in fatigue. According to Anoraga (2005), Occupational Safety and Health (OSH) is an organization's effort to create a work environment and provide a safe feeling for employees by paying attention to aspects of the work environment, technical equipment, and humans themselves. There are three aspects of OSH which include the work environment, technical equipment, and people. Aspects of the work environment refers to everything that is around employees that will affect the tasks performed by employees. The technical equipment aspect refers to work machines and tools because the condition of the machines and work tools can have a direct or indirect impact. The human aspect refers to direct or indirect human error when doing work.

OSH was chosen to be a factor that affects work engagement because occupational health and safety is an important aspect for employees to survive while in the work environment. Therefore, it is very important for companies to encourage the implementation of OSH among employees. Management's commitment to OSH shows the extent to which the organization shows concern and support for occupational health and safety.

In the workplace, employees will face occupational health and safety threats from their duties. In running a good business, employees must be consistently protected through the implementation of the OSH system. This is in accordance with Law Number 1 of 1970 concerning Occupational Safety and Law Number 1 of 2003 concerning Manpower which explains that it is the obligation of employers to protect workers from potential hazards that occur.

Several studies explain that the human factor occupies a very important position in the occurrence of work accidents, namely 80% to 85% (Suma'mur, 2009). The role of Occupational Safety and Health (OSH) services is to place and maintain employees in a work environment that is adapted to their physical and psychological abilities. Operational responsibility for good Occupational Safety and Health (OSH) practice rests with the people performing and supervising the work, employees, operations personnel, and managers. Business providers must provide a safe workplace for employees to increase efficiency and productivity (Nwachukwu, 2007). Organizational support can have an impact on increasing commitment, job satisfaction, employee job involvement, work performance, desire to stay in the organization, and reducing tension at work, so as to increase organizational productivity.

One of the companies that develop these expectations is PT X Yogyakarta Branch. PT X Yogyakarta Branch develops a flexible work system, strives to build a comfortable work environment by paying attention to the functioning of the available facilities, providing support, and developing employees' self so that they can adapt to changing working conditions. Good performance from employees makes the company survive well. The implementation of OSH is one of the most important strategies for the organization in an effort to increase employee engagement. This is done so that individuals have a point of view to understand their behavior. In addition, this study can see the phenomenon of low engagement in work for employees who are associated with occupational safety and health. The implementation of OSH is a way for organizations to show how much the organization cares about the health and safety of employees. This is important to research so that companies are more open to various changes that may occur suddenly and pay attention to employee performance in following the company's flow in order to have high work engagement.

This study has differences with previous studies, researchers will examine the effect of Occupational Safety and Health (OSH) on Work Engagement. Therefore, this research is important to do so that it is useful to see how much influence Occupational Safety and Health has on Work Engagement for Employees of PT X Yogyakarta Branch. The results of this study are expected to assist the institution in setting management strategies that will be applied to its employees.

Method

This study uses a quantitative approach. The type of research used is ex post facto or non-experimental or empirical research. Ex post facto research is an approach to research subjects to examine what is already owned by the research subject in a reasonable manner without any deliberate attempt to give treatment to bring up the variables to be studied (Dantes, 2012). This research was conducted at PT. X Yogyakarta Branch. Data collection was carried out from October 2021 to April 2022. This study is a population study, involving all employees of PT. X Yogyakarta Branch, totaling 96 employees.

Data collection, instruments and analysis

Data was collected using a psychological scale in the form of a Likert-scale with four alternative answer choices for each instrument. The psychological scale in this study will contain statements modified from the theory of Schaufeli and Bakker (2006) and the modified OSH theory from Anoraga (2005) to see the level of behavior related to these two variables. The research scale consists of four answer choices, namely (1) very unsuitable, (2) unsuitable, (3) suitable, and (4) very suitable. The Work Engagement scale consists of 26 items with the reliability value is 0.817, while the OSH Scale is 24 items with a reliability of 0.873. The data analysis technique was carried out by descriptive analysis and simple linear regression.

Descriptive Analysis. Descriptive analysis is an analysis that aims to provide a description of the data from variables obtained from the research subject group and is not intended to test hypotheses (Azwar, 2018). Data were collected through the distribution of questionnaires that were formed on a measurement scale. In this study, the measurement scale used is the Likert scale. After obtaining the total score, the scores are then categorized using the formula in Table 1.

Table 1. Categorization Norm

Category	Formula
Very High	$X > \mu + 1.5\sigma$
High	$\mu + 0.5\sigma < X \leq \mu + 1.5\sigma$
Moderate	$\mu - 0.5\sigma < X \leq \mu + 0.5\sigma$
Low	$\mu - 1.5\sigma < X \leq \mu - 0.5\sigma$
Very Low	$X \leq \mu - 1.5\sigma$

Note:

μ : theoretical mean

X: score

σ : standard deviation

Assumption Check. Normality test is used to determine whether any data taken is normally distributed or not. To make things easier, the researcher uses SPSS for Windows to test the normality of the data using the Kolmogorov-Smirnov normality test technique with $\alpha = .05$. Data that are normally distributed have $\alpha \geq .05$ (Ghozali, 2018). The linearity test aims to determine whether the dependent variable and the independent variable have a significant linear relationship or not. In this test the two variables are said to have a linear relationship if the significance is $.05$ (Ghozali, 2018).

Hypothesis Testing. Hypothesis testing aims to determine whether there is an effect of the independent variable (Occupational Safety and Health) on the dependent variable (work engagement). Through this step, a conclusion will be drawn to accept or reject the hypothesis that has been proposed. In a simple linear regression test to see how positive or negative it is, it can be through the value of the beta coefficient (β). The beta coefficient that does not have a minus sign (-), means that it has a positive effect and vice versa, if it has a minus sign (-), it means that it has a negative effect. The conclusion is drawn by comparing t count with t table with a significance level of 5%. If t count < t table then the influence of the independent variable on the dependent variable is not significant (Sugiyono, 2018). The general formula for simple linear regression in this study is $Y = a + bX$.

Result and Discussion

Result

Descriptive Statistics. Based on the results of the descriptive analysis test, it was found that work engagement has a hypothetical mean = 65, SD = 13, a minimum score = 26, and a maximum score = 100. Based on the results of the descriptive test, work engagement is divided into five categories, namely very high as many as 95 employees (99%), and only one employee in the high category. This finding indicates that the average level of work engagement of employees of PT X is in the very high category with a percentage of 99%. Based on the categorization on each aspect of the work engagement variable, it shows that the highest score is the dedication aspect, which is 42.5% and the lowest score is the strength aspect, which is 27.2%.

Based on the results of the descriptive analysis test, it was found that OSH has a hypothetical mean = 60, SD = 12, minimum score = 24, maximum score = 96. Based on the results of the descriptive test OSH is divided into five categories namely very high category with 95 employees (99%) and only one in the high category. The data shows that the average OSH level of employees is in the moderate category with a percentage of 99%. Based on the calculation of categorization in each aspect, the highest aspect score is the work environment aspect, which is 37.8% and the lowest aspect score is technical equipment at 24.7%, meaning that everything that is around employees and has a great influence on the tasks carried out by employees.

Data Analysis. The normality test was carried out to find out the distribution of the data that had been taken was normally distributed or not. The testing technique used is Kolmogorov-Smirnov. Based on the significance value of Asymp. Sig. (2-tailed) is .177 or greater than .05. Therefore, it can be concluded that the distribution of the data in this study is normally distributed. Therefore, the prerequisites in the regression model have been met.

The linearity test aims to determine whether the dependent variable and the independent variable have a significant linear relationship or not. The results of the linearity test are said to have a linear relationship if it is significant .05. Based on the significance value (Sig.) of the output above, the Deviation from Linearity Sig value is obtained. is .276 > .05. It can be concluded that there is a significant linear relationship between the Occupational Safety and Health variable and the Work Engagement variable.

Hypothesis testing aims to determine whether there is an effect of the dependent variable and the independent variable. The hypothesis test of this study used simple linear regression analysis with the help of the IBM SPSS Statistics 21.0 program. Based on the ANOVA test or F statistical test, the calculated F value is 93.141 with a Sig value. .000 ($p < .05$), it can be concluded that the hypothesis is accepted and the OSH variable has a significant effect on Work Engagement. It is also seen that the coefficient of determination or R^2 is 0.498 or 49.8%, which means that the effective contribution of the OSH variable to work engagement is 0.498 or 49.8% and 50.2% is influenced by other factors not examined in this study.

Based on linear regression analysis, it can be concluded that OSH (X) can predict work engagement (Y). OSH has a positive influence on work engagement with a contribution value of 49.8%. This positive effect means that OSH is able to predict work engagement with a contribution value of 49.8%. These results prove that the research hypothesis is accepted.

Discussion

Based on research that has been conducted on a number of 96 employees of PT X Yogyakarta Branch with demographic data of male employees totaling 67 people, female employees 29 people with an age range of 21-30 years with a working period of 6-10 years, and The latest education level is Diploma to Bachelor's degree, the results of the analysis show that the majority (99%) of employees of PT X Yogyakarta branch have a very high level of work engagement. Work engagement is a positive state, feeling of satisfaction, and working conditions that are obtained from strength, dedication, and absorption (Schaufeli et al, 2002). Employees with very high work engagement tend to have high enthusiasm and are active in their work so that they can achieve work goals. The results of a very high work engagement category can be influenced by a good and pleasant work environment for employees. In addition, good communication between superiors and employees can also make them more comfortable. This is in line with the opinion of Bakker (2011) which states that a pleasant work environment, supportive colleagues are work resources that can be extrinsic motivation as a predictor of work engagement.

The results of the descriptive analysis on OSH data also show that 99% of employees have a very high level of OSH as well. OSH is an organizational support effort towards occupational health and safety perceived by employees. Employees who have a very high OSH find it easier to carry out tasks that involve the work environment, be careful in the use of machines and work tools, and have the right placement in the type of work according to the skills, motivation, and talents of the employees.

Based on the results of the descriptive analysis, it shows that work engagement and OSH are at a very high level and there are differences in the findings in the field which state that work engagement found at PT X Yogyakarta Branch tends to decrease. This is due to differences in subjects in terms of age at the time of data collection as an initial survey because at the time of the initial survey, the majority of subjects who participated in data collection were employees aged >41 years, while the number of subjects for data collection as a result of the study was the majority aged 21-30. year. At the time of the initial field survey, it was found that only a small proportion of employees' behavior was found to be negative. Most employees show the opposite attitude.

The results of this descriptive analysis of work engagement show that the very high category can be described from the length of work and age. Based on the table of working hours, it can be seen that employees have a tendency to work long enough, namely 6-10 years as many as 31 employees or equivalent to 32.3% of the total respondents. Individuals who have a long period of time or work tend to be more involved in organizations or companies (Ju & Li, 2019). The longer the employee's working time span, the higher the work involvement in the company, so it can be concluded that a long working period causes employees to also have a good contribution in adapting to their work environment. Furthermore, it can be seen in the table of the age of the subject, the results of the age categorization of the subject are known that at most have the age of 21-30 years as many as 52 employees or by 54.2%. According to Etikariena (2019), the age range of 21 to 30 years is the age that makes a lot of innovation. An employee will show a positive, enthusiastic, active work attitude, and so on. After that, employees tend to provide new ideas that can develop the company.

The results of the OSH descriptive analysis are in the very high category as well. The reason that supports this behavior is long working hours. Based on the results of the descriptive analysis related to the length of work is 6-10 years as many as 31 employees or 32.3%. Employees with 6-10 years of service have implemented OSH properly and according to the rules. Knowledge about the implementation of OSH has been embedded in each employee, so that employee behavior in implementing OSH tends to be high.

The results of other data analysis in this study indicate that there is an effective contribution of OSH to work engagement of 49.8%. The influence of OSH perception with work engagement will greatly determine the progress of the company, because maximum worker conditions will affect the employee's sense of involvement in the company, especially companies that can provide comfort, guarantee safety, and adequate facilities. The application of OSH can be a way for organizations to show how much the organization cares about the health and safety of employees. According to Kahuzuma and Schelehter (2008), it is explained that the driving force of engagement when an employee is given empowerment from the company's management system in an effort to increase his engagement with the company becomes the sole prediction in influencing an employee when he has the desire to quit and or terminate his employment relationship with the company. The process to improve the implementation of OSH by means of training in the form of providing knowledge and skills for employees to be able to carry out their work better, supported by the provision of facilities and infrastructure. The company always tries to implement OSH properly and must have good internal employee strengths. This is an effort to support the organization in maintaining OSH. In addition, it can be improved through the work environment. A conducive and adequate work environment will increase employee engagement, reduce stress and conflict levels, increase job satisfaction, increase commitment between employees and the company (Razak et al., 2016).

Based on the analysis of the categorization of each aspect of each variable, the results of the work engagement variable show the dedication aspect of 42.5%, which means that employees have a meaningful, enthusiastic, inspiring, proud, and challenged feeling. When employees have a high level of dedication, employees will be enthusiastic and will feel proud of their work (Schaufeli & Bakker, 2006). The absorption aspect is 30.3%, which means that employees will love their work and always feel involved with their work. The categorization of the strength aspect is 27.2%, which means that employees will give good effort and have enthusiasm in completing their work. The highest categorization score in the work engagement variable is the aspect of dedication which can be characterized by strong employee involvement in work, enthusiasm, inspiration, pride, and challenges. When faced with a difficult task or job, it does not become a workload, but makes him feel challenged in completing his task (Schaufeli & Bakker, 2006).

This indicates that the higher the OSH, the higher the work engagement. The results of this analysis are in accordance with the pre-determined hypothesis, namely that there is an effect of OSH on work engagement on employees of PT X Yogyakarta Branch. This is also in accordance with previous research conducted by Maula et al (2019), which showed a positive influence between perceptions of occupational health and safety on job involvement in field engineering employees of PT Haleyora Powerindo. According to Anoraga (2005), in implementing OSH, it is necessary to have a good understanding of aspects, including the work environment, technical equipment, and humans themselves. This explains the principle of applying work safety, that efforts need to be made not only to improve unsafe conditions, but also dangerous human actions (unsafe action).

Based on the analysis of the categorization of the OSH variable, 37.8% of the work environment aspects related to the safety of employees' implementation in the work environment were obtained. The human aspect is 37.5%, which means that work accidents, either directly or indirectly, usually occur due to human error, mistakes can be made by those who make design, construction, installation, as well as management, supervision, and all production processes. The human aspect is also related to OSH training which can improve the knowledge, skills, and attitudes of employees, so that employees are able to apply OSH. Furthermore, the technical equipment aspect is 24.7%, which means that the condition of machines and work tools can have a direct or indirect impact on the incidence of work accidents. The highest categorization score in the OSH variable is the aspect of the work environment which means that everything that is around employees and has a great influence on the tasks carried out by employees at work. The work

environment has other factors, namely lighting, temperature and air circulation, noise, and work regulations. Employees who are indicated to have work engagement are influenced by how big their OSH is, for example in the aspect of the work environment, employees feel an urge in themselves to implement safety in the work environment (Saks, 2006). Examples are lighting, temperature, air circulation, noise, and work regulations.

Conclusion

Based on the research that has been done by researchers, it can be concluded that there is an influence of Occupational Safety and Health (OSH) on work engagement of employees of PT X Yogyakarta Branch with a contribution of 49.8%. This study can be concluded that there is an effect of variable X on variable Y which shows the higher the OSH, the work engagement that occurs in employees will also be higher.

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