

## The Relationship between Task Factors and Occupational Safety and Health (OSH) Performance in the Printing Industry

### Hubungan Antara Faktor Tugas dan Prestasi Keselamatan dan Kesehatan Pekerjaan (KKP) di Industri Percetakan

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#### ABSTRACT

*In Malaysia, studies had shown that the low workers performance occurred due to Occupational Safety and Health (OSH) related aspects such as occurrences accidents, absenteeism, higher level of sickness and stress at work. The long run of this situation will effect organization performance and reduce the quality of work, increase the cost of worker's compensation and eventually troubling the development of organization. This study examines the task factors related to work demand in enhancing OSH performance, measured in term of occupational accident, occupational stress, sickness of workers and absenteeism focused in the Malaysian Printing Industry. Two hundred and ninety-five respondents from several printing companies in Malaysia were analyzed through distributed questionnaires. Three dimensions involved as independent variables to measure task factors referred to quantitative demand, emotional demand and sensorial demand, while OSH performance as dependent variables measured by occupational stress, occupational accident, absenteeism and sickness. Higher work demand contributes to worker's stress and accidents that leads to absenteeism problem. Sickness problem confirmed result in influencing absent issues. Moreover, result concern related behavioural aspect which attention should be given on the developing behavioural intervention in order to enhance worker's knowledge, attitude, and skill while performing their work. Changes related in practicing Human Resource Management (HRM) aspect especially on OSH factors at work such as balancing working hours, altering work condition and environment, enforcing ergonomic aspects, implementing OSH training and safety culture, will help to ensure employees' safety and health performance. Future research and limitations of the study is discussed.*

*Keywords: OSH performance; task factors; quantitative demand; HRM practicing; printing industry*

#### ABSTRAK

*Di Malaysia, kajian telah menunjukkan bahawa prestasi pekerja yang rendah berlaku disebabkan aspek berkaitan Keselamatan dan Kesehatan Pekerjaan (KKP) seperti kejadian kemalangan, ketidakhadiran, bertambahnya penyakit dan tekanan di tempat kerja. Keadaan yang berpanjangan ini akan mempengaruhi prestasi organisasi dan mengurangkan kualiti kerja, meningkatkan kos pampasan pekerja dan akhirnya mengganggu perkembangan organisasi secara keseluruhannya. Kajian ini mengkaji faktor-faktor tugas yang berkaitan dengan permintaan kerja dalam meningkatkan prestasi KKP, yang berpandukan kepada kemalangan pekerjaan, tekanan kerja, penyakit pekerja dan ketidakhadiran di Industri Printing Malaysia. Dua ratus Sembilan puluh lima responden dari beberapa syarikat percetakan di Malaysia telah dianalisis melalui soal selidik yang diedarkan. Tiga dimensi yang terlibat sebagai pemboleh ubah bebas untuk mengukur faktor tugas merujuk kepada permintaan kuantiti, permintaan emosi dan permintaan sensori, sementara prestasi KKP sebagai pemboleh ubah bersandar diukur melalui tekanan pekerjaan, kemalangan pekerjaan, ketidakhadiran dan penyakit. Permintaan kerja yang lebih tinggi menyumbang kepada tekanan dan kemalangan pekerja yang membawa kepada masalah ketidakhadiran. Masalah penyakit juga dikatakan mempengaruhi isu-isu ketidakhadiran pekerja. Selain itu, hasil kajian menyatakan penekanan kepada aspek*

*tingkah laku, perlu diberi perhatian bagi meningkatkan pengetahuan, sikap, dan kemahiran pekerja semasa menjalankan kerja mereka. Penambahbaikan amalan aspek Pengurusan Sumber Manusia (PSM) terutamanya melibatkan faktor-faktor keselamatan dan kesihatan pekerjaan di tempat kerja seperti mengimbangi waktu kerja, mengubah keadaan persekitaran kerja, menguatkuasakan aspek ergonomik, melaksanakan latihan KKP dan budaya keselamatan, akan membantu untuk memastikan prestasi keselamatan dan kesihatan pekerja lebih terjamin. Penyelidikan masa depan dan batasan kajian turut dibincangkan dalam artikel ini.*

*Kata kunci: Prestasi keselamatan dan kesihatan pekerjaan (KKP); faktor tugas; permintaan kuantiti; praktik pengurusan sumber manusia; industri percetakan*

## INTRODUCTION

Work performance of an individual/ worker improved by integrate him with the healthy working environment and work place. In general, workers' performance defines as people's best abilities in performing a job or task and regarded with their behavioral outcome of an individual (Heathfield 2011). In like manners, performance of workers' measured by worker's output based on their performance. (Sabine & Michael 2002). Hence, to improve worker's performance at work place, the need of support and sustain the maximum degree of physical, mental, and social well-being of individuals in all works it is significant (Archer, Borthwick & Tepe 2009).

Workers' health and social well-being at work are very importance, numerous problem will occur when ignorance of its. Organizational performance will decrease and some of worker's talents will loss. Further to this, organizations with the greatest safety and health problems, environmental problems, a bad facility, as well as poor working environments will see a decline in their employees' work performance (Selamat 2016), adding over time to organizational costs. It is clear that further discussion on the issues is needed, with the aim of answering whether task factor leads to OSH performance in Malaysian printing companies?

The balance theory defines task factors are psychosocial work factors. Furthermore, these factors are included task elements, such as job demand, job control, and job content (Smith & Carayon 2000). In addition, a study by Carayon (2009), clarify task factors as task demand factors which he divided/explain further in to three elements. Firstly, quantitative demand (the quantities and capacities that workers will encounter while doing their work). Secondly, sensorial demand (the concentration and sense of workers in their work activities), and finally

emotional demand (the emotions and feelings of workers while conducting their work). On the other hand, OSH performance refer to the several dimension which presenting the issues of OSH at work. There included occupational accident, occupational stress, sickness and absenteeism.

In general OSH aspects not only encourages an awareness of safety and health, but also promoting a safety and health culture to entire workforce. The concern of OSH aspect at work also to seeks and ensures that all everyone concerned, primarily employers and workers, are more responsible in their efforts to deliver and maintain a safe and healthy workplace for the ever-growing labor force. Moreover, OSH aspects play major roles in order to attain the highest degree of physical, mental, and social well-being of the workers in an organization's environment. Not surprisingly, another study i.e., Salleh, Bakar & Keong (2008) considered OSH aspect as an important factor to improve the performance of organizations' and workers'. A study by Seok et al. (2013) claimed occupational and near accident can be avoiding when system of safety and health management in a good practice and awareness of worker on safe working practice. Thus, worker safety and health shows as significant role in achieving better performance, a broad understanding of the terms 'safety' and 'health' inspire workers and organizations to implement OSH, irrespective of occupation. This situation had happened in the printing industry which possibility of workers to involved with OSH problem were high.

Since 1887, printing industry was established as oldest production industry in Malaysia. Developed of printing industry give positive effect on dissemination knowledge, information, communication and education. Even though in Malaysia the state of communication technology supports for dispensing the need for hardcopies,

however it is not achievable since current media technology has not yet reached its full potential and capacity. This is particularly true in terms of the distribution of information through the use of magazines, newspapers, academic references, exam papers, textbooks, and others.

However, workers in the printing industry still suffer several problems. Unsuitable working environment for workers, including poor workstation designs and heavy workloads, affect the ability of workers to perform as productively as possible. Workers risk getting injured or being involved in accidents at work. However, literature shows that the issue of safety while conducting tasks and work in the printing industry is receiving attention. These safety issues need to address which are the potential threats for the workers in terms of OSH related problems. These are the major OSH related safety issues accidents, hazardous exposure and back pain (Aziah 2003; Gundega et al. 2014).

In the printing industry, production workers are tending to have greater work demands. The workers physically exposed to exposing plates and masking film, operating power tools, loading and unloading materials like papers and ink, tending to machines, as well as mixing and placing ink, water, alcohol, gummer and paper (Aziah 2003). Furthermore, greater work demands can affect workers' psychological health and physical health. Formerly, these are the major challenges such as stress, sickness, laziness and idly. In terms of physical health, these changes affect negatively on their health performance such as, changing time arrangements, differing work schedules (randomized work shifts), inconsistent working hours, and overtime (Selamat 2016). According to Aziah (2003), these prevailing wicked and ill practices in printing companies should be prohibited in Malaysia. These conditions are prevalent in printing companies in Malaysia, where there is an ever increasing demand for more work and abilities on the part of employees (Aziah 2003). There for a study should be taken in order to assist printing industry to overcome any OSH problems occurred due to increasing demand of work.

Based on the currently available literature, little exertion has been spent clarifying the concept of OSH performance in the workplace (Selamat 2016; Ahmadon et al. 2006; Sabine & Michael 2002). Furthermore, according to Bateman, King and Lewis (1994) concluded that OSH related issues such as humanitarian considerations, financial

costs, and legal sanctions have significant insight in printing industry. convey significant insight into. This study examines task factors related to work demand in enhancing OSH performance, measured in term of occupational accident, occupational stress, sickness of workers and absenteeism focused in the Malaysian Printing Industry.

## OSH PERFORMANCE

The OSH pay much attention on the safe work practices. The implementation of OSH not only enhanced worker safety and health on the job, but also guides workers how to prevent potentially related threats. Owing to that, the OSH issues could be given consideration in order to achieve a higher performance.

A study by Ludin (1994) claims that 'safety' is a pivot point which generates positive sense of security in working environment. In addition, Chow (1995) defines safety as the condition of protection from danger, risk or harm of employees, properties, and profit of an organization. Another aspect of safety, it may include worker perceptions towards work, their feelings, approaches of accomplishing safety and prevention from incurring losses (Selamat 2016). In further to safety, absence of disease was wisely defined and classified is generally synonymous with the term 'health'. Previous studies define 'health' is not only the set of physical, mental and social well-being, but also the absence of disease or infirmity (World Health Organization 1998 (WHO)) Archer, Borthwick and Tepe (2009). Moreover, a study by Selamat (2016) mentioned confirmed that to follow guideline of safety and health enable worker to avoid health related problem which ultimately benefits both the worker as well as the organization. Further, Selamat (2016) emphasis to bring the OSH definition under scrutinizes, before commencing a discussion on evaluation methods of OSH performance.

In broader sense, the term safety and health used interchangeably to refer to OSH issues which are subject to use. For example, previous studies show that the concept of OSH intervention is used to access the safety and health matters i.e., the term personal protection equipment is a set of complete health care items (gloves, glasses etc.) as well as applying and evaluating safety and health (Donato, Enrico & Guido 2014). Henceforth, this study refers OSH for safety and health issues and vice versa.

In order to reduce the obstacles and to implement OSH in an organization, one need to implement good measurement system in place that enable to identifies potential issues and facilitates proactive remedial actions. In addition, the OSH performance should observe multiple aspects to increase efficiency and effectiveness, such as psychological, psychosocial, physiological aspects, and the physical environment (Selamat 2013). Later, these aspects should be blended with proactive remediation, organization development and organization's missions and goals. Unanimously, the comprehensive knowledge and implementation of OSH, is the most suitable way to increase productive at workplace.

As a conclusion, OSH performance could play a role in enhancing the concept of safety and health at work. As mentioned by Carayon's (2009) the safety and health issues contributed to the extension to the potential outcome for workers and organizations. Thus, issues on the absenteeism, worker's sickness, occurrences occupational stress and occupational accident, would representing OSH performance; which shows that if these issues could not give attention, it affected to the performances of workers and organizational.

### TASK FACTORS

In the workplace, the performance is evaluated on the basis of a task. Different task demands different skills and knowledge. Task analyst enlists all these elements in a work system, which ultimately effect on the task/performance, such as job control, workload, job contents, rotation between tasks, job autonomy, challenges and opportunities, (Carayon 2009). Besides, task effect either positive or negative effect on the job description and physical demand (Smith & Carayon 1989). In terms of negative effect, a study by Carayon (2009) pinpoints the five major types of task which cause of poor performance. According to her, the first is incorrect or incomplete instructions, second is competitive tasks. He considered distractions as the third main reason, and changing priorities and inadequate support from people, services or equipment as fourth and fifth respectively.

A wide diversity of influences has been studied, from content considerations such as job workload, which can be considered as emotional demand, sensorial demand, quantitative demand,

and cognitive demand, as well as repetitiveness and workload issues including shift work, working hours, and other activities concerning tasks. Thus, task factors can be considered as the demand or requirement of individuals need in order to perform their work. Based on the Balance Theory, task factors can be defined as an aspect related to demand of work that individual need to adapt while performing work.

In terms of positive effect, task analyst considered appropriate and succinct approaches and techniques to accomplish task as the main weapon of success. However, different individuals accomplish their task by utilizing different approaches and techniques according to their skills, experience and capabilities, which demand more energy, efforts and time. The implementation of standard approach and technique enable to reduce efforts and save time and energy. A study by Mathis and Jackson (2006) indicate the specific task refer specific knowledge, skills and abilities to achieve goals. Moreover, job description clearly mentioned the most suitable person required with appropriate skills, knowledge and techniques (Mathis & Jackson 2006). From the organization perspective, task can be considered as the demand or requirement of individuals need in order to perform their work.

Considering the Balance theory, a task can be defining as an aspect related to demand of work that individual need to adapt while performing work. Furthermore, Balance theory improves workers' quality of working life, the physical and mental health as well as stress at work (Carayon 2009; Smith & Carayon 1989). Balance theory also pinpoints the process which produces stress for workers such as, picking a wrong person for a key task, unhealthy environment, inappropriate technology and organizational misbehavior. Moreover, Balance theory also discuss how to sort out these issue with the role of OSH at the workplace (Carayon & Smith 2000).

Moreover, balance theory also enlarges on concepts related to OSH at the organization (Carayon & Smith 2000) which eventually raise the focus of attention on promoting and maintaining physical health, social well-being, as well as mental stability of the workforces. Therefore, in this study, three task demand factors are referring to emotional demand, sensorial demand, and quantity demands (Carayon 2009).

Firstly, the quantitative demand refers to the quantity and capacities workers encounter. To identify items to measure the quantitative demand of work, Copenhagen Psychosocial Questionnaire (COPSOQ) was used. For example, how many hours an individual overtime, number of hours an individual required to complete their work task and overload. Secondly, the sensorial demand which define as demand of the attentiveness and emphasizing of work activities. For example, the requirement of precise bird views in order to hand the job, the level of accuracy, and the requirement for the constant attention when performing the task. Owing to that, researchers found that the sensorial demand play a critical role in the printing industry at the making unit and design section. Finally, emotional demand explained as a dimension of task demand; which deals with the worker's emotion during the workplace. Furthermore, emotional demand arouses the psychological emotion due to having extra work burden as well as depression at the workplace.

Kahya (2007) reported in his study, to performing task in manufacturing companies, blue-collar employees need different frequencies, level and duration of the physical effort. In addition, their need more energy to performing task but, lot of energy was waste and unproductivity because a static and awkward posture. In case of Malaysia, it is found that higher workloads, higher pressure demands and long working hours contribute to poor OSH performance (Ahsan et al. 2009; Selamat 2016). According to Manshor, Fortain and Choy (2003) the higher workloads directly contribute to workers enduring occupational stress. They further mentioned the relationship between job workload and OSH performance. According to them, in manufacturing industries, where a high workload demand is expected, as being very significant. Rauhala et al. (2007), provide the supporting argument. According to them, higher workload demand leads to higher levels of sick-leave. Bottom line greater work demands have an effect directly on an individual health status. In addition, High workloads cause to higher number of sick leave and effect on other health related issues such as depression and general sickness.

Another study on workload and work-related stress at United Kingdom has reported by Bartram, Yadegarfar and Baldwin (2009). Cross-sectional approach and questionnaire distributed via email to 3200 vets, based on stratified random sampling

method. Based on their study, self-reported causes of work-related stress, and job satisfaction among a representative sample of vets. The Health and Safety Executive Management Standards Indicator Tool included a series of bespoke questions embedded in a 120 items questionnaire, which assessed anxiety and alcohol consumption, positive mental well-being, depressive symptoms, suicidal ideation, and work-home interaction. The result of the study confirms that number of working hours and professional mistakes were the main causes of contributing to stress, which finally affects worker's performance.

Bottom line, many studies identify the relationship between task factors and OSH performance. Moreover, the task factors play as an important role to enhance OSH performance, particularly on occupational stress, occupational accident and health of workers. Hence, to bring major benefits to employee and organization, organizational support need to organize better task or duties to their worker.

## METHODOLOGY

Registrar of Companies (ROC) and Malaysian Printers Association (MPA) are agencies were provided list population of printing companies to calculated. All the workers from 3162 printing companies was registered with Home Affairs Ministry of Malaysia (2002), in Malaysia as total 47,102 employees (Department of Safety Malaysia, DOSM, 2010) was choose as the research population.

For studying OSH performance, production line who is involved in operations of production department in Malaysian printing companies was used as the unit of analysis. Production line workers included printing machines worker, binding and folding machines worker, and any other worker related with production department/ unit.

Moreover, probability sampling was used in this study, were the populations have a known opportunity was chosen as sample. Exactly in this study stratified random sampling used to assessing the population parameter and recognizing subgroup of population. Hence, the list of employee in each printing company was provided by the Human Resource Department.

In the current situation, the total number of production workers in printing industry still

unclear. To generate the appropriate number of sample from accurate number of production workers, an assumption is needed. From the first observation in the printing company found only 15percent to 20 percent people in administration and another 80 percent involved in production. From this assumption, researcher decided 80 percent of workers each company considered as production line workers and eligible for this sample of study. Two hundred and ninety-five respondents from several printing companies in Malaysia were analyzed through distributed questionnaires.

To suit the context of this study, a set of questionnaires with five-point Likert scale was adapted from certain approaches and element in others studies to determine the relationship among task factors and OSH performance.

In Table 1, occupational accidents were measured by respondent to report any accidents while performing their work in the workplace. Study from Nikolaos (2010) discovered some individual and organizations fail to report an accident. In this study to measure occupational accident, three different statement was designed. For example, to measure the severity of accidents experienced by workers, the statement "Rate the severity of the impact of an accident at work that you experienced in the last six months" was used. Furthermore, several items from Zafir et al.

(2013) were adopted to measured sickness among workers such as physiological, psychological, and physical (Zafir et al. 2013). Each item was suitable for measuring sickness in this study with average Cronbach's alpha of .60.

Moreover, there are four items regarding absenteeism were presented. Absenteeism are the habitual pattern of employees who absence from duty with mostly without good reason. Personal problems, family problems, organizational problems and some no valid motive which adapted from Harrison and Shaffer (1994), Bockerman and Ilmakunnas (2008), Lidwall, Marklund and Voss, (2010) and Morgan et al. (1976) has indicated the causes of workers not attend work. Workers feelings' disturbed and worried at work because from these problems. Another dimension was to measure are occupational stress. Measuring occupational stress, it's focus on work-related stress (perceived workload, role conflict, role ambiguity, and interpersonal conflict). Through the self-reporting psychological strain (anxiety, depression, job dissatisfaction, and frustration) was measured. Therefore, by combining several items from previous studies was the best way to measure occupational stress. The combination was used by Jex et al. (1992) in their study. Fourteen items adopted from Jex et al. (1992) to measure occupational stress.

TABLE 1. Questionnaire Structure for Measurement

| Section | Variables/Dimensions   | Num. Items | Cronbach Alpha | Sources  |      |
|---------|------------------------|------------|----------------|--|------|
| A       | OSH Performance        | 35         | .601           | Harrison and Shaffer (1994)<br>VandenHeuvel and Wooden (1995)<br>Bockerman and Ilmakunnas (2008)<br>Morgan and Herman (1976) |      |
|         | Absenteeism            | 1          |                |  |      |
|         |                        | 1          |                |  |      |
|         |                        | 1          |                |  |      |
|         | Occupational Accidents | 3          |                |  | .887 |
|         | Sickness               | 14         |                |  | .614 |
|         | Occupational Stress    | 14         | .928           | Jex et al. (1992)  |      |
| B       | Task Factors           | 18         | .736           | Mathias et al. (2006)  |      |
|         | Quantitative Demand    | 18         |                |  |      |
|         | Sensorial Demand       |            |                |  |      |
|         | Emotional Demand       |            |                |  |      |
| C       | Respondent Background  | 9          |                |  |      |

Furthermore, task factors were redefined as the demand placed on workers while doing their works. Task factor was categorized as quantitative demands, sensorial demands, and emotional demands according to Carayon and Smith (2000). Task factor will affect workers' performance and their health and safety. Copenhagen Psychosocial Questionnaire (COPSOQ) approach was adapted in this study. This approach was used by Matthias et al. (2006) to measure psychological stress at work. However, only three task demand (quantitative demand, sensorial demand, and emotional demand) were used in current study. Based on previous study these three demand is sufficient and suitable to measuring overall task demand.

## RESULT AND DISCUSSION

From 420 sets of questionnaires only 295 or 70 percent were usable for data analysis. Another 125 (30%) questionnaires were rejected due respondent not complete answering the questions. For example, researcher found most respondents failed to fill the items consistently and as required in this study, if respondent not filled more than five items, questionnaire will be rejected and not included in the final analysis.

Respondents below 20 years old (less 2%) were fewer in this study and the youngest respondent aged 17. Meanwhile, the oldest respondents aged 58 and range respondents aged 51 or older were about 6 percent. The mean of respondents aged was 35.34 years (SD = 8.93). The aged 31-40 years' (36.3%) respondents were majority, followed by the aged group 21 to 30 years' (35.6%). The respondents aged between 41 to 50 were about 20.7 percent. Male were majority respondents of this study with 87.5 percent (n = 258), compared to females at 12 percent (n = 37).

Married respondents were more than half with 68.1 percent, respondent with single status 29.8 percent, divorced were about 1.4 percent and widowed 0.7 percent. Malay is the majority by ethnic in this study with 93.9 percent, while Chinese less than 2% and Indian more than 2 percent. Meanwhile, 37.6 percent respondents had worked for five years or less in their company, 6 to 10 years 18.9 percent. Meanwhile, both of 11 to 15 years and 16 to 20 years were less than 16 percent. The result revealed 38 respondents (12.6%) had worked more than 20 years and the longest-serving period were 40 years. The length of service mean

was 10.91 years (SD=8.97). In terms of education level, 3.7 percent hold a bachelor or higher degree, 30.2 percent were graduated with a diploma or some technical or professional certification. Nevertheless, 2 percent were only educated to the primary school level and the majority of respondents were 62.4 percent, received a secondary school education. Lastly, result from questionnaires show only 34.9 percent had experienced an accidents and 65.1 percent remaining not. Slipping, stumbling, cutting of fingers and hand and legs being caught was cited more than 10 times in the types of accidents. These type of accidents still have effects on worker's performance although it seems like minor accidents.

After several processes of factor analysis and redevelop the hypothesis, only specific result was mentioned. First, reliability analysis from data of 295 respondents was conducted to measure consistency, accuracy and stability. Several items in measuring OSH performance were assessed with Cronbach's alpha coefficient with greater reliability index were closer to 1. For example, sickness with three items was represented as  $\alpha = .614$ ; absenteeism with three items was represented as  $\alpha = .600$ ; occupational accidents with two items was represented as  $\alpha = .887$ ; task factor - quantity demands and sensorial demand ( $\alpha = .736$ ) and occupational stress with 16 items was represented as  $\alpha = .928$ . But, low loading and cross loading value of emotional demand in this analysis, this items were excluded from the further analysis.

Table 2 shows the result of the relationship between task factors and OSH performance. Definitely, from Multiple Regression Analysis Results show quantity demand ( $\beta = .51, p = .00$ ) is positively significant towards occupational stress, but result for sensorial demands ( $\beta = -.02, p = .69$ ) we're not significant. Additionally, result from relationship between task factors and OSH performance indicated only quantity demands is significant positive relationship to sickness ( $\beta = .24, p = .00$ ). But sensorial demands ( $\beta = .02, p = .71$ ) not significant. Result on relationship of the occupational accident showed sensorial demands negatively significant ( $\beta = -.23, p = .00$ ) nevertheless quantity demands were positively significant ( $\beta = .18, p = .00$ ) toward occupational accident. From analysis also showed quantity demands ( $\beta = .19, p = .00$ ), were positively significant towards absenteeism. Besides that, variables sensorial demand was not significantly towards absenteeism ( $\beta = -.09, p = .12$ ).

TABLE 2. Multiple Regression Analysis Results for the Relationship between Task Factors and OSH Performance

|                    | Occupational Stress<br>( $\beta$ ) | OSHPeformance           |                                       |                         |
|--------------------|------------------------------------|-------------------------|---------------------------------------|-------------------------|
|                    |                                    | Sickness<br>( $\beta$ ) | Occupational Accidents<br>( $\beta$ ) | Absenteeism ( $\beta$ ) |
| <i>Taskfactors</i> |                                    |                         |                                       |                         |
| QuantityDemands    | .51**                              | .24**                   | .18**                                 | .19**                   |
| SensorialDemands   | -.02                               | .02                     | -.23**                                | -.09                    |
| $R^2$              | .33                                | .10                     | .12                                   | .06                     |
| $F$                | 2.83**                             | 4.59**                  | 5.66**                                | 2.82**                  |

Note:  $n = 295$ . \* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$

#### OCCUPATIONAL STRESS

Results has found that there is a significant positive relationship between task demand and OSH performance. Specifically, these showed that quantitative demand to be positively significant towards occupational stress. It is confirmed that increasing the number of tasks assigned to workers can result in increased stress, leading to poor health. This finding is consistent with past studies, which reported that an overload of work increases worker's stress (Ahsan et al. 2009; Salleh et al. 2008; Zafir et al. 2013).

On the other hand, sensorial demand has a significant relationship to occupational stress, yet, in the opposite direction. This shows that when work requires higher concentration and focus, the workers experienced less stress at work. Past studies have shown that when the work is challenging such as in this highly required concentration in work, work may be perceived to be pleasurable and non-monotonous. Moreover, monotonous work has been shown to lead to a stressful work (Ahsan et al. 2009; Jensen & MChintos 2007). In this work nature, workers may have accepted the nature of the work and perceived it as challenging and this created less stress experienced.

#### SICKNESS

The result regarding the amount of task attributed to worker's probability to sickness are found, which argued that the amount of work demands, relate to the amount of burden that would affect individual physically and mentally. This result is similar to the other studies, which reported that sickness among workers is elevated when the increase of task burden at work (Shaliza et al. 2009; Zafir 2009; Zafir et al. 2013).

This study also found that sensorial demand had insignificant effects on sickness. The concentration demanded by the work is not enough to develop into sickness among workers. Moreover, the concentrated area of work in the industry is observed to confine to those respondents who are working at the section of masking unit and design which offer more work burden related to sensorial aspects. Thus, too small an area and eventually respondents could be a reason of the result.

#### OCCUPATIONAL ACCIDENT

Studies found that quantity demand has a significant positive relationship to accidents at work. As stated in previous studies, workers with various tasks and need to complete within a short period time prone to involve accidents (Saad et al. 2012; Zakaria et al. 2012). Though, the results of the study stated that sensorial demand had an insignificant effect on occupational accidents at work. This result may be due to the less of participants among respondents from the section of masking unit and design. At this section requires workers to concentrate hard related to sensorial aspects especially while performing masking plate task. On the other hand, when the work is challenging such as in this highly required concentration in work, work may be perceived to be pleasurable and non-monotonous that eventually avoids workers to involve with hazard and accident. Working in the happy mood was found to reduce injuries, hazard, as well as accident (Hwajin, Sujin & Alice 2013; Selamat et al. 2013).

#### ABSENTEEISM

From the study show absenteeism were positively significant. Previous study shows consistently with this finding which reported worker's absenteeism



were led by task demand were cause tiredness, frustration, and a feeling of being overwhelmed (Quick & Nelson 2008). Furthermore, when accident occurred in the workplace, a worker is not able to attend work due to getting medical certificate. However, sensorial demand shows an insignificant

effect on absenteeism between workers. Only some respondents were involved with the task related to sensorial demand and required the sensitivity of the process while conducting their job, which eventually affect the final result of data analysis.

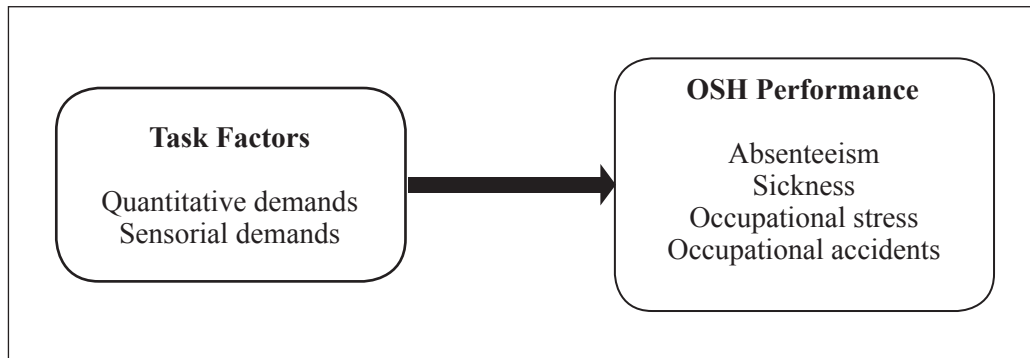


FIGURE 1. Research Framework

IMPLICATIONS AND RECOMMENDATIONS

This study showed that quantitative demand and occupational stress had a significant positive relationship. This suggests that the level of stress must be observed since the result of the study provides the amount of work allocated to the operators must be monitored to a certain work of demand. Meanwhile, sensorial demand and occupational stress has a significant positive relationship, that mean level of operator sensitivity must be monitored to control stress level of worker's. Therefore, in order improve worker performance, higher management (line leader and supervisor) must observing sensitivity that related to the task of workers. On the other hand, to prevent the worker troubling, human resource managers and executives should show a logical and analytical in work allocation and to lead their performance.

The research framework has proposed in this study confirm the theory on relationship between the variables. Empirical data and evidence on relationship between task factors and OSH performance were provided to convincing the findings. The findings on this study enhances the theoretical view, most on the issues of demand work factors and how it's reflect on worker's performance. The result also supports balance theory that proposed quantity demand are contributes to the occurrence of occupational stress and sickness among workers. This finding

supported by Smith and Carayon (2009) research, which a work factors are variables measured as an outcome of worker performance. This study extends the traditional theory through integrating new component to measuring safety in the balance theory. Occupational accidents have added to measuring worker outcome to widen the safety issue.

The findings of the data suggest opportunities for futureresearch. First, future research could be focusing the study to other sectors to broader generalizations. Furthermore, characteristic of ergonomics in printing company depend on nature of task and worker capabilities. Administrators and higher level of management might be interesting to investigate. The issue of OSH problems at work involving all workers in a company could be evaluated and proper solutions created.

Other suggestions, regarding the research design of the study, the data collectiontactic could be extended to include in-depth interviews with respondents. Measuring several factors, like absenteeism, accidents at work and the level of participatory ergonomics should be useful for further study. In addition, to clear reasons of absenteeism, future researchers would study on the sickness and having an unsuitable working environment. In addition, multiple sources of data will be gathered for analysis of the OSH problem to enhance understanding and knowledge of the study.

Therefore, to extend the sample of the study, several industries could be involved to enhance the research. This involvement is to measure more objectively and is valuable to research outcome and field. Besides that, worker's knowledge, attitude, and skill to perform work should be stressed with developing a behavioral intervention based on result of study in behavioral aspect.

Furthermore, the study's findings may offer clear understanding to enhance of workplace by ensuring good health practices, creating good relationships between supervisors and employees, introducing good shift work arrangements, reducing workloads and providing participatory ergonomics programs. More specifically, the interaction between these factors could provide input to the organization in order for it to come out with good work plans and work arrangements. For example, feedbacks from a variety of opinions and ideas of workers on the arrangement of office workstations could result for them in being more comfortable and less pressured. Meanwhile, the development of workers' committees in an organization could prove to be a good approach for getting workers involved in all of the organization's activities.

### CONCLUSION

This study hopes to convey an understanding of the practical implementation of OSH in the Malaysian organization. Priority should be given to enhancing the applications of OSH in the workplace, as this is still rare. This could help managers in organizing work processes and assist them in making good decisions on work-related issues.

As mentioned earlier, managers play a pivotal role in providing good environment for their subordinates while they carry out their work. To ensure employees' safety and health performance, OSH factors at work such as balancing working hours, altering work condition and environment, enforcing ergonomic aspects, implementing OSH training and safety culture are related on practicing Human Resource Management (HRM) need to changes (Rahmah 2000; Selamat 2016). Moreover, continuous intervention programs at the workplace can promote good health, reduce workers' stress and thereby improving quality of life. In this way, human resource practitioners are made to recognize how work designs influence employee performance and their well-being.

This in turn, will lead to increased investment in manufacturing, especially in the industries related to printing companies at the national and international level, thus also assisting to generate more Malaysia's national income.

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