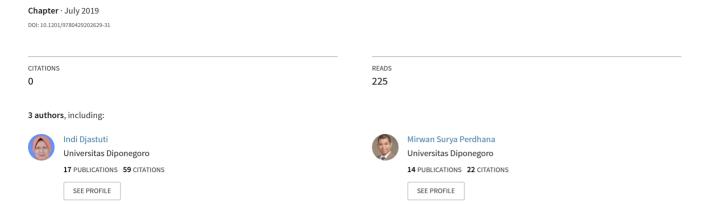
Safety behaviour of manufacturing companies in Indonesia



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Effect of Training and Job Satisfaction on Employees Performance and Company Performance in Support to Achieve the Internationalization Model of SME's Competitive Advantage View project

Safety Behavior of Manufacturing Companies in Indonesia

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ABSTRACT

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The high rate of accidents in the workplace makes employee safety be a priority in manufacturing companies. This is because work safety is closely related to employee survival. The paper aims to analyze the safety behavior of employees in manufacturing companies by looking at the influence of three variables there are safety climate, job satisfaction, and safety motivation. This research was Carried out on one of the manufacturing companies in Indonesia that produce musical instruments and furniture. The sample is employees in the production section with nonprobability sampling technique. There were 300 respondents who Participated in this research, but only 190 questionnaires that were feasible to be processed. This research found that the safety climate and job satisfaction have a positive and significant impact on the safety of employee motivation. Safety motivation Also has a positive and significant effect on employee safety behavior. But, the safety climate do not have a negative effect and not significant on the safety behavior. And then, job satisfaction have a positive effect but not significant on the safety behavior. Safety climate and job satisfacion has a direct effects to the safety motivation, and safety motivation has a direct effect to the safety behavior. Then, safety motivation is able to mediate safety climate and job satisfaction on the safety behavior. Therefore, a company need to consider taking a policy in implementing a safety climate and increasing employee job satisfaction in order to improve the safety motivation which is then expected to create good safety behavior within the company.

ABSTRAK

Tingginya angka kecelakaan kerja menjadikan keselamatan kerja karyawan sebagai prioritas utama dalam perusahaan manufaktur. Hal ini disebabkan karena keselamtan kerja berhubungan erat dengan kelangsungan hidup karyawan. Penelitian ini bertujuan untuk menganalisis perilaku keselamatan kerja karyawan pada perusahaan manufaktur dengan melihat pengaruh variabel iklim keselamatan kerja, kepuasan kerja, dan motivasi keselematan kerja. Penelitian ini dilakukan pada salah satu perusahaan manufaktur di Indonesia yang memproduksi instrumen alat musik dan furnitur. Sampel yang digunakan adalah karyawan pada bagian produksi dengan teknik pengambilan sampel nonprobability sampling. Terdapat 300 responden yang berpartisipasi pada penelitian ini, namun jumlah kuesioner yang layak untuk diolah sebanyak 190 kuesioner. Temuan penelitian menunjukkan bahwa iklim keselamatan kerja dan kepuasan kerja masingmasing berpengaruh positif dan signifikan terhadap motivasi keselamatan kerja karyawan. Selain itu, motivasi keselamatan kerja juga berpengaruh positif dan signifikan terhadap perilaku keselamatan kerja karyawan. Namun, iklim keselamatan kerja berpengaruh negatif dan tidak signifikan terhadap perilaku keselamatan kerja karyawan. Kemudian, kepuasan kerja berpengaruh positif namun tidak signifikan terhadap perilaku keselamatan kerja karyawan. Iklim keselamatan kerja dan kepuasan kerja berpengaruh langsung terhadap motivasi keselamatan kerja dan motivasi keselamatan kerja berpengaruh langsung terhadap perilaku keselamatan kerja. Kemudian, motivasi keselamatan kerja kerja mampu memediasi iklim keselamatan kerja dan kepuasan kerja terhadap perilaku keselamatan kerja. Sehingga, perusahaan perlu mempertimbangkan dalam mengambil kebijakan dalam menerapkan iklim keselamatan kerja dan meningkatkan kepuasan kerja karyawan guna meningkatkan motivasi keselamatan kerja yang kemudian diharapkan dapat menciptakan perilaku keselamatan kerja yang baik dalam perusahaan.

1. INTRODUCTION

Accidents that occurred in the industrial companies in Indonesia showed a high rate. Although there has been a decline since 2014, the number of accidents that occur are still quite large at over 100 thousand cases. Based on data from BPJS Ketenagakerjaan, the number of accidents in 2016 still reached 101 367 cases. The high number of accidents that surely must be a concern of all parties to find a solution.

Safety is a very important thing to be a major concern of companies, especially manufacturing companies and high-risk enterprise. This is because safety is directly related to the survival of the worker or employee. Quoted from Prihatiningsih and Sugiyanto (2010), Labor Law No. 13/2003 article 86 and 87 explain the importance of workplace safety.

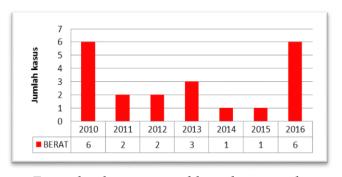
Generally, work accidents occurred due to a weak system of corporate work (O'Toole), Various attempts were made to reduce the number of accidents at the company, such as creating technical solutions, human factors, and regulation. However, those solutions will be meaningless if it is not followed by employee feedback. So it becomes important to analyze the behavior of the safety of employees.

employees produce with performance, including how to work with a good safety standard would require a stage that is not easy, in addition to motivation, knowledge, competence, organizational culture must be built on safety-oriented behavior in order to avoid safety problems. Employee performance is influenced by two factors, namely factor in job satisfaction organizational commitment as well as external factors, namely leadership, security, safety, and organizational culture.

Safety motivation mediates the relationship between safety climate and safety behavior (Neal and Griffin, 2006), Probst and Brubaker (2001) in Huda, Sukmawati, and Sumertajaya (2016) found that safety motivation has an effect on adherence to safety procedures until 6 months later.

This research was conducted at a manufacturing company located in the city of Semarang where one company performance target is to make safety a top priority. companies should Management demonstrated a commitment to fully support all efforts related to anticipation of a safety issue, but even if the company and the management has implemented a safety management system with a good, tight, and disciplines including forming department Health Safety and Environment (HSE), but still only in case of accident work according to the data shown in the figure below:

Figure 1.1
Serious Accidents of Manufacturing Company in Semarang



From the data seen problems between the target of the first strategy of Indonesian Manufacturing in 2016 is zero occupational accidents with the data safety performance in 2016, that there is a severe increase in cases of work accidents.

2. THEORETICAL FRAMEWORK AND HY-POTHESES

Definition of Safety Climate

Schneider (1975) in Seo et al (2004) mention that the organizational climate is an overall

Based on the theory of needs Maslow, people are motivated to meet and satisfy a number of needs that exist in every human being. Employees will feel satisfied if they received feedback and the company in excess of what they expected (Robbins, 2013), Employees will be motivated to do anything, including in terms of the behavior of the working salvation (Huda et al., 2016),

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perception that a person has about the settings in their workplace. Climate often referred to as something temporary and subjectively. While the safety climate is a picture of perceptions related to policies, procedures and safety practices (Prihatiningsih and Sugiyanto, 2010), Meanwhile, according to Zohar (2014), safety climate is defined as the perception of the safety of employees who describe their confidence in the safety priorities. That perception reflects the expectation of the results of their work behavior.

Social perceptions of safety will give description against employees how management commitment to the health and safety of their work. Perception of safety appears with a variety of experiences on the extent to which the management employees to invest in protecting them. A positive safety climate can improve the safety behavior of employees working in the hazardous working environment and vice versa.

Definition of Job Satisfaction

Job satisfaction is not a single concept whereby one can be satisfied with some aspects and feel not satisfied with other aspects (Kreitner and Kinicki, 2010), Job satisfaction is an attitude or behavior which is owned by the individual common to the work that he did (Robbins and Judge, 2015), When an individual has a high satisfaction with the job then he is likely to display behaviors or attitudes are positive, and vice versa.

Luthans (2011) defines job satisfaction as a result of a person's perception of how good a job they give things a person is considered important. It can be concluded that job satisfaction is a feeling that arises as a result of the perception of their work shown in attitude or behavior towards the work itself.

Definition of Safety Motivation

The term refers to the safety motivation individual's willingness to make an effort to enforce safe behavior and valence associated with these behaviors (Neal and Griffin, 2006), Individuals have to be motivated to comply with safe work practices and participate in safety activities if they feel that there is a positive safety climate in the workplace.

According to Griffin (2000) Huda et al. (2016), Motivation can be divided into two dimensions, which will boost safety behavior and willingness to conduct workplace safety. Definition of Safety Behavior

Hsu (2008)states et al. employee safety is always abode by the rules and safety procedures. Employees can play it safe or unsafe when they do their job. Therefore, the behavior of employees in the workplace is very important to minimize safety concerns. In addition, the safety behavior was found to prevent accidents from happening (Martínez-Córcoles, Gracia, Tomás, and Peiro, 2011), The results showed that the safety behavior is the right approach in reducing accidents in the workplace. To determine the safety behavior, there are two dimensions of behavior that safety compliance and safety participation.

According **IOHS** (Institution Occupational Safety and Health direction 06.1), safe behavior is part of the development of the safety management of the approach is very prescriptive, through systems engineering or procedural mostly at progressive companies that are long established, with a system that recognizes the workers as human beings adult with a genuine interest in their welfare, which contributes the best when they can see that they themselves can have an influence on their own safety. To accomplish this transition is done to change the culture of the working group involved so that this approach does not give instant results.

Human behavior is often categorized as a reflex/automatic, which can be considered as a habit. The behavioral approach focuses on custom category and not for the purposes of blame or punish workers, such action is largely counterproductive in any case, some of the behaviors associated with the incident as allowed by the system management. An effective approach is to identify and measure the behavior of secure and non-secure (risky) that happens in the workplace and manage it. Measuring behavior provides a health and safety system with tools for proactive

management. This is for the safety of a stable level.

According to Neal and Griffin (2006), behavioral safety of employees can be divided into two dimensions, namely safety compliance and safety participation. Safety compliance refers to the core activities of the individual to be done to maintain safety in the workplace. This behavior includes following standard operating procedure and wear personal protective equipment. Safety participation describes the behavior that does not directly contribute to an individual's personal safety but helps develop an environment that supports safety. This behavior includes activities such as participating in a voluntary safety activities, help colleagues with the issues related to safety, and attend safety meetings.

hypothesis:

- H1: Safety Climate has a positive and significant effect on the safety motivation.
- H2: Job satisfaction has a positive and significant effect on the safety motivation.
- H3: Safety Climate has a positive and significant effect on the safety behavior.
- H4: Job satisfaction has a positive and significant effect on the safety behavior.
- H5: Safety Motivation has a positive and significant effect on the safety behavior.

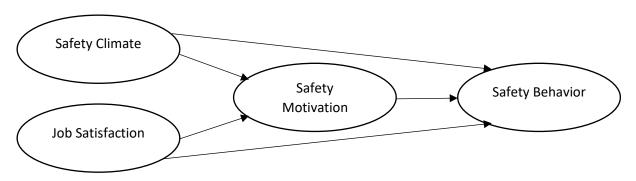


Figure 2.1 Research framework

3. RESEARCH METHOD

The population is the entire group of people, events, or things to be investigated by researchers (Sekaran, 2006), Population is a generalization region consisting of the objects/subjects that have certain qualities and characteristics defined by the researchers to be learned and conclusions drawn (Sugiyono, 2008), The population used in this study were employees of a manufacturing company.

The sample is a fraction of the number and characteristics of a population (Sugiyono, 2008), Samples are some members of the population. A researcher can analyze samples when the population is too large for the overall study and constrained limitations of time, effort, and funds. The sampling design used in this

research is to nonprobability (nonprobability sampling). Nonprobability sampling is a sampling technique that does not give the same opportunity or chance on every member of the population to be used as a sample (Sugiyono, 2008),

Nonprobability sampling is used when the amount of elements in the population is unknown. There are several techniques of sampling by means of nonprobability sampling, but were used in this study is a sampling intended or purposive sampling, where researchers have understood that the required information can be obtained from a particular group that is able to provide the desired information and they have fulfilled criteria determined (Ferdinand), The tools used to process the data in this study is SEM

(Structural Equation Model) which is operated by AMOS (Analysis of Moment Structure).

4. DATA ANALYSIS AND DISCUSSION Overview of respondents

The number of respondents who filled out questionnaires is 300, yet only 190 eligible questionnaires were analyzed. Of the total number of 190 respondents, 49 percent (n = 93)

were women, and the remaining 51 percent (n = 97) were male. In terms of employment, employees with longer than two years to dominate 53 percent, n = 101), followed by employees with a working time of 6 months - 1 year (27 percent, n = 51), employees with long work for more than 6 months (10 percent, n = 19), and employees with long working 1-2 years (10 percent, n = 19)

Table 4.1

Goodness of Fit Test Results Overall Feasibility Model Structural Equation Model (SEM)

Goodness of Fit Index	Cut-off Value	Results Model	Information	
Chi-Square	<147.010 (df = 98)	189.113	Marginal	
Probability	≥ 0.05	0.087	Good	
GFI	≥ 0.90	0.911	Good	
AGFI	≥ 0.90	0.886	Good	
CFI	≥ 0.95	0,990	Good	
TLI	≥ 0.90	0.989	Good	
RMSEA	≤ 0.08	0,028	Good	

Measurement Models

Chi-square is the most fundamental measure that indicates the conformity of the overall model. If the value of Chi-Square it will produce a small probability of large, it indicates that the sample covariance matrix of the covariance matrix of the model did not differ significantly (Ghozali, 2016), fit structural equation model Chi-Square if the value is small and the probability of > 0.05. The use of Chi-Square is only suitable for use in the study sample totaled 100-200 and if the sample size is outside the range of the sample size, the significance tests become less (Ferdinand, 2014). In this study, Chi-Square values obtained at 189.113 with a probability of 0.087, so it can be said that the structural equation model developed well.

Level of significance probability is a statistical measure that is fundamental in determining whether H_0 (null hypothesis) can be rejected. In the analysis using structural equation modeling approach (SEM) is expected

H₀ is not rejected, it is different with hypothesis testing in general. Good model should not reject H₀. Thus the significance of the expected probability is greater than 0.05 or 0.10 in order not to reject H₀. If the results of this research generating significance data probability of 0.087. While the implied value for the level of significance probability is ≥ 0.05 . It can be concluded that there is sufficient evidence to negate H0, it means that the alternative hypothesis can not be accepted. So. It can be concluded that there is no difference between the matrix of variance / covariance matrix samples with variance / covariance population.

Goodnes of Fit Index (GFI) is a non-statistical measure which reflects the level of accuracy of the model obtained from the predicted residual quadratic models compared to the actual data, which has a range from 0 to 1 and getting closer to 1 indicates the model is getting better. In this study, the limit values for states GFI fit model is \geq 0.90 and GFI value

between 0.8 to 0.9 is said to be marginal fit. GFI value in this research is 0.911, so the model can be considered good.

Adjusted Goodness of Fit Index (AGFI) is a development of GFI adjusted for the degree of freedom for the proposed model. A model is said to be fit when the value AGFI \geq 0.90 and AGFI value between 0.8 - 0.9 is said to be marginal fit. In this study, the value of AGFI amounted to 0.886, so that the structural equation model we tested is said to be marginal fit.

Hypothesis testing

Once the model has been declared fit then it will be followed by hypothesis testing, done by looking at the significance of the estimated value, the critical ratio, and probability (Table 4.2). Table 4.2 shows that all the significant of parameter estimation of each relationship has a value of <0.05 unless the value of the estimated parameter significance workplace safety climate on the behavior of worker safety and job satisfaction on behavioral safety (0.012 and 0.039). The results of data analysis known that the climate effects on motivation Safety Safety have CR = 2.613 and p = 0.007 (<0.05), so it can be said to be significant. This indicates a safety climate can increase the motivation of the perceived safety of employees. Therefore, Safety climate positive and significant impact on the safety of emplovees motivation manufacturing companies in Indonesia. Thus, it can be concluded that H₁ is accepted.

The results of data analysis known that the effect of job satisfaction on motivation safety has CR = 3.005 and p = 0.005 (<0.05), so it can be said to be significant. This indicates that job satisfaction can increase the motivation of the perceived safety of employees. Thus, job satisfaction and a significant positive effect on the safety of employees motivation manufacturing companies in Indonesia. Thus, it can be deduced that the H_2 is accepted.

CFI value of 0,990 above the value of 0.95 which is a CFI value required, so it can be stated that the condition of good standard CFI value. Furthermore, the TLI value of 0.989 is more than 0.90, which is the value TLI required, meaning that the value of a good standard TLI. Then, for a value of 0.028 RMSEA below 0.08 which is an RMSEA value required, so that the value of a good standard RMSEA.

The results of data analysis known that climate influences on behavioral Safety have CR = -2.431 and p = 0.012 (> 0.05), so it can be said that not significant. This indicates a safety climate have not been able to increase the perceived safety behavior of employees. Thus, the safety climate and no significant negative effect on the behavior of safety of employees of companies manufacturing in Indonesia. Therefore, it can be deduced that the H_3 is rejected.

The results of data analysis known that the effect of job satisfaction on safety behaviors have CR = 2.713 and p = 0.039 (> 0.05). This indicates that job satisfaction has a posittive effect but not significant on the safety behavior. Therefore, job satisfaction has a positive effect but not significant on the safety behavior of employees in manufacturing companies in Indonesia. Thus, it can be concluded that the H_4 is rejected.

The results of data analysis known that the effect of occupational safety motivation towards work safety behaviors has CR = 3.201 and p = 0.005 (<0.05), so it can be said to be significant. This indicates the safety motivation can improve the perceived safety behavior of employees. Thus, safety motivation has a positive and significant effect on the safety behavior of employees of companies manufacturing in Indonesia. Thus, it can be deduced that the H_5 is accepted.

Table 1.2
Regression Weight Structural Equation Modeling

			Estimate		SE	CR	P-value	SE	P-value
					ML		ML	Bootstrap	Bootstrap
MKK	<	IKK	H1	0215	0082	2,613	.009	.081	.007
MKK	<	KK	H2	0229	0076	3005	.003	.082	.005
PKK	<	IKK	Н3	-0183	0075	-2431	.015	.080	.012
PKK	<	MKK	H4	0237	0074	3,201	.001	.079	.005
PKK	<	KK	H5	0152	0070	2173	.030	.075	.039

5. CONCLUSIONS, IMPLICATIONS, SUGGESTION, AND LIMITATIONS

The main objective of this study is to look at the role of occupational safety climate and job satisfaction to employees' safety behavior. In addition, this study also wants to determine the effect of occupational safety motivation in mediating the safety of the working climate on employee safety behavior. The research conducted at one of the manufacturing companies in Indonesia.

Based on the hypothesis that had been developed in the beginning, the results showed that there are two hypotheses that contradicts the results of the study. From H₁ to H₅, third and fourth hypothesis (H₃ and H₄) contrary to the findings of the research. The findings show that the H₃ which is the correlation between climate with occupational behavior and H₄ which is the correlation between job satisfaction and work safety behavior. It means climate safety and job satisfaction have no connection occupational safety behavior. Moreover, the causal relationship between safety climate and job satisfaction on employee safety behavior has a negative impact and insignificant.

The findings of the research for the H_1 , H_2 , and H_5 consistent with the hypothesis drawn up at the beginning. The results showed that the climate of industrial safety and job satisfaction positive and significant impact on the motivation of safety (H_1 and H_2). Then, occupational safety motivation is also the positive and significant effect on the behavior of

safety (H₅). The findings indicate that the climate of safety and job satisfaction can increase motivation safety of employees. Vice versa, if a safety climate and poor job satisfaction will decrease the motivation of workplace safety. In addition, the findings also indicate if the motivation safety can improve the safety behavior of employees.

Direct and indirect relationships between variables using path analysis indicate that the variables safety climate and job satisfaction directly influence safety motivation. Then, safety motivation has a direct effect on safety behavior. Safety climate on the safety behavior directly has a negative effect, but if through the safety motivation on the safety behavior becomes positive. The results of the Sobel Test show that safety motivation can mediate safety climate and job satisfaction on the safety behavior.

The results showed a positive correlation between safety climate, job satisfaction, motivation safety against employee safety behavior of manufacturing companies in Indonesia. Given there is still potential work accidents whether mild or severe, should the company pursue policies on a regular basis by conducting a survey measuring the behavior of the employees by a factor measured is the level of compliance of safety (safety compliance) and participation anticipating in danger, considering the frequent turnover for system contract. The survey followed up with a policy in anticipation of declining employee safety behavior including improving the quality of safety motivation.

The limitation in this study is the reduction of indicators in research in order to get the model Fit in quantitative data processing, there is still goodness of fit criteria which do not meet that standard with marginal results Probability. In addition, the least scientific references that discuss the topics covered in this study. then, Sources of respondents still limited that only 300 respondents and the number of questionnaires that can be analyzed only amounted to 190.

This study does not in spite of the limitations so that more attention to research that will come. The first suggestion for further research is in order to explore the relationship between safety climate on the behavior of safety. This is due to very limited literature related to the discussion. Secondly, it is necessary to do research again about how it relates to climate safety with the safety of employees' behavior because there is still a gap between the research results with one another. Thus, the results of these studies were able to enrich the literature already exists. Third, needed to do research on the positive side and negative on the safety of employees' behavior in addressing the climate of safety in an organization. It is able to provide solutions to organizations in taking climate policy in applying safety and increase employee job satisfaction in order to increase the motivation of safety, so as to create a good safety behavior within the organization. Then, there is the limited number of respondents in this study is a limitation, expected in future studies added the number of respondents that meet the test of goodness of fit chi-square. It is able to provide solutions to organizations in taking climate policy in applying safety and increase employee job satisfaction in order to increase the motivation of safety, so as to create a good safety behavior within the organization. Then, there is the limited number of respondents in this study is a limitation, expected in future

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