

## **THE INFLUENCE OF IMPLEMENTATION OCCUPATIONAL SAFETY AND HEALTH ON EMPLOYEE PRODUCTIVITY: A CONCEPTUAL MODEL**

**Ahmad Sutisna<sup>1</sup>, Dwi Sunu Kanto<sup>2</sup> and Muchtar Luthfie<sup>3</sup>**  
Universitas Trilogi, Jalan TMP Kalibata No.1 Jakarta Selatan 12760  
E-mail: sutisna\_83@yahoo.com

**Abstract:** Work productivity of workers in a company is affected by several factors, one of which is occupational safety and health program. This research aimed to determine the effect of occupational safety and health program on the productivity employees at PT. Versacon Medical. The research used observational analytic design with cross sectional study. Data collection was by observation, interviews and questionnaires. Samples were taken from all field workers at PT. Versacon Medical in total of 110 workers using total sampling technique. Analysis technique used multiple linear regression with F and T tests. With this research and analytic design of the application the conceptual model that shows and proves the relationship of influence of implementation occupational safety and health on employee productivity.

**Keywords:** Safety & Occupational Health; Productivity.

### **1. Introduction**

One of very strategic aspects in the efforts of achieving workers welfare in industrial sector is maximum attention on safety and health issues.

As pointed out by Barthos, one of the aspects of human well-being is occupational safety and health, especially in industrialization era. Labor Law of 2003 (Article 86 paragraph 1 states that every worker is entitled to the protection of health and safety, morals, ethics and treatment in accordance with human dignity and religious values. Studied by Sinaga (2017) says that occupational health and safety has a positive and significant influence on work productivity. Workplace accident is the major cause of workers' deaths and injury in workplace in the United States in the industrial sector. The cases of workplace accidents cause an economic impact of 845.6 billion dollars in 2010. In globally more than 2.78 million people die's in every years due accident work ([www.ilo.org/jakarta/info/public](http://www.ilo.org/jakarta/info/public)). And data from PT. Jamsostek (Social Security) until the end of 2011 recorded around 99,491 cases of workplace accidents or around 3.9% of 2,567,671. Based on data from the International Labor Organization (ILO) 2018 every year around 380,000 workers or 13.7 percent of the 2.78 million workers are killed by workplace accidents, one of the reasons being the low awareness of

employers and employees on the importance of implementing Occupational Safety and Health. According to the latest ILO estimates, more than 1.8 million work-related deaths occur each year in the Asia and Pacific region. Even two-thirds of work-related deaths in the world occur in Asia. At the global level, more than 2.78 million people die every year due to accidents or occupational diseases. In addition, there are around 374 million non-fatal work-related injuries and illnesses every year, many of which result in work absenteeism ([www.ilo.org/jakarta/info/public](http://www.ilo.org/jakarta/info/public))

This is due to the failure to apply provision of occupational safety regulations consistently. Issues on occupational safety are considered actual to be discussed only in the incidence of an accident at construction industry location. Furthermore, studied by Wicaksono (2011) argue that occupational safety and health program (K3) in Indonesia in general is still often neglected, indicated by the high number of workplace accidents. Although there is an obligation to implement occupational safety and health management system in large enterprises through labor law, empirical conditions show that only 2.1% of 15,000 large-scale enterprises in Indonesia have already implemented occupational safety and health management system (SMK3).

In today's era of information globalization, PT. Versacon Medical as one of the companies in the field of importers company that have activities in logistics and distribution, where one of the tasks is to deal improvement the logistics and distribution activities with minimize work accidents for workers.

## **2. Literature Review**

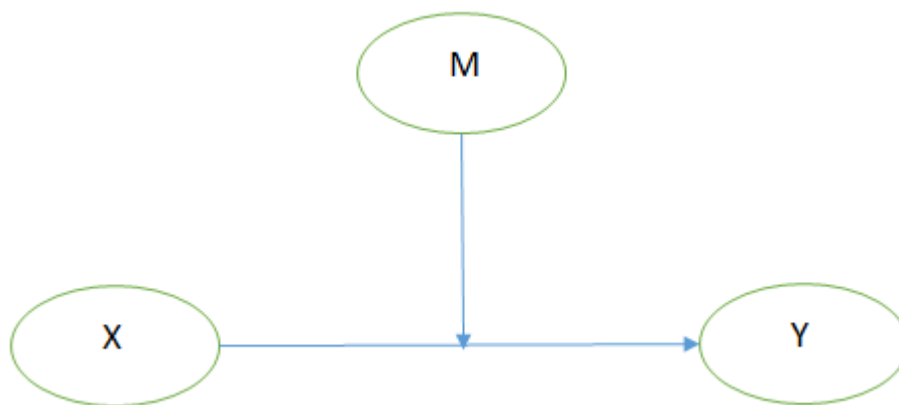
A considerable survey of literature on the empirical analysis of the relationship between occupational safety and health program on the employee productivity. This study has been reviewed numerous empirical studies. There are several previous studies that have tested the implementation of occupational safety and health on work productivity. Kusuma (2012), Purwanti (2017) and Budiharjo (2017) obtained the findings of the implementation of occupational safety and health positively influencing work productivity. Based on research by Sinaga (2017), Nur (2017), Jufri (2017), Puspita (2018) the implementation of occupational safety and health has a positive and significant influence on employee productivity. Whereas according to Mulyadi (2010) research, Siswandi (2017), Lumempow (2018), Marliana (2018) shows that employee competency also has a positive and significant effect on employee productivity. What was previous research that tested the implementation of occupational safety and health on work productivity. Kusuma (2012), Purwanti (2017) and Budiharjo (2017) obtained the findings of the implementation of occupational safety and health positively influencing work

productivity. Based on research by Sinaga (2017), Nur (2017), Jufri (2017), Puspita (2018) the implementation of occupational safety and health has a positive and significant influence on employee productivity. Whereas according to Mulyadi (2010) research, Siswandi (2017), Lumempow (2018), Marliana (2018) shows that employee competency also has a positive and significant effect on employee productivity.

There were still a lot of study and results regarding the Influences of Occupational safety and health program on employee productivity, but this paper is want testing the Influence of Implementation Occupational Safety and Health program on employee productivity.

### 3. Conceptual Model

The Objective of this paper is to investigate influence Implementation Occupational safety and health program on employee productivity. This paper has set out a conceptual model to investigate: (1) influence implementation Occupational safety and health program on employee productivity. (2) Influence implementation Occupational safety and health program on employee productivity with the competence worker as the moderation variabel.



**Figure 1:** The conceptual model (Source: Purwanti (2017), Budiharjo(2017), dkk)

$$1) \quad Y = b_0 + b_1X$$

$$2) \quad Y = b_0 + b_1X + b_2M + b_3XM$$

X = independen variabel which is consist of occupational safety and health program

M = Moderation variabel which is competency of worker

Y = dependen variabel which is consist of employee productivity

XM = (occupational safety and health program) x (competency of worker)

### 4. Hypotheses Development

4.1 influences implementation occupational safety and health program on the employee productivity

This hypotheses is analyze that implementation occupational safety and health program on the employee productivity. There were researchers have supported a positive and significant (Mulyadi, 2010), (Kusuma, 2012), Jufri (2017).

H1 = The implementation of the Occupational Safety and Health Program has an Influence on Employee Productivity

4.2 influences implementation occupational safety and health program on the employee productivity with the competency worker as moderation.

This hypotheses is analyze influences implementation occupational safety and health program on the employee productivity with the competency worker as moderation. There were researchers have supported a positive and significant (Purwanti, 2017), (Sinaga, 2017), Puspita (2017), Nur (2017), Marliana (2018).

H2 = The implementation of the Occupational Safety and Health Program has an Influence on Employee Productivity with Worker Competence as a Moderating Variable.

## **5. Methodology**

The subjects of this research were workers at PT. Versacon Medical in total of 110 workers using total sampling. The research used analytical, observational design with cross sectional study. Data collection was by observation, interviews and questionnaires. Analysis technique used multiple linear regression with F and T tests.

It was followed by significance test with  $\alpha = 0.05$  and two-party test with the following steps: calculating correlation coefficient (R) and coefficient of determination (R<sup>2</sup>), followed by F test and ended with t test.

### **5.1 Research Design**

The subjects of this research were workers at PT. Versacon Medical in total of 110 workers using total sampling. The research used analytical, observational design with cross sectional study. Data collection was by observation, interviews and questionnaires. Analysis technique used multiple linear regression with F and T test.

### **5.1 Analysis Data**

After the questionnaire was collected again then the data processing was done by editing, giving the code, grouping, reinterpreting the questionnaire, making scores composing the structure in the matrix then doing tabulation and calculation and processing of data using SPSS. We will test the data with several test processes in SPSS such as Validity data test, Reability data test, Normality data test, Multicolinierity data test, until F & t test.

## 6. Conclusion

This paper is to analyzed of the implementation of the Occupational Safety and Health Program has an Influence on Employee Productivity, the conceptual model of the relationship, hypotheses development, and the methodology. By knowing a clear explanation on the relationship of the implementation of the Occupational Safety and Health Program has an Influence on Employee. Eventually with this research and analytic design of the application the conceptual model that shows and proves the relationship of influence of implementation occupational safety and health on employee productivity.

## References

- [1] Almighty. 2010. *Analisa Faktor Penyebab Keselamatan dan Kecelakaan Kerja pada Pemakaian Crane di Proyek Konstruksi*. Jakarta: Dian Rakyat.
- [2] Barthos, B. 2010. *Manajemen Sumber Daya Manusia: Suatu Pendekatan Makro*. Cetakan V. Jakarta: Bumi Aksara.
- [3] Budiharjo, P. 2017. *Pengaruh Keselamatan Kerja, Kesehatan Kerja, dan Lingkungan Kerja terhadap Produktivitas Karyawan pada PT. Air Manado*
- [4] Galler, B. Scott. *Behavior Based Safety and Occupational Risk Manajemen*. 2005.
- [5] *Behavior Modification Journal*. Virginia USA: Virginia Polytechnic Institute and State University. (29) 3: 34-37.
- [6] Jamsostek, 2012. *Navigasi Laporan Tahunan PT. Jamsostek (Persero) Tahun 2012*. Jakarta: PT. Jamsostek.
- [7] Nur, M. 2017. *Pengaruh Pelaksanaan Program Keselamatan dan Kesehatan Kerja, (K3) terhadap Produktivitas Kerja Karyawan pada PT. Bormindo Nusantara Duri*
- [8] Priyadarshani, Kanchana. Karunasena, Gayani & Jayasuriya, Sajani. *Construction Safety Management Assessment Framework for Developing Countries: A Case of Sri Lanka*. 2013. *Journal of Construction in Developing Countries*. Kuala Lumpur: Universiti Sains Malaysia: 15-23.
- [9] Sinaga, A. 2017. *Pengaruh Keselamatan dan Kesehatan Kerja terhadap Produktivitas Kerja karyawan bagian Produksi PT. Ciba Vision*. Batam: Sekolah Tinggi Ilmu Manajemen
- [10] Undang-undang Republik Indonesia Nomor 13 tahun 2003 tentang *Ketenagakerjaan*. Usman & Akbar, 2005. *Pengantar Statistika*. Cetakan 4. Jakarta: PT. Bumi Aksara.
- [11] Wicaksono, Kurniawan, Iman dan Moses L. Singgih, 2011. *Manajemen Risiko K3 (Keselamatan dan Kesehatan Kerja) Pada Proyek Pembangunan Apartemen Puncak Permai Surabaya*. Surabaya: Magister Manajemen Teknologi – ITS.