ASSOCIATED FACTORS AND COPING MECHANISM FOR STRESS AMONG PRIMARY HEALTHCARE DOCTORS, ASSISTANT MEDICAL OFFICERS AND NURSES IN GOVERNMENT HEALTH CLINICS IN KELANTAN, 2010

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ASSOCIATED FACTORS AND COPING MECHANISM FOR STRESS AMONG PRIMARY HEALTHCARE DOCTORS, ASSISTANT MEDICAL OFFICERS AND NURSES IN GOVERNMENT HEALTH CLINICS IN KELANTAN, 2010

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A thesis submitted in fulfillment of the requirements for the degree of Masters of Public Health (Health Promotion).

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Dr. Asmah binti Razali.

UNIMAS, Kuching, Sarawak.
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ABSTRACT


Stress is experienced by everybody in daily life. Healthcare providers also experience job stress while giving treatment to the clients. Numerous studies have shown high levels of psychological stress in doctors, assistant medical officers and nurses and other healthcare professionals working in various medical fields. However there are limited studies about job stress among primary healthcare staff in the country. Therefore, this study aims to explore associated factors for stress and coping mechanism practised by primary healthcare doctors, assistant medical officers and staff nurses at government health clinics in Kelantan. This was a cross sectional study conducted from 1st June until 31st August 2010. A total of 248 respondents (responds rate 84.9%) which consist of 34 doctors, 76 assistant medical officers and 138 nurses were selected through stratified random sampling. The Malay version of the validated Depression, Anxiety and Stress Scale, Karasek's Job Content Questionnaire and The Malay version of Brief cope Questionnaire were used as research instruments in this study. Informed consent was obtained from all participants.

The prevalence of stress among primary healthcare doctors, assistant medical officers and nurses in government health clinics in Kelantan was 7.3% (95% CI 4.06, 10.54). According to job categories, the prevalence of stress among doctors was 8.8%, assistant medical officers 10.5% and nurses 5.1%. Multiple Linear Regression analysis of stress score among doctors showed that supervisor support (adj b = -0.74, 95% CI -0.98, -0.50, P <0.001) and hazardous condition (adj b = 0.86, 95% CI 0.58, 1.15, P <0.001) were significant associated factors for stress. For assistant
medical officers, MLR analysis revealed that co-worker support (adj b = -1.45, 95% CI -1.77, -1.12 P = 0.002), job insecurity (adj b = 0.89, 95% CI 0.61, 1.16, P <0.001) and supervisor support (adj b = 0.44, 95% CI 0.17, 0.71, P = 0.002) were the significant associated factors for stress. MLR analysis of stress score among nurses showed that duration of employment (adj b = 0.30, 95% CI 0.24, 0.36, P <0.001), number of children (adj b = -0.95, 95% CI -1.25, -0.65 P <0.001), decision authority (adj b = -0.19, 95% CI -0.33, -0.06, P =0.005), psychological job demand (adj b = -0.33, 95% CI -0.44, -0.22, P <0.001), physical exertion (adj b = 2.81, 95% CI 1.78, 3.84, P <0.001) and job insecurity (adj b = 0.45, 95% CI 0.04, 0.87, P =0.033) were the significant associated factors for stress.

Majority of the respondents in this study had practised positive coping mechanism. The commonest coping practised by doctors and AMOs were religion, planning and acceptance and for nurses were religion, positive reframing and planning. This study also found that the stressed respondents had used more negative coping mechanism like; self distraction and self blame among the stressed doctors; denial coping among stressed AMOs; and denial, instrument support, self distraction, behavioural disengagement, humour and self blame among the stressed nurses. Finding of this study may be useful for intervention strategies of preventing stress among primary healthcare providers in the country.
INTRODUCTION

1.1 Introduction

Job life can cause a great deal of stress to anyone who is working in this globalized world. Due to the competitive nature of the job environment, most of the people are now spending their time more for job related work. Healthcare workers who are not satisfied with their job may feel stressed when they are having problems with the clients or colleagues. This may leave a negative impact to the organization itself. Therefore, it is very important for employer and employees to realize the stress and the stressor that cause all the negative effects (Nilufar et al., 2009).

Numerous studies have shown that healthcare workers including doctors (Caplan R.P, 1994), medical assistants (Azman et al., 2010) and staff nurses (Herman, 1997; Zhong-Xiang et al., 2008 and Chung-Kuang et al., 2009) are exposed to work stress. Individuals who are exposed to prolonged work stress are associated with medical illness like cardiovascular diseases (Karasek et al. 1981), metabolic syndrome (Chandola et al., 2006), Type 2 Diabetes (Emilie et al., 2003), depression (Emma, 2007 & Edimansyah et al., 2008) and thus, can affect the quality of life of stressed individuals (Rusli et al., 2008).

The primary healthcare doctors, assistant medical officers and staff nurses are the first contact of the patient. Medical officers are established professionals in the public sector and form the backbone of the Malaysian healthcare delivery service. Together with assistant medical officers and nurses, they perform crucial roles from providing diagnosis and treatment for patients who come to the clinic. They are also involved in planning and implementation of government policies concerning the national health programmes and
other health related activities. With expansion scope of the primary healthcare services, little study was done to assess current level of job stress among primary healthcare staffs.

1.2 Background of the Study

This study aims to explore the prevalence of stress, its sources and coping behaviours practised by primary healthcare doctors, assistant medical officers and staff nurses at government health clinics in Kelantan. Primary healthcare staffs consist of a wide range of staff that includes doctors, family medicine specialists, assistant medical officers, dentists, nurses, community nurses and also attendants. Medical officers, assistant medical officers and staff nurses were chosen in this study because they are the backbone of the service given at government health clinics. They are responsible for all aspects of health delivery service especially in examining, diagnosing and treating patients, administering and prescribing medication and performing procedures in the health clinics.

They also perform health examinations on out patient cases, antenatal and postnatal mothers, child follow-up and other related duties as required. They are also responsible for the implementation of family health and planning programmes as well as prevention and control of communicable diseases. Together, they form part of the team that disseminates medical education to the public. The healthcare staff also needs to attend courses, seminars and are involved in the management of the clinic. With increasing demand and responsibilities made on primary healthcare staffs, little is known about their stress level. Therefore, it is important to determine the prevalence of stress and its associated factors, and their coping mechanism adopted.
1.3 Research Question

a. What is the prevalence of stress among primary healthcare doctors, assistant medical officers and staff nurses in government health clinics in Kelantan?

b. Are there any relationships among socio-demographic factors (age, marital status, number of children, personal income) with stress score among primary healthcare doctors, assistant medical officers and staff nurses in government health clinics in Kelantan?

c. Are there any associations among factors of stress (job factors) with stress score among primary healthcare doctors, assistant medical officers and staff nurses in government health clinics in Kelantan?

d. What are the coping mechanisms practised by stressed and non-stressed primary healthcare doctors, assistant medical officers and staff nurses in government health clinics in Kelantan?

e. Is there any relationship between stress score and coping mechanism among primary healthcare doctors, assistant medical officers and staff nurses in government health clinics in Kelantan?
1.4 Literature review

1.4.1 Primary Health Care in Malaysia

During the independence era (1957), the healthcare system in Malaysia catered predominantly to the needs of urban communities and rural health services were largely non-existent. If available, rural health service were based in health centers located in small country town (Chen, 1981). By the early 1970s rural healthcare was delivered through a three-tier system consisting of a main health center (consist of a medical officer, dentist, nurses, midwives, medical assistants and public health team), a health sub-center (consist of medical assistants, nurses and midwives) and midwifery clinic.

In 1973, a two-tier system was initiated when the health sub-centers were upgraded to the status of main health centers (currently called health clinics). The midwifery clinics were replaced by 'klinik desa' (community clinics) that are run by a trained and qualified nurse or community nurse (Kamil M.A. and Teng C.L., 2002).

Nowadays, most of the health clinics are managed by a trained and qualified doctor, also known as Medical and Health Officer (MHO). MHO is responsible to see cases presented at the government health clinic. He/she will also accept referral from the assistant medical officers, nurses and community nurses. The MHO are also involved in the surveillance of infectious diseases and vector control program with the public health team. Some of the health clinics in Malaysia are having Family Medicine Specialist (FMS), who has postgraduate training in family medicine. FMS also accepts referral from the MHO and physician who wants to continue treatment of patient who was discharge from the hospital to the health clinics.
Many of the health clinics are equipped with emergency services, laboratory facilities, and medical imaging diagnosis (X-ray and ultrasound) which provide a much wider range of services to the clients. Therefore, the primary healthcare services in Malaysia are provided with health services that include health diagnosis and treatment, health promotion and education-related activities, nutrition, maternal and child health, immunization, family planning, prevention and control of endemic diseases and dental health.

Primary health care (PHC) shall be the thrust and foundation of the total health system. Based on this clear policy, the healthcare system in Malaysia is continuously making an effort to achieve equity in health and healthcare, encourages inter-sectoral collaboration and community participation and thus provides a basic package of services that is to be delivered to all.

The PHC is also linked to the other levels of care in the system as well as to the other PHC players in the countries. The development of PHC in Malaysia has encompassed policy formulation, infrastructure and manpower, sustainable financing, and a health management and information system development. In addition to this, the scope of basic package of care in the primary care has expanded to meet changing needs, as exemplified by newer activities for adolescent health, elderly health, community mental health, non-communicable diseases control and workers health.
1.4.2 Definition of stress

Stress has been defined in many ways in the literature and may have different definitions by psychologist, medical doctors and social scientist. The term “stress” may have different meanings for each individual and researchers. Selye (1976) defined stress as the non-specific response of the body to any demand made upon it. According to Selye, these non-specifically caused changes constitute the stereotypical, i.e., specific, response pattern of systemic stress. This stereotypical response pattern was called the ‘General Adaptation Syndrome (GAS)’.

According to Lazarus and Folkman (1984), stress was regarded as a relational concept in which stress was not defined as a specific kind of external stimulation nor a specific pattern of physiological, behavioural or subjective reactions. Instead, stress is viewed as relationships (transactional) between individuals and their environment. This definition points to two processes as central mediators within the person–environment transaction that was cognitive appraisal and coping.

However, the definition of stress in this study falls within the definition proposed by Lovibond and Lovibond (1995) that stress is a persistent state of over arousal which reflects continuing difficulty in meeting taxing life demands. Stress is measured according to the difficulty relaxing, nervous arousal, easily upset/agitated, irritable/over-reactive and impatient according to the stress component of the Depression Anxiety Stress Scale (DASS).
1.4.3 Prevalence of stress

Prevalence of stress among doctors, assistant medical officers and nurses were varied. Ruhaini and Nurhassim (2009) reported that the prevalence of occupational stress among doctors in Kuala Lumpur in 1994 was 40%. Since then, not many studies was conducted to investigate the prevalence of stress among medical doctors. Azman et al. (2010) studied job stress among assistant medical officers in government hospital in Kelantan and Terengganu and noted that the prevalence of stress was 13.7%. Studies among nurses indicated that the prevalence of stress were significantly higher in comparison with medical doctors. For example, Rokiah and Krishna (2009) found that the prevalence of stress among nurses in Kuala Lumpur Hospital in 1995 was 49.5%. Emilia and Nurhassim (2009) reported that the prevalence of stress among medical and surgical ward nurses in University Kebangsaan Malaysia Hospital was 49.3%. However the prevalence above was not comparable because different authors had used different types of research instrument to measure prevalence and associated factors for stress.

Several studies were also conducted to investigate the prevalence of stress among staff in health clinics-based settings. For example, Mohammad Azizul and Nurhassim (2009) studied job stress among the staff in District Health Office in Kemaman, Terengganu in 2006 and reported that the prevalence of stress was 57.1%. Majdah and Nurhassim (2009) studied stress prevalence and job factors among community nurses in Kelantan in 2000 and noted the prevalence of stress was 38.5%. Studies for prevalence of stress among staff working at health clinic setting were limited.

1.4.4 Occupational stress and its associated factors
The terms 'occupational stress', 'job stress' and 'work-related stress' are used interchangeably in the literature that refer to stress attributed by job factors. Occupational stress has been described as an incompatibility between the individual and his or her work environment. There are many definitions of occupational stress. Beehr and Newman (1978) defined occupational stress as a condition wherein job-related factors interact with the worker to change his or her psychological or physiological condition such that she or he is forced to deviate from normal functioning. Occupational stress can also be defined as the emotional, mental, and behavioural reaction to vulnerability caused by elements in the job environment that are, in large part, out of the awareness of the worker. The United State’s National Institute of Occupational Safety and Health (NIOSH) defined occupational stress as ‘the harmful physical and emotional responses that occurs when the requirements of the job do not match the capabilities, resources, and needs of the worker’ (NIOSH, 1999).

In this study, the conceptual model of job stress; the demand-control model that was explained by Karasek et al. (1998) was adapted and tested among primary healthcare doctors, assistant medical officers and nurses in Kelantan. The demand control model has contributed to the study of occupational stress by providing a theoretical framework to explain the relation between the psychosocial characteristics of the work environment and health outcomes. It comprises 2 basic dimensions; decision latitude and psychological demands that predict a broad range of health and behavioural outcomes.

The workers’ control over the performance of his or her own job is measured by sub-dimensions of decision latitude that are skill discretion and decision authority (Karasek et al. 1998). Skill discretion assesses the level of skill and creativity required on the job.
Decision authority assesses the organizationally mediated possibilities for workers to make decision about their work. The psychological demands dimension refers to whether there is enough time to get the job done, the amount of work, and the presence of conflicting demands.

Karasek and Theorell (1990) reconceptualised the demands-control model to include social support. The demands-control-support model predicts that employee strain should be highest under high work stress combined with low levels of both work control and social support. This was in line with the stress-buffering model of social support, which proposes that social support protects the individual against the adverse effects of stress. For this study, the demands-control-support model was expanded to include three additional dimensions; job insecurity, physical demands and hazardous work environment.

Karasek classifies job into four categories according to level of psychological demand and of decision latitude or job control (Figure 1). 'Job strain' is hypothesized to exist when there are high levels of job demands and low level of control over these demands. In contrast, when high level of job demands and control exist, the job is described as being 'active', meaning that the demands act as a source of challenge and regeneration rather than as a source of mental and physical stress. A work context that is low in job demands and control is considered to be 'passive' where, over time, employees may become unable to make decisions, solve difficulties, and rise to work challenges. The fourth quadrant in Karasek's model proposes that people with high levels of control and minimal work demands will experience 'low strain'.
In Figure 1, the active job quadrant (upper right) with high demand and high control, has high-prestige occupations: public officials, physicians, engineers, nurses, and managers of all kinds. The passive job quadrant (lower left), with low demands and low control, has clerical workers such as billing clerks, and low-status service personnel such as janitors. The high-strain quadrant (lower right), with high demands and low control, has machine-paced operatives such as assemblers, cutting operatives, as well as other low-status service operatives such as waiters. Occupations with high percentages of women are frequent (waitresses, telephone operators, and other nurse's aides). Low strain self-paced occupations (upper left) often involve significant training and self-pacing, such as repairmen, linemen, and natural scientists.

Figure 1.1; Karasek's model of job strain. Adapted from Schnall, P.L., Landsbergis, P.A., Baker, D. (1994).
The Karasek model has become very widely known and studied. It has been used in a multi-national European study (n = 38,000) of patterns of job demand and control by occupation and sex (Karasek et al, 1981).

The work content of the job that was used in this study include decision authority, decision latitude, psychological job demand, job insecurity, physical exertion, supervisor support, co-worker support, social support, hazardous condition, toxic exposures and total physical hazards. Decision latitude was a significant associated factor of stress (Azman et al., 2010). Decision latitude had negative association with job stress among assistant medical officers which means that increase in decision latitude of the job may buffer their stress level at workplaces. (Azman et al., 2010).

Rusli et al., (2006) reported that psychological job demand had the strongest association with stress among the dental healthcare workers in Higher Institution of Learning in Kelantan. The positive association of stress and psychological job demand were documented by Edimansyah et al., 2008; Azlihanis et al., 2009; and Azman et al., 2010. Edimansyah et al., (2008) reported that psychological job demand was strongly associated with DASS depression, anxiety and stress.

It was documented that job insecurity had positive association with stress (Aziah et al., 2004; Edimansyah et al., 2008; and Azman et al., 2010). Perceived job insecurity was an important source of stress and was associated with poor health. D’ Souza et al. (2003) did a cross-sectional population study in Australia and reported that both job strain (high demands and low control) and job insecurity were independently associated with poor health outcomes. D’souza found that people with high job insecurity had nearly four