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**AWARENESS ON WORK STRESS AMONG PUBLIC EXPRESS
BUS DRIVERS AT TERMINAL BUS MELAKA SENTRAL**

FUNG CHEW HWANG

**SCHOOL OF HEALTH SCIENCES
UNIVERSITI SAINS MALAYSIA**

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**AWARENESS ON WORK STRESS AMONG PUBLIC EXPRESS
BUS DRIVERS AT TERMINAL BUS MELAKA SENTRAL**

by

FUNG CHEW HWANG

**Dissertation submitted in partial fulfillment of the
requirements of the degree of Bachelor of Health Sciences
(Environmental and Occupational Health)**

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LIST OF ABBREVIATIONS

BLS	Bureau Labour Statistic
CDC	Centers for Disease Control and Prevention
COP	Code of Practice
HSE	Health Safety Executive
KAP	Knowledge, Attitude and Practice
NIOSH	National Institute of Occupational Safety and Health
OSH	Occupational Safety and Health
PTSD	Post Traumatic Stress Disorder
SD	Standard Deviation
SPAD	Suruhanjaya Pengangkutan Awam Darat
SPSS	Statistical Package Social Science
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
<i>f</i>	Frequency
<i>n</i>	number

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CERTIFICATE

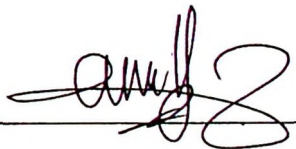
This is to certify that the dissertation entitled '**Awareness on Work Stress Among Public Express Bus Drivers at Terminal Bus Melaka Sentral**' is the bonafide record of research work done by Fung Chew Hwang 102660 during the period of October 2011 to May 2012 under my supervision. This dissertation submitted in partial fulfillment for the degree of Bachelor of Health Sciences (Occupational and Environmental Health). Research work and collection of data belong to Universiti Sains Malaysia.

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ABSTRAK

Pemandu bas adalah satu daripada kumpulan pekerjaan yang melaporkan tahap tekanan kerja yang tinggi serta tidak seimbang. Tujuan kajian ini adalah untuk mengkaji tahap kesedaran tentang tekanan kerja dalam kalangan pemandu bas ekspres awam di Melaka dan menentukan hubungan antara umur, tahap pendidikan dan pengalaman bekerja dengan tahap kesedaran tentang tekanan kerja. Satu kajian diskriptif telah dijalankan terhadap 80 orang pemandu bas ekspres di terminal bas Melaka Sentral dengan menggunakan soal selidik. Data dianalisis dengan menggunakan *Statistical Package Social Science* (SPSS) versi 19.0. Majoriti responden mempunyai tahap pengetahuan yang tinggi berkenaan tekanan kerja 48 (60%) diikuti oleh tahap yang sederhana iaitu sebanyak 32.5% dan hanya enam (7.5%) responden sahaja mempunyai pengetahuan yang terhad mengenai tekanan kerja. Majoriti responden mempunyai sikap yang positif terhadap tekanan kerja iaitu mencecah 95% (76 orang pemandu bas). Hanya 5% daripada pemandu bas mempunyai amalan yang baik ke atas tekanan kerja. Selebihnya, 40% responden tergolong dalam kumpulan amalan sederhana diikuti dengan responden yang mempunyai amalan yang buruk iaitu sebanyak 55%. Terdapat hubungan statistik yang signifikan antara kesedaran tentang tekanan kerja dan tahap pendidikan ($p=0.000$). Terdapat juga hubungan yang signifikan antara kesedaran tentang tekanan kerja dengan pengalaman kerja ($p=0.012$). Walau bagaimanapun, tiada hubungan statistik yang signifikan antaran kesedaran tentang tekanan kerja dengan umur ($p=0.515$). Kesimpulannya, tahap kesedaran tentang tekanan kerja dalam kalangan pemandu bas ekspres di Melaka adalah tinggi kerana tahap pengetahuan yang tinggi tentang tekanan kerja serta amalan yang baik terhadap tekanan kerja.

ABSTRACT

Bus drivers are one of several occupational groups who have reported disproportionately high levels of occupational stress. The aims of the research were to study the level of awareness on work stress among public express bus drivers in Melaka and to find the relation between age, education and working experience with awareness level on work stress. A descriptive study on 80 express bus drivers at terminal bus Melaka Sentral was done using a questionnaire. Data was analyzed using the Statistical Package Social Science (SPSS) version 19.0. Majority of the respondents had high level of knowledge on work stress which is 48 (60%) followed by moderate level (32.5%) and only six (7.5%) of the respondents had limited knowledge. Majority of the respondents had positive attitude towards work stress which is 76 (95%). Only 5% of the bus drivers had good practice on work stress. The rest of the respondents (40%) fall in the group of average, followed by the most respondents had bad practice on work stress which is 55%. There is statistically significant relationship between awareness on work stress and education level ($p=0.000$). There is a significant relationship between awareness on work stress and working experience ($p=0.012$) too. However, there is no significant between awareness on work stress and age group ($p=0.515$). In conclusion, the level of awareness on work stress among the express bus drivers in Melaka was high due to their high knowledge level and good practice level on work stress.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Raising awareness at an early stage seems all the more important because work-related stress is also a problem which is far from being resolved in developed and industrialized countries. Health and Safety Executive (HSE) (2000) suggested that 20 percent of workers feel 'very' or 'extremely' stressed at work, with percentages rising to 40 percent in some occupational groups.

By understanding the levels of knowledge, attitude and practice will enable a more efficient process of awareness creation as it will allow the program to be tailored more appropriately to the needs of the community (Kaliyaperuma, 2004).

Figure 1.1 shows the magnitude and trend of anxiety, stress, and neurotic disorder cases reported by Bureau Labor Statistic (BLS) which involving days away from work in year 1992 until 2001 (CDC, 2004).

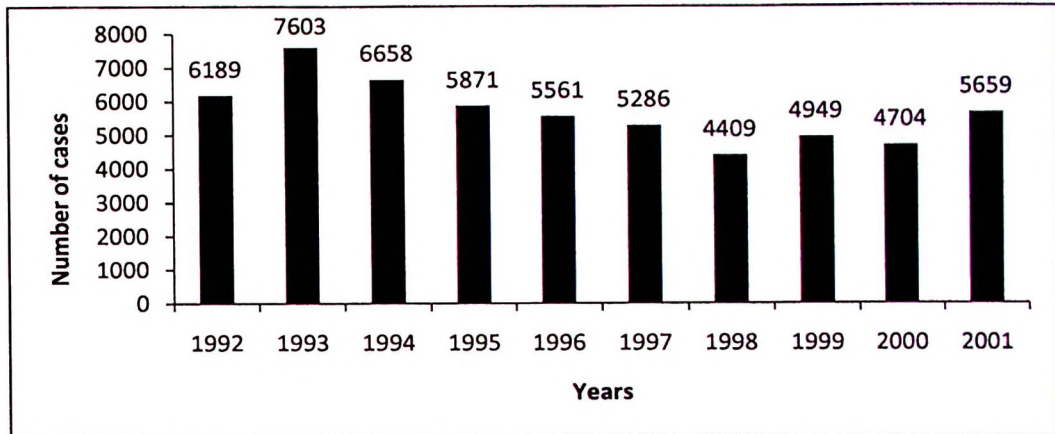


Figure 1.1: Number of anxiety, stress and neurotic disorder cases involving days away from work in private industry
(Source : BLS, 2003 ^{a,b})

Acknowledging that bus is one of the most popular modes of public transport worldwide, and, that the strong likelihood of this transport enduring for the foreseeable future, there is clearly a need to actively address the psychosocial environment of the bus drivers (Dhar, 2009). Bus driving is an occupation characterised by both high and conflicting demands (Carrere *et al.*, 1991; Meijman and Kompier, 1998). For example, the demand for professional and courteous customer service often conflicts with the need to keep to tight time schedules and safely operate of the bus (Meijman and Kompier, 1998) will lead to work stress to the bus drivers.

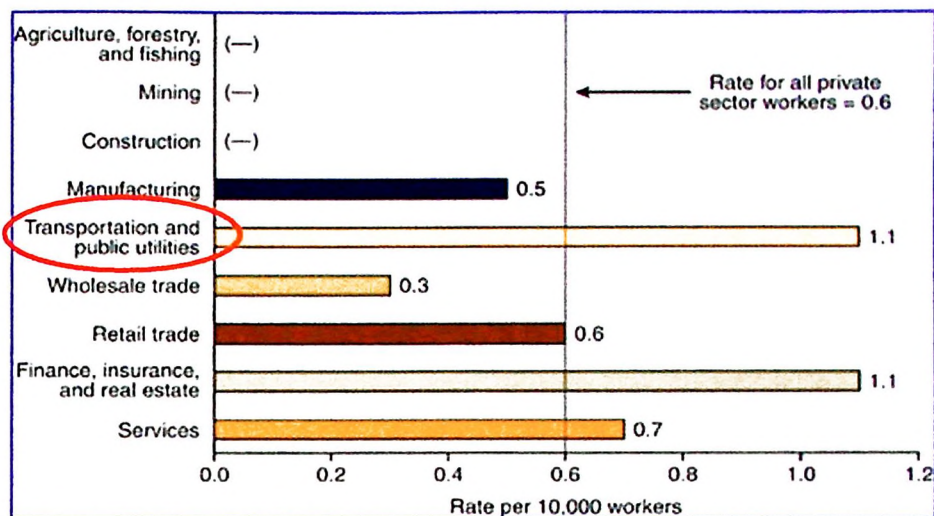
1.2 Problem Statement

Work stress is a major occupational health problem in transportation sector. Bus drivers are one of several occupational groups who report disproportionately high levels of occupational stress. Therefore, the work of professional bus drivers is considered as extremely stressful. Studies also have shown that occupational stress is a significant

problem among long distance's bus drivers highlighted high strain work (high demand and low control). It is an environment over which they have no control and is an atmosphere that wrecks their schedules, disrupts their home life, less time for social activities and irregular breaks (Dhar, 2009).

The research has demonstrated a greater understanding that specific stressors result in certain physical problems such as cardiovascular disease, gastrointestinal disorders, musculoskeletal problems and fatigue, while psychological problems like depression, anxiety and post-traumatic stress disorder as well as behavioural outcomes like substance abuse. Bus driver ill health will have consequences for organisational performance in terms of employee absence, labour turnover and accidents whereas stressors for bus drivers include poor cabin ergonomics, rotating shift patterns, traffic, violence from passengers and inflexible running times (Tse *et al.*, 2006).

Figure 1.2 shows incidence rate of anxiety, stress, and neurotic disorder cases by private industry sector in 2001. As seen in this figure, higher rates of these disorders were reported for transportation and public utilities, finance, insurance, real estate, and services.



* Note: A dash in parentheses indicates that no data were reported or that data do not meet BLS publication criteria

Figure 1.2: Incidence Rates of Anxiety, Stress and Neurotic Disorders
(Adapted from BLS, 2003^a)

In addition, the situation is made worse by the lack of occupational health services coverage. World Health Organization (WHO) estimated that only five to ten percent of the workers in developing countries and 20-50 percent of the workers in industrialized countries (with a few exceptions) have access to adequate occupational health services (Cassitto *et al.*, 2003).

1.3 Objectives of the Study

The general objective is to study the level of awareness on work stress among public express bus drivers in Melaka.

1.3.1 Specific Objectives

1. To determine the knowledge level on work stress among bus drivers.
2. To determine the driving attitude/behaviour level due to work stress among bus drivers.
3. To determine the practice level on awareness of work stress among bus drivers.
4. To find the relation between age, education and working experience with awareness level on work stress.

1.4 Hypothesis

H_0 = There is no relation between age, education and working experience with awareness level on work stress.

H_A = There is a relation between age, education and working experience with awareness level on work stress.

At the 5% level of significant, the H_0 is rejected if $p < 0.05$.

1.5 Significance of Study

Public transportation in Melaka highly depends on bus services because the public transportation is not that advanced as Kuala Lumpur which has rail transport, including Rapid KL rail, KTM commuter and KL monorail. Therefore, the workload of bus drivers in Malacca are heavy and they are prone to get work stress.

Furthermore, Tse *et al.* (2006) recently reviewed 50 years of research into bus driver health and well-being. It is clear from their study that there are serious negative health outcomes experienced by bus drivers, including physical illnesses such as increased risk of cardiovascular disease, gastrointestinal disorders, and musculoskeletal problems, reduced psychological well-being such as greater depression, anxiety, and symptoms of post-traumatic stress disorder (PTSD) and behavioural problems, such as substance abuse.

Besides, in a study of Australian coach drivers, Raggatt (1991) found that long driving hours and passenger complaints predicted maladaptive coping behaviours such as speeding and stimulant use. Hence, the implication of this study is to increase the awareness on work stress in bus drivers so that they can clearly acknowledge and understood the symptom and effect of work stress and take appropriate action to cope with it. It is because it will influence their job productivity and performance, especially the safety of bus passengers.

In addition, this study will help to provide the employers to be more concern on work stress among bus drivers in the formation of working schedule, implementing rules and regulations and others intervention efforts.

CHAPTER 2

LITERATURE REVIEW

2.1 Definition of Terms

2.1.1 Awareness

According to Macmillan English Dictionary (2007), awareness can be defined as knowledge or the understanding of a subject, issue, or situation.

2.1.2 Work Stress

The World Health Organization defines work-related stress as a pattern of physiological, emotional, cognitive and behavioral reactions to some extremely taxing aspects of work content, work organization and work environment (Houtman and Jettinghoff, 2007).

2.1.3 Knowledge

According to Macmillan English Dictionary (2007), knowledge can be defined as all the facts that someone knows about a particular subject or aspects. But according to Sadeghipour *et al.* (2006) knowledge means awareness, understanding and problem-solving capacity. In this research, the knowledge is related to bus driver's knowledge about work stress.

2.1.4 Attitude

Attitude is about someone's opinions or feelings about something, especially as shown by their behavior (Macmillan English Dictionary, 2007). According to Sadeghipour *et al.* (2006), attitude refers as inclination to react in a certain way to the certain situation or to organize option into coherent and interrelated structure. In this research, the attitude refers to how they act and the driving behavior of the bus driver.

2.1.5 Practice

Practice is the actual performance of an activity in a real situation or when one is do something in order to become better at it, or the time that one's spend doing this (Macmillan English Dictionary, 2007). But according to Sadeghipour *et al.* (2006) practice is the application of rules and knowledge into action. In this study, the practice refers to the routine of bus driver in releasing work stress.

2.2 Work Stress

Stress arises when the demands of the work or workplace exceed the employee's ability to cope with and control them in the work environment. Stress, which can be positive if managed correctly because it enable in improving performance and giving job satisfaction. On the other hand, it can detrimental to health when the pressure reaches excessive levels and continues for some time (Teasdale, 2006).

Several theories have been developed regarding work stress, which derived from the concept of interaction between the worker and the work environment such as Karasek's job demand-control theory (Karasek, 1979). According to this theory, work stress is a process where expectations of some kind of positive feedback like reward for hard effort are not met, lead to a prolongation of exhaustion and stress reactions which is also the core aspect of burnout theories. It is not a sudden event but is a process when an individual experiencing chronic stress and gets exhausted in terms of physical, mental and emotional strength (Sinha, 2010).

Williamson (1994) states that the natural reaction to situations that are perceived to require more than normal effort to achieve required performance is the body's stress response. For example, when the situations are unfamiliar, challenging or threaten them in some way will produce a stress response.

A certain level of stress is a necessary aspect of maintaining work productivity. For example, the changes in terms of physiological, psychological and behavioural that form the stress response have beneficial effects on work performance. Furthermore, biochemical and other changes help to increase the level of energy and muscle tension of the individual and help to enhance their performance by improving their ability to concentrate in task (Williamson, 1994).

2.3 Work Stress in Bus Driver

Bus drivers are exposed to variety of work stressors such as the behaviour of other drivers, traffic congestion, work scheduling, ergonomic factors, climate conditions and noise, which result in poorer health and work performance (Evans *et al.*, 1999). The most important psychosocial demands of the bus driver's job is adhere to the time schedule, providing service to passengers and driving safely (Meijman and Kompier, 1998).

Driving requires sustained attention for detection of changes in the work environment to increase the awareness of the existence of the potential hazards. The perception of hazards of driver stress may be affected by those bus drivers who often have to adhere to strict schedules and timetables (Dorn and Brown, 2003). Therefore, the maintenance of maladaptive behavior in professional drivers such as over-speeding and drug abuse can be affected also when they are exposed to occupational stressors in combination with low availability of social attachment outside work (Emdad *et al.*, 1998).

Inevitably, some employers may take the opportunity to place excessive demands on drivers especially when there is a shortage of skilled drivers, poor health status, high absenteeism and low profit margins in the workplace (Winkleby *et al.*, 1988). Workload of bus driver has high demands with little control over the ability to make decisions to help cope with job demands especially in the operation of buses in urban areas, (Dorn *et al.*, 2002; Greiner *et al.*, 1998).

Symptoms of work stress which often experienced by bus drivers including worry, irritation, and anxiety. For example, in a situation when driver has a high anxiety condition during a simulated drive will resulted in slower and less accurate identification of peripheral lights. This significantly will decreased the performance of drivers in central and peripheral tasks when compared with a low anxiety condition (Janelle and Singer, 1999).

Bus drivers can also be socially isolating and often involve in dealing with difficult passengers especially those inconsiderate road users who behave aggressively in response to a slow-moving bus, which required a height alertness from bus driver. Greater traffic congestion and time pressures when driving lead to aggression, irritability, frustration and negative mood to the drivers. Work stress can also spill over into home life because of split schedules and rotating shifts. (Hennessy and Weisenthal, 1999).

Inability to fall asleep or early awakening is one of the most frequent symptoms of work stress (Linton and Bryngelsson, 2000). Therefore, arousal is important from time to time in maintaining vigilance and alertness which required for safe driving. Recent evidence suggests that depression influences cognitive functioning such as attention processes but there is no research on the effects of depression on driver risk (Farrin *et al.*, 2003).

Moreover, one of the physical hazard posed by bus drivers is lower back pain (LBP). There is a high prevalence among Taiwanese bus drivers whereby LBP can be attributed to excessive use of body part, which subjected to postural stress. LBP is associated with the duration of employment as a bus driver, perception exposure to vibration and

steering wheel adjustability. The incidence rate for LBP increased with factors such as total bus trip per day, previous working experience, previous employment as bus driver, part time working, seat adjustability, carrying passenger load, previous history of accident and practicing shift work. (Guo *et al.*, 2004; Pope *et al.*, 2002).

2.4 Driving Attitude due to Work Stress

2.4.1 Smoking

Smoking is higher in drivers who suffering greater job strain especially in monotonous working conditions (Greiner *et al.*, 1997). Only some cigarettes were smoked in order to satisfy the symptoms of addiction due to they perceived themselves as being addicted to smoking since young. Those cigarettes smoked in response to crave or in order to avoid others symptoms of nicotine withdrawal were considered as a cause to addiction. Smoking was mainly to fulfill the specific purposes such as the management of emotions, coping with stress and boredom, which associated with home, work and the social arena (Bancroft *et al.*, 2003).

2.4.2 Caffeine Intake

According to Brice and Smith (2001), the beneficial effects of caffeine enable in making a safer, accurate and more stable drive compared with the decaffeinated condition. Besides, it shows that regular consumption of caffeine can reduce fatigue throughout the working day due to it able to increase the levels of alertness and improve performance

on long-distance bus drivers. Furthermore, caffeine only increases alertness and improves psychomotor performance during the night (Pandi-Perumal *et al.*, 2006) but not for releasing work stress. Another study showed that consumed an average of 12 cups of caffeine per day on long-distance trips for coach drivers also showed signs of sleep disturbance, unwanted daytime sleepiness and elevated stress hormones to compensate for fatigue debt (Sluiter *et al.*, 1998).

2.4.3 Drug abuse

According to Ragland *et al.* (1995), they stated that when other forms of coping stress are not possible or do not work, alcohol use is a form of coping with work stress among bus drivers. Another study found that burnout, which is an extreme form of occupational stress positively correlates with alcohol dependency among drivers (Cunradi *et al.*, 2003).

2.4.4 Speeding

Meskens (2002) has found that speeding violations are mainly due to the bus driver wanted to get to the destination on time and to maintain speed or speed itself causes positive feelings in the bus driver. Kontogiannis (2006) suggested that drivers with high aggression were more likely to be caught over-speeding and accidents are more prone to happen on them. Speeding could not reduce work stress among bus drivers because according to James *et al.* (1993) that faster driving speed and willingness to commit

driving violations increase the crash risk. These factors may be explicable in terms of personality and antisocial motivation (James *et al.*, 1993).

Besides, Xinping *et al.* (2011) stated that speeding has become the most illegal bus drivers' choice due to carry as many passengers as possible in working time and achieve the scheduled frequencies on route. Secondly due to the bus drivers' uneven quality and lack of bus drivers which together lead to the high working intensity and work task.

Therefore, the high work pressure stimulates the bus driver be apt to drive above the speed limit. Bus drivers engaging in such violations include over-speeding, running red and amber traffic lights and not completely stopping at the stop signs (Greiner *et al.*, 1998; Kompier, 1996).

2.5 Practice of Bus Driver

According to Morrow and Crum (2004), studies have shown that heavy exercise causes commercial driver accidents as a result of fatigue. Therefore, both the effects of exercise directly and indirectly on accident antecedents such as stress, fatigue, and health status in order to develop and examine the effectiveness of physical activity interventions on risk of driver accidents.

According to Tse *et al.* (2006), provide training and stress management program for bus drivers are able to strengthen and enhance stress coping strategies. When driving, try learn in changing negative appraisals of stressful situations can avoid accident happen.

Furthermore, by improving social network and family circle without compromising efficiency in service delivery and planning regular short break at work can reduce work stress. Besides, by improving emotional intelligence like stress coping strategies was recommended to cope up with burnout (Duraisingam and Dollard, 2005).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design

Descriptive study was used in conducting the research about awareness on work stress among public express bus drivers at terminal bus Melaka Sentral. The aim of the descriptive study is to describe the characteristics of individuals or groups regarding to the awareness on work stress.

As there is no published data available on Melaka bus drivers' knowledge, attitude and practice towards work stress, thus lead the researcher to conduct this study. The researcher also believes that the larger sample accessible through a qualitative design will aid the generalization of the findings. This descriptive study was selected because least was known about knowledge, attitude and practice on work stress among bus drivers in Melaka. A part of that, this study was also trying to describe the relation between age, education and working experience with awareness level on work stress.

This study was mainly a descriptive survey as it attempted to explain knowledge and confidence level, attitude level and practice level on work stress in bus drivers with additional statistics to examine relationship also included.

3.2 Population and Setting

This study was carried out in terminal bus Melaka Sentral which is the main transportation hub for public transport in Melaka. This location was selected because Melaka is one of the state in Malaysia that has been a point of attraction since obtaining “Melaka Maju 2010”. Besides that, the historical site of Melaka have been listed as World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO) on 7th July 2008 that definitely would help in boosting the tourism in Melaka in a long run (Eddie, 2008). For this reason, many tourists either from local or international choose Melaka as one of their must visit place. Therefore, the long distance bus company has a very demanding job especially during public holiday due to these reasons.

3.3 Sample

3.3.1 Sample Size

The respondents of the survey includes all the bus drivers from the five chosen bus companies at Melaka Sentral. Sample size was calculated using Macorr Sample Size Calculator (Krejcie and Morgan, 1970) at confidence level 95%, confident interval/marginal error 5%, response distribution percentage 50% and population size is approximately 104, the sample size needed is 80 (refer appendix C).

3.3.2 Sample Design

In this study, random convenience sampling design had been used.

3.3.3 Inclusion and Exclusion Criteria

Table 3.1 The inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
- Full time bus driver	- Part time bus driver
- Express bus driver	- Not express bus drivers
- Consented and willing to participate in this study	- Not willing to participate in this study
- Have bus driving license	- Do not have bus driving license

According to Land Public Transport Act 2010, an application for a license shall be made to the Land Public Transport Commission (SPAD). A licensed operator must achieved rules on the standards of performance made by the Commission in connection with the operation or provision of public service vehicle services or goods vehicle services.

3.4 Instrumentation

This study had been collected by self-administered questionnaire. This questionnaire consists of a total of 27 questions, which are eight questions on sociodemographic, seven questions on knowledge, five questions on attitude and seven questions on practice.

3.4.1 Instrument

The questionnaire in this study is a self-established questionnaire consisting of four sections. Section A was used to collect demographic factors of respondents covering age,

ethnicity, marital status, education level, smoking, monthly income, daily driving hours and years as a bus driver.

Section B is the knowledge section which consists of seven questions to test on the knowledge of bus drivers regarding work stress. Five out of seven dichotomous questions which consist 'Yes' and 'No' were used in evaluating the knowledge score of the bus drivers while the other two questions were assessed using multiple choice questions. A correct answer was given one mark, while a wrong answer was not given any mark.

Answer to questions relating to attitude were in the form of a scale of one to four in Section C. This was the confidence level part which consists of five questions. It was used to measure the confidence level of the bus drivers' attitude towards work stress. Each item in the confidence level part was scored on the four-point Likert scale. Likert scale is a type of psychometric response scale and non-comparative scaling technique that often used in questionnaires which the respondents will specify their level of agreement to a statement (Likert, 1932).

A total of seven questions in Section D which is relating to the practice of the bus drivers in their daily routine towards work stress. Four out of seven are dichotomous questions which consist yes and no were used in evaluating the attitude score of the bus drivers while the other three questions were choosing the suitable answer according to their daily routine practices. The correct answer or good practice was given one mark, while a wrong answer or bad practice was not given any mark.

3.4.2 Measurement of Variables

In this questionnaire, the dependent variables were the knowledge score, attitude score and practice score of the bus drivers. The independent variables were the age, education level and working experience of the bus driver.

In this study, dichotomous questions ‘Yes’ and ‘No’ and multiple choice questions were used in evaluating the knowledge and practice score in Section B regarding knowledge and Section D regarding practice. One score was given when the respondent answers positively while no point was given for the negative answer. The range of score was zero to seven in both Section B and Section D. The highest score was seven points and the lowest score was zero point. The studied bus drivers were divided according to their answers into three levels, high knowledge and good practice (five to seven scores), moderate knowledge and average practice (three to four scores) and limited knowledge and bad practice (zero to two scores). The higher the knowledge score is, the higher the knowledge level of the bus driver whereas the higher the practice score is, the better the practice level of the bus driver towards the awareness on work stress.

Likert scales were used in the Section C of the questionnaire in this study to measure the confidence level of the bus drivers in their attitude level. It calculated the total score of the bus driver who participate in this study. The scale also evaluated the bus drivers’ confidence level. Respondent was given a state of statements that represent a range of alternative views on a subject relating to their attitude towards work stress. The respondent was asked to select the view which closest to his response. Each item was scored on a four-point Likert scale: strongly agree (SA), agree (A), disagree (D) and

strongly disagree (SD). Scores ranged from one 'strongly agree' to four 'strongly disagree'. The range of the score was from five to 20 points. The higher the score is, the higher the confidence level of the bus drivers of their attitude towards work stress. Respondents with positive towards work stress were given four mark, while those negative attitude towards work stress were given one mark. The range of score was zero to ten categorized as negative attitude while 11-20 categorized as positive attitude.

After completing the questionnaires, the answered questions of knowledge, attitude and practice were scored. It means that, high (five to seven scores), average (three to four scores) and low scores (zero to two scores) were chosen for the questions of knowledge and practice. Positive (11-20 scores) and negative scores (zero to ten scores) were applied for the questions of attitude (Dandash and Abdurrahman, 2007).

3.4.3 Translation of Questionnaire

Translation and back translation had been done on the original questionnaire. First, the researcher translated it into Malay language and checked by the supervisor. Then, the translated questionnaire was sent to *Pusat Bahasa dan Terjemahan* Universiti Sains Malaysia, Kubang Kerian for back translation on the Malay questionnaire. It is crucial to perform back translation so that the meaning of the original questionnaire is still maintained after translated into Malay language.

3.4.4 Validity and Reliability

Pilot test was carried out to test the reliability of the questionnaire. One of the most popular reliability statistics in use today is Cronbach's alpha (Cronbach, 1951). Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature. Besides, the pilot test was aim to test the readability and the appropriateness of the language used in the questionnaire. The pilot test was involved eight bus drivers of Universiti Sains Malaysia, Kubang Kerian, Kelantan. From the analysis conducted, it showed that the reliability coefficient for each factor was more than 0.7 (α Cronbach = 0.727). Thus, the questionnaire was reliable and could be used to collect data for this study.

3.5 Data Collection Method

The questionnaire was distributed to the bus drivers at Melaka Sentral. Each of the bus drivers were briefed regarding the questionnaire and asked to fill in a consent form to participate in the study. They answered the questions under the observation and guidance of the researcher. At the end of the session, each of the questionnaires was checked by the researcher to verify that all the questions had been answered. The respondents answered the questionnaire during their break from driving. Each session was lasted approximately for ten to 15 minutes. The questionnaire was collected directly after the respondents fill up the questionnaire (refer appendix D).

3.6 Ethical Consideration

The approval was obtained from Ethics Research Board of Universiti Sains Malaysia. Thus, the permission obtained from the management of terminal bus Melaka Sentral as well as from the person in charge of respective bus express company. All of the participants who were willing to participate were asked to sign on the written consent as verification after explaining the objective of the study. They also were informed that their involvement in this study was voluntary. Besides that, the information is confidential for the use of this study only.

3.7 Data Analysis

The data was analyzed by using Statistical Packages for Social Sciences (SPSS) software version 19.0. Descriptive statistics (frequency and percentage) was used to describe the demographics factors, knowledge level on work stress, attitude and practice towards work stress among the bus drivers. After that, the relationships between the variables were determined such as age, educational level and working experience with mean score of variable of knowledge by using Chi-square test.

CHAPTER 4

RESULTS

4.1 Sociodemographic Data

Eighty bus drivers agreed to take part in this study. All questionnaires were collected and given a response rate of 100 percent. Table 4.1 summarises the sociodemographic data of the bus drivers.

The majority of the bus drivers were stand in the age group of 31 to 40 years old ($f = 30$). 87.5 percent ($f = 70$) of the respondents are Malay, meanwhile 10 percent ($f = \text{eight}$) are Indians and the fewest is Chinese population which is 2.5 percent ($f = \text{two}$). 90 percent of the respondents are married ($f = 72$) and 10.0 percent are being single ($f = \text{eight}$).

Education level was divided into four groups, which are primary school, PMR, SPM and diploma. The majority of the respondents were average educated and mostly of them had education at PMR level, 51.2 percent ($f = 41$) and SPM level, 28.7 percent ($f = 23$).