

THE TOTAL DIRECT COST AND KNOWLEDGE, ATTITUDE AND
PRACTICES TO MUSCULOSKELETAL DISORDER

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PRACTICES TO MUSCULOSKELETAL DISORDER

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To my beloved mother and father

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ABSTRACT

The objectives of this study are 1) to determine the total direct costs incurred as a result of cases of chronic musculoskeletal injuries that was approved by the Social Security Organization of Malaysia SOCSO from 2009-2014. 2) To identify the total direct cost for the types of industry, causes of injury, types of injury and types of body part. 3) To assess the levels of Knowledge, Attitudes and Practices about MSDs among the employer. 4) To find the association of Knowledge, Attitude, Practices (KAP) with demographic profile and KAP variables. This study adopted top down approached from SOCSO database on permanent disability, paid cases and completed cases on the occupational disease for the period 2009 until 2014. The total direct cost on types of industries, types of injury, causes of accident and type of body parts is collected for the 416 claims. 270 questionnaires is distributed to the employer in order to know the KAP and 45 were responded. The data is analyses by using descriptive data and inferential statistic. Manufacturing industry, strenuous movement, sprain and strain and back are recorded as highest total direct cost with the cost of RM 5,181,282.34, RM 7,088,839.51, RM 8,753,975.13, and RM 5,526,590.69 respectively. The age group of 35-44 years old is recorded as the highest total average cost. The knowledge shows strong correlation with the experiences work in safety field and practices has the significant with level of education. While, only attitude shows the correlation with practices. MSDs cases are increasing hence thorough research is needed in order to understand the underlying of cost claims. For the KAP factors are crucial, therefore it is need to increase the number of the sample size. This study will provide the basis for future studies and intervention on MSD related injuries in working environment in Malaysia.

ABSTRAK

Objektif kajian ini adalah 1) untuk menentukan jumlah kos langsung yang ditanggung akibat daripada kes-kes kecederaan otot kronik yang telah diluluskan oleh Pertubuhan Keselamatan Sosial Malaysia (PERKESO) 2009-2014. 2) Mengenal pasti jumlah kos langsung bagi jenis-jenis industri, sebab-sebab kecederaan, jenis-jenis kecederaan dan jenis bahagian badan. 3) Untuk menilai tahap Pengetahuan, Sikap dan Amalan mengenai MSDs dalam kalangan majikan. 4) Untuk mengetahui hubungan Pengetahuan, Sikap, Amalan (KAP) dengan profil demografi dan pembolehubah KAP. Kajian ini menggunakan pendekatan data mining daripada PERKESO dan hanya tertumpu pada penyakit pekerja yang mengalami hilang upaya kekal, kes dibayar dan selesai bagi tempoh 2009 sehingga 2014. Jumlah kos langsung bagi 416 tuntutan kepada jenis industri, jenis-jenis kecederaan, punca kemalangan dan jenis bahagian-bahagian badan direkodkan. Sebanyak 270 soal selidik yang diedarkan kepada majikan untuk mengetahui KAP dan 45 telah bertindak balas. Data yang digunakan adalah menganalisis adalah menggunakan data deskriptif dan statistik inferensi. Jumlah kos langsung yang direkodkan bagi industri pembuatan, pergerakan berat, terseliuh dan ketegangan dan belakang adalah RM 5,181,282.34, RM 7,088,839.51, RM 8,753,975.13 dan RM 5,526,590.69. Kumpulan umur 35-44 tahun direkodkan sebagai jumlah kos purata tertinggi. Pengetahuan menunjukkan hubungan dengan pengalaman bekerja dalam bidang keselamatan pekerja. Amalan mempunyai signifikan dengan tahap pendidikan. Sementara itu, hanya sikap menunjukkan korelasi dengan amalan. Kes MSDS semakin meningkat saban hari, oleh itu, kajian mendalam diperlukan untuk memahami asas tuntutan kos. KAP faktor adalah penting. Oleh itu, adalah perlu untuk meningkatkan jumlah sampel saiz. Kajian ini akan menyediakan asas bagi kajian masa depan dan campur tangan kepada kecederaan yang berkaitan MSD dalam persekitaran kerja di Malaysia.

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CHAPTER 1

INTRODUCTION

Chapter one in this study is the initial part in conducting the project of research. Chapter 1 will guide on the direction of the flow of project within the scopes. This introduction will give an overview on the background of the problem regards to the cost and psychosocial risk factors to the musculoskeletal disorder. In this chapter also consist of the problem statement of the study, and the significant of conducting this research.

1.1 Background of the Problem

Malaysia is one of the growing industrialized countries and expected to have developed country status in the next decade, (Adinegara *et al.*, 2008). Industries are booming at a very high rate and therefore the hazard of occupational diseases are always considered as most significant problems for workers in the future, especially for developing countries like Malaysia (Abbas, 2015). Meanwhile for the developed countries such as Canada that already claims occupational diseases are a common health problem and is the major contributor to the disability and cost in working for population (Bhattacharya, 2014). Consequently, both developed and developing countries face the same problems and being apprehensive to all organizations nowadays.

A study conducted in the United States mentions that about 29%-35% of occupational diseases and injuries belong to Musculoskeletal Disorder (Dunning *et al.*, 2010). The others had reported a survey in United Kingdom Health and Safety Executive, which stated that musculoskeletal disorders were the most common disease and 37% of working days lost were from MSD (Widanarko *et al.*, 2011). In Malaysia, a total number of 553 claims were recorded related to MSD between years 2009 until 2014 which corresponds to 25.22% of the overall occupational diseases that lead to temporary and permanent disability (Jafri *et al.*, 2016). Besides, the number of occupational MSDs cases reported to the Social Security Organization (SOCISO) has increased tremendously, from 10 cases in the year 2005 to 675 cases in the year 2014.

MSD problems are generally caused by the work-related physical risks factors such as repetitiveness, work environment, and psychosocial factors (Bridger, 2003). This MSD will give labors experience of pain or discomfort in the muscles, nerves and tendons region including other soft tissue (Nurhayati *et al.*, 2014). Referring to the official Swedish statistics, the ergonomic factor such as monotonous or unusually strenuous movements or work posture were the cause of 58.5% of all work-related diseases with a rate of 35.7 cases per 10,000 workers. However, the percentage of claims will be vary depending on the scale of sectors.

MSD causes loss of workdays that affect the productivity of business and after that creates a negative economy on individual and community (Jafri *et al.*, 2016). MSDs cases have damaged about the US \$171.7 million of productivity losses in Columbia in 2005 (Piedrahita, 2006). The productivity can be related to the efficiency between the input and output of the workers but the problem arises when that number of output unit becomes less than input hours due to workers being away from work due to illness and absenteeism (Escorpizo, 2008). While the study in Korea shows that the economic cost of MSD was estimated to be \$6.89 billion, which represent 0.7% of the Korean gross domestic product in 2008 (In-Hwan *et al.*, 2011). The research on the global burden of disease and injury due to the occupational factor, were recorded 31% of all the occupational disease estimated in the word in the year 1994 (Leigh *et al.*, 1995).

Other than a physical risk factor that leads to the cost claims, MSDs may be caused by the psychosocial factors especially at workplace (Cromie *et al.*, 2000). Numbers of the risk factors could be occupational and non-occupational. Risk varies by age, gender, socioeconomic status, and ethnicity (Punnett and Wegman, 2004). MSDs risk factors can be generalized into three main categories; knowledge, attitude and practices, work-related factors and external factors (Keifer *et al.*, 2009).

1.2 Statement of the Problem

The increasing number of claims cost for musculoskeletal disorder becoming growing concern to the organization. The claims cost also being a burden to the whole world. Even though, there are regulation and the guideline sets by the authority organization, yet the number of claims is still at the high. For the period year of 2009 until 2014, the number of claim cost gradually increases year by year and drop at the year 2013 yet it rose at the year 2014 (Jafri *et al.*, 2016).

In Malaysia there are reporting a study on the compensation cost being compensated (Adinegara *et al.*, 2008). But less reporting in the total direct cost which includes the medical cost, rehabilitation cost and return to work cost. Besides, few of the researcher are focussing on the physical risk factor and less being conducted in psychosocial factors such as Knowledge, Attitude and Practices. Therefore, it needs to reveal the total direct cost claims and in other to know the consequences of the cost claims, KAP questionnaire is distributed.

1.3 Objectives of the Study

The objectives of the study are stated as below:

- (i) To identify the total direct cost for the types of industry, causes of injury, types of injury and types of the body part.
- (ii) To determine the age group for the highest total direct cost for the types of manufacturing, causes of injury, types of injury and types of the body part.
- (iii) To obtain relationship of Knowledge, Attitudes and Practices about MSDs among the employer.
- (iv) To find the association of KAP with a demographic profile and KAP variables.

1.4 Scope of the Study

In order to ensure this study will be carried out in the concise and meaningful manner there are several scopes and limitations that will be covered. The related scopes and limitations can be referred as below:

- (i) Focusing on the MSDs disorder reported by SOCSCO from 2009 until 2014 only.
- (ii) Covers only Malaysian workers.
- (iii) Only permanent disability cases and have been paid by SOCSCO are included in this study.
- (iv) Focus on the totals numbers states that contribute 80% from the overall of cases reported for claims for the year 2009 until 2014.

1.5 Significance of the Study

The study is important and significant from theoretical and practical viewpoint. The rationale and motivation for this study are:

- (i) Awareness on the prevention and implementation on safety workplace if there is showing cost that burden the company on figure value. This can give impact to the management to reduce the number of unproductivity rather than showing the frequency of workers claimed.
- (ii) This study addresses to the permanent disability on the cost claimed in Malaysia and aimed to the intervention of work musculoskeletal disorder in the manufacturing and non-manufacturing field. The number of claimed is increasing. This shows there is still lack on the policy enforcement either from the DOSH or the company itself.
- (iii) The Knowledge, Attitude and Practices among the employers will help the top management to seek the problem solving on the low score for the KAP assessment.

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