UNIVERSITI PUTRA MALAYSIA

KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS SAFETY CULTURE AND ITS ASSOCIATED FACTORS AMONG STAFF OF A PUBLIC UNIVERSITY, MALAYSIA

ODU JOSIAH OLUWASEUN

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By

ODU JOSIAH OLUWASEUN

Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Master of Science

March 2018

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DEDICATION

I dedicated it to Almighty God, all the great researchers in the world and to my late father Dr. L. B. Odu for his gentle hearted and for all his sacrifices, and memories to cherish forever.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS SAFETY CULTURE AND ITS ASSOCIATED FACTORS AMONG STAFF OF A PUBLIC UNIVERSITY, MALAYSIA

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March 2018

Chairman : Titi Rahmawati binti Hamedon
Faculty : Medicine and Health Sciences

Workers practicing good work safety culture (WSC) will have less accidents at their workplace. This principle applies in public institution such as in Universiti Putra Malaysia (UPM). Work safety culture is usually studied in the dangerous sectors, but published articles on work safety culture among staff of the university setting in Malaysia is scarce. The main objective of this study was to determine the proportion and predictors of knowledge, attitudes and practice (KAP) on work safety culture (WSC) among staff of Universiti Putra Malaysia (UPM). A cross-sectional study was conducted on 220 randomly selected employees who had been working for at least one year among the staff of Universiti Putra Malaysia. The self-administered questionnaire was used to collect information on socio-demographic, employment characteristics, as well as data on knowledge, attitudes and practice towards work safety culture. Data were analyzed by using the IBM Statistical Package of Social Sciences (SPSS) version 22. The results of the study showed that out of 184 respondents who answered the questionnaire 174 (94.6%) had good knowledge on safety culture, 128 (69.6%) had positive attitudes towards safety culture and 140 (76.1%) had good practice towards safety culture. Chi square test showed factors that were significantly associated with KAP of safety culture: employment status (p=0.031) with knowledge on safety culture, work duration (p=0.036), educational level (p=0.020) and marital status (p=0.051) with attitudes towards safety culture and gender (p=0.039), employment status (p=0.053) with practice towards safety culture. Binary logistic regression test showed the significant predictor factors to KAP of safety culture were employment status (OR=1.19, 95% CI:1.09-5.70) with knowledge on safety culture, work duration (OR=1.51, 95% CI: 1.25-6.07), educational level (OR=1.29, 95% CI: 1.19-5.82), marital status (OR=1.07, 95% CI: 1.02-5.38) with attitudes towards safety culture and gender (OR=1.92, 95% CI: 1.45-6.91) with practice towards safety culture. This study reports that good knowledge,

positive attitude and good practice of safety culture was prevalent among the staff of UPM but still lower compared to those found in other studies on safety culture, most especially the attitude of the staff towards work safety culture. Those come from higher education background, higher working experience and single are associated with lower odds of positive attitude towards safety culture and the male staff are as well associated with lower odds of good practice towards safety culture. Hence, in creating awareness on work safety culture in other to minimize work related injury and improve work safety performance, researches on safety culture among staff in the academic setting should be more alert, and to identify staff with higher education background, higher working experience and single as such staff are more likely to have lower positive attitude towards safety culture and male staff as well are more likely to have lower good practice towards safety culture at work.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PENGETAHUAN, KESELAMATAN DAN PRAKTIK DALAM KEBUDAYAAN KESELAMATAN DAN FAKTOR YANG BERKAITAN DENGAN STAF UNIVERSITI AWAM, MALAYSIA

Oleh

ODU JOSIAH OLUWASEUN

Mac 2018

Pengerusi : Titi Rahmawati binti Hamedon
Fakulti : Perubatan dan Sains Kesihatan

Pekerja yang mengamalkan budaya keselamatan kerja yang baik (WSC) akan mengalami kurang kemalangan di tempat kerja mereka. Prinsip ini diguna pakai di institusi awam seperti di Universiti Putra Malaysia (UPM). Kebudayaan keselamatan kerja biasanya dikaji di sektor berbahaya, tetapi artikel yang diterbitkan mengenai budaya keselamatan kerja di kalangan kakitangan universiti di Malaysia amat sukar. Objektif utama kajian ini adalah menentukan perkadaran dan peramal pengetahuan, sikap dan amalan (KAP) dalam budaya keselamatan kerja (WSC) dikalangan kakitangan Universiti Putra Malaysia (UPM). Kajian rentas keratan telah dijalankan ke atas 220 pekerja yang dipilih secara rawak yang telah bekerja selama kurangnya satu tahun dikalangan kakitangan Universiti Putra Malaysia. Soal selidik yang dilakukan ini akan digunakan untuk mengumpul maklumat tentang sosio-demografi, ciri-ciri pekerjaan, serta data mengenai pengetahuan, sikap dan amalan terhadap budaya keselamatan kerja. Berdasarkan data dianalisis dengan menggunakan PPSS versi 22, hasil kajian menunjukkan bahawa daripada 184 responden yang menjawab soal selidik 174 (94.6%) mempunyai pengetahuan yang baik mengenai budaya keselamatan, 128 (69.6%) mempunyai sikap positif terhadap budaya keselamatan dan 140 (76.1%) mempunyai amalan yang baik terhadap budaya keselamatan. Ujian Chi square menunjukkan faktor yang dikaitkan dengan KAP budaya keselamatan: status pekerjaan (p = 0.031) dengan pengetahuan tentang budaya keselamatan, tempoh kerja (p = 0.036), tahap pendidikan (p = 0.020) dan status perkahwinan (p =) dengan sikap terhadap budaya keselamatan dan jantina (p = 0.039), status pekerjaan (p = 0.053) dengan amalan ke arah budaya keselamatan. Ujian regresi logistik berganda menunjukkan faktor peramal yang signifikan terhadap budaya keselamatan KAP ialah status pekerjaan (OR = 1.19, 95% CI: 1.09-5.70) dengan pengetahuan mengenai budaya keselamatan, tempoh kerja (OR = 1.51, 95% CI: 1.25-6.07), tahap pendidikan (OR = 1.29, 95% CI: 1.19-5.82), status perkahwinan

(OR = 1.07, 95% CI: 1.02-5.38) dengan sikap terhadap budaya keselamatan dan jantina (OR = 1.92, 95% CI: -6.91) dengan amalan ke arah budaya keselamatan. Kajian ini melaporkan bahawa pengetahuan yang baik, sikap positif dan amalan budaya keselamatan yang baik telah berleluasa dikalangan staf UPM tetapi masih rendah berbanding dengan yang terdapat dalam kajian lain mengenai budaya keselamatan, terutamanya sikap kakitangan terhadap budaya keselamatan kerja. Mereka datang dari latar belakang pendidikan tinggi, pengalaman kerja yang lebih tinggi dan dikaitkan dengan sikap positif terhadap budaya keselamatan. Manakala kakitangan lelaki juga dikaitkan dengan kemungkinan yang lebih rendah dari kebiasaan yang baik terhadap budaya keselamatan. Oleh itu, dalam mewujudkan kesedaran mengenai budaya keselamatan kerja untuk mengurangkan kecederaan dalam kerja dan meningkatkan prestasi keselamatan kerja, penyelidikan mengenai budaya keselamatan dikalangan kakitangan dalam bidang akademik harus lebih berhati-hati, dan mengenal pasti kakitangan dengan latar belakang pendidikan tinggi, pengalaman kerja yang lebih tinggi, maka kakitangan tersebut lebih cenderung mempunyai sikap positif yang lebih rendah terhadap budaya keselamatan dan kakitangan lelaki serta lebih cenderung untuk mempunyai amalan yang lebih rendah terhadap budaya keselamatan di tempat kerja.

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At first, I would like to express my gratitude to the Almighty for His great blessings and for giving me the opportunity, self-control and strength to complete my study. Next, my gratitude goes to the chairman of my Supervisory committee, Dr. Titi Rahmawati binti Hamedon, for her massive assistance, guidance, support and positive criticism from the start of this research to the end. Without her assistance and support, I would not have been able to finish my study. Apart from being a superb supervisor, she is a woman of principle, with significant knowledge and awareness of research in her field of specialization. My profound gratitude and appreciation as well goes to my co-supervisor, Assoc. Prof. Dr. Juliana binti Jalaludin, for her suggestions and many valuable contributions and her constructive notes and comments which were helpful and motivating to me.

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I certify that a Thesis Examination Committee has met on 8 March 2018 to conduct the final examination of Odu Josiah Oluwaseun on his thesis entitled "Knowledge, Attitude and Practices Towards Safety Culture and its Associated Factors among Staff of a Public University, Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

Members of the Thesis Examination Committee were as follows:

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This thesis was submitted to the senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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Declaration by graduate student

I hereby confirm that:

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Name and Matric No.: Odu Josiah Oluwaseun, GS43166

Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- Supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) were adhered to.

Signature: _____
Name of Chairman of Supervisory Committee: _____

Signature: _____
Name of Member of Supervisory Committee: _____

Signature: _____
Name of Member of Supervisory Committee: _____

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LIST OF ABBREVATIONS

KAP	Knowledge, Attitude and Practice
WSC	Work Safety Culture
BLS	Bureau of Labor Statistics
FMHS	Faculty of Medicine and Health Sciences
FA	Faculty of Agriculture
UPM	Universiti Putra Malaysia
DOSH	Department of Occupational Safety and Health
DV	Dependent Variable
Et. al,	And others
HSC	Health and Safety Commission
HSE	Health and Safety Executive
ILO	International Labor Organization
IV	Independent Variable
JKEUPM	Ethics Committee for Research Involving Human Subject of Universiti Putra Malaysia
OSHA	Occupational Safety and Health Administration
N	Sample size
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OHSMS	Occupational Health and Safety Management System
RM	Ringgit Malaysia
Sd	Standard deviation
SOCSO	Social Security Organization
SPSS	Statistical Package for Social Science
UPM FMHS	Universiti Putra Malaysia, Faculty of Medicine and Health Sciences
X^2	Chi-Square Test
WRI	Work related injury

CHAPTER 1

INTRODUCTION

1.1 Background of Study

1.1.1 Safety Culture

It is important for employees to remain healthy and to work in a safe environment while working because their general work safety performance can be affected by exposure to various hazards which could lead to accidents at work. Ill health is likely to be accompanied by many psychosocial problems such as depression, personal suffering, economic loss, and loss of self-confidence and self-esteem due to poor safety culture at work (García-Serrano et al, 2010; Brun et al., 2007 & Nieuwenhuijsen et al., 2014).

Safety culture is defined as "the product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's management of safety (Health and Safety Commission, 1993). Safety culture is also defined as the attitude, beliefs, perceptions and values that employees share in relation to safety in the workplace (Cox, & Cox, 1991). Safety culture is a part of organizational culture, and has been described by the phrase "the way we do things around here (Zohar, 2010)".

The present stage we are considers safety culture as an influential factor, which has a serious influence on the prevalence of work related injury and work safety performance. Study done by (Sun, 2008) on safety culture, explained the concept of safety culture summarized the safety perceptions which employees share about their work environments and act as a frame of reference for guiding appropriate and adaptive safety behavior. In its simplest form, he explained that culture is the way things are done in the organization in relating to safety (Sun, 2008).

Study done by Everon found that workplace related disasters (accident and injury) are a result of a breakdown in an organization's policies and procedures that were established to deal with safety, and that the breakdown flows from inadequate attention being paid to safety culture to make the work place safe for everyone, for example since the disastrous nuclear accident at the Three Mile Island (USA) in 1979 and Chernobyl (Ukraine) in 1986, public attention became focused on safety culture and the term safety culture has been put into serious consideration in order to minimize the rate at which everyone is exposed to accident or injury at work because the accident investigation in Chernobyl revealed many irregularities in the organizational safety culture (Everon, 2010).

Based on some of the definitions of safety culture stated above, researchers comes to a conclusion that safety culture is an important concept needed by every organization to create awareness about safety in the work place in order to minimize the level of exposure of the employees and everyone to injury and accident at work and also a more favorable safety culture is associated with improved safety performance (Oh & Sol, 2008, Smith & Wadsworth, 2008)

Although safety culture is more important in high risk working environments such as the petrochemical industries (Kao et al, 2008), nuclear power stations (Lee & Harrison, 2000) and aviation industries (Gill & Shergill, 2004) its role in the academic and medical setting is also very essential (Jones, Mayar, & Mandelkehr, 2009; Nieva & Sorra, 2003). Education setting is committed to keeping up a safe and healthy environment, where contact with chemical, biological, and physical and psychosocial health risks/hazards is preserved to minimum level and that objective can only be achieved through a good knowledge, attitude and practice of safety culture, it will eventually increase the level at which the staff of the university can be able to identify hazards and which will invariably reduce the work related injury/accidents at work. Recent study of major 15 major petrochemical accidents between the year 1980 to 2010 showed that poor safety culture contributed to 12 of the 15 accidents. (Fleming & Scott, 2012, Oh & Sol, 2008).

1.2 Prevalence of work related injury (WRI) in relation with work safety culture (WSC)

The prevalence for WRI among university staff or office staff is very scarce and from this study and from the previous study done on safety culture, research showed that having a good safety culture is one of the important factors to ensure that WRI can be reduced among employee in any organization (Oh & Sol, 2008 & Ek, & Akselsson, 2006 & Kohn, Corrigan, & Donaldson, 2000).

Shalaw (2016) found that the prevalence of WRI in the Faculty of Medicine and Health Science was quite high with prevalence of 5.4% with WRI. This prevalence is very high compared with the results of study done in Europe (Suárez-Cebador, Rubio-Romero, Carrillo-Castrillo, & López-Arquillos, 2015). A study by Suarez et al, 2012 on WRI among university staff, reported that in Spain, out of 4761 university employees, only 0.40% had WRI, 16,591 (0.66%) in Germany and 18,339 (0.61%) in the United Kingdom (UK) (Suárez-Cebador, Rubio-Romero, Carrillo-Castrillo & López-Arquillos, 2015)). In addition, in another study which was carried out in the UK (Venables, & Allender, 2006) found that only 2.5% out of 389 university staffs had WRI (Venables, & Allender, 2006). As comparison, the study concluded that the proportion of WRI that occurred among the respondents very much higher compared to those in other countries; 13.5, 8.2, and 8.9 times higher than the proportion of WRI that occurred among university employees in Spain, Germany and the UK respectively (Suárez-Cebador, Rubio-Romero, Carrillo-Castrillo, & López-Arquillos, 2015).

However, study from Fleming & Scott, 2012 showed that poor safety culture at work is one of the major factor that cause work related injury/accidents in any organization and this is now recognized as a significant issue all over the world presently and having a good safety culture is one of the important factors to ensure that work related injury (WRI) can be reduced at work. This is because reduce work related injury at work has been linked to developing a strong work safety culture in any organization (Oh & Sol, 2008, Kohn, Corrigan, & Donaldson, 2000).

The International Labor Organization (ILO, 2013) stated that about three hundred and twenty one thousand workers are fatally injured at work every year due to work-related incidents/injury at work. The finding also showed that, one hundred and seventy two workers were fatally injured in the United Kingdom in the period of two years, in the year 2011 and 2012 respectively, which is equivalent to a rate of 60% fatalities per hundred thousand workers (Health and Safety Commission, 2013). In addition, the finding also revealed two hundred and thirty three thousand injuries occurred, a rate of 84% per hundred thousand workers. In the United States, the Occupational Safety and Health Administration (OSHA, 2013) findings revealed that 4,609 workers died at work, when working in the year 2011, and approximately 3 million workers eventually suffered a non-fatal injury/accidents. Most of these accidents and injuries at work is due to poor safety culture (Hui, N.A.Y, 2014).

In Australia, a total of 640,700 workers suffer a work-related injury/accidents in every year (Australian Bureau of Statistics, 2010). In addition to that statistics, 374 workers were fatally injured in a year, from July 2010 to June 2011, as a result of work-related activities in Australia (Safe Work Australia, 2013). The negative impact of this work related injuries and accidents is very high on the economy in Australia because the economic cost is very high and costly. It was estimated to be approximately $60.63 billion loss in every year representing 4.8 per cent of gross domestic product GDP (Safe Work Australia, 2013). The negative impact of this work related injuries at work in Australia is not fully or adequately represented by the economic costs. In addition, business reputation is severely affected, as well as the effect on an individual's work-mates, family and community who are also affected negatively.

Although this study focus on safety culture in the education sectors but data on other sectors were also used in this study due to inadequate data from the education sectors, for example in the construction industries most recent data in the world showed that in the construction industries at least sixty thousand fatal incidents/injury occur in every year at construction sites worldwide, equivalent to one death every ten minutes due to poor safety culture at work (ILO, 2013). In addition, it is estimated that one out of every six fatal accident/injury that occurred at work took place at a construction site when working, and this rate is very much increased in countries that have many industries, where construction site accident/injury account for 25% to 40% of all accidents/injury that occurred at work.

Statistics in the UK revealed that the highest rate of accidents/injury in two years, that is in the year 2011 and 2012 occurred in the construction and agriculture industries, the findings also revealed that in the previous years, 42 workers died at work when working in the construction industry (Health and Safety Commission, 2013). Also statistics in the US revealed that, in 2011 the construction and mining and agricultural industry, 798 workers died at work, which eventually make it the most dangerous industry after the transportation industry. Additionally, two hundred and forty four non-fatal incidents/injury, in the construction and agricultural industry among the workers in the US in the year 2008 (Bureau of Labor Statistics, 2013).

Study from Kohn, Corrigan, & Donaldson showed that work related injury can be reduced because there is a linked between a strong work safety culture (WSC) and work related injury (WRI) in every organization and any organization practicing a good safety culture, the rate of work related accident/injury will reduced in such organization and eventually resulted into improved safety performance in such an organization (Kohn, Corrigan, & Donaldson, 2000, Smith & Wadsworth, 2008).

1.3 Problem Statement

Research showed that having a good safety culture is one of the important factors to ensure that work related injury/accidents can be reduced among employee in any organization and safety culture was associated with safety performance at work among employees. It was a positive association, showing that a more favourable safety culture was associated with improved safety performance. (Oh & Sol, 2008, Smith & Wadsworth, 2008 & Kohn, Corrigan, & Donaldson, 2000).

Statistics of occupational accidents in Malaysia revealed a continuous reduction from the 2000 to 2008. However, the statistics remained static since 2009. 37% and 22% of all fatal injuries investigated by the Department of Occupational Safety and Health (DOSH) were from Construction industry and manufacturing industry. Hearing and back diseases accounted for 34% of the occupational diseases. Occupational diseases caused by chemical agents was 4% of all cases. In the year of 2011, the number of investigated accidents involving loss of life is about 7% or 176 cases out of 2,429 cases. The high occupational accidents stated above is probably due to lack of safety culture and non-compliance of the requirements of Occupational Safety and Health Act (OSHA) 1994. Shalaw (2016) found high prevalence of work related injury among the staff at the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, where 5.4% of the respondents sustained work related injury, this prevalence is very high compare to the study done in Europe (0.4% in Spain & 0.66% in Germany) and in UK (0.61% in London). The aim of this study is to determine the level of knowledge, attitude and practices of work safety culture among the staff of Universiti Putra Malaysia. Malaysia aimed to reduce work related accidents by 20% by 2015 and in order to achieve this goal, the government should continue to focus on vulnerable employee groups. This aspect helps in better analyzing accidents in workplace and in identifying areas prevention efforts should be directed to prevent occurrence of accidents (OSHA, 1994).

International Labor Organization (ILO, 2013) found that in every year, approximately five million people suffer from work-related accidents at work, these accidents has a substantial financial impact on occupants, as 150 million days are lost from work and the insurance costs to be borne by industry tally up to 20 billion Euro (ILO, 2013). Statistics in Australia revealed that 640,700 workers suffer a work-related accidents/injury at work when working in every years (Australian Bureau of Statistics, 2010). Based on the estimation of work related accidents/injury that occurred at work from the incidence rate discussed above, it simply means more research still need to be done in other for both employee and employer to have better knowledge about safety culture because having a good safety culture in any organization is one of the important factor need to ensure work related injury can be reduced at work (Oh & Sol, 2008, Smith & Wadsworth, 2008). Safety culture is also very much needed in the academic setting, most especially among the university staff due to the facts that there are huge numbers of institutes, colleges and universities around the world as well as there have been an increasing number of universities, colleges and institutes set up in Malaysia to sustenance the role of tertiary education (Yen et al, 2015). This sector is still growing and both staff and students are exposed to various risks and hazards in this seemingly safe setting. Education setting is committed to keeping up a safe and healthy environment, where contact with chemical, biological, and physical health work related injury/accident is preserved to minimum level and that objective can only be achieved through a good knowledge, attitude and practice of safety culture (Shalaw, et al, 2016 & Rosliza et at, 2015).

Despite the previous studies done on KAP of safety culture in Malaysia, to the best of our knowledge, are still lack of studies that have been published with regard to the determinants of KAP on safety culture among University staff in Malaysia, the literature for KAP of safety culture among staff of the university setting in Malaysia is scarce. Therefore, it is essential to determine the factors that affect KAP of safety culture among Malaysian university staff. It is important to consider how, socio-demographic, and occupational factors are related to KAP of safety culture among the academic, administrative and support staff of university.

This research will help to make a significant and substantial contribution to explore the knowledge, attitude and practice of safety culture among the staff of Universiti Putra Malaysia.

1.4 Significance of Study

Thorough searching of the literature from Bielefeld academic search engine, Cog prints, AGRIS , and arXiv and CHBD (Circumpolar Health Bibliographic Database) using the following keywords, safety culture, knowledge, attitude and practice of safety culture, associated factors, work related injury, Malaysia and Universiti Putra Malaysia, shows that there are limited publications on safety culture in the academic setting or education sector, so by considering the important of this study and the limited publication on safety culture in the academic setting, this study aims to

explore the knowledge, attitude and practice of safety culture among Universiti Putra Malaysia staff, which will eventually add to the limited publication on safety culture in the academic setting.

It is hoped that through this study, the factors associated with work safety culture among university staff can be recognized. Hence it can raise the awareness among the university staff worker. It is important for them to have a good knowledge, positive attitude and good practice towards safety culture at work, which will eventually minimized or reduced work related injury and improved safety performance at work among the employees.

1.5 Objective of Study

1.5.1 General objective

The overall objective of this study is to determine the knowledge, attitude and practices of work safety culture and its associated factors among Faculty of Medicine and Health Sciences and Faculty of Agriculture staff of the Universiti Putra Malaysia.

1.5.2 Specific objectives

1. To describe the socio-demographic and employment characteristics of the respondents.
2. To describe the knowledge score, attitude score and practices score on safety culture among the respondents.
3. To determine the association between knowledge, attitude and practices (KAP) on safety culture and the socio-demographics variables (gender, age, ethnicity, marital status, level of education, monthly income)
4. To determine the association between knowledge, attitude and practices (KAP) on safety culture and the employments characteristics (job title, employment status, department and length of service) among the respondents.
5. To determine the predictors of KAP on WSC among the respondents.

1.6 Null Hypothesis

1: There is no association between the knowledge, attitude and practices (KAP) on safety culture and the socio-demographic factors (gender, age, ethnicity, marital status, level of education, monthly income) among the respondents.
2: There is no association between the knowledge, attitude and practices (KAP) on safety culture and the employment characteristics (job title, department, employment status and length of service) among the respondents.
3: There is no association in the predictors of KAP on WSC among the respondents.

1.7 Conceptual Framework

Conceptual framework shows the visual representative of how the independent variables showed association with the dependent variable in the figure 1

1.7.1 Dependent variables consist of knowledge, attitude and practice of work safety culture among the staff at FMHS and FA Universiti Putra Malaysia

1.7.2 Independent variables are divided into two categories which are:
a) Socio-demographic factors (age, ethnicity, educational level, marital status and monthly income
b) Occupational characteristics (job title, department, employment status and work duration.

1.7.3 Confounding factors (Formal training and Job security perception and Experience). These confounding factors also have the ability to influence the KAP of work safety culture but they are not part of this study.

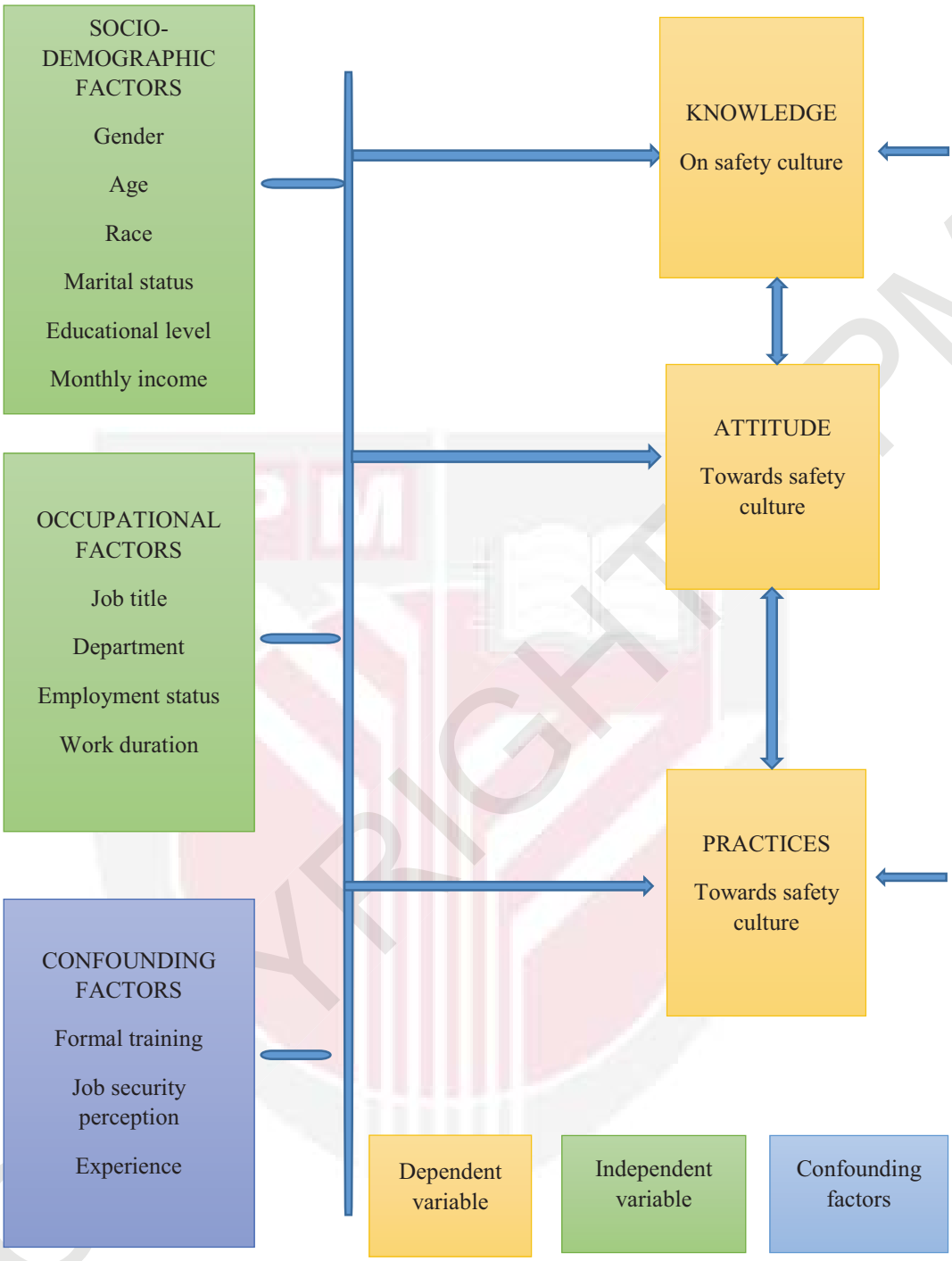

Figure 1: Conceptual Frame Work of KAP on WSC

1.8 Conceptual and operational definition of work safety culture (WSC)

1.8.1 Conceptual definition of WSC

Safety culture is defined as "the product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's management to safety (Health and Safety Commission, 2013, Cox, & Cox, 1991, & Sun, 2008).

1.8.2 Operational definition of WSC

A pre-tested safety attitude and self-administered questionnaire in both English and Malay language was used to collect information on socio-demographic characteristics, employments characteristics and information on knowledge, attitude and practice of safety culture among FMHS and FA staff adapted from previous studies (Ahmed, 2013; Wu, Liu, & Lu, 2007). The respondents is considered to have poor knowledge of work safety culture if the knowledge level is <230.00 of the mean distribution, negative attitude of work safety culture if the attitude level is <80.00 of the mean distribution and poor practices of work safety culture if the practice level is <83 of the mean distribution.

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