Psychosocial safety climate and risk factors at work: the Malaysian context

By

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In memory of:

My late father, Idris Yaacob – who taught me how to catch a fish and swim in the real world.

To my late brother Mat Isa, who had sacrificed his young life only to ensure that I could have a good future.

To the late AP Aminuddin Mohd Yusof who inspired me to be a psychologist.

Abstract

Psychosocial safety climate and risk factors at work: the Malaysian context.

Research in job stress has mainly been undertaken in Western countries, much less so in developing countries. Concepts about job stress and the research tradition have derived from Western countries, and consequently little is known about the conditions of job stress in Eastern developing countries. This study uses a mixed qualitative and quantitative methodology to explore the nature and consequences of job stress in Malaysia, by employing the integrated psychosocial safety climate (PSC) model which extends the Job Demands-Resources (JD-R) model.

Eight studies were undertaken to achieve the study aims. The first study (N = 48) involved individual interviews which found that Western and Malaysian employees have similar concerns about job stress although the consequences of job stress may be explained in different ways. Using NVivo the study found that external demands (i.e. globalization) emerged as part of job stress. However, since Study 1 was unable to obtain a clear picture regarding the meaning of job demands and job resources, a second study was conducted, particularly to investigate the job demands and job resources variables. The second study (N = 13), used a focus group where although there were similarities between Western and Eastern concepts of job demands and job resources, this study identified a new variable (i.e., organizational politics) that was not generally identified in the JD-R model.

Using findings from first study and second study, a survey canvassing important demands and resources was developed and used in subsequent studies. The third (N = 269) and fourth studies (N = 291) employed two population samples and found the evidence for PSC model (a Western concept) in Malaysia. Structural Equation Modeling using AMOS 7.0 was used for the analysis. The cross-sectional study found that PSC is a precursor to job demands and job resources, and supports the argument that some Western models for job stress are applicable to Eastern Asian workplaces. The research concluded that job demands are associated with some negative emotional health outcomes (i.e., burnout, anger and depression), while job resources are linked to employees' engagement and satisfaction. In a fifth study (N = 308) addition, the research also found that globalisation was an antecedent to job demands and resources, exhaustion and job satisfaction.

As PSC theory is a multilevel theory, and given that PSC is an organisational level phenomenon, this could not be readily assessed in a population study. The next studies

utilised a multilevel approach (studies 6 and 7) integrating organisational and individual level factors. This approach is relatively new to the field of work stress and the researcher applied this technique in a Malaysian sample to contribute to new theoretical developments in the area. Employing hierarchical linear modeling (HLM) analysis, study six (N = 427) found that PSC as an organizational climate at the team level contributes to individual level job resources i.e., learning opportunities, and to team engagement and team performance. The study found that PSC improves individual performance, particularly through learning opportunities and engagement, supporting the notion that PSC contributes to positive outcomes in the workplace.

Since PSC is a relatively new construct, it was important to establish the uniqueness of the PSC construct. In study seven (N = 180), the research found that PSC differs from other similar climate constructs (safety climate, team safety climate and organizational support), and PSC has a negative relationship to both job demands and psychological health problems. In addition, the results supported a mediation process - psychosocial safety climate → job demands → psychological health problems - that corroborated psychosocial safety climate as the preeminent stress risk factor. The research found both physical and psychosocial safety climates were stronger in Australia, compared to the Malaysian context.

Finally to assist multilevel causal analysis the final study (N = 117) used a longitudinal and multilevel approach among private employees from 36 organizations. The study found that PSC predicted emotional demands and emotional exhaustion over time, but not depression. The research also found that emotional demands mediated the relationship between PSC and emotional exhaustion over time, to support the notion that PSC is a climate construct associated with working conditions.

Overall the findings suggest that some aspects of Western conceptual thinking regarding work stress can be applied to Malaysia. This thesis provides valuable and practical information for government policy makers, multinational companies and local organizations in understanding and formulating PSC as the best strategy to improve employees' workplace performance and their psychological well-being.

Achievement

PhD research 'Psychosocial safety climate and risk factors at work: the Malaysian context' was included in the overall compendium of activities for the World Health Organisation (WHO) Global Plan of Action 2008-2012.

Part of the findings in this thesis has been presented in conferences as follows:

Oral presentations

1. The Job Demands and Resources Model: Why are Malaysians Different? at South East Asia Psychology Conference, Sabah, Malaysia , 9-11 July 2009.
2. 'The impact of globalization on employees' psychological health and job satisfaction: The Malaysian experience' at 3rd Asian Psychology Conference, Darwin, Australia, 4-7 July 2010.
3. 'Psychosocial Risk Factors at Work: Malaysia Experience', at 1st Asia Pacific Psychosocial Risk Factors Meeting, Darwin, 8-9 July 2010.
4. 'Organizational resources vs. job resources as antecedents to job engagement and employees performance: Multilevel analysis' at 2nd Asia Pacific Psychosocial Risk Factors Meeting, Johor Bahru, Malaysia, 8-9 July 2011.

Poster presentation

1. The language of Malaysian work stress at 8th Industrial and Organisational Psychology Conference, Sydney, Australia, 25-28 June 2009.

Other achievements

1. Reviewer for *International Journal of Stress Management*
2. Assisted Prof Maureen F. Dollard review a manuscript for *Journal of Occupational Health*

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Alhamdullilah – Praise be to ALLAH S.W.T., the Most Compassionate and the Most Merciful, Whose blessings and mercy have helped me throughout my life. There is no will and no strength unless with His help.

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To my former department head, AP Jas Laile, who 'accidently' found me and gave me the opportunity to become a University Malayan academic. Also to the present department head Dr Malini, who granted me a one year study extension, and provided support when I needed it.

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Signed Statement

This work contains no material which has been accepted for the award of any other degree or diploma in any university of tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by any other person, except where due reference has been made in the text.

I give my consent to this copy of my thesis, when deposited in the university Library, being made available for loan and photocopying.



Mohd Awang Idris

CHAPTER ONE

General statements

The thesis is submitted as a 'Thesis Containing Published Research' in accordance with UniSA Academic Regulations for Higher Degrees by Research Clause 16.1.1.b.

Overview

The aim of this research was to investigate several psychosocial risk factors at work including working conditions (job demands and job resources), employees' health (burnout, anger, depression) and positive outcomes (such as job satisfaction, engagement and performance) in Malaysia. The study utilized qualitative and quantitative methods to explore several aspects associated with job stress.

In general, the thesis investigated the broad understanding of psychosocial risk factors at work in Malaysia that comprised, i) the meaning of job stress and employees' perception of job demands and resources, ii) investigation of psychosocial safety climate (PSC; Dollard & Bakker, 2010), and iii) the impact of globalization and its relationship to working conditions, work outcomes and psychological health. The research started with a preliminary study to explore the definitions and conceptions of job stress, followed by the exploration of the meaning of job demands and job resources as perceived by Malaysian employees. This area is argued to be significant since most job stress theories have been developed from Western conceptual frameworks (Burke, 2010; Liu, Spector, & Shi, 2007), thus this study could contribute to the research literature by providing findings from a non-Western perspective.

Then the research examined the significance of psychosocial safety climate (PSC) in the workplace. This study contributes to the industrial and organizational literature as it offers a broad explanation of psychosocial risk factors at work and also tests the recent construct outside the Western context.

The thesis also examined the relationship between globalization on job characteristics, and how this relationship has influenced employees' burnout and job satisfaction. This area was examined since there has been much discussion about the

changing nature of work (Landsbergis, 2003; Sparks, Faragher, & Cooper, 2001), but empirical studies in this area remain scarce.

In summary, the current thesis presents a wide dimension of recent working conditions, particularly from outside the Western perspective, in an Eastern, developing, Muslim-dominated country, to offer a new insight into the theoretical and practical implications of job stress literature.

The structure of the thesis

This thesis is structured in two parts. Part One introduces the preliminary research associated with job stress in Malaysia, particularly from two studies that included individual interviews, and focus groups. This is presented in the form of two published papers which detail all the process, results and implications. Details of these studies can be found in Chapter 2 and Chapter 3. Overall, Chapter 2 discusses the results based on interviews with employees in Malaysia. Chapter 3 focuses on the meaning of job demands and job resources as described by focus group participants.

Part Two focuses on research that explores the influences of i) globalization on working conditions and its relationship to employees' satisfaction and burnout, and ii) PSC as an antecedent to job characteristics, and how it influences employees' emotions and its effect on job performance. The data were mainly derived from population-based surveys (Survey 1 and Survey 2) and a multi-organizational study (Survey 3). At the time of the thesis submission, a longitudinal study using a multi-level approach (Survey 4) was completed. However the results Survey 4 are not reported due to time limitations associated with the period of study and sponsorship regulations. Some data from Survey 4 however have been reported in Chapter 5 and Chapter 9. Overall, Part Two consists of one published papers; three in press papers and two submitting papers. It reports the results of the impact of globalization on working conditions (Chapter 4), and also the findings and discussion about PSC in the workplace, as a precursor for working conditions and its relationship to other organizational outcomes (Chapters 5, 6, 7, 8 and 9).

The thesis structure and chapters are summarized in Table 1 on the next page.

Table 1. Summary of the chapters

Chapter	Title	Remarks
1	Introduction	
2	Lay theory explanations of occupational stress: The Malaysian context	**Published paper:** Idris, M.A, Dollard, M.F & Winefield, A.H. (2010). *Cross-Cultural Management: an International Journal 17*, 135-153 (Editor: Prof. Simon Dolan)
3	Job characteristics: What can we learn from the East?	**Published paper:** Idris, M.A, Dollard, M.F & Winefield, A.H. (2011). *International Journal of Management Studies 18*, 135-154
4	The effect of globalization on employees' psychological health and job satisfaction in Malaysian workplaces	**Paper in press:** Idris, M.A, Dollard, M.F & Winefield, A.H. (2011). *Journal Occupational Health* (Editor: Prof. Shigeru Sokejima)
5	Conceptual distinctiveness and effect of psychosocial safety climate on worker psychological health and engagement	**Published paper:** Idris, M.A, Dollard, M.F., Coward, J. & Dormann, C (2011). Safety Science, 50, 19-28 (Editor: Prof. K. Mearns)
6	Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysian workers	**Published paper:** Idris, M.A, Dollard, M.F. & Winefield, A.H. (2011). *South African Journal of Industrial Psychology* (Special Issue on the JD-R model, Guest Editor Prof Arnold B Bakker & Prof Evangelia Demerouti)
7	Psychosocial safety climate, work conditions, and emotions in the workplace	**Published paper:** Idris, M.A & Dollard, M.F. (2011) *International Journal of Stress Management*, 18, 324-327 (Editor: Prof Sharon Glazer)
8	Psychosocial safety climate as a tool for employee engagement and performance: A multilevel analysis	**Submitting paper:** Idris, M.A, Dollard, M.F & Tuckey, M. (2011). Work & Stress
9	Psychosocial safety climate, emotional demands, burnout and depression: A longitudinal study on Malaysian private sectors	**Submitting paper:** Idris, M.A & Dollard, M.F.
10	Conclusion, limitations, future research and implications	

Introduction

Since the 1980s, globalization has wielded a great influence on the nature of work by forcing organizations to deal with specific issues such as economic liberalization, competition policies, and new industrial relations legislation which has created less secure jobs and weakened union representation for workers (Dollard, Skinner, Tuckey, & Bailey, 2007). For this reason, the changing nature of work has been discussed extensively (Dollard, et al., 2007; Landsbergis, 2003; Sauter & Murphy, 2003; Sparks, Faragher & Cooper, 2001). These changes have been brought about by the introduction of advanced technologies, changes in work arrangements, an emphasis on productivity (Dollard, et al., 2007) and the implementation of new production systems thought to improve productivity. However, not all employees benefit from such changes (Gospel, 2003). Organizational change has implications for how a business affects workers' jobs, impacts on worker health, organizational productivity and the quality of work life.

Globalization has forced companies to use innovative methods such as mergers, strategic partnerships and privatization (Sparks, Faragher, & Cooper, 2001) to compete economically. As a result of these changes, employees in European Union (EU) countries report that they are now experiencing reduced psychological well-being, feel job insecurity, and work under tight schedules (European Agency for Occupational Health and Safety, 2004). Similar findings were found for Australian employees when The Australian National Survey (2002) reported that 8,259 employees experienced a high level of occupational stress, with 68% reporting having concerns with stress and pressure at work (Dollard & Knott, 2004). Since organizations require a combination of emotional, psychological and behavioral patterns from workers to cope with the new work environment, these aspects can compromise workers' health and lead to injuries as well (Dollard & Knott, 2004) particularly when employees fail to adapt, don't know how to work when resources are lacking, or fail to have a true assessment of their own capabilities.

In the last two decades, many studies have concentrated on the relationship between work stress and a variety of diseases and issues such as sleeping patterns, health and physiological problems and family relationships (Dolan, 2007) or behavioral consequences such as smoking or alcohol use. Modern companies 'expect employees to be superman every day of the year' (Dolan, 2007, p.14) and as a result employees feel exhausted and suffer burnout. Claims related to occupational stress have also dramatically increased in some countries. In the Netherlands, as reported by Dollard and Knott (2004), claims for

work-related stress increased from 11% in 1967 to 34% in 2004, and in Australia, workers' compensation claims for work-related stress rose by 62% from 1996-97 to 2002-2003 (Dollard, 2007).

The impact on modern workplaces is not only affecting economically developed countries but may be even greater in emerging and developing countries, including Asia (Kortum, Leka & Cox, 2011; Tsui, 2008). With assumptions that adverse working conditions are central factors that affect employees' well-being and lead to severe health problems in employees in developing countries, the present thesis focuses on the situation of working conditions in Malaysia, one of the fastest emerging economies in Asia (World Competitiveness Yearbook, 2007). Studies so far have revealed that Malaysian employees also confront various psychological problems related to workplaces such as depression, job stress and job strains (Nordin, Fatt, & Banon, 2005; Panatik, O'Driscoll, & Anderson, 2009). However, often in developing countries, symptoms related to psychosocial risk factors at work remain under-reported and under-investigated (Burke, 2010). Nevertheless Malaysia may also be confronted with similar problems to the West.

In 2005, from a total of 300 occupational health cases reported to the Department of Occupational Safety and Health, only four cases might be categorized as emerging from psychosocial risk factors (Annual Report, Department of Occuptional Safety and Health, 2005) with one case out of 409 cases in 2006 (Annual Report, Department of Occuptional Safety and Health, 2006). Although few cases were reported, this does not reflect the real situation regarding psychosocial risk problems in Malaysia. One of the reasons is that Malaysian employees are not very aware of occupational health issues (Annual Report, 2006). Some problems in the workplace are evident however. For example, disputes between employees and employers have led to a rising number of cases referred to the Industrial Court, from 3,100 cases in 2001 to 6,979 in 2007 (Labour Bulletin, 2008). For these reasons, research on work psychosocial risk factors in Malaysia is needed to more fully understand the workplace situation.

The impact of globalization such as the undermining of unionism and creating less secure jobs as reported by Dollard (2007) is not new in Malaysia. For example, although nearly 100,000 local workers were made redundant from 2002 to 2006 and this statistic is rising annually, migrant workers are still needed in various industrial sectors. For instance, in the manufacturing sector alone, 630,000 migrant workers were employed (Labour Bulletin, 2007). Employees are now complaining that they are trapped in heavy workload

situations, denied the right to be a union member, working long shifts and are not paid well or are underpaid (Labour Bulletin, 2007a).

The new nature of work does not augur well for employees' good health and well-being, but the incidence of decreasing organization productivity and increasing human problems means that this research is vital. The United States NIOSH Organization of Work Task Force has set four agenda issues for research and development in this area. One of them is data collection to better understand the effects of work on employees (Landsbergis, 2003). The World Health Organization (WHO) has also urged more studies on this topic in developing countries:

> The majority of the developing countries have very poor investment in research and still have many unsolved problems; these are maybe the main cause that explains the paucity in generating proper data and evaluating the impact of the change at work (WHO, 2007, p. 11).

Working Conditions and Job Stress

Historically, most job stress theories have evolved in a Western context. The concepts and terminology used are also borrowed from the research tradition in the West (Liu, Spector, & Shi, 2007). Dollard and Knott (2004) identified three categories of psychosocial risk factors at work: i) job characteristics and nature of the work such as job content/demands, workload, work schedule, job control and physical environment; ii) social and organizational context of work, e.g. organizational culture, interpersonal relationships at work, role in the organization and career development; and iii) individual risk factors such as individual differences and home-work interface.

Psychosocial risk factors are defined as '*interaction between and among work environment, job content, organizational conditions and workers' capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction'* (International Labour Office, 1986, p. 3). Psychosocial risk factors are more subjective than physical and biological hazards, and are harder to measure. Yet, they have an impact on employees' capacity to do their job effectively and have led to mental health problems and suicide.

To date, discussion of the interaction between job setting and stress has been shaped by two influential models, namely the Job Demand-Control (JDC) model (Karasek, 1979;

Theorell & Karasek, 1996) and the Effort-Reward Imbalance (ERI) model (Siegrist, 1996; Siegrist, Siegrist & Weber, 1986). The JDC model (Karasek, 1979) focused on two dimensions of the work environment: job demand and job control. Job demand refers to workload in terms of time pressure and role conflict. Job control refers to a person's ability to control his or her work activities by skill discretion and decision-making authority (van der Doef & Maes, 1999).The JDC model proposes that job strain is a consequence of high job demands (e.g. work overload and time pressure) and low job control (e.g. the potential of an individual to control his or her tasks) (Karasek, 1979). According to this model, if a worker has control over his or her tasks, there will be less stress and an improved learning process (van der Doef & Maes, 1999).

Although over the past two decades the JDC has dominated stress studies (Bakker & Demerouti, 2007), empirical studies have failed to consistently find that negative human emotions resulted from the interaction of demand and control (van der Doef & Maes, 1999). Although the JDC framework is straightforward, Bakker and Demerouti (2007) questioned why autonomy is the most important resource in the JDC model. They argued that variables or predictors concerning burnout and job stress such as emotional demands, low social support, lack of supervisory support and performance feedback should not be neglected (Hakanen, Bakker, & Schaufeli, 2006).

The second model of job stress, the Effort-Reward Imbalance (ERI) model (Siegrist, 1996) emphasizes the effort and reward structure of work (van Vegchel, de Jonge, Bosma & Schaufeli, 2005) rather than the control structure. This model claims that salary, rewards and control are the most important job resources and may compensate for any strain or pressure being experienced by workers (Bakker & Demerouti, 2007). The model is based on the notion that work-related benefits depend on an equal relationship between effort and rewards at work. Efforts signify job demands and/or obligations that are forced on the employees. On the other hand, work rewards are allocated by the employer (van Vegchel et al., 2005) via three transmitter systems: money (e.g., adequate salary), esteem (e.g., respect and support), and security or career opportunities (e.g., promotion prospects, job security and status consistency) (de Jonge, Bosma, Peter & Siegrist, 2000). The ERI model argues that lack of reciprocity between 'effort' and 'reward' leads employees to feel emotional distress (poor health, sickness, absenteeism, stress, etc.).

Recently, a new job stress theory has been proposed, namely the Job Demands and Resources (JD-R) model (Bakker & Demerouti, 2007). The perspective of the JDR is not only the negative side of working conditions, but it also emphasises the positive aspect of

job characteristics. From the perspective of the JD-R model (Bakker, Demerouti, & Verbeke, 2004; Llorens, Bakker, Schaufeli & Salanova, 2006), job demands are defined as "those physical, social, or organizational aspects of the job that require sustained physical and or psychological effort and are, therefore, associated with physiological and or psychological costs" (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007, p.122). Job resources on the other hand are defined as "those physical, social, or organizational aspects of the job that (i) are functional in achieving work-related goals, (ii) reduce job demands and the associated physiological and psychological costs, and (iii) stimulate personal growth and development" (Xanthopoulou et al., 2007, p.122).

One of the most useful features of this model is that it can be used in various work contexts (Bakker & Demerouti, 2007) and it has been tested in various occupations and countries such as in the Netherlands (Bakker, Demerouti, de Boer & Schaufeli, 2003), Germany (Demerouti, Bakker, Nachreiner & Schaufeli, 2001), Finland (Hakanen et al., 2006; Mauno, Kinnunen & Ruokolainen, 2007), Sweden (Hakanen, Bakker & Demerouti, 2005; Peterson et al., 2008), Australia (Lewig, Xanthopoulou, Bakker, Dollard & Metzer, 2007; Lynch, 2007) and India (Duraisingam & Dollard, 2005). The revised JD-R model (Schaufeli & Bakker, 2004) proposed two psychological processes, namely: i) energetic process and ii) motivational process. Energetic process refers to a situation where chronic job demands may exhaust an employee's energy resources and lead to burnout, illness or stress, while the motivational process occurs where job resources inspire employee motivation in the context of work engagement and positive work outcomes (e.g. organizational commitment and employees' effectiveness (Lynch, 2007)).

Although most of the job theories make a significant contribution to understanding the impact of psychosocial risk factors on employees' psychological health and organizational outcomes, it seems that the possible precursors to job characteristics are neglected. In fact, job characteristics are designed (Johns, 2010; Morgeson & Humphrey, 2008), whether by external factors (Sauter & Murphy, 2003), or by the organizational context (Morgeson & Humphrey, 2008; Morgeson, Dierdorff & Hmurovic, 2010) including managerial discretion. Morgeson, Dierdorff and Hmurovic (2010) recently described several possible ways that organizational context can promote better job characteristics, and contribute to positive or negative employees' well-being. One of the possible ways, as mentioned by Morgeson, Dierdorff and Hmurovic (2010), is via organizational climates that may influence individual level outcomes. In a similar vein, using a "meso-perspective", Mathieu, Maynard, Taylor, Gilson and Ruddy (2007) show how employees are linked in

the workplace – actually nested in a complexity of organizational processes such as teams, sub-units (i.e. departments), and how they are also linked to strategic business groups. Erez (2010) goes further by arguing that national culture and values also influence the process of designing job characteristics, as each culture serves a specific priority for individual well-being (i.e. individual vs. collective). These explanations provide evidence that although job stress results from job characteristics (Bakker & Demerouti, 2007; Karasek, 1979), the 'causes of these causes' cannot be overlooked (Dollard, 2011).

Thus, the research built upon the notion that job conditions are created (John, 2010), and extended current research frameworks by adding PSC and globalization as precursors to work conditions. In turn, the research expected that PSC and globalization influenced employee performance through psychological health erosion and motivational pathways (Dollard & Bakker, 2010).

The current research will significantly contribute to the job stress literature, by explaining the antecedents for job characteristics and the impact of these relationships on employees' psychological health and positive work outcomes. The research framework is illustrated in Figure 1.

2.0 Research overview

In general, the overview of the research framework is illustrated in Figure 1.

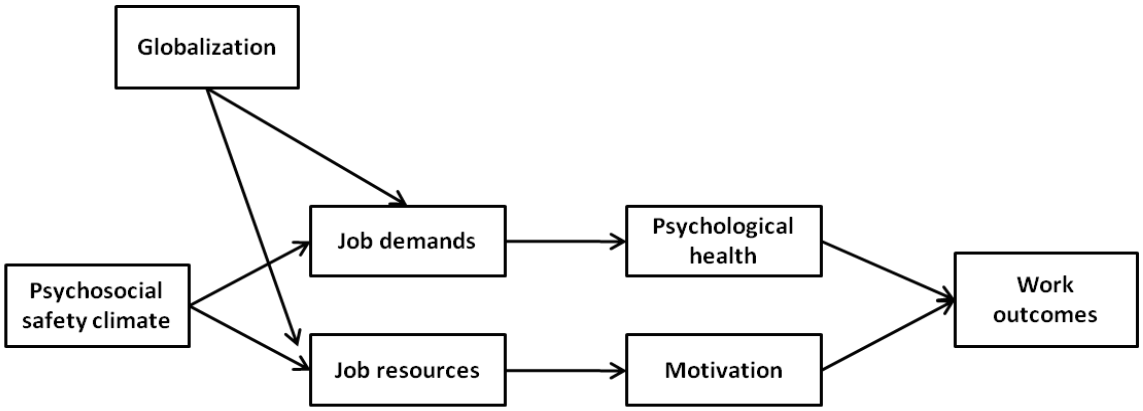


Figure 1. Overview of research framework

Consistent with the argument that working conditions are created (Johns, 2010; Morgeson & Humphrey, 2008), the current research theorized that globalization and PSC are precursors to working conditions. As illustrated in Figure 1, working conditions are

influenced from factors outside work, such as external factors,economic, legal, political, technological and demographic forces (Sauter & Murphy, 2003) or by specific climates (Dollard & Bakker, 2010). The influence of external factors also has been explained in another model, the Determinants of Worker Health model (DWH; Polanyi et al, 2000). This describes how external factors (e.g., technology, socio-economy and government policy) influence organizational practices (i.e., health and safety policy, salary system), managerial effectiveness, and finally job functioning (i.e., physical demands). All of these factors, directly or indirectly contribute to employee health and effectiveness.

In the context of the current study, globalization forces organizations to be more competitive with cost cutting policies, implementation of new systems, cost reduction and expecting employees to work hard. These situations indirectly change the job characteristics, particularly in terms of higher job demands and low job resources (see Dollard, Skinner, Tuckey & Bailey, 2007; Sparks, Faragher & Cooper, 2001). Although increasing job demands are mainly to ensure organisation productiveness, they adversely affect employees' psychological health (Bakker & Demerouti, 2007) and impact on their performance. However, while job characteristics are not necessarily negative, some scholars argue that certain aspects of the job (i.e. job resources) are able to enhance employees' motivation (Bakker & Demerouti, 2007; Bakker, Demerouti & Verbeke, 2004).

Built upon the JD-R perspective, Dollard and Bakker (2010) recently introduced a specific facet climate to investigate the psychosocial risk aspect of jobs. From their perspective, the psychosocial safety climate (PSC) is a precursor of working conditions. Their assumption is based on the idea that working conditions are created from the higher level of the organization (Dollard & Karasek, 2010), or in other words, employers who take care of employees' well-being will create working conditions that are less demanding and have higher resources than those who do not. Some characteristics of PSC are closely related to the safety climate (Zohar & Luria, 2005), using the same terminology and domain such as management priority, management participation, management communication and mangement commitment[1]. However, Dollard and Bakker (2010), and also in a recent publication Dollard (2011), argue that PSC is distinguished from the safety climate, as it focuses on psychological health, while the safety climate mainly focuses on injuries, accidents and physical health.

[1] Due to the thesis is being presented by using 'thesis by journal publications', some of the details and explanation of PSC will also be discussed in Chapters 5, 6, 7, 8 and 9. Discussions on how PSC is distinguished from other climates are explained in each particular chapter, but intensively in Chapter 5.

Bringing both perspectives (globalization and PSC), and integrating these into the JD-R framework, the current thesis focused on how globalization affected job conditions and employees' satisfaction and burnout (see Chapter 4), and also how PSC is related to working conditions, psychological health, job engagement and employees' performance (see Chapters 5, 6, 7, 8 and 9).

Next, the researcher explained what organizational climate is and how it is related to organizational effectiveness. In addition, the current research also provided a brief explanation on the root of the PSC construct, and some debates about climate investigation. These issues were mentioned here as a rationale for the following series of studies, which comprise both quantitative and qualitative data analysis that were subsequently designed and implemented.

3.0 Climate and organizational effectiveness

In general, climate has been defined as '*those aspects of the social environment that are consciously perceived by organizational members*' (Denison, 1996, p. 624). It has been argued that climate is a potential predictor of organizational performance (Luthans, Norman, Avolio & Avey, 2008; Patterson, Warr & West, 2004; Salanova, Agut & Piero, 2005). For over a decade, climate scholars have become very interested in exploring the nature of climate in the organizational context (Kuenzi & Schminke, 2009), particularly in terms of its contribution to specific employees' behaviour (Patterson, Warr & West, 2004). For example, safety climate refers to safety performance (Clark, 2006), while organizational climate relates to productivity (Patterson, Warr & West, 2004). Climate may function as a special tool for organizational effectiveness in that when people work together, they share similar experiences and beliefs that lead to specific behavioral patterns (Salanova, Agut & Piero, 2005). To date, climate examination has been conducted from various perspectives. Although various climates are noted in the literature (e.g. team climate – see González-Romá, Fortes-Ferreira & Peiró, 2009; services climate – see Salanova, Agut & Piero, 2005), what is missing in the literature is the climate for psychosocial health safety (Dollard & Bakker, 2010).

3.1 Psychosocial safety climate: A brief explanation

The current study introduced a new climate construct, namely psychosocial safety climate (PSC) which is a specific facet of organizational climate that refers to 'psychosocial health and safety' (Dollard & Bakker, 2010, p.580). Using a similar assumption to that of the well-known safety climate, PSC refers to policies, practices and procedures for protecting employees' psychological health and well-being (Dollard, 2007a). The basic argument of PSC is that climate flows from organizations' management and leadership, and this affects how management delegates job tasks and how work is created (Dollard & Bakker, 2010). For this reason, PSC is regarded as the precursor of job characteristics (namely job demands and resources), rather than an outcome of work environments. Empirical studies so far support this assumption (Dollard & Bakker, 2010; Hall, Dollard & Coward, 2010).

Theoretically, the PSC construct has been developed in response to job stress literature (Bakker & Demerouti, 2007; Karasek, 1979) and safety science studies (Zohar, 1980). Until Dollard and Bakker (2010) proposed the concept of PSC, no specific climate had been developed to examine psychosocial risk factors and psychological health at work. Kuenzi and Schminke's (2009) review of 89 published articles on organizational climates, did not report any specific climate regarding access to job stress or psychosocial health. A climate that is often used in the relevant literature is that of the safety climate (Zohar, 1980; Zohar & Luria, 2005). However, safety climate is related to physical health, injuries and safety behaviour (Gillen, Baltz, Gassel, Kirsch & Vaccaro, 2002; Larsson, Pousette & Törner, 2008; O'Toole, 2002; Seo, 2005; Siu, Phillips & Leung, 2004).

Borrowing the concept from safety-related studies, Dollard and Bakker (2010) argue that PSC indicates the priority employers give to productivity concerns vs. the psychological health of workers. Similar to the concept of organizational climate (Schneider, 1975), it is argued that PSC is a property of the organization, team or unit: knowing about the climate will provide a good indication of working conditions (i.e., job demands and job resources), worker psychological health, engagement and employees' productivity (Law, Dollard, Tuckey & Dormann, 2011).

Based on assumptions of the organizational climate literature (Patterson et al., 2005; Zohar & Luria, 2005), PSC refers to four dominant themes: (1) management commitment; (2) management priority; (3) management and employee participation and involvement in stress prevention; and (4) organizational communication (Hall, Dollard & Coward, 2010).

When considering the characteristics of PSC, an organization which strongly emphasizes employee psychological health and safety will create job demands that are both motivating and conducive to good health (Dollard & Bakker, 2010). Communication systems will be in place so that risks can be *prevented,* identified and managed, for example, through better allocation of workload, or greater opportunity for recovery. There will be strong participation and involvement of all levels of the organization in stress prevention. This will lead to better information for continuous improvement and will render jobs less stressful (Dollard, 2011). Managers who have little regard, priority, or commitment for worker well-being – as in a low PSC environment – will ignore high demand scenarios and will not supply adequate resources (Dollard & Bakker, 2010). If PSC is what shapes working conditions, then conceivably it will lead to better health and more efficient work practices through these conditions.

3.2 Climate constructs: challenging methodology

Organizational climate has been investigated for more than 60 years, especially in the management literature (Kuenzi, 2008), and in recent decades it has emerged as an important theme (Kuenzi & Schminke, 2009). From time to time, organizational climate has been developed from various perspectives, with specific facets and outcomes (Zohar & Luria, 2005). However there are still questions regarding operationalization of the climate construct. Organizational climate has been defined as 'employees' perceptions of their organizations' (Patterson, et al., 2005). In line with this argument, scholars believe that climate is more relevant to 'psychological climate' and it can be evaluated at the individual level (James & Jones, 1974). Closely related to this notion dominated by researchers who have investigated perceived organizational support (POS, see Butts, Vandenberg, DeJoy, Schaffer & Wilson, 2009; DeJoy, Della, Vandenberg & Wilson, 2010). Although the research at the individual level is common among climate scholars and has dominated the climate literature (for review, see Clark, 2006), there are limitations, especially when climate is conceived as an attribute of the organization.

Several researchers have called for integrating multi-level models in the occupational stress field (Bliese, Jex & Halverson, 2002). Similarly, recently climate scholars have advanced their theoretical approaches using multi-level theories and research designs (for example, Dollard & Bakker, 2010; Zohar & Luria, 2005). There are reasons to believe that job stress processes and phenomena are nested among the individuals in the

work group, within the organization, and that higher level factors could influence the lower level entities (Bliese, Jex & Halverson, 2002; Mathieu, Maynard, Taylor, Gilson & Ruddy, 2007). Given the assumption that 'organizational collectives have their own climate' (Patterson, et al., 2005), organizational climate needs to be investigated from the unit or organizational level. This is coherent meso-thinking that links between the micro and macro levels (Mathieu & Taylor, 2007).

The current research used both approaches – individual and multi-group analysis. While the former could limit the potential of looking at group process, the latter could provide more opportunity to aggregate data by organizational attributes. In the context of the current study, the participants worked in various organizations. However, clustering data within organizational attributes would not be practical as most people probably came from different organizations. For this reason the researcher conducted another survey at the organizational level. Using both approaches could help us to understand the climate phenomenon from both perspectives, each study complementing the other's limitation (Note: report on PSC at the individual level is reported in Chapters 6 and 7, while multi-level analysis is reported in Chapters 5, 8 and 9 in the thesis).

Next, the researcher raises the question about the job stress conception. The researcher highlights this issue as it reflects the approach taken in the current thesis.

4.0 Occupational stress – is there a similar concept in Malaysia[2]?

Since most psychology theory is constructed from a Western perspective (Burke, 2010), another question is, how do Malaysians or Eastern culture workers conceive of work stress? One step that could help to understand Malaysian occupational stress is to use lay theories (Kinman & Jones, 2005). A lay theory has a function to 'establish a cause-and-effect relationship between phenomena' (Furnham, 1997, p. 69). In general, lay theory can be defined as a public explanation of a social behaviour (Kinman & Jones, 2005). Although both lay and scientific theories have their conceptual differences, there are many similarities between them (Rydstedt, Devereux & Furnham, 2004). Parker, Finkel and Indice (1993) found that lay persons and health workers held similar beliefs about the relationship between stress and particular health consequences. However, the definition of stress itself remains unclear. Research by Beehr and Roberts (cited in Jex, Beehr &

[2] I am not discussing details about Malaysian culture here as some explanation has been discussed in Chapters 2, 3 and 7 in their respective papers.

Roberts, 1992) found that the word *stress* in six major journals in organizational behavior between 1985 and 1989 was used in various ways. Twenty-one journals (41%) referred to *stress* as a stimulus condition, 11 (22%) defined it as a response and 13 identified it as a stimulus-response condition. Seven (14%) articles remained unclear of their usage (Jex et al., 1992). Arthur (2004, p. 158), using the analogy of 'six blind men who encounter an elephant', suggested that the only way to reach a true understanding of the meaning of occupational stress is by sharing information with each other. One of the advantages of using a lay theory definition is to determine the distinction between lay people and academic researchers (Furnham, 1997). In a similar vein, Lewig and Dollard (2001) suggested further study to find out how 'employees themselves' perceive the concept.

For the reasons mentioned above, using the lay perspective model is a useful method or technique in obtaining more knowledge about the definition and sources of occupational stress from the Malaysian perspective, rather than using a Western-based definition, particularly in the context of intervention strategies and policies. Previous studies have also found that using the well-developed questionnaires may not be helpful. Jex and colleagues (1992) argued that respondents may interpret stress in many different ways. Chen (1989) cited in Jex et al. (1992) modified Peter and O'Connor's (1980) frustration scale by replacing the word *stress* with *frustration*. Surprisingly, the results showed that the correlation between the modified scale and the original scale was 0.77, indicating that there was no difference in meaning between both words as far as the participants were concerned.

To date, only a few studies (Dewe & O'Driscoll, 2002; Furnham, 1997; Shraply & Gardner, 2001 cited in Kinman & Jones, 2005, p.104) have examined lay representations of occupational stress and the studies have found that employees believed that occupational stress refers more to under-performance and low productivity rather than to psychological strain (Furnham, 1997). Employees had 'little' or 'no control' over the stressors (Dewe & O'Driscoll, 2002) and the majority of employees perceived stress to be a response to workplace events (Shraply & Gardner, 2001). These findings show that employees have their own conceptions about the consequences and outcomes of stress.

5.0 Research problems and aims of the study

The aim of this research was to identify several aspects of psychosocial factors in the workplace – in Malaysia. Since psychosocial risk factors are linked to job stress (Dollard & Karasek, 2010; Dollard & Bakker, 2010), the first stage of this study evaluates the context of job stress in Malaysia, particularly from the employees' perspective (Lewig & Dollard, 2005; Kinman & Jones, 2005). The second stage analyzes the central notion of PSC as the precursor of workplace environments (Dollard & Bakker, 2010) using surveys conducted among working people in Selangor, Malaysia. In addition to this population study, an additional survey was conducted using organizations located in Kuala Lumpur, Selangor and Negeri Sembilan, three states that are close to central Peninsular Malaysia (see Figure 2).

This study not only examines the specific issues of PSC, but also reveals the Eastern perspective on psychosocial risk factors in the workplace. As globalization and the changing nature of work emerge as a new reality in the modern workplace, another issue asociated with job stress is described in the current study. In general, the key questions for this study were:

i) What is the meaning, cause and consequences of job stress for Malaysian employees based on the lay perspective theory? (see Chapter 2)

ii) What are job demands and job resources for Malaysian employees? Are there any similarities and differences from the Western perspective? (see Chapter 3)

iii) Does globalization have the potential to be a precursor to working conditions? (see Chapter 4)

iv) Can PSC be distinguished from other similar climate constructs (e.g. safety climate), and in relation to their capacity to predict employees' psychological health? (see Chapter 5)

v) Is PSC related to employees' performance through job demands and resources? (see Chapter 6 and Chapter 8)

vi) Can emotions at work be explained from a PSC perspective? (see Chapter 7 and Chapter 9)

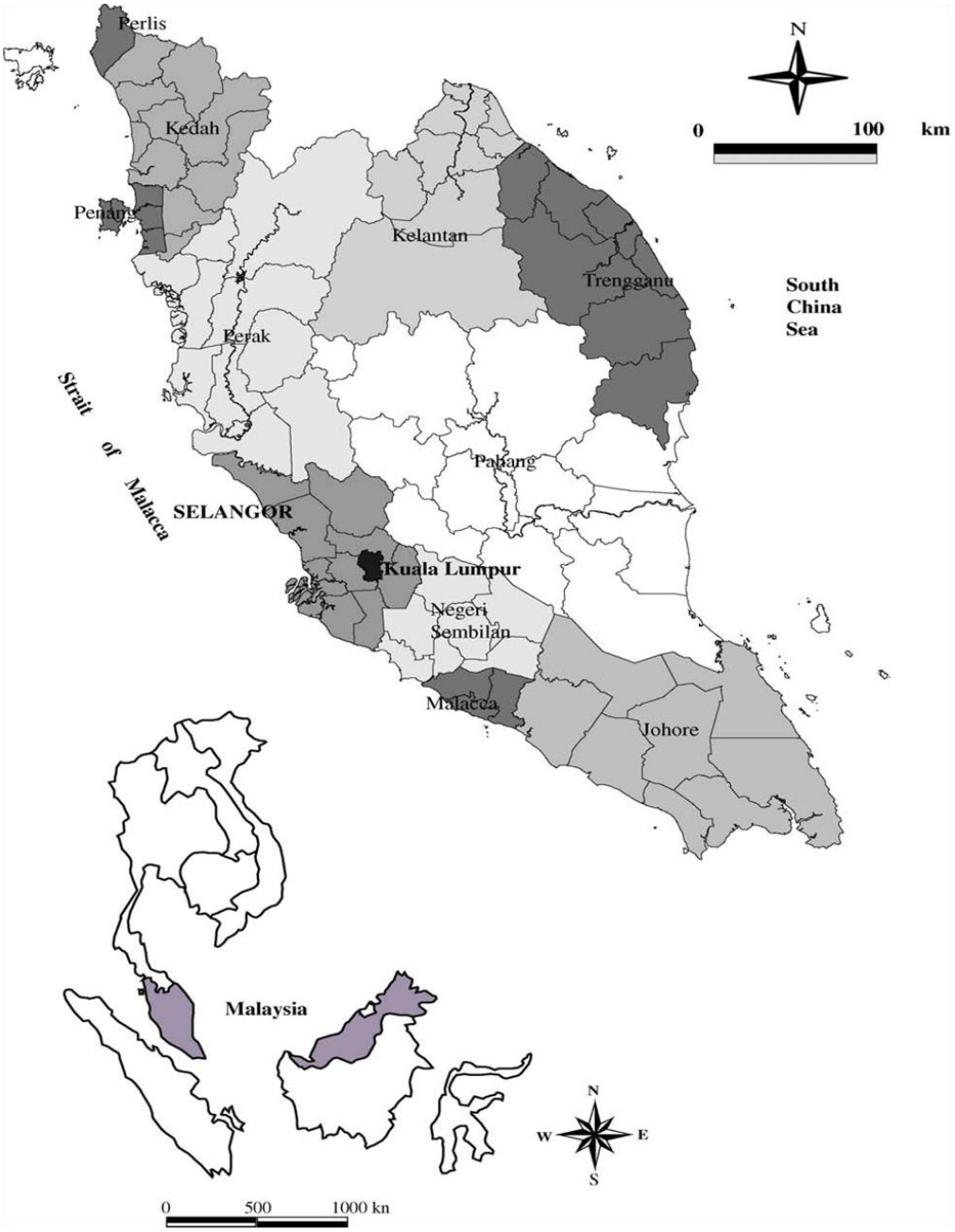


Figure 2. Map of peninsular Malaysia

Sources:
Abdullah, S. A., & Nakagoshi, N. (2006). Changes in landscape spatial pattern in the highly developing state of Selangor, peninsular Malaysia. *Landscape and Urban Planning, 77*, 263-275.

Figure 2. Map of peninsular Malaysia

6.0 Significance of the study

The present study is significant and it is based on three themes that are explained in more detail below.

6.1 Understanding psychosocial risk factors from the perspective of developing countries

The most important part of this proposed research was to generate knowledge for understanding the psychosocial risk factors emerging in Malaysia. To date, the data that we have are very limited. Approximately 75% of the world's labour force (2400 million people) live and work in developing countries (WHO, 2007). In Malaysia, it is estimated that around 10.5 million people work in various industries, ranging from traditional agriculture to high technology concerns (Jemoin, 2006). While the majority of the world's workers live in developing economies, the data on hazardous exposures at work in Third World countries is still limited in comparison to Western countries, for example: Denmark (Rugulies, Bultmann, Aust & Burr, 2006); Finland (Lallukka et al., 2004); United Kingdom (Matthews, Hertzman, Ostry & Power, 1998; Ross, Keynes & McDonald, 1998); other Western European countries (Benach, Gimeno, Benavides, Martinez & del Mar Torne, 2004; Cox, Leka, Ivanov & Kortum, 2004; Siegrist et al., 2004; Tangian, 2007) and Central and Eastern Europe (Pikhart et al., 2004). One study in Asia was conducted a few years ago on the situation in South Korea (Park & Wilson, 2003).

In the Malaysian context, using a Delphi study technique, Sadhra, Beach, Aw and Sheikh-Ahmed (2001) found that occupational stress was given the lowest ranking in research priorities compared to other specific health problems in the workplace. This finding also contrasted to similar research in European countries, which showed that occupational health research was classified as a medium priority in the United Kingdom, while it was a high priority in Dutch studies (Sadhra et al., 2001). However, the authors commented that the differences between Malaysia and European countries may be due to the questions asked, or how the Delphi technique was used.

Recent research by Manshor, Fontaine and Choy (2003), Poon (2003) and Che Ros, Beh, Uli and Idris (2006) has led to a greater understanding of the psychosocial risk factors in Malaysian workplaces. Manshor et al. (2003), for example, found that workloads, working conditions and relationships at work were the main reasons for managers' stress. However, their research only focused on managers who worked for multinational companies and concentrated on sources of stress, not its impact on the job demands or resources.

From a different perspective, Poon (2003) proposed that organizational politics caused occupational stress and low job satisfaction resulting in the trend where employees quit their jobs. Despite efforts to understand the Malaysian organizations' context, this study does not comprehensively anticipate the psychosocial risk factors. Nordin, Fatt and Banon (2005) focused on the validity and reliability of the Malaysian version of the Copenhagen Psychosocial Questionnaire (COPSOQ). Although these authors found that COPSOQ is theoretically valid and reliable for Malaysia, the number of participants (only 50) was not considered sufficient, nor can it be used as a benchmark to implement policy. Using the Malay-validated version of the Job Content Questionnaire, Aziah, Rusli, Winn, Naing and Tengku (2004) studied laboratory technicians in one hospital in Malaysia who experienced stressors such as job insecurity, hazardous conditions and toxic exposure. The majority of the respondents were classified in a passive group (36.9%) and the others (33.3%) were categorized as experiencing high job stress.

All of the above important studies have concentrated on a specific occupation only, have used small size samples in cross-sectional studies and have adapted stress as defined in Western countries. The present study, however, aims to fill a gap not covered in previous research. Most of the previous researchers in Malaysia (Aziah et al., 2004; Edimansyah et al., 2008) are focused only on the JDC (Karasek, 1979) model, and have not investigated the positive effect of job conditions (e.g. job engagement, performance). However, one study using the JD-R approach in Malaysia also examined job performance as an outcome (Panatik, 2010). However, Panatik's study only used a specific occupational group (technical workers) that could limit generalization to the other job settings. Thus, as the current thesis integrated globalization and PSC into the JD-R model, particularly as a precursor to working conditions, we conceive that the present study could provide more detailed explanation on the scenario of job stress and working conditions in Malaysia. Using a series of studies that comprise both qualitative and quantitative approaches would also strengthen the research methodology and findings.

7.0 Overview of research stages

To achieve the thesis aims, the research was designed to include three stages of data collection, and combined qualitative investigation and quantitative survey.

Stage 1 of data collection focused on individual interviews of 48 employees in Selangor, Malaysia using a lay perspective approach (Kinman & Jones, 2005). Focus groups were employed among two groups of employees (manager, $N = 7$ and non-manager, N=8) to explore the meaning of job demands, job resources and work stress.

Stage 2 focused on data collection at a population level, in Selangor, Malaysia using household maps provided by the Department of Statistics, Malaysia. Data were collected from 576 employees (Study 1) and 430 employees (Study 2).

Stage 3 focused on a longitudinal study among 427 employees (56 organizations) at Time 1, and 275 employees (42 organizations) at Time 2 in Kuala Lumpur, Selangor and Negeri Sembilan, Malaysia. Details about the data collection process are illustrated in Figure 3 below:

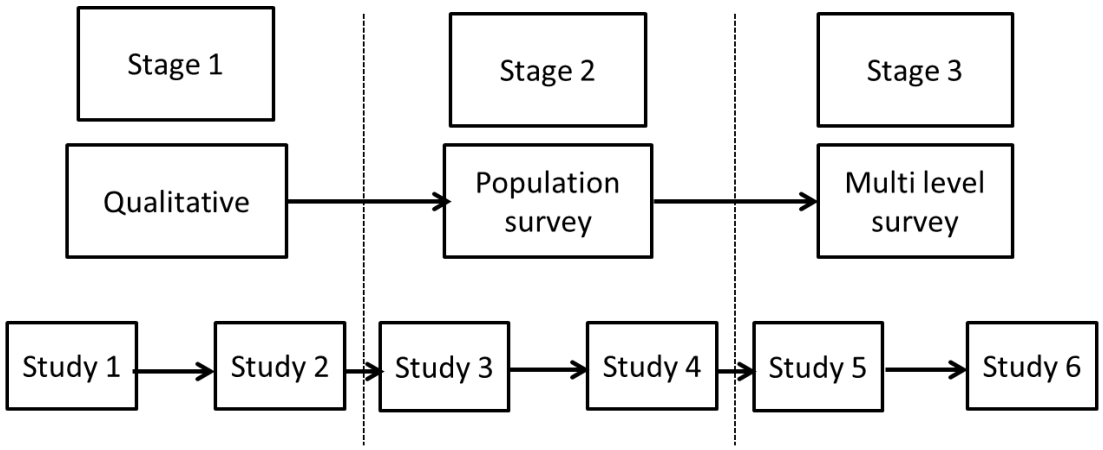


Figure 3. Data collection process

Note:
Study 1: Individual interviews
Study 2: Focus group
Study 3: Population survey
Study 4: Population survey
Study 5: Multi level research
Study 6: Multi level research
⁺Due to time constraint, detail of the outcomes of study 6 has not been reported in the present thesis.

8.0 Conclusion

In summary, this chapter explains the possible causes of job stress, which may be due to factors from outside the workplace or to precursors to job characteristics. The importance of lay theories and employees' description of their working experiences is also a key element in examining the important public health issue of psychosocial risk factors at work. In-depth explanation from the focus group approach also offers useful information on the scenario of working conditions in Malaysia. Considering that each approach has its own strengths and limitations, the research utilized several methods of data collection, including an approach using a multilevel framework consistent with a recent suggestion in the industrial and organizational psychology field (Bliese, Jex & Halverson, 2002; Probst, 2010). The researcher hopes that this study will offer a significant contribution to job stress literature, especially from the developing country and Eastern perspective.

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Part I

Chapter Two

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Lay theory explanations of occupational stress: The Malaysian context

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Abstract:

Purpose – The purpose of this paper is to examine the causes and consequences of job stress in Malaysia and make a comparison between Western and Eastern perspectives.

Design/methodology/approach – A grounded theory approach was used to develop a lay representation of Malay people's descriptions of their experiences at work, including job stress. Interviews were conducted with 48 employees in Malaysia, using six semi-structured interview questions adopted from Kinman and Jones and translated into the Malay language, as a guide.

Findings – Although most respondents perceived that individual factors play an important role in work stress, organizational factors seemed to be the dominant factor identified that contributes to work stress. Respondents also perceived the individual as key to stress reduction rather than management interventions. A new concept emerged in this study that was related to external factors impinging on work (such as globalization).

Practical implications – Organizations should formulate strategies to prevent job stress among employees. They must also be alert to the impact of external factors that are now common in the Malay workplace.

Originality/value – Research of job stress in employees in Eastern cultures is rare. The paper provides in-depth preliminary research which will lead to further investigations of job stress in Eastern workplace settings.

Introduction

Employees around the world have reported that they feel increasingly stressed at work (Murphy and Sauter, 2003). However, the majority of studies on job stress have been undertaken in Western countries, especially in the UK and the US, and also in Canada and Australia (Spector, Cooper and Aguilar-Vafaie, 2002). In contrast such studies are lacking in developing countries (Chopra, 2009; Kortum, Leka and Cox, 2008). Additionally, most job stress theories have originated in Western economies.

There are comparatively few cross-cultural studies of job stress and most of these have adopted a Western approach. This problem has been accentuated by scholars assuming that the concepts of job stress are transferable from country to country or culture to culture (Sanchez, Spector and Cooper, 2006). In general, most cross-cultural studies have used Western-based questionnaires (Liu, Spector, and Shi, 2007), but on occasions these have proved to be unconvincing in regard to documenting 'subjective' phenomena accurately (Frese and Zapf, 1995). The tools fail to explain satisfactorily the concrete features of job stress (Liu et al., 2007). To overcome this problem, scholars have argued that using qualitative methods can lead to a better, more in-depth understanding of job stress (Liu et al., 2007; Narayanan, Menon and Spector, 1999)

Therefore this study emphasises the use of qualitative methodologies to develop a more detailed understanding of work stress from a Malaysian perspective (Furnham, 1997; Kinman and Jones, 2005). Specifically, it will examine the meaning, causes and consequences of job stress and how people in Malaysia deal with stress. We will compare the results obtained with those from a similar study in the UK (Kinman and Jones, 2005). We believe that by using this method, we can provide new insights about how job stress is understood in an Eastern developing country. Finally, we consider these in the light of Western concepts of job stress.

The significance of research in Malaysia

Malaysia is a fast emerging economy in South-East Asia (World Competitiveness Yearbook, 2007). The country practices a moderate form of Islam (Tong and Turner, 2008) and the population consists of three major ethnic groups, namely Malays, Chinese and Indians. Almost all Malays are Muslim, the Chinese are either Buddhist or Christian and the Indians are either Hindu or Christian. Although Malay culture and the Islamic tradition

have been accepted as the country's mainstream 'culture' (Neo, 2006), other religions are tolerated[3].

Although there have been few studies on job stress in Malaysia (Sadhra, Beach, Aw and Sheikh-Ahmed, 2001), they have focused on similar stressful workplace experiences reported in developed countries. In Malaysia, for example, employees reported that they experienced stress that is provoked by several factors such as workloads, organizational politics and a lack of autonomy in the workplace (Aziah, Rusli, Winn, Naing and Tengku, 2004; Edimansyah et al., 2008; Huda et al., 2004; Manshor, Fontaine and Choy, 2003; Poon, 2003). Recent data reported that disputes between employees and employers have led to a rising number of cases being referred to the Industrial Court, from 3,100 cases in 2001 to 6,979 in 2007 (Labour Bulletin, 2008).

Our study contributes to the cross-cultural literature in two ways. First, it compares Eastern and Western explanations of job stress. Our study adds an interesting dimension, since Malaysia is mainly Islamic (Hassan and Dollard, 2007). Previous cross-cultural studies on job stress in Asia have focused on China or Taiwan (Chang and Lu, 2007; Liu, Nauta, Spector and Li, 2008; Liu et al., 2007; Lu, Cooper, Kao and Zhou, 2003; Lu, Kao, Chang, Wu and Cooper, 2008), countries that are ethnically homogeneous and where most people follow either a Buddhist or Confucian philosophy. A well-known international comprehensive study about job stress and well being at work in cultures in Asia, East Europe and Latin America (Spector et al., 2007; Spector et al., 2004; Spector, Cooper, Sanchez et al., 2002) did not include Malaysia. The studies mentioned above discovered similarities and differences between Eastern and Western culture in regard to the nature of job stress, yet were silent in regard to Muslim countries.

One previous study compared Iranian and American managers (Spector, Cooper and Aguilar-Vafaie, 2002). Iran and Malaysia share similarities such as Islam being the official religion. They are also characterised as collective societies and have a *high power distance* between rulers and the ruled (Spector, Cooper and Aguilar-Vafaie, 2002). However, unlike Iran, Malaysia is a pluralistic and hybrid culture that embraces various ethnic groups and religions, and this makes it almost unique (Hassan, Dollard and Winefield, 2007). Indeed, Malaysia is not an absolutely theocratic state such as Iran (Thio and Neo, 2006) because the government in Malaysia has incorporated British common law as part of the Constitution.

[3] It should be noted that religious freedom applies only to non-Malays. The Federal Constitution of Malaysia (Article 160) states that Malays must profess the Muslim religion (see Neo, 2006) and each Malay 'remains in the Islamic faith until his/her dying days' (Thio and Neo, 2006).

Second, while some studies on job stress have been conducted in Malaysia (Aziah, Rusli, Winn, Naing and Tengku, 2004; Edimansyah et al., 2008; Manshor, Fontaine and Choy, 2003; Poon, 2003) and used Western questionnaires as their research tools, no study has used lay theories (derived from the ordinary person) in the Malaysian context. This study includes a preliminary investigation using qualitative methods to evaluate job stress in Selangor, a state of Malaysia, prior to our more general population study.

Job stress from a cultural perspective

Culture plays a pivotal role in the manifestation of human feelings and behaviours (Hofstede, 2001; Triandis, 2004). While individualism emphasises personal achievement (Triandis, 2006), collectivism places a priority on group or communal goals over the needs and ambitions of the individual. For example, in one cross-national job stress study that used both qualitative and quantitative methodologies in a study of Chinese and American employees (Liu et al., 2007), the authors discovered important differences. In the qualitative study, Americans who had been brought up to believe in the 'cult' of individualism complained about lack of job control as their major source of job stress. In contrast the Chinese in their collectivist system reported that they experienced stress due to firstly, mistakes at work and secondly, job evaluation. This study also discovered that American employees experienced significantly more anger, frustration and feeling overwhelmed, while Chinese employees indicated that they felt more anxiety and helplessness.

One study that compared Muslim employees was conducted among Iranian and US managers (Spector, Cooper and Aguilar-Vafaie, 2002). At one level, this study found that Western findings could be generalized to the Middle East. However, using a more detailed analysis, the study also found that Americans reported having a higher sense of well-being and fewer sources of pressure (e.g. roles, home/work balance, and support) than Iranian managers. Although both samples experienced similar stressors that led to reported strain, the results were to some extent culture-specific.

Another remarkable study that involved 24 countries (Spector, Cooper, Sanchez et al., 2002) set out to find whether Western findings were applicable to other cultures. Although the study did not specifically examine job stress, the investigation on how collective and individualistic cultures have influenced well-being in the workplace proved useful. Unexpected results were found in that the study failed to show conclusively that individualism/collectivism moderated the relationship between locus of control in the

workplace and well-being. Spector et al. (2004) selected three culturally distinct regions involving a total of 15 countries – the US and Canada, China (i.e. Hong Kong, Taiwan) and Latin America (i.e. Argentina, Brazil). A stronger relationship was found between work stressors (e.g. work hours) and work-family stressors in white Anglo samples than in Chinese and Latin American samples. Their study also showed that culture does wield an influence on the ways in which people perceive their longer working hours and how these affect family matters.

Grounded theory as a methodology to analyse job stress

The grounded theory approach (Corbin and Strauss, 1990; Glaser, 2002) was employed in our study to enable a more comprehensive examination of the concept of job stress among Malaysian employees. Although quantitative data can also be used in grounded theory (Glaser, 1999), in practice, qualitative data is more useful as it offers enriching descriptions of people's lives (Glaser, 2002). Using this strategy is considered crucial (Corbin and Strauss, 1990), particularly for preliminary work (Hallberg, 2006) because it enables the discovery of new phenomena as they emerge in the data (Glaser, 2002; Hallberg, 2006).

One of the explanatory devices that fits the grounded theory criteria is lay theory (Dewe and Trenberth, 2004; Furnham, 1997; Kinman and Jones, 2005; Lewig and Dollard, 2001). Lay theory can be defined as the public explanation of a social behaviour (Kinman and Jones, 2005). Lay theory reflects people's beliefs (Furnham, 1997; Pollock, 1988). Therefore a combination of grounded theory as a basis for conceptualizing data (Glaser, 1999) and lay theory as a tool for obtaining opinions about job stress is considered useful. Lay theory also enables the utilization of 'cause-and-effect relationships' (Kinman and Jones, 2005), and sometimes functions to explain complex and multidimensional phenomenon (Furnham, 1997). Consequently, a combination of both approaches is very relevant.

Although both lay and scientific theories have their conceptual differences, there are obviously many similarities between them (Rydstedt, Devereux and Furnham, 2004). Parker, Finkel and Indice (1993) found that lay persons and health workers held similar conceptions about the relationship between stress and particular health consequences. In a similar vein, Clark, (2003) found that the lay perspective sometimes underlines concepts that have similarly been described by professional discourse.

The importance of lay theories in understanding job stress

To date, only a few studies have examined lay representations of job stress (Dewe and O'Driscoll, 2002; Furnham, 1997; Sharpley and Gardner, 2001). The studies have generally concluded that employees believe that occupational stress refers more to under-performance and low productivity rather than psychological strain (Furnham, 1997). Employees believed that they were unable to control the stressors (Dewe and O'Driscoll, 2002) and that most perceived stress was a response to workplace events (Sharpley and Gardner, 2001). Kinman and Jones (2005) in their qualitative research on 45 individuals in the UK, found that although participants agreed that organizational factors contributed to work stress, employees perceived the impact of stress as affecting them more than the organization. The majority of respondents in Kinman and Jones' study (2005) categorized occupational stress as a stimulus-response (47%), and most of them perceived occupational stress as a stimulus (33%). Only 9 respondents perceived job stress as a response.

Sharpley and Gardner (2001) interviewed 36 managers of successful companies in Australia. The researchers concluded that most managers indicated that occupational stress emerged as a response to the work environment, while the others emphasized work stress as a stimulus. Only one respondent categorized job stress as a relationship between stimulus and response. Although managers have different views on employees who were involved in a job stress intervention program, they labelled the workers who attended such programs as 'weak' and failing to adapt to job demands.

In a similar way to the lay theorists, Harkness et al. (2005) used discourse analysis to measure the meaning of occupational stress among twenty-two female clerks in Canada. Although using solely female participants may constitute a gender bias the researchers' conclusions were interesting. Work stress is one way of workers expressing their discomfort when they were not treated well, such as being under-valued or under-appreciated. Furthermore, an employee who fails to cope with stress was regarded as 'abnormal', in line with what was found in Sharpley and Gardner's (2001) study.

Lay beliefs about work stress have also been collected using a different strategy. Lewig and Dollard (2001) analysed fifty-one articles which were published in major newspapers in Australia in 1997. The results showed that work stress is represented in the media as an 'economically costly epidemic' (p.179), and as a response to poor working conditions. Despite the newspaper reports that sub-standard working conditions led to some health problems, this phenomenon was represented as a public sector crisis and not applicable to privately-owned and operated industries or businesses.

Previous studies as stated above may have discovered a plethora of lay beliefs on work stress (Harkness et al., 2005), but do not explain job stress among employees in developing countries. Are there any similarities or differences in lay discourse between workers in Western and Eastern countries? Most researchers (Dewe and O'Driscoll, 2002; Furnham, 1997; Kinman and Jones, 2005; Lewig and Dollard, 2001; Sharpley and Gardner, 2001) using lay examinations, have discovered that occupational stress is viewed as a consequence of workplace experiences or as an interaction between stimulus-response. However, none of these specific studies was conducted in Eastern or developing countries. For these reasons, we explored lay theories to enhance our understanding of job stress in Malaysia, the first study of this kind from an Eastern perspective.

Method

Participants

A total of 48 employees (31 male and 17 female) participated in the study. Participants were selected from a range of occupations (e.g. manager, lecturer, teacher, newspaper reporter, government employee, production worker, nurse, medical doctor).

Materials

Six questions were used and they derived from the semi-structured interview questionnaires developed by Kinman and Jones (2005). We used their questions to ensure that we had comparative data. The questions were as follows:

1. What do you think the term ''occupational stress'' means?
2. Some people think there is more work stress. To what extent do you agree with this view?
3. Are there any particular jobs or working conditions that you think are more stressful than others? If so, what are they, and why do you think they are more stressful?
4. Are there any particular types of people that you think would be more likely to suffer from stress? If so, what types of people are they, and why do you think they are more stressed than others?
5. If somebody was experiencing stress at work, what would be the signs?
6. A number of things can be done to help people manage stress at work. If people are stressed at work what do you think can be done about it?

Since our study used the Malay language to communicate with participants, the term 'occupational stress' or 'work stress' was translated as '*tekanan kerja'*. Sometimes the word '*stres*' (Malay spelling for stress) was also used. Both of these terms are acceptable in Malaysia.

Procedure

Following Kinman and Jones (2005), participants were selected using purposive sampling via personal and professional connections. Participants were first approached via phone or email where we invited them to participate in our study. We selected them on the basis that they were currently working, were between 18-55 years of age and we tried as much as possible to ensure that each occupation sampled (e.g. manager, lecturer, production worker) involved both genders. We also invited employees from different ethnic groups to participate. Individual interviews which lasted from five to twenty-five minutes were conducted in the Malay language. All recorded interviews were transcribed manually, and then analysed using NviVo version 8 software (rater 1, AI).

The framework for analysis initially consisted of the themes and sub-themes developed by Kinman and Jones (2005). For themes arising in our analysis that were not identified by Kinman and Jones (2005), new categories were constructed (e.g. religion, anger). To ensure reliability and avoid interpreter bias, a proportion of data was analysed by a second rater with expertise in job stress. A proportion (15%) of the sample was accessed by another researcher as this benchmark has been employed by Kinman and Jones (2005). The inter-rater reliability between the two coders was *Kappa* = 89.29. This provided evidence of reliable rating, hence rater 1 completed the remaining coding.

Results and Discussions

In general, the main finding from this study was that, at the first level of analysis, Malaysians do not differ markedly from Westerners in terms of the way they classify job stress (e.g. stimulus, stimulus-response, response). However, as the analysis progressed, we found that Malaysians and Westerners differed in the way they perceived organizational stressors. Our study also revealed that Malaysians use different methods to reduce or manage their job stress. A slight distinction between Malaysians and Westerners can also be described in terms of their perception regarding the consequences of job stress.

Job Stress - a complex phenomenon?

In general, the main themes arising in the study were consistent with previous Western studies in suggesting that environmental stressors and individual factors are significant sources of job stress (Kinman and Jones, 2005). Respondents emphasized that environmental stressors are more important than individual factors as causes of stress for employees. Interestingly, whereas respondents perceived that mainly organizational factors produced unfavourable emotions among employees, they believed that the individuals themselves were responsible for reducing their occupational stress. This result is similar to those reported in a study of New Zealand managers (Dewe and O'Driscoll, 2002). Furthermore, although job stress is sometimes recognised as either beneficial, harmful or unavoidable (Harkness et al., 2005), our analysis found that respondents only indicate job stress as being detrimental and unavoidable.

In our study, we characterized job stress perceptions in terms of a stimulus belief, a response belief or an interaction between stimulus and response beliefs (Jex, Beehr and Roberts, 1992). In general, stimulus refers to any aspect of the work environment (e.g. workload, role conflict) that is potentially harmful to employee well-being. These conditions are also known as 'stressors" (Jex and Yankelevich, 2008). In contrast, response refers to an individual's reaction to job stressors. Employee reactions to these unfavourable working conditions are also termed 'strain' (Jex, Beehr and Roberts, 1992). Finally, job stress is also categorised as an interaction between both stimulus (job stressors) and responses (individual strain) (Jex, Beehr and Roberts, 1992; Kinman and Jones, 2005).

Our study found that 39% of respondents (N = 19) revealed their understanding of occupational stress as an interaction between stimulus and response, a further 39% of respondents defined occupational stress as a stimulus (N = 19) and the remaining 22% viewed job stress as a response (N =10). This pattern is similar to Kinman and Jones (2005) as their respondents also conceptualized job stress as a stimulus and response (47%), a stimulus (33%) or a response (20%). Our respondents' conceptualization of job stress as an interaction between stimulus-responses can be detected in their statements like: "*job stress is when we felt pressure with our tasks, we are not feeling well and we felt it is better to leave the job"*. People also believed that occupational stress is derived from a stimulus (negative conditions at work). For example: "*Job stress is work overload experienced by employees. It may be because of management, too many duties, unnecessary tasks, tough to handle or don't get support from teamwork*". Their classification of job stress as a stimulus also can be found in statements like: "*work stress is …heavy workload. Everything is fast paced, a condition of the environment which is not comfortable…"* An example of job

stress classified as a response is: "*we always feel pressure, not only at working times, but we still think about the job at off-job time*".

Overall, our results show similarities with the study by Kinman and Jones (2005). One of their respondents described job stress as: "*It is a mental thing - something that is in people's head… An emotional thing, not a physical pressure*…". Similarly, our study shows a typical understanding when one respondent indicated: "*In general work stress is mental confusion, not a physical pressure. It's as a consequence of interaction between employees with several factors at work"*. This translated statement reveals that at one level, there are similarities between Western and Malaysian lay beliefs regarding job stress.

Job Stress – External factors?

The majority of participants (77%) agreed that occupational stress had increased recently. Their view is encapsulated in one statement: "*This is an undeniable fact. What we needed in the past was different from what we want now. Everything is moving fast. People need to move fast for them to cope with others. If not, we will be left behind".* When asked whether the working environment in recent years has changed, most respondents (80%) also emphasized that the nature of work has changed dramatically due to changes in how life is lived socially. Some (20%) indicated the impact of social and economic forces in Malaysia has changed the work environment and trapped employees in new career challenges. One respondent described her husband's work*: "When the business becomes bigger, the workload becomes higher. Like my husband's company…right now he comes back very late…10 p.m or 11 p.m…and Saturday and Sunday has to go to work. Sometime his stress is* [transferred] *to me, [even though] myself is steady. This is another type of stress*".

Employees also noticed that the impact of globalization creates more competitive working conditions. This finding supported the proposition that an organization's work model (Murphy, 2002; Sauter and Murphy, 2003) itself not only caused job stress but was also a consequence of external factors. One respondent commented: *"We are now living in a competitive world. We must ensure that our organization is able to compete with competitors. That's why the present job is more stressful. If we fail to deliver, we cannot cope with the other players. In the past we were more relaxed because of a lack of competitors".* Another respondent indicated that: "*Maybe the company needs to survive in the current globalization time, the company needs to compete, and should act aggressively. When company activities become more aggressive, it will affect employees. Companies should not survive, if they are not innovative, maybe companies can't stay longer. So they*

should find new technologies; they encourage employees to learn new technologies, it produces job stress".

Social change and advanced technologies have also had an impact on the business organization's environment. For example: "*Advanced technology. It also contributes to job stress. Before this we worked manually but now with technology, using a computer, the organization's vision and mission is to become faster. They need to make a very fast profit, because they already have advanced technology; people become robots. For some people technology may help their job, but for some people there are problems, people need to learn*". Employees also identified information technologies as leading to change in job features, for example: *"Work instruction becomes faster. They can reach us everywhere, cell phone…e-mail. There are no spaces between human interactions. With the current system, they can reach us even when we are overseas".*

Stressors: Environmental or individual?

An analysis of recorded statements (Table 1) reveals that sources of job stress comprise mainly environmental stressors (or 55%) and the rest comprise individual stressors (43%). This finding is in line with the statements on type of stressors. However, a few statements (2%) emphasized job stress as 'a test given by God' – a new facet which was not identified in previous studies on work stress, nor in textbooks. One respondent said, *"God will test us with stress…just to know whether we still remember Him".*

In relation to the workplace environment, time pressure or deadlines were described as the most common stressor (10.28%). One respondent said: "*In the Malaysian context, whether you are stressed or not, they don't care. The important thing is you must finish your tasks, and submit your report. They give you only two or three days to complete. Finally, without sufficient time, you just report on surface problems, not on factual issues. In the end, the actual problems arisen [at work] can't be solved".*

In some cases, deadlines and work overload combined to make work more stressful. One respondent described the situation: "*Job stress occurs when we are faced with a lot of tasks. They set us a very tight deadline and we can't cope with it. While we are still working on existing jobs, we need to complete the other jobs*". Another respondent expressed feelings about his job: "*Sometimes, they gave us a very important job, but we need to fulfil it in a short period of time".* Although employees are expected to meet their deadlines, sometimes they are also provided with only limited knowledge. Work overload as a common work hazard is well documented in Western studies. This experience seems to be

similar in Malaysia as well and was reported in two other quantitative studies (Aziah et al., 2004; Huda et al., 2004).

Table 1: Categories of perceived organizational stressors

Type of stressors	Number of statements/percentage (current study)	Number of statements/percentage (Kinman and Jones, 2005
Environmental stressors	**(55% of overall statements)**	**(78% of overall statements)**
Job insecurity	3 (2.80)*	20 (7.43)*
Time pressure/deadline	11(10.28)	22 (8.17)
Work overload	6 (5.60)	17 (6.31)
Boring and repetitive work	3 (2.80)	12 (4.46)
Lack of support	1(0.93)	12 (4.46)
Responsibilities for welfare of others	1(0.93)	11 (4.08)
Lack of job control	1(0.93)	11(4.08)
Lack of resources	1(0.93)	11(4.08)
Conflict with managers/co-workers	ND+	10 (3.71)
Dealing with stressed people	ND	10 (3.71)
Long working hours	ND	9 (3.34)
Others	32 (29.90)	62 (23.04)
Individual stressors	**(45% of overall statements)**	**(22% of overall statements)**
Personality	19 (17.75)	25 (9.29)
Lack of person-environment fit	10 (9.34)	5 (1.85)
Poor time management skills	6 (5.60)	2 (0.74)
God test	2 (1.87)	ND
Others	11(10.28)	30 (11.15)

*Note: *The number in the parentheses denotes percentage of total responses. + ND = not detected. ++ Some items in these categories were excluded for analysis because they were too small or not relevant for comparison.*

In our study, one customs officer revealed his frustration about his current job: "*We worked with multi-tasking jobs. We experienced a lot of cases, everything must be handled, and everything must be investigated, even at midnight. I worked day and night. Sometimes, 2 or 3 days we do not even go to bed, but our salary is still the same (not increased)*". Moreover, respondents also became involved in certain tasks that were not their responsibility. One respondent, working as a secondary school teacher, stated: "*Sometime we need to be involved in tasks that not supposed to be for teachers. We need to arrange*

chairs, tables. This task is supposed to be completed by general workers, but they don't want to do it. As a teacher, we just follow the headmaster's instruction".

Our study also found that Malaysian employees did not mention the importance of job control as a job stressor, although this variable is frequently discussed in the Western literature. However, other studies could explain the fact that Asian employees did not emphasize control at work as much as Western employees. For example, Spector et al. (2004) discovered that Chinese employees generally work as a collective entity and do not put an emphasis on job control, which is a typical trait of American employees. This finding echoes the research of Hamid (1994, cited in Spector et al., 2002) who indicated that an individual-oriented culture may prioritise job control, but this is missing in collective-oriented societies. However, Huda et al. (2004) in their study in Malaysia found that job control is considered to be an important source of stress among employees. Their study focused on academics in university settings and therefore their conclusion could be expected as respondents were more educated and typically have more autonomy at work.

While Kinman and Jones (2005) found that UK employees experienced conflict with their co-workers or supervisors, our research did not produce any such statements regarding such tensions. However, it is possible that respondents' statements may have hidden any experience of conflict or conflict had an indirect character. Asian cultures generally tend to promote group harmony (Liu et al., 2008; Sanchez et al., 2006), and therefore Malaysian employees may not outwardly express their dissatisfaction with their colleagues or supervisors in the interests of maintaining group harmony.

Although organizational factors were identified as the biggest contributor to work stress, individual characteristics were also cited as causes of stress. In the study by Kinman and Jones (2005), employees commonly referred to personality as an individual stressor. Similarly, our study found that personality was frequently mentioned by respondents. This suggests that Malaysian employees have similar notions about individual stressors as their Western counterparts do.

Employees with a pessimistic outlook appear to be people who fail to adapt to working conditions. One respondent said: "*If someone perceives negatively, they will become stressed. But if they look at something in positive ways, of course stress can be avoided. But if they are always negative, pessimistic, they will experience stress, even if they are just cleaners. But, if they look positively, even if they were appointed as managers, CEOs, Members of Parliament, they will perform the tasks well".* According to the respondents' views, people are responsible for their own stress experiences. For example,

"If someone has high motivation, they will accept pressure and not perceive it as a kind of stress, but for those people who do not take the job seriously, even small things (tasks), they will feel the stress".

Lack of person-environment fit was also perceived as a significant factor that caused job stress. One respondent, who worked for an international manufacturing company, said: "*Your attitude toward your work, [will depend on] your interpretation [of your job] description. Everybody has their own job descriptions, has a list of tasks. If I think in this way, I'm not supposed to take on other jobs. If I have this kind of attitude, of course we will be trapped with stress. For me we must have the right attitude toward our work".*

Another respondent indicated that lack of interest about the job also contributes to job stress, for example: "*...if someone has chosen a job that they enjoy, they will be happy, they can work even 24 hours per day, because they enjoy their job…but if they have a job which does not interest them, it will cause them stress…".* Another respondent stated: "*…maybe they chose a job they were forced to work in, for example a doctor who has chosen a medical field because of family pressure…of course they will experience stress".*

Individual poor time management was also identified as a source of stress among employees. One respondent claimed of others that: *"They have no planning, so it is madness to not prioritize [their work]. At the end of the day, people complete tasks that do not add value [instead]…it will consume a lot of time. At the end, [it will result in] maximum levels of stress*". Respondents also identified a type of person who always procrastinate, or delayed getting a job done.

How Malaysians deal with job stress

The results in Table 2 show that Malaysian employees use both individual and organizational strategies to manage stress. However, although a couple of strategies are perceived as important, the results suggest Malaysian employees mainly focus on individual strategies (83.1%) rather than organizational interventions (16.9%).

Our results are therefore consistent with Kinman and Jones (2005) whose respondents emphasized the individual, with slighter smaller percentage of statements emphasizing the individual (76% for individual strategies; 24% for organizational strategies). Time management, self analysis and expressing emotions were identified as important ways to cope with occupational stress in the Kinman and Jones (2005) study. Unlike them, we found that Malaysian employees underlined the importance of talking to their manager as

their main strategy for coping with occupational stress, followed by slowing down, religious activity and talking to friends.

The importance of talking to one's manager was suggested by one respondent: "*If stress is because of workload, the better way to answer it is to discuss it with your superior"*. Another respondent suggested that: "*We should look at the antecedents (of stress). If the problems occurred because of work itself, it would be better to discuss it with the superior…"*.

Table 2: Stress management strategies

Strategies	Number of statements/ percentage (current study)	Number of statements/percentage (Kinman and Jones, 2005)
Individual strategies	**(83.1% of overall statements)**	**(76% of overall statements)**
Time management/personal organization	5 (7.04)*	9 (10.97)*
Self analysis/Introspection	4 (5.60)	8 (9.76)
Exercise	2 (2.81)	6 (7.31)
Hobbies, interests, leisure	1 (1.40)	5 (6.09)
Depends on individual – (what works)	1 (1.40)	4 (4.87)
Change your reaction/attitude	ND+	4 (4.87)
Medication/medical advice	ND	3 (3.65)
Talk to your manager	9 (12.67)	2 (2.44)
Slow down	7 (9.85)	2 (2.44)
Take leave	5 (7.04)	ND+
Talk to your friends	5 (7.04)	ND
Religion – back to God	6 (8.45)	ND
Others++	14 (19.7)	19 (23.2)
Organizational strategies	**(16.9% of overall statements**)	**(24% of overall statements)**
More control, information and knowledge	ND	6 (7.31)
Organizational in general	1(1.40)	4 (4.87)
Investigates sources	6 (8.45)	2 (2.44)
Others	5 (7.04)	8 (9.76)

*Note: *The number in the parentheses denotes percentage of total responses. + ND = not detected. ++ Some items in these categories were excluded for analysis because they were too small or not relevant for comparison.*

The importance of talking over problems with a manager is expected as Malaysia is a country that has been classified as having high power distance (Hofstede, 1991); employees

are expected to be well mannered with others, accept hierarchical structures and show loyalty to their leaders (Abdullah, 1992 cited in Rose et al., 2007). Moreover, Malaysian employees are expected not to confront or disagree with their superiors due to the shared cultural belief of people having a different and clearly defined status (Rose, Suppiah, Uli and Othman, 2007). This situation has been reported in other studies (Lu et al., 2000) which illustrates that unlike the results shown in Western studies, Asian employees show more respect to their superiors. This result is not unexpected because this is characteristic of Malaysian organizations, norms and culture.

Although not many researchers have examined the usefulness of religious activities as coping strategies (Levin and Vanderpool, 1989), our results suggest that spiritual beliefs are important for some Malaysian respondents. Although they believed that occupational stress is the consequence of work, an interaction between the individual and workplace, their whole experience is said to be the work of God. For that reason, "back to God"' is one of their solutions for managing stress. One respondent indicated: "*…to be close with God…do a lot of reading of al-Quran, and thinking of dying*". Another respondent disclosed: "*Even though we should have a positive personality, people should return to their religion…*". One respondent revealed that his method for relieving job stress is to perform some religious deed such as making a donation, and via *redha* and *tawwakal [being fully accepting of a si*tuati*on even if it is difficult]*. This finding is consistent with the study by Loewenthal, Cinnirella, Evdoka, and Murphy (2001) which showed that Muslims are more likely to engage in religious activities when dealing with depression, than to seek professional help or use other methods. In a similar vein, a study among cancer patients in Israel found that religiosity played an important role in coping with illness (Lea Baider et al., 1999).

With only 16.9% of responses describing organizational interventions, it seems that Malaysian employees expect that they should manage their occupational stress. It might also show, however, that occupational stress intervention strategies are still underdeveloped in Malaysian organizations. We were also not able to detect any suggestions or responses from interviewees suggesting that organizations should provide any suitable training or train employees on how to manage their stress. One respondent even thought that there are no ways to reduce stress: *"…even though we provide motivation talks…it cannot solve the problem…maybe we should ask employees themselves…sometimes by sending them to training, but in the end it still doesn't work".*

For most participants, investigating the source is a most important solution for occupational stress. For instance, it was stated: *"We should investigate the main factor…then we can solve it*" or *"…whether people stress because of work, or because of their boss, or external problems or marital problems. From them we can solve the problems"* or *"their boss should ask them".* However, although participants tended to blame the organization, it should be emphasized that this study gathered information using the *participant perspective* (Randall, Cox and Griffiths, 2007). Thus further investigation is needed from a management perspective. Alternatively, using a different strategy (e.g. recording participants' narrative during the process of an intervention) could also be a useful method.

Consequences of job stress: What do lay representations tell us?

The consequences of job stress in this study (see Table 3) seem to be similar to those reported by Kinman and Jones (2005). Their results suggested that people perceived job stress as having various psychological (28%), behavioural (30%), physical (22%) and cognitive consequences (20%). Despite this close similarity, however, our analysis found that Malaysian employees perceived occupational stress as having a strong psychological impact (42%), followed by behavioural (26%), cognitive (18%) and physical (14%) domains.

From the 42% of responses in psychological outcomes, most deal with depression-unhappiness (12.94%) and anger (11.76%). Tension-anxiety-worries were the most prominent psychological outcomes (12.56%) in Kinman and Jones' (2005) study. Our study reveals that the percentage for our Malaysian respondents (2.35%) was too small to represent a meaningful outcome. While depression-unhappiness is the most mentioned consequence for Malaysian employees, this outcome is relatively small for UK respondents (4.83%). Our result is consistent with other Malaysian studies (Aziah et al., 2004; Rusli, Edimansyah and Naing, 2008) which proposed that job stress influences employees' depression. It may reflect the fact that in Malaysia, where many employees are still not familiar with how to manage job stress, they may not actually recognize that they have depression.

Interestingly, while anger outcomes were not documented in Kinman and Jones (2005), our study shows a different pattern in that employees highlighted this outcome repeatedly. Some comments regarding anger were: *"very fast to get angry", "we get angry very easily", "they will be angry when dealing with the public"* and so on. This result

contrasts markedly with the findings in other collective cultures (e.g. for China, see Liu et al., 2007) while Americans tend to exhibit more anger than their Chinese counterparts (Liu et al., 2007). In the case of Malaysia, anger may result from being unable to achieve organizational goals; frustration may in turn lead to aggression (i.e. Frustration-Aggression hypothesis, see Dollard et al., 1939, cited in Fox and Spector, 1999). Alternatively, it may result from a lack of organizational support or suggestions regarding appropriate methods for employees to deal with stress.

Table 3: Categories of perceived outcomes of occupational stress

Outcomes	Number of statements/percentage (Current study)	Number of statements/percentage (Kinman and Jones, 2005)
Psychological outcomes	**(42% of overall statements)**	**(28% of overall statements)**
Tension-anxiety-worries	2 (2.35)*	26 (12.56)*
Depression-unhappiness	11 (12.94)	10 (4.83)
Anger	10 (11.76)	ND+
Others	13 (15.29)	22 (10.62)
Behavioral outcomes	**(26% of overall statements)**	**(30% of overall statements)**
Irritability–being argumentative	3 (3.53)	*18 (8.69)*
Marital difficulties	1 (1.18)	*14 (6.76)*
Absenteeism	7 (8.23)	*6 (2.89)*
Others	11 (12.93)	24 (11.59)
Physical outcomes	**(14% of overall statements)**	**(22% of overall statements)**
Poor physical health	1(1.18)	16 (7.72)
Migraine and headache	5 (5.88)	ND
Others	6 (7.06)	29 (14.00)
Cognitive outcomes	**(18% of overall statements)**	**(20% of overall statements)**
Poor standard of work /making mistakes	6 (7.05)	20 (9.66)
Poor concentration	1(1.18)	10 (4.83)
Others	8 (9.41)	12 (5.79)

*Note: *The number in the parentheses denotes percentage of total responses. + ND = not detected. ++ Some items in these categories were excluded for analysis because they were too small or not relevant for comparison.*

In relation to behavioural aspects, the respondents believed that job stress influences human performance at work, specifically with respect to absenteeism. For example: "*Employees tend to be lazy at work, their faces show an unhappy mood, have a tendency to take leave, get MC (medical certificates) and absenteeism increases*". One respondent told us: "*A very easy symptom that you can see…people tend not to come to work, take MC. He or she tries to escape from the issues being raised. The short cut (way) is to do this (absenteeism)"*. However, in a similar category, we found that UK respondents perceived job stress has more of an impact on irritability, and being argumentative (Kinman and Jones, 2005). On the other hand, Malaysian employees did not indicate being argumentative as a consequences of job stress as in the UK study.

This may be explained by the fact that Malaysian employees work in a collective sense and try to avoid conflict scenarios (Liu et al., 2008). Kinman and Jones (2005) also reported respondents indicating that job stress has implications for marital relationships. However, we found a reverse situation where our respondents did not_indicate marital conflict as a consequence of job stress. This finding can be explained in terms of one's work being important as it supports a family in a collective-oriented community (Hassan et al., 2007). Similar conclusions have been reported in previous research in collective cultures (e.g. Spector et al., 2004) which indicated that work functions to make a better life for the family. For these reasons, Malaysian employees – in contrast to Western individualist cultures - do not regard job stress as influencing family harmony detrimentally.

In relation to cognitive categories, respondents emphasized poor work standards as a consequence of job stress. Comments such as *"fail to finish tasks*", *"can't concentrate on the job*", *"deliberately made a mistake*", and *"deliberately waste time*" arose in our study. These results suggest that Malaysian employees have similar beliefs to Western employees about the impact of stress on worker performance, and this reinforces conclusions made in studies on other collective cultures (Liu et al., 2007). However, there are significant differences between Malaysian employees compared to those in the UK (Kinman and Jones, 2005). While we mapped physical health outcomes, we found that Malaysian employees did not perceive them as a major consequence of job stress. Since there are no similar studies in this area, we can assume that Malaysian employees are still not fully aware of these consequences (Sadhra et al., 2001) because they are not looking at the impact of job stress on their health as much as Western communities do. For example, employees in Malaysia neglect to highlight their health problems at work (*Annual Report*,

2006), and employers still expect them to work even if they are not feeling well. This is a common situation in developing countries (Chopra, 2009). In summary the main domains proposed by Kinman and Jones (2005) were found in the responses here, but we found some differences in the relative emphasis in the outcome domains. Furthermore within these domains we note some differences between Eastern and Western countries concerning psychological outcomes (i.e. depression and anger vs. anxiety) and in physical outcomes (i.e. poor physical health vs. migraine and headache).

Conclusion and future research

This study showed that job stress is a global phenomenon (Spector et al., 2004). It occurs in both Western and Eastern workplace settings. Malaysian and UK employees share similarities in particular aspects (e.g. organizational factors as major stressor and prevention strategies). This may be expected as Malaysia is a Commonwealth country and has adapted British systems in some aspects of its administration, legal and education policies. Some lay arguments in the present study show that the conceptualization of job stress is mainly an interaction between unfavourable working conditions and individuals' characters. Our finding also suggests that organizational and individual factors have an impact on employees' job stress, and employees use preventive methods to deal with stressors in a Malaysian context (Quick, Quick and Nelson, 2000).

However, the cause, impact and the way people interact with job stress is different. Cultural traditions, expectations and norms influence the way people think about and react to job stress. Organizational factors are perceived as stressors for Western and Eastern employees, but work environments have unique features that affect employees' job stress. Respondents in both this study and Kinman and Jones (2005), emphasized the individual's responsibility to reduce occupational stress, rather than what the organization could do. This situation seems to be unfair as organizational factors emerge as the source of job stress, but employees are expected to deal with it or resolve it in some way. However, culture influences the way employees react to job stress; Malaysian employees choose to avoid conflict and maintain harmony at work (e.g. talk to manager), while UK employees use their initiative (e.g. time management) or look for more effective methods of job control.

A new category that emerged in this study was made possible using the grounded theory approach. The impact of globalization and external factors were represented by Malaysian employees as important sources of job stress. Recent papers have described

multi-factorial models that explain work stress, including external (e.g. political, economic), organizational (e.g. supervisory practices), task level (e.g. demands, resources) **(**Sauter and Murphy, 2003) as well as individual factors (Dollard and Kang, 2007). These external factors have not been mentioned in previous lay perspective research. Therefore our research indicates that employees in developing countries are alert to these external forces, as they impact on and change the nature of their workplaces.

For these reasons, future research should give consideration to developing new tools that reflect a multi-level of job stress (e.g. external, organizational and work context) to examine job stress in the developing countries. It may not only enhance our understanding of occupational stress in the developing countries, but can help avoid the assumption that the nature of job stress is the same or similar in all countries.

Practicality

This study presents preliminary research on job stress from the lay perspective in Malaysia. It not only represents the first study of this kind in Malaysia, but could be the first such study in an Eastern Muslim country. Although the findings may explain the job stress scenario in Malaysia, it may also enhance our understanding of job stress in developing countries. The study found that Malaysian employees have a similar conception about job stress as their Western counterparts. Despite these similar conceptions, the way they react to job stress may differ, perhaps because culture functions to influence the way people's beliefs are articulated. Organizations should create a better work environment because this was identified as a major source of job stress. On the other hand, given that external factors are now becoming job stressors, policy makers could propose a suitable solution to protect employees from new threats emerging in the Malaysian workplace environment.

Limitations

Interviews were undertaken to gain valuable information from employees about their job stress experiences. However, in our study, respondents were not very forthcoming in expressing their feelings and experiences, and did not actively make conversation. This situation is very common in the Malaysian workplace setting (Schermerhorn and Bond, 1997) because of the power distance and living in a collectivist culture. Malaysians have also been influenced by the need to avoid the '*malu'* (ashamed) personality (Goddard, 1996) and not to make conversations complicated. In our study, we used informal discussions to build rapport and trust in order to create a better communication process.

Most participants were contacted via e-mail and phone to inform them of our intention to conduct this study. Although some interviews were quite short and people spoke quite quickly, we decided to use these conversations because they answered all the questions and answers ranged from 300-350 words. This proved to be suitable for analysis.

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Chapter Three

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Job characteristics: What can we learn from the East?

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Abstract

Since being introduced in 2000, the Job Demands and Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2000) has been studied extensively in various Western countries. Although the JD-R proposition is not proscriptive about specific demands and resources variables, scholars have used common variables as demands (e.g. workloads, deadlines), and as resources (e.g. support). The question is whether the common variables in the JD-R model that had their origins in Western formulations are applicable in developing countries. In this paper, based on grounded theory, we conducted focus group interviews to investigate specific variables that may apply in Malaysian workplaces. Two focus group interviews (N=13) were conducted with two groups of respondents (managers and non-managers) who worked for private and public sector organizations. Data were analysed using a thematic content analysis strategy. The study found that new variables (e.g. organizational politics, bureaucratic factors) emerged as new demands not generally explored in JD-R research, whereas similar demands were identified at a job task level (e.g. deadlines). Regarding resources these were mainly identified as in other Western research (e.g. support). Job challenging and exploring new things were identified as pleasurable aspect of work. This finding suggests that using qualitative methods is crucial to explore the psychosocial concept of stress at work to uncover cultural differences that are apparent between Malaysian and Western employees.

Keywords: *job demands, job resources, qualitative studies, job stress, JD-R*

Introduction

Job characteristics are considered to be important antecedents related to employees' well being and health (Van den Broeck, Van Ruysseveldt, Smulders & De Witte, 2010). Although job characteristics emerge as a fashionable topic in the job stress area, Burke (2010) has noted that there are only a few studies on job stress in the developing countries. Most job stress theories are based on the Western perspective (Liu, Spector, & Shi, 2007; Spector, Cooper & Aguilar-Vafaie, 2002). One of the recent job characteristics stress models arising from the Western tradition is the Job Demands and Resources (JD-R) model (Bakker & Demerouti, 2007).

The JD-R model introduced two types of job characteristics, namely *job demands* and *job resources*. Job demands refer to an employee's responsibility in his or her job, or more simply "*things that have to be done*" (Schaufeli & Bakker, 2004, p. 296). Specifically, Bakker, Demerouti and Euwema (2005, p. 170) have defined job demands as "those physical, social or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs". On the other hand, job resources can be described as "those physical, psychological, social or organizational aspects of the job" (Schaufeli & Bakker, 2004, p. 296) that may energise employee work targets, moderate job demands and intensify personal progression (Bakker & Demerouti, 2007). While job demands are associated with employees stress, job resources function to boost employees' engagement.

While job demands and resources are regarded as important job characteristics, work value is another variable associated with employee job stress. People may value their work for various reasons, such as financial, status or pleasurable aspects of their work environment. Van den Broeck, Van Ruysseveldt, Smulders and De Witte (2010) argue that work value also influences job characteristics, and strengthens the relationship between job characteristics and employee well being. Kalleberg's (1977) has listed six dimensions of work values that are associated with employees satisfaction, including *intrinsic components (*characteristics of job itself), *convenience* (job characteristics that provide creature comforts), *financial* (such as pay, benefits or security) *relationship with co-workers* (whether the job permits employees to make friends or friendly co-workers), and *career*

(good chance of promotion) and adequacy resources (resources from organisation such as support from supervisor).

In the current paper, we examined the JD-R model, and in addition we also investigated what are the important work values for employees. So far, the JD-R model has been tested in various occupational settings in many countries. This model has been used for examining employee job stress and well-being in countries such as Germany, Finland, Spain (see Llorens, Bakker, Schaufeli, & Salanova, 2006), and Australia (Lewig, Xanthopoulou, Bakker, Dollard, & Metzer, 2007). However, there are some limitations. For example, nearly all of the studies using the JD-R approach are Western countries, and most of them were derived using English terminology. A problem that sometimes happens when translating English questionnaires is that could have a different meaning for non-native English speakers, or some job characteristics may lead to cultural-specific job stress perception (Liu, Spector & Shi, 2007). For example, "I love my job' would be normal language usage among English users, but in Spain, the word 'love' refers only to people, not work (Sanchez, Spector & Cooper, 2006). These limitations can be resolved by using a qualitative approach, which could reveal more and emerging phenomena than a quantitative survey.

Another limitation is that no study has used a qualitative approach to examine the JD-R model in the Eastern work settings. The previous studies in Western countries could limit an in-depth understanding of the nature of job demands and job resources in developing countries. For example, although work intensity is regarded as part of job demands and leads to job stress in Western contexts, a study by Burke and El-Kot (2009) found something interesting. Their study of Egyptian managers revealed that work intensity not only led to negative outcomes (i.e. job stress), but also predicted positive outcomes (i.e higher job engagement). Given the inconsistent findings from Western and developing countries, the current study used a focus group approach to gain a better understanding of job demands and resources in a Malaysian setting.

We believe that the experiences of employees, and their description, and meaning ascribed to job demands and job resources are crucial since previous research on job stress research discovered that qualitative research sometimes yields different findings from research that focuses only on quantitative data. For example, Liu, Spector and Shi (2007) found that there are differences in results on job stress consequences when comparing qualitative and quantitative methodologies. Similar conclusions have been found by Idris, Dollard and Winefield (2010) using in-depth interview where they found unexpected

results from employees' description of their job stress experiences (e.g globalizations as job stressor). Narayanan, Menon and Spector (1999) urge the use of qualitative methodology to get more explicit information about the nature of job stress. Our aim for the current study was to examine how Malaysian employees conceptualize and describe job demands and resources at work. Our study can contribute to the job stress literature in various ways. So far, most job stress studies in Asia are from China or Taiwan (Chang & Lu, 2007; Lu, Cooper, Kao & Zhou, 2003). Second, scholars agree that there are differences between collective and individualistic culture that influence how people perceive job related stress (Duraisingam & Dollard, 2005; Liu, Nauta, Spector & Li, 2008). Hopefully, our study will add to the job stress literature, especially in understanding the recent JD-R model and the extent to which it generalises outside the Western context.

What are job demand and resources?

Although the JD-R model is similar to the Job Demands Control (JDC) model (Karasek, 1979) that emphasises working characteristic as major factors contributing to employees job stress, the JD-R model is more flexible, and not limited to specific variables (Bakker & Demerouti, 2007). Scholars who introduced the model believe that every occupation has its unique job demands and resources that are closely associated with job stress (Bakker & Demerouti, 2007). Employees' job demands and resources depend on the occupation (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007) and these may well differ between jobs. However, several variables such as workload, emotional demands, physical demands, work-home interference or organizational change are often used in relation to job demands (Bakker, Demerouti & Uewema, 2005; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

The main notion of the JD-R model is that some employees will experience job stress in conditions of high job demands, and low job resources (Bakker & Demerouti, 2007). While job demands can adversely affect employees' health, resulting in burnout, job resources play a crucial role in boosting their motivation, through engagement (Schaufeli & Bakker, 2010). With the recent increasing use of the JD-R model among job stress scholars (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Lewig et al., 2007; Llorens et al., 2006), the question is whether the common variables in the JD-R model that had their origins in Western formulations are applicable in developing countries. For example, while job control is regarded as an job resource in most the JD-R studies it is apparently not important in some cultures such as in China (see Nauta, Liu & Li, 2010), and certain

aspects of job demands could perceived differently for employees outside the Western context (Burke & El-Kot, 2010). Due to such inconsistencies, Duraisingam and Dollard (2005) for example, urged for the need to find out specific job demands and job resources variables for developing countries.

Method

Design

In this study, we used focus groups. The advantage of using this method is that it allows the researcher to gain insights into people's knowledge and their employment experiences. For these reasons, this study used qualitative data, based on the focus group method to discover and gauge employees' own experiences of the demands and resources in their workplace.

Participants

Samples were chosen through purposive and professional networking (see Idris, Dollard & Winefield, 2010; Kinman & Jones, 2005). Participants were selected from various organisations that represent a wide range of businesses and occupations. To ensure that our research sampling represented a range of occupations, we tried to contact as many participants as possible, from different organisations (i.e. oil and gas, manufacturing, media, university, school, hospital, construction, services etc). Thirty-five respondents were first approached by phone, and if available, were then contacted via e-mail to brief them about the research. In some cases, if the contacted respondents were unable to participate, we also asked them if they could suggest work colleagues or others who were in a similar position to them. We also asked them whether they worked in managerial or non-managerial position. From 35 contacted people, only 20 were willing to participate in our study. However, on the date when the focus group sessions were conducted, only 13 participants attended the session. We considered the nature of power distance (Hofstede, 1994) in Malaysian workplace that may impede interaction between managers' and non managers' discussion. Therefore we used separate focus groups consisting of people at the managerial level and non-managerial level. A separation between the groups could enhance our understanding about the similarities and differences in perceptions of demands and resources between employees who are involved in managerial tasks and non-managerial duties. Two focus groups were formed, managerial level (N = 6) and non-managerial level (N = 7) who worked in various occupations.

Procedure

Each focus group discussion was facilitated by a group leader (i.e. research assistant) and the discussion lasted approximately 180 minutes for the manager group, while the non-manager group discussion lasted 150 minutes. Both discussions were recorded with the participants' consent. At the beginning of each session, the moderator briefed the group about the reasons for the study, and group members were encouraged to express their opinions freely about their experiences, knowledge and any related issues about their job. Participant information forms were also distributed to them to explain the nature of the focus group and the aims of the study. When all participants agreed to participate in the research, the consent form was disseminated to all participants. The moderator's role was to encourage any special issues that occurred during the session, or monitor any unnecessary dialogue that may have arisen. After discussion, each group member received a nominal fee, and group leaders expressed their appreciation for their participation.

The discussions were conducted in the Malay language. The questions asked were as follows:

1. What are the most helpful things that ensure your job runs effectively or smoothly?
2. Would you say that these factors represent 'job resources'?
3. What are the factors at work that make you feel stressed?
4. Would you say these factors represent 'job demands' or simply the most demanding aspects of your job?
5. What are the most pleasurable aspects of your work?

We also had a problem in translating some terminology in the current research. Given the lack of a formal translation for the terms 'job demands' and 'job resources' in the Malay language, in the current study we interchangeably used Malay and English when discussing a term with participants. We explained to them the closest equivalents of 'job demands' and 'job resources'. In general, we used 'tuntutan pekerjaan' for job demands. For job resources, we used either 'pendorong pekerjaan' or 'penggalak pekerjaan' both of which represent a close meaning to 'job resources'.

Analysis strategy

Coding themes in our analysis were based on themes that had been published in previous JD-R studies (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Bakker, Demerouti & Euwema, 2005; Bakker, Demerouti, & Schaufeli, 2003; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Bakker et al. 2007; Demerouti, et al., 2000; Demerouti, et al., 2001; Hakanen, Bakker, & Demerouti, 2005; Hakanen, Bakker, & Schaufeli, 2006; Llorens, et al., 2006; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Bakker, 2004; Xanthopoulou, et al., 2007). We first transcribed verbatim interviews from tape recordings. A content analysis was conducted to identify the main themes to emerge during the interviews (Kinman & Jones, 2005). Data analysis was performed by the first author. Standards of analysis were used in accordance with Kyale (1996) to avoid bias in the interpretation of data, we engaged another scholar who was familiar with job stress in Malaysia to validate our analysis. Following separate analysis, themes were matched and in case of any disagreement between the themes arising, the first author made an adjustment to ensure that there was consensus on themes.

Using this method, we categorised job demands and resources themes as they emerged in our study. However, we created new themes for those arising in our analysis but not occurring in previous JD-R studies.

Results and Discussion

What are job demands for Malaysian employees?

Although employees may describe their work experiences and nature of job stress from their own perspectives (Kinman & Jones, 2005), at the first level of analysis, our focus group participants revealed that job demands were conceived similarly among Malaysian employees as they are in the West. In general, most participants highlighted the familiar job demands variables discussed in the Western literature. This could reflect the idea that globalization and the changing nature of work have influenced employees in both developed and developing countries work settings (Sauter & Murphy, 2003).

As illustrated in Table 1, from a total of 69 statements recorded for our analysis, we found that deadlines are described as the most common job demand in the workplace (12 statements). One publishing company worker said: "*In my field, the most stressful part in my job is deadline. Deadline is the word that is always said by my boss, by 'hook or by*

crook' I must finish my tasks". Similarly another respondent who worked as a newspaper reporter said: "*As I have finished my assignment [field work], then within 1 hour I must complete my story. Then we have a meeting to discuss tomorrow's deadline, but at the same time I also need to make amendments to my current story as suggested in the meeting. Then my boss pushes for pictures to be inserted. Deadlines again. I face a similar process on every work day"*. Another respondent who worked in the construction sector said: *"In my job, we always try to compete with tender jobs. Although we know the submission date exactly, sometimes it will not always happen. For example, during the last month, we were informed only one day before the deadline for tender submission*".

Table 1: Job demands at work

Demands	**Number of Statements**
Deadlines	12
Organizational politics	6
Bureaucracy /red tape	5
Expectations of others	5
Little support	5
Dealing with clients/customers	4
Workload	4
Little feedback	3
Role conflict	3
Unclear goals	3
Fast pace	2
Job security	2
Dealing with difficult people	2
Problems with tools/information technology	2
Organizational culture	2
New performance system	1
Supervision/leadership	1
Communication problems	1
Other	
Individual factors/personality	6
Work-family conflicts	1
Lack of recognition	1
Total	**69**

Interestingly, organizational politics emerged in our analysis as a job demand. Some previous JD-R studies have not included organizational politics in their investigations. One respondent stressed his opinion: "*What I see, in Malaysia [workplaces] now is very political. Peer politics. This is very annoying. When you meet someone at certain events, they will ask you, 'how are your [organizational] politics*?" Because organizational

politics are sometimes perceived as unfair threat to employees (Ferris & Kachmar, 1992; Vigoda, 2002), respondents also mentioned this situation in their organization. One female manager indicated: "*What I experienced, when someone [from a particular ethnic background] was appointed as a manager, they will favour their own ethnic group employees rather than others. Even if their subordinates [from the same ethnic group] failed to complete tasks, that is still okay*". Another respondent shared this experience in the workplace: "*In the past, when I worked for one company owned by [ethnicity], I think I have learned more. But when I worked for [another ethnicity], I think they play a lot of political games. Before I could go to bed and sleep easily, but now I have problems [thinking about organizational politics]*'.

Respondents also mentioned that bureaucratic issues are part of the demands of their job. So far, in our review of the most recent Western articles that focused on the JD-R model, this aspect was not reported (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Bakker, Demerouti & Euwema, 2005; Bakker, Demerouti, & Schaufeli, 2003; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Bakker et al. 2007; Demerouti, et al., 2000; Demerouti, et al., 2001; Hakanen, Bakker, & Demerouti, 2005; Hakanen, Bakker, & Schaufeli, 2006; Llorens, et al., 2006; Mauno, Kinnunen, & Ruokolainen, 2007; Schaufeli & Bakker, 2004; Xanthopoulou, et al., 2007). One officer who worked for a government agency noted: "*For me, all of these [bureaucratic issues] are part of my job demands. I can't distance myself from these because government has many policies and departments. I'm lucky because I worked in a technical department. If not, I'm sure that I could face a lot of these hindrances*". One manager who worked in one public sector department stressed: "*I agree that stress occurs in all work places. However, in the government agencies, we can't say that because their system [bureaucratic] is bad; we have the option to choose another system. In fact, the system is there and was decided on by policy makers. Whether we feel stressed or not, we need to face this fact. What we can do only is to adapt to the stress*".

Bureaucratic problems not only occurred in the public sector but in the private sector as well. One manager who worked for a multi-national firm said: "*Bureaucratic issues are a problem in organizations. A very simple thing sometimes becomes complicated because of bureaucracy and red tape. It is unnecessary stress and leads to real stress*".

Another important aspect that was perceived as a job demand was the level of expectation of others, whether from one's supervisor, co-workers or subordinates. One female manager expressed this opinion: "*Sometimes we feel trapped by other people's*

expectations. We may have performed our work well but we wonder if we have done the right thing". Another manager shared his experience of when he had worked abroad: "When I was in Germany as a project leader, and worked with some workers from Italy and France, all of them reported to me. I felt stress about whether I could perform". Another respondent remarked: "*As a manager, I have superiors and sub-ordinates. I feel stress about what my supervisor's expectations are, and at the same time I am also thinking about my subordinates' expectations*".

Low or little support also emerged in our study. One respondent said: "*To accomplish tasks we actually need support from others. But if we have a problem with support, I think we will fail to deliver the tasks*". In such case, low levels of support combined with lack of recognitions created more complicated working conditions. For example, one respondent remarked about her experience at work: "*I feel stressed when other people don't want to appreciate our work. Of course, I don't expect their nice words. Yet sometimes they criticize my work. They don't want to share their experiences and knowledge. That makes me feel unmotivated".*

Other demands reported in our study include workload and dealing with clients/customers. These particular aspects have been discussed extensively in previous studies (Bakker, Demerouti, de Boer, & Schaufeli, 2003). In conclusion, job demands as described by our respondents are more associated with the work context and group dynamics in the workplace. Unlike deadlines and support, organizational politics, other people's expectations and bureaucracy have rarely been discussed in previous research using the JD-R model. However, scholars of job stress have found that organizational politics and bureaucracy are associated with poor performance among employees (Wallace, Edwards, Arnold, Frazier, & Finch, 2009) and act as stressors in the workplace (Vigoda, 2000, 2002). In combination they were identified as hindrance stressors problems (e.g. Wallace et al., 2009).

Job Resources: How were they perceived?

Job resources play important roles in energising employees' motivation. As indicated in Table 2, our analysis found that the most important job resource among respondents was related to social support. From a total of 36 statements made, 12 statements discussed the importance of social support.

One respondent expressed his opinion about the importance of support: "*the manager is actually a middleman. We get directions from top management; we pass it on to*

sub-ordinates. If we don't have enough support, we can get nothing done". Another respondent said: "*Even if we have a strong information technology system, if we don't have support from other; we are unable to perform effectively. Both advanced systems and team work complement each other*". One female worker remarked: "*As a publication worker, the most important things that make my job run smoothly is only if I have a group of supportive people, a good editor, excellent publisher, and an artist who delivers on time. If all of them could not meet deadlines, it would make my job much harder*".

Table 2: Job resources at work

Job Resources	Number of Statements
Social support	12
Knowledge	4
Management quality	4
Information communication technology	3
Experience	2
Networking	2
Finance/salary	2
Family	2
Job control/Autonomy	1
Clear goals	1
Career development	1
Feedback	1
Love own job	1
Religious	1
Total	**37**

Besides the importance of support, management quality also played a crucial role as a job resource. One respondent made the following statement: "*I can perform work well if I work in a well organized environment. I can do my job if no one has disturbed me. Sometimes my job is interrupted by subordinates, sometimes by superiors. So, I think management should ensure everything is well organised*". Another respondent indicated: *"Everything must be in order. The system must operate in an appropriate way, authority, workflow, guidelines, and team work and so on*". In the modern workplace, information technologies have been emphasised as a crucial aspect of work. One respondent indicated that: "*In the current working environment, we are no longer depending on old filing systems. We need a current information technology system*". Another respondent expressed the need for information technologies as part of work in an increasingly competitive world.

As he said: "*For me, to ensure that I am up to date with the knowledge, I must obtain help from people who work on websites. This helps me to improve my job"*. One tutor who worked at a university expressed her opinion: "*I'm very particular about computer facilities. I am very demanding regarding the latest technology. If it is not provided, it will make me stressed*".

Interestingly, although some previous JD-R studies emphasised job control as part of job resources, this study found that Malaysian employees did not mention this variable as much as Western workers did. In our recent study (Idris, Dollard & Winefield, 2010), we also found a similar trend when Malaysian respondents did not drew attention to this theme. We can assume that in a collective society where the power distance (Hofstede, 1994) is very high between executives and employees, people might not be concerned about exerting control over their own job.

In conclusion, we found both similarities and differences regarding job demands and resources perceived by Malaysian employees compared with Western employees. We found that, while some job demands are coherent with JD-R model (i.e. deadlines), Malaysian employees also identify some job demands not referred to in previous Western studies (i.e. organisation politics). We found however that for job resources variables, there were not many differences from the Western literature. Our findings could imply that each country has its own unique job characteristics, and not all conform to the Western stereotype.

Workplace is not only an evil. What did they say?

Jobs do not always create problems for employees, but work also has meaning for employees (Van den Broeck, Ruysseveldt, Smulders & De Witte, 2010). In this study, participants described various aspects that might be valuable for them. As indicated in Table 3, job challenges and exploring new things were reported as beautiful things at work. One respondent described his experience as follows: '*For me, if we feel engaged with our job, we are not longer concerned with the financial aspect, or benefit. The most important things are to prove our potential. I am even able to deal with a big project alone...*'. Another participant said: '*For me, I am very excited if I can achieve my work target...able to complete my task within a deadline'*. *One newspaper told his experience: 'For me, although I know that my job is very demanding, sometimes need to work until midnight. Sometimes my supervisor calls me to meet someone, although we know that people might sleep on that time. Sometime, he asks me to find a story at 10.00 pm, and deadline at 12 o'clock at midnight. But, if I am able to achieve a target..This was very amazing for me'*.

Exploring new things is also described as one of the pleasurable experience in the workplace. One manager said: '*Before this I worked in accounting department, and then Imoved to Information Technology section. Although I felt difficult on the first time, now I feel happy to get a new knowledge*'. Another respondent, said: *I worked for a private company. Before this I work as a planner, but now as a QS (Quantity Surveyor). I feel sometime going to work is like going to school as well. We are able learn new things, share experience with a new boss. For me...this was a great thing that we gained from the work.*

Table 3: Pleasurable aspects at work

Pleasurable aspects at work	**Number of Statements**
Job challenging	11
Explore a new things	10
Internal satisfaction	8
Financial	7
Appreciation by others	5
Job control	3
Conducive working environment	3
Total	**47**

Internal satisfaction or attachment to job was also one of the important factors that made employees feel happy with their job. One participant said: '*For me...people feel engaged with their job because they get satisfaction from their job. For example, if teacher...if they work because of money, they only deliver their job as what was describing in their job description. But, if they have interest in their job...feel responsible...I think this is the best way*. Another participant said: '*If you ask me what is pleasurable..I already worked for more than 10 years. I recognised that...I love this job. I feel engaged and more responsible. Every time, when I am preparing to go home...I think what I should do tomorrow. That's why I have never changed my job*.

Financial benefits were also acknowledged as one of the pleasurable thing in the workplace. One participant, clearly indicated: "*The first thing...the rule of thumb...is money'.* Another participant gave a good example of how money motivated people at work. She said: '*I think financial reward is important. If you ask the fresh graduates who are currently working, whether they are happy or not...I think they will say that they are not*

happy. This is because what they want is only money. They are driven by money. Pleasure will only come after they are satisfied with their financial income'.

Participants also stressed the importance of appreciation of others as part of job pleasure. One respondent has said: "*Once we deliver our job, and my boss is happy and satisfied with what I have done...for me, this is pleasurable'*.

Conclusion

Our study found that deadlines, organizational politics and bureaucratic issues are typical job demands of the Malaysian workplace. Achieving a deadline is a common job demand for every modern workplace in both developed countries and developing countries. However, organizational politics and bureaucratic issues have not been discussed in depth, if at all, by scholars who use the JD-R model as their framework for studying job stress.

In Malaysia's context, organizational politics have an impact on job stress as has been demonstrated in previous research (Poon, 2003). At the international level, Vigoda (2002) for example, has summarised the association between organizational politics and negative emotions in the work place (job anxiety, job stress, job tension) and organizational politics has a positive relationship with these domains. Job stress also emerged as a mediator between organizational politics and aggressive behaviour in the workplace. However, since organizational politics have still not been extensively examined from the JD-R perspective, our study is a preliminary study that requires further investigation

Bureaucracy also emerged in our study. Since our study did not focus on the antecedents of these particular issues, we do not really know what factors have contributed to this situation. However, since Malaysia is a country that well demonstrates power distance and social collectiveness (Hofstede, 1994), we can assume that these factors have also indirectly contributed to bureaucracy and 'red tape' in Malaysian workplaces. In a recent study, Wallace, et al., (2009) found that bureaucracy and red tape caused problems regarding organizational performance.

We see that job demands and working conditions have cultural implication. Most common job stressors as reported in Western literature (i.e. deadlines, workload) always regard as a major contributor to employees' strain (Karasek, 1979). However, the current study found Malaysian employees' has a different perception on factor contribute to their stress, such as organizational politics and bureaucratic that occurred in the workplace. Although scholars are agreed that organizational politics and bureaucracy could lead to job

stress (Poon, 2003; Vigoda, 2002; Wallace et al., 2009) and affect employees' performance, so far these factors have not been studied in the JD-R framework. Our findings suggest that different cultures and countries have their own specific perceptions of what is regarded as a workplace stressor (Glazer & Gyurak, 2008; Lu, Seng & Cooper, 1999), could provide insight into working conditions in Muslim developing countries. For example, while favouritism is something that is unacceptable in Western workplace, in some developing countries and collective cultures, favouritism is regard as a normal practice (Ali, 2010).

Participants also perceive their job in several ways. Being an employed worker confronted them with challenges, learning new things and satisfying their internal needs. Thus, we see that although employees described several factors that contributed to job stress (i.e. job demands), and aspects that buffer the impact of job demands (i.e. job resources), employees also indicated the aspect of their job that related to their needs.

Limitations

Although using a qualitative study enhances our understanding of employees' experience of job stress, some limitations should be acknowledged. The current study only utilized a small group of participants (e.g. two groups) comprising managerial and non-managerial staff. We also only covered a few types of occupations. It would have been better if the study had used more participants, as well as a greater range of occupations. We found it difficult to get more participants to participate in the study as in the Malay culture, people are not too willing to express their problems due to 'malu' or 'ashamed personality' (Goddard, 1996). However Berland, Natvig & Giunderson (2008) only used a small number of participants and nonetheless found that they were able to describe the nature of job stress.

We also had a problem in translating some terminology in the current research. So far, no study using the JD-R model has been conducted in Malaysia. Job resources when translated back into the Malay language (*sumber pekerjaan*), does not reflect job resources as defined in Western terminology. A very close meaning for 'job resources' in Malay terminology is 'job support' or 'sokongan pekerjaan'. Job support however has a different meaning. Due to the fact that there are no exact words to explain the job resources, in the current study, first we explained to the participants how we define 'job resources'. We gave them a few examples before discussing their attitudes to job resources.

Future research

Future research should use a large sample in order to might enhance the external validity of the findings. Researchers should also consider testing factors associated with job demands and resources by using a different methodology (i.e. survey). The effects of deadlines, organizational politics or social support on employees' psychological health erosion (i.e. burnout) or motivational pathways (i.e. work engagement) as proposed by the JD-R model (Bakker & Demerouti, 2004) may contribute to better explanations. In addition, using a comparison study with other cultures or countries would also be helpful to determine whether any boundary conditions limited the current findings.

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Part II

Chapter Four

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The effect of globalization on employees' psychological health and job satisfaction in Malaysian workplaces

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The effect of globalization on employees' psychological health and job satisfaction in Malaysian workplaces

Abstract

Objective: To examine the impact of globalization on employees' psychological health and job satisfaction via job characteristics (i.e., job demands and job resources) in an emerging economy, that of Malaysia. As external factors are regarded as influences on the working environment we hypothesized that global forces (increased pressure and competition) would have an impact on burnout and job satisfaction via increased demands (role conflict, emotional demands) and reduced resources (supervisor support, co-workers support).

Methods: Data were collected using a population based survey among 308 employees in the state of Selangor, Malaysia. Participants were approached at home during the weekend or on days off from work. Only one participant was selected per household. Structural equation modelling was used to analyse the data. Nearly 54% of respondents agreed that they need to work harder, 25% agreed that their job was not secure, and 24% thought they had lost power and control on the job, due to global trade competition.

Results: Consistent with our predictions, demands mediated the globalization to burnout relationship, and resources mediated the globalization to job satisfaction relationship.

Conclusions: Together these results support the idea that external factors influence work conditions and in turn employee health and job satisfaction. We conclude that the jobs demands-resources framework is applicable in an Eastern setting, and that globalization is a key antecedent of working environments.

Keywords: Globalization, burnout, job satisfaction, developing countries

Introduction

There is ample evidence that job related stress impacts severely on psychological health, and is also related to job dissatisfaction. However, it is not clear how globalization and other external factors affect working conditions and the health and satisfaction of workers. Although globalization and its relationship to the changing nature of work has been discussed from various perspectives, there is still a lack of empirical evidence exploring the link between globalization and working conditions[1, 2]. Even though there are few studies concerning globalization in non-Western countries, increasingly international reports of the psychological effects of work conditions support the notion of a global phenomenon affecting workers. In Asia alone, statistics show an increasing prevalence of depression, burnout and even fatalities due to work conditions[3].

The aim of the current study was to explore the impact of globalization in Malaysia, through its effect on work conditions and job satisfaction. The pressure from globalization in Malaysia can be seen from the adoption of Western and Japanese performance systems, downsizing and mergers that force employees to deal with higher job demands. The introduction of new and advanced technology resulting from the need for business competitiveness also creates increased pressure for employees[4].

Studies examining directly the impact of globalization on work conditions in developing countries are scarce. Most studies especially in the West have used macroeconomic contexts such as the unemployment rates to assess globalization indirectly. Research has found that increased unemployment reduces life satisfaction and increases stress via changes in work structures, such as low decision latitude and increased job demands[5]. Similarly, Cheng, Chen, Cheng and Chiang et al. used job insecurity as an indicator of macro-economic conditions and found relationships between perceived job insecurity and poor health[6].

Other studies have more directly assessed globalization effects. Pelfrene et al. in their study of 21,419 respondents in Belgium found that participants who rated themselves as threatened by high world trade impacts were more likely to report poor health status, fatigue, depression and sleep problems[7]. A longitudinal study of Australian dairy farmers, found that over and above the effects of common stressors, globalization factors (for example, deregulation and unpredictable markets) caused psychological distress to rise to extreme levels[8]. Other studies have used job insecurity as an indicator of external factors

and found that employees who feel insecure about their jobs are likely to experience job stress[9].

Assuming that globalization is important in influencing elements related to job characteristics, we formulated our research framework based on the idea that external factors influence working conditions. Research in this area is generally guided by job stress theories that focus heavily on individual and/or immediate working conditions and are limited in their explanation of the role of external factors[10]. Therefore we extended the Job Demand - Resources (JD-R) framework to model the effects of globalization. Our framework also builds on Sauter and Murphy's multi-level Work Organization Model that includes the external context (i.e. globalization), organizational factors (e.g. supervisory practises) and work context factors (job characteristics) that influence employees' psychosocial health[11]. We assume that conditions are indirectly created by forces from outside of work[11]**.** By integrating the assumptions of the Work Organization Model and the JD-R model, we hope to be able to explain how globalization as a precursor to workplace environments could in turn be related indirectly to worker psychological health and job satisfaction. Although the former model was specifically developed to assess the impact of external factors, we chose to apply the JD-R model as it is more flexible in accessing variables relating to job characteristics [12].

In general, the JD-R model postulates that working conditions, job demands and job resources affect employees' well being (burnout) and motivation (engagement). Job demands have been defined as any "*physical, psychological, social or organizational aspects of the job that require sustained physical and/or physical effort*[13]. Job resources refer to those aspects of work that reduce job demands, and function to achieve work goals. Many studies have been conducted using the JD-R model and provide support for its main assumptions. Studies reveal that employees who are exposed to high job demands are likely to experience burnout, while job resources are mainly linked to motivational outcomes such as work engagement and job satisfaction[13,14].

With globalization, employees are exposed to more psychological threats as organizations concentrate more on profit and survival[15]. Employees are expected to work harder, deal with increasing emotional demands, and may suffer from various psychological health problems, and even mortality due to high job demands. Cheng et al., found that due to globalization and recession, employees are likely to be faced with higher job demands [6]. As a result of globalization, employees are confronted with interdependency with other people, and employees are likely to suffer from emotional demands. Meanwhile, the

changing nature of work also requires greater flexibility of human resources – with the expectation by employers that employees will perform multiple tasks[1,16]. This situation may lead to increased feelings of confusion (e.g., role conflict), along with increased emotional and psychological demands. We extend the health erosion hypothesis of the JD-R model and propose:

Hypothesis 1: *Globalization is positively related to burnout through its positive relationship with job demands (e.g. psychological demands, emotional demands and role conflict)* (Figure 1). In other words, job demands will mediate the relationship between globalization and burnout.

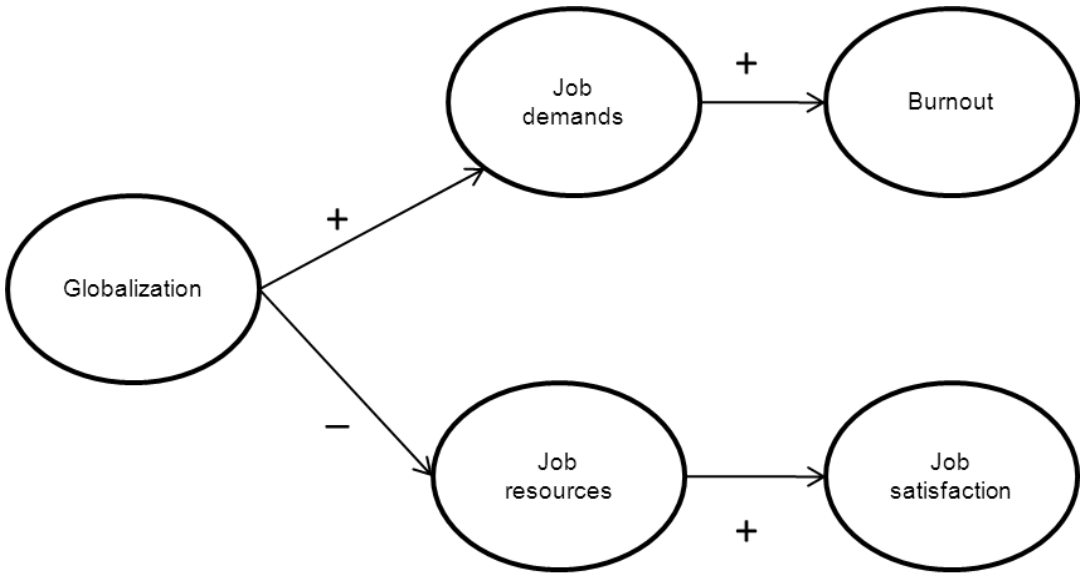


Figure 1: Relationship between globalization and burnout and job satisfaction through job demands and job resources

While globalization is expected to increase job demands, it will also decrease organizations' commitment to invest in job resources. In accord with JD-R theory, resources are related to outcomes like job satisfaction via a motivational pathway. We expect that globalization will be adversely related to employees' job satisfaction through low decision authority, low supervisor support and low co-worker support. Although there is no research that examines directly the relationship between globalization and job satisfaction through working conditions, there is related empirical evidence suggesting that globalization minimises employees' job control[8,10]. Other studies have reported that

downsizing and restructuring lead to low supervisory support, low control and decreased social support[6].

Although job control is important for employee learning and development, external demands (e.g. globalization) could diminish employee job control. Recent studies in China for example found that job task structures are designed by high ranking authorities, and employees are expected to follow instructions[17]. As organizations strive to achieve the global competition agenda we expect that employees will be confronted with reduced supervisory support. In one study among organizations dealing closely with global market activities, employees reported that they were supervised strictly by supervisors[18]. This situation is expected given the fact that supervisors play a middle role for their organization's agendas, and need to fulfil the organization's goals as part of their job requirements. Supervisors need to plan and schedule employees' work, and may even neglect their welfare[19]. Furthermore, highly competitive conditions also create working conditions with more interpersonal conflict and less co-worker support. Every employee is expected to invest their maximum energy for productivity. Under these conditions, globalization is likely to decrease supervisor and co-worker support, and decision authority. We extend the motivation pathway of the JD-R model and propose:

Hypothesis 2: *Globalization is negatively related to job satisfaction through its negative relationship with job resources (supervisor support, co-worker support, and decision authority).* In other words, job resources will mediate the relationship between globalization and job satisfaction.

Method

Participants and Procedure

A survey was conducted among 308 participants (53% response rate) in all 9 districts in Selangor, Malaysia using a population-based strategy. In general, a sample greater than 200 is considered to provide enough power to conduct maximum likelihood estimation using Structural Equation Modelling[20]**.** We used two-stage stratified sampling (urban vs. rural) map provided by the Malaysian Statistical Department. Our respondents were approached by research assistants at their homes during the weekend and off-work days, and their participation in this study was voluntary. Only employed participants were selected, and one participant was selected from each residence. The distribution of industry sectors within our sample was very similar to that indicated in national population data reports**.**

Comparing our sample with the national Labour Force Survey Report 2007 respectively, most participants work in services sector (49.6%/ 54.4%), manufacturing (12.6%/18.5%), agricultural and forestry (11.6%/13.6%), construction (3.2%/8.5%), and mining (0.6%/0.4%).[21)].

The research participants included 147 males (47.7%) and 137 females (44.3%), and 24 who did not indicate their gender; 170 (55.2%) lived in urban areas, most were of Malay ethnicity (*N* = 214, 69.5%) and were aged between 20 to 65 years old. The majority of respondents (*N* = 258, 84%) were aged between 20 and 49. Furthermore the vast majority of participants were Malaysian citizens (*N* = 294, 95.5%). The level of education was mostly secondary school (*N* = 139, 45.1%) and 179 respondents (58%) worked for private organizations.

Instruments

The instruments used in this study were translated into Malay using back-to-back translation.

Global competition

Globalization competition was assessed using the 3-item global demands questions scale from the Job Content Questionnaire (JCQ)[22,23)]. The scale is shown in Table 1. A sample question is "Do you have to work harder because of competition from world trade?" The reliability of this scale was α = .71. The response scale ranged from 1 (*very untrue*) to 4 (*very true*).

Job demands

Job demands were assessed using *psychological demands*, *emotional demands* and *role conflict.* Psychological demands were assessed by using two items from the psychological demands scale of the JCQ for example "Some demands I face at work are in conflict with other demands at work" and 'I have to work through my breaks and lunch/dinner in order to catch up at work'[23)]. We omitted "my job requires working very hard' and 'my job requires working very fast" because of low reliability. The inter-item correlation was *r* =.44. Both emotional demands (α = .85) and role conflict (α = .85) were assessed using four items each from the Copenhagen Psychosocial Questionnaire [24)]. Answers were rated: 1 (*not agree*) to 4 (*strongly agree*). A sample question for emotional

demand is: “Does your work put you in emotionally disturbing situations?” A sample question regarding role conflict is ‘Are contradictory demands placed on you at work?’

Resources

Job resources were examined using three subscales: *decision authority*, *supervisor support* and *co-workers' support* from the JCQ[23]. We used two items from the decision authority scale (α = .66), “I have a lot of say about what happens on my job” and ”My job allows me to make a lot of decisions on my own” from the original three-item scale. We omitted a reverse item, “On my job, I have very little freedom to decide how I do my work” due to low reliability of this item. *Supervisor support* (α = .91) was assessed using 5 items from the original 6 items scale, for example: “My supervisor/manager is concerned about the welfare of those under him/her”. We omitted the reverse items in the current study. The responses range from 1 (*strongly disagree*) to 4 (*strongly agree*). *Co-workers' support* (α = .87) was assessed using six items from the original 7-item scale for example: “People I work with are competent in doing their jobs”. A reverse item “I am exposed to hostility or conflict from the people I work with” was omitted from the analysis as it reduced the scale reliability. The responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*).

Job Satisfaction

We measured job satisfaction by using a 3-item measure of overall satisfaction, which assesses the extent to which employees like or dislike their jobs[25]. Items include “In general, I don’t like my job” (reverse-scored), “All in all I am satisfied with my job” and “In general I like working here”. The responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) (α = .79).

Analysis strategy

First, we conducted descriptive analyses to examine frequencies (Table 1), and inter-correlations between all variables (Table 2). Second, due to the cross-sectional nature of the study we conducted Harman’s one factor test commonly used in cross-sectional research to assess the potential influence of common method effects[26]. We entered all the items of the 10 variables (as illustrated in Figure 2) into an exploratory factor analysis, that yielded 10 factors as expected accounting for 65 % of the variance, with factor 1 accounting for 19% of the variance. Given that a single factor did not appear, and that a general factor did not

account for most of the variance, common method bias is not considered a significant problem in our study[26].

Second, we used structural equation modelling (SEM) and AMOS 17 to evaluate how well the research model fit the data. We evaluated our model by using five absolute fit indices, χ^2 goodness-of-fit statistics, Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Fit Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). For GFI, CFI and TLI, values greater than .90 and for RMSEA values smaller than 0.08 are acceptable[27].

We first assessed the null hypothesis model (M0). Then we tested the proposed full mediation model (M1) as shown in Figure 1. Next, we tested a partial mediation model (M2) with the following paths: globalization → job demands → burnout, globalization → job resources → job satisfaction, and included a direct path between globalization to the distal variables, globalization → burnout and globalization→ job satisfaction.

Further, we tested an alternative model that only included direct effects of globalization to distal variables (M3), with the following paths: globalization → burnout and globalization → job satisfaction. One-tailed significance levels are reported given that the hypotheses were directional.

We also applied some additional tests for mediation following Shrout and Bolger's[28] approach: (1) that the independent measure (globalization) is related to the outcomes (burnout and satisfaction); (2) that the independent measure is related to the mediators (demands, resources); (3) that the mediators are related to the outcome measures after controlling for the independent measure; and (4) for full mediation, that the relationship between the independent measure and the outcome, should not be significant with the mediators in the model. If both effects (mediators and independent measure) are significant, then partial mediation is confirmed. Finally we confirmed the mediation directly using bootstrapping as suggested by Hayes[29] and Preacher, Rucker and Hayes[30].

Results

Descriptive statistics (Table 1) showed that 54.2% agreed that they have to work harder due to global trade. Nearly 25% thought their job was no longer secure due to global trade and nearly 24% thought they had lost power and control due to global trade competition. The only benchmark sample we had was of Australian dairy farmers[8]. We conducted a *t*-test

between both groups (*N* = 339 for Australian sample) for item 2 (*Do you have to work harder because of competition from world trade*?) and item 3 (*Do you lose power and influence over the way things go at your workplace because of competition from world trade*?). We found that for each item there was a significant difference between the groups for item 2, t (64) = 14.0, p <.001, and for item 3, t(64) = 7.96, p < .001, with the Australian sample (item 2, M =2.98, SD = .85; item 3 M=2.64, SD=.84), reporting considerably higher levels of global competitive effects,.

Next we assessed the mediation hypotheses using a multi-step approach. The summary of model comparison fit indices is shown in Table 3. We analysed the proposed mediation model (M1) which represented the following paths: globalization→job demands→burnout, and globalization→job resources→job satisfaction. The model M1, χ^2 (31) = 49.33 fitted the data very well as indicated by the fit indices: GFI = .97, CFI = .96, TLI =.94, and RMSEA = .04. Next we examined the partial mediation model (M2), globalization→ job demands→burnout, and globalization→ job resources→job satisfaction, with paths between globalization to burnout and job satisfaction also included. The M2 model fitted the data well, where χ^2 (29) = 46.60, GFI = .97, CFI = .96, TLI = .94, and RMSEA = .04.

Table 1: Mean, standard deviation, and percentage of employees' responses on global stress items questionnaire

	Very untrue %	Untrue %	True %	Very true %	Mean	Standard Deviation	N
Is your job insecure because of competition from world trade?	15.3	58.4	21.8	2.6	2.12	.68	302
Do you have to work harder because of competition from world trade?	7.5	36.7	47.7	6.5	2.54	.73	303
Do you lose power and influence over the way things go at your workplace because of competition from world trade?	11.7	61.7	21.4	2.9	2.16	.66	301

Note: *N*=308.

Table 2. *Means (M), standard deviations (SD) and inter-correlations between the study variables*

	M	*SD*	1	2	3	4	5	6	7	8	9
1.Globalization	5.37	1.33									
2. Psychological demands	3.80	1.02	.20**								
3.Emotional demands	1.19	0.85	.31**	.40**							
4.Role conflict	1.46	0.84	.18**	.31**	.48**						
5.Supervisory support	3.08	0.72	-.08	-.13*	-.14*	-.20**					
6.Co-workers support	3.11	0.54	-.18**	-.04	-.10	-.07	.41**				
7.Decision authority	2.64	0.62	.02	.14*	.01	-.01	.07	.13*			
8.Exhaustion	2.80	1.41	.22**	.24**	.35**	.18**	-.07	-.03	.02		
9.Cynicism	2.14	1.14	.18**	.21**	.28**	.15**	-.13*	-.04	-.05	.44**	
10.Job satisfaction	3.90	0.76	-.14*	-.01	-.17**	-.10	.24**	.33**	.25**	-.20**	-.25**

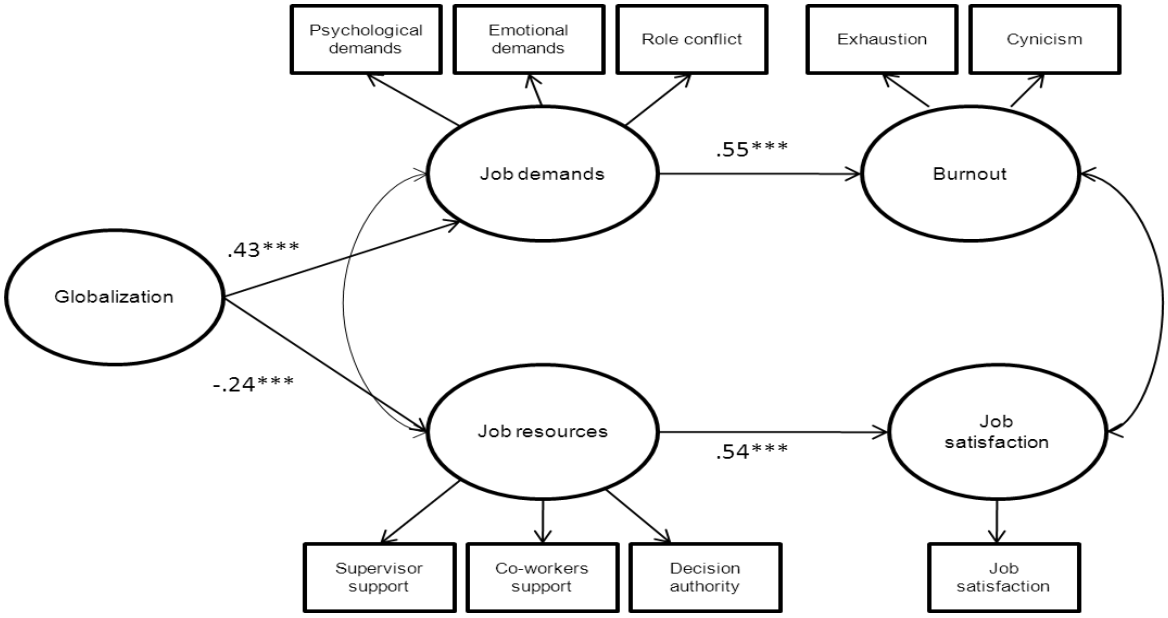
Note. N = 308 employees. * $p < .05$; ** $p < .01$.

Table 3. *Fit indices and comparisons of alternative models*

	χ^2	*Df*	GFI	CFI	TLI	RMSEA	$\Delta\chi^2$ (*df*) sig	Comparison
M0. Null model	478.363	45	.71	.00	.00	.177		
M1. Proposed mediation model	49.33	31	.97	.96	.94	.04		
M2. Partial mediation model	46.60	29	.97	.96	.94	.04	2.73 (2) (ns)	M2-M1
M3. Alternative direct effects model	156.54	33	.91	.71	.61	.11	107.21 (2)***	M3-M1

Note: N = 308, * $p < .05$, ** $p < .01$; ***, $p < .001$; χ^2 goodness-of-fit statistic; GFI = Goodness of Fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation.

To see whether the partial mediation model (M2) was better than M1, we conducted a chi square test. We found that the fit of the M2 model did not significantly improve upon the M1 model. Next, we tested the alternative direct effect (M3) model with a path between globalization→burnout, and globalization→job satisfaction. The M3 did not fit the data well, with, χ^2 (33) = 156.54, GFI = .91, CFI = .71, TLI = .61, and RMSEA = .11 Since the M1 model fit was very good and fitted the data better than M2 and significantly better than the M3 model, we used M1 model (as illustrated in Figure 2) to evaluate our hypotheses.



Note: N=308, *** $p < .001$, ** $p < .01$.

Figure 2: Globalization as a precursor to job demands and job resources and its impact on burnout and job satisfaction.

Hypothesis 1 predicted that *globalization is positively related to burnout through its positive relationship with job demands.* We found that the path between globalization and job demands was significant and positive ($\beta = .38$, $p < .001$) and between job demands to burnout was significant and positive ($\beta = .57$, $p < .001$). To confirm the full mediating effects, we conducted bootstrapping tests. Our 1,000 samples bootstrapping test confirmed the effect of job demands as the mediator between the globalization and burnout (indirect

effect = 0.16, 95% Confidence Interval (CI), lower CI = 0.13, upper CI = .31, $p < .01$), and thus provided support for Hypothesis 1.

Hypothesis 2 predicted that *globalization is negatively related to job satisfaction through its negative relationship to job resources* (H2). In M1 the results indicate that there is a negative relationship between globalization and job resources ($\beta = -.22$, $p < .01$), and a positive relationship between job resources and job satisfaction ($\beta = .48$, $p < .001$). Again, a 1,000 sample bootstrapping analysis confirmed the mediation process between globalization and job satisfaction via resources (indirect effect = -.06, 95% CI, lower CI = -.12, upper CI = -.02, $p < .01$). This result supports Hypothesis 2.

Additional tests following Schrout and Bolger's recommendation supported the full mediation hypotheses[28]. First, the coefficients for the direct paths were significant; globalization→burnout ($\beta = .30$, $p < .001$) and globalization→job satisfaction ($\beta = -.14$, $p < .01$). There was also a significant relationship between globalization and the mediators (job demands and job resources) when the other paths were set to zero, $\beta = .37$, $p < .001$ and $\beta = -.22$, $p < .01$ respectively. The mediator (job demands) was also related to burnout ($\beta = .51$, $p < .001$) and job resources was related to job satisfaction ($\beta = .48$, $p < .001$) when the independent variable was included in the model. The relationship between the independent variable and the outcome variables was not related when we added the mediator into the model; globalization→burnout ($\beta = .12$, *ns*) and globalization→job satisfaction ($\beta = -.04$, *ns*). Together the results confirm fully mediated paths and the impact of globalization on burnout through job demands, and the impact of globalization on job satisfaction through job resources.

Discussion

The results provide evidence that globalization affects burnout and influences employees' job satisfaction via demands and resources. Our finding is consistent with Cheng et al., who found that macro-economic changes led to higher job demands that in turn were related to poor employee health[6]. In the current study, we found that globalization competition increased job demands (i.e., task related pressure, emotional demands, role conflict) in organizations. Indirectly, increasing job demands led to employees' exhaustion and cynicism in their jobs. Pressure from globalization competition not only increased job demands, but also reduced much needed organizational job resources, relating to decision authority, supervisory support and co-workers' support. In turn a lack of resources was

related to decreased satisfaction. Importantly work conditions, i.e., demands and resources, respectively mediated the effects of globalization on employees' burnout, and job satisfaction, supporting both of our hypotheses.

The descriptive results (Table 1) showed that Malaysian employees reported that they needed to work harder as a result of external global competition. The results were expected since the pressure of economic liberalization is becoming more commonplace in Malaysian organizations[4]. However, the impact of globalization on Malaysian employees is considerably lower than in a sample of Australian dairy farmers[8]. This is not really surprising because the dairy farmers were experiencing significant deregulation in the industry and unpredictable market prices. Relative to other Australian industries this particular industry would be highly affected by globalization. The findings are also consistent with the assumption that global factors affect work environments and indirectly influence employees' well being and satisfaction[5]. Our results suggest the importance of job resources in creating healthy working environments and improving employees' satisfaction. Organizations have the responsibility for ensuring that job demands are fair and equitable, so that employees' job satisfaction is maintained.

The emergence of globalization is thought to have wide ranging effects internationally and our study has confirmed it is a phenomenon that has negative impacts related to adverse psychological conditions in developing, as well as developed countries, giving weight to its global impact. It is evident that psychological ill-health and burnout in developing countries is increasing. The pressures emanating from global factors with their effects on demands and resources in Malaysia's public and private sectors may be the main source of the problem.

Theoretical and practical implications

The current study found that globalization not only affected employees' health and job satisfaction, but was also a precursor for working conditions. We also found an indirect effect of globalization and the mechanism of influence on employees well being was through job characteristics (job demands and job resources). So far, the literature reports how globalization creates a negative impact on employee health and safety[31]. Accordingly, researchers have been aware that globalization is a growing risk factor for working conditions. Karasek et al. first proposed globalization competition scales in the JCQ[22]. Theoretically, our findings are coherent with the argument from the Work Organization

Model which proposed that external factors could change working conditions and indirectly have major psychological health effects among employees[11].

Since globalization is becoming a new force driving change in work conditions in most modern organizations, theoretically scholars should give more attention to the impact of globalization on employees' health[1, 2]. Issues related to macro-economy and job security are now becoming a crucial threat to modern employees[32]. As indicated by Grant et al., changes in societal and economic structures have influenced job design, so scholars should rethink traditional models of job design[33]. Working conditions are not only reflected by job characteristics, but are likely influenced by various external factors. Thus, we see globalization could be modelled as a precursor to job design, and integrated as a higher level influence on lower level job entities in work stress models.

Practically, we found that globalization is now not only a threat in developed countries, but is also salient in developing countries. Greater attention to creating more healthy working conditions with the social coordination and initiatives of high level multi-stakeholder decision makers in organizations may provide a necessary buffer against the negative impact of globalization[34]. Around the world, with the changing nature of work resulting from a highly competitive agenda and neo-liberalist economy, employees are now confronted with various health and safety issues[15]. Since globalization is likely to create more problems for employees in developing countries as developed countries have more advanced preventive strategies, the research agenda regarding the impact of globalization should focus on developing countries[35, 36].

Conclusion

This study provides strong empirical support for Sauter and Murphy's proposition that emphasised the link between external factors and working conditions[11]. Expanding the JD-R framework enabled us to show that globalization does create increased demands and reduced resources in the workplace with both worker and organizational consequences. A globalization 'throw-away' worker is not only rhetoric, but clearly part of a modern threat for every employee. In summary, the current study provides an explanation of how globalization is associated with poor working conditions, and importantly to employees' health and dissatisfaction. A preventive social policy agenda to avoid the negative side of globalization should be a priority for developing countries.

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Chapter Five

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Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health

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Abstract

Psychosocial safety climate is an emerging construct that refers to shared perceptions regarding policies, practices, and procedures for the protection of worker psychological health and safety. The purpose of the research was to: (1) demonstrate that psychosocial safety climate is a construct distinct from related climate measures (i.e. physical safety climate, team psychological safety, and perceived organizational support); and, (2) test the proposition that organizational psychosocial safety climate determines work conditions (i.e., job demands) and subsequently worker psychological health. We used samples from two different cultures; an Australian sample (N = 126 workers in 16 teams within a primary health care organization) and a Malaysian sample (N = 180 workers in 31 teams from different organizations and diverse industries). In both samples confirmatory factor analysis verified that psychosocial safety climate is a construct distinct from related climate measures. Using hierarchical linear modeling, psychosocial safety climate was superior to other team level climate measures in its negative relationship to both job demands and psychological health problems. Results supported a mediation process, psychosocial safety climate → job demands → psychological health problems, corroborating psychosocial safety climate as a preeminent stress risk factor, and an efficient target for intervention. We found both physical and psychosocial safety climates were stronger in the Australian, compared with the Malaysian work context. Levels of psychosocial safety climate were significantly lower than those of physical safety climate in both countries indicating a 'universal' lack of attention to workplace psychological health.

1. Introduction

Estimates are that 20% of workers in the European Union believe that work-related stress is a risk to their health (EASHW, 2007). In Australia around 7% of the workforce suffers from clinical level depression (Whiteford, Sheridan, Cleary, & Hilton, 2005) and stress-related absenteeism and presenteeism is estimated to cost the Australian economy $14.8 billion per year, or 1.78% of GDP (Medibank Private Ltd, 2008). Psychological distress affects important safety outcomes as well (i.e., accidents and injuries, Clarke, in press). This situation is not confined to Western contexts, with similar trends reported in others areas including Asia (Siu, Phillips, & Leung, 2004; Tsui, 2008). However these high human and industry costs are preventable (Clarke & Cooper, 2004), and in several countries occupational health and safety legislation requires employers act against psychosocial risk factors that cause work stress (Ertel, Stilijanow, Cvitkovic, & Lenhardt, 2008).

The challenge then is to identify and control the correct work stress or psychosocial risk factors. Dominant work-stress theories mainly focus on proximal job factors as the precursors to psychological health (Job Demands-Control model, Karasek, 1979; Job Demands-Resources model, Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Psychosocial safety climate theory proposes that the origins of stress are further upstream (more at an organizational level) than is commonly implied in these theories. An emerging construct, psychosocial safety climate, has been proposed as a lead indicator of psychosocial risk factors and work related psychological health (Dollard & Bakker, 2010; Law, Dollard, Tuckey, & Dormann, 2011). Psychosocial safety climate refers to shared perceptions of organizational policies, practices, and procedures for the protection of worker psychological health and safety that are largely driven from senior management (Dollard & Bakker, 2010). It reflects management values, attitude and philosophy regarding worker psychological health and the management of psychosocial risks. Psychosocial safety climate theory emphasizes that the origins of work stress may be found in the organizational psychosocial safety climate, for example where a manager may not have a priority for worker psychological health, and instead favors a high pressure, high demand, work environment.

Prevention of work related stress, in accord with the hierarchy of controls, requires a focus on ‘causes of the causes’. In particular it requires ‘safe place’ measures over ‘safe person’ approaches that focus on worker behavior to ensure safe and healthy workplaces (Bluff, 2011). Psychosocial safety climate theory therefore provides a fresh and optimistic

outlook for effective stress prevention, because it focuses on 'safe place' and identifies a more distal 'cause', that if tackled should have a larger downstream impact. This movement accords well with shifts in industry where safety climate is regarded as a lead indicator of accidents and injuries (Flin, Mearns, O'Connor, & Bryden, 2000).

To date, the content area (domains) (Dollard & Bakker, 2010), the construct validity (Hall, Dollard, & Coward, 2011), and the predictive validity (Dollard & Bakker, 2010; Dollard, 2011) of the psychosocial safety climate measure have been established. No previous study has tested the conceptual distinctiveness of the measure. The purpose of the research was to: (1) demonstrate that psychosocial safety climate is a construct distinct from related climate measures (i.e. physical safety climate, team psychological safety, and perceived organizational support); and to (2) test the proposition that organizational psychosocial safety climate determines job demands that in turn affect worker psychological health. Further we intended to test the veracity of these findings cross-culturally, and test cross-cultural differences in psychosocial safety climate.

1.1 Definition of psychosocial safety climate

Psychosocial safety climate covers four domains (Dollard & Bakker, 2010; Dollard, 2011) that also reflect major elements of safety climate (Cox & Cheyne, 2000; Gershon, et al., 2000). First, s*enior management support and commitment* refers to quick and decisive action by managers to correct problems or issues that affect psychological health. When concern is raised for an employee's psychological status, management support and commitment is evident though involvement and commitment in stress prevention activities.

Second, *management priority* is characterized by the priority management give to psychological health. Zohar and Luria (2005) argue that focal organizational climate facets may represent competing operational imperatives in relation to other facets (e.g., safety versus productivity; service climate versus efficiency). Therefore the best indicators of an organization's true priorities as distinguished from their formally declared counterparts are the *enacted* policies, procedures, and practices. The juxtaposition of psychological health related policies pitted against those that relate to productivity goals provide a clear indication of the psychosocial safety climate of the organization, its importance and priority.

Third, *organizational communication* refers to the extent the organization communicates with employees about issues that may affect psychological safety, and bring these to the attention of the employees. It also concerns the extent to which contributions

that employees make in relation to occupational health and safety concerns are listened to. In aggregate this domain reflects policies, practices, and procedures that enable a two-way communication process to occur to resolve and prevent work stress.

Finally, *organizational participation and involvement* is evident by the integration of stakeholders including employees, unions, and health and safety representatives in the occupational health and safety process, though participation and consultation. It reflects the principle that work stress prevention involves all organizational levels (Jordan et al., 2003).

The predictive validity of group-level psychosocial safety climate was demonstrated in recent research showing that it predicted reduced demands, improved resources and reduced psychological health problems (Dollard & Bakker, 2010), and objective sickness absence (Dollard, 2011). Outstanding is a discriminant validity test of psychosocial safety climate.

1.2 Psychosocial safety climate and related constructs

It is important when proposing a new construct that it is conceptually distinct from related constructs to avoid a proliferation of constructs that are too similar. Indeed there is much controversy in climate research concerning the meaning of climate and its operationalization (Anderson & West, 1998; Carr, Schmidit, Ford, & DeShon, 2003). Researchers have called for definitional specificity, such as a 'climate for service' or 'safety climate', whereby climate domains are specific, so that specific outcomes may be predicted (Schneider, 2000).

Despite the proliferation of climate measures, there are none that specifically relate to workplace psychological health. In our framework, psychosocial safety climate is conceived as a facet-specific component of organizational climate, a 'climate for psychological health and safety' that is hypothesized to specifically relate to the outcome - psychological health.

Nevertheless it is likely that some other facet-specific climate measures would relate to psychological health tangentially. Safety climate for instance is a facet- specific component of organizational climate (Zohar & Luria, 2005), that relates to "shared perceptions of a group regarding policies, practices and procedures relating to workplace safety" (Neal & Griffin, 2006). Safety climate research has accumulated over 30 years (Zohar, 1980) largely demonstrating that safety climate is related to accidents and injuries to *physical* health (Nahrgang, Morgeson, & Hofmann, 2011 Silva, Lima, &Baptista, 2004). Further the nexus between safety climate and work stress has been discussed (e.g., Clarke

& Cooper, 2004; Glendon, Clarke & McKenna, 2006), and not unsurprisingly significant relationships have been empirically confirmed between safety climate and psychological health (Goldenhar, Williams, & Swanson, 2003; Clarke in press; Siu, et al., 2004; Morrow & Crum, 1998; Oliver, Cheyne, Toma´s, & Cox, 2002; Wilson, DeJoy, Vandenberg, Richardson, & McGrath, 2004). However psychosocial safety climate is different from physical[4] safety climate as it is largely about a climate for psychological, not physical, well-being, and therefore should more strongly relate to psychological health.

Another related climate construct is team psychological climate, "a shared belief held by a work team that the team is safe for *interpersonal* risk taking" (Edmondson, 1999, p. 354; emphasis added). According to this theory, when workers experience a team environment that is psychologically safe they will be free to engage in new interpersonal behaviors that are thought to be necessary for learning and team performance. The construct should be related to psychological health because it reflects a sense of confidence or trust in the context. Nevertheless psychosocial safety climate should be more strongly related to psychological health as it broadly concerns the prevention of a range of stressors not just those related to interpersonal behaviors.

Finally another related construct is perceived organizational support, which refers to employees' perceptions concerning the extent to which the organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). It is predicted and empirically confirmed that when support is perceived it is reciprocated via improved organizational outcomes (Rhoades, & Eisenberger, 2002). However, we argue that psychological health is important in its own right, and should be on an equal footing with organizational productivity needs. The psychosocial safety climate construct reflects this position, whereby psychological health is viewed by the organization as an important health and safety issue of great importance, of priority, as important as productivity, and that requires decisive swift action when threatened. In this regard psychosocial safety climate goes further than perceived organizational support by honing in on psychological health, stress prevention, and employee psychological status.

Taking these considerations of the climate constructs together we propose that:

H1. Psychosocial safety climate is a construct distinct from related constructs (safety climate, team psychological climate, perceived organizational support) (see Figure 1).

[4] We use the term physical safety climate now to distinguish safety climate from psychosocial safety climate

H2a. Psychosocial safety climate will be more strongly negatively related to psychological health distress measures than the other related measures.

Because of its specific concern for psychological health we expect that:

H2b. Psychosocial safety climate will be a better predictor of psychological health than physical safety climate because of its specific concern with psychological health.

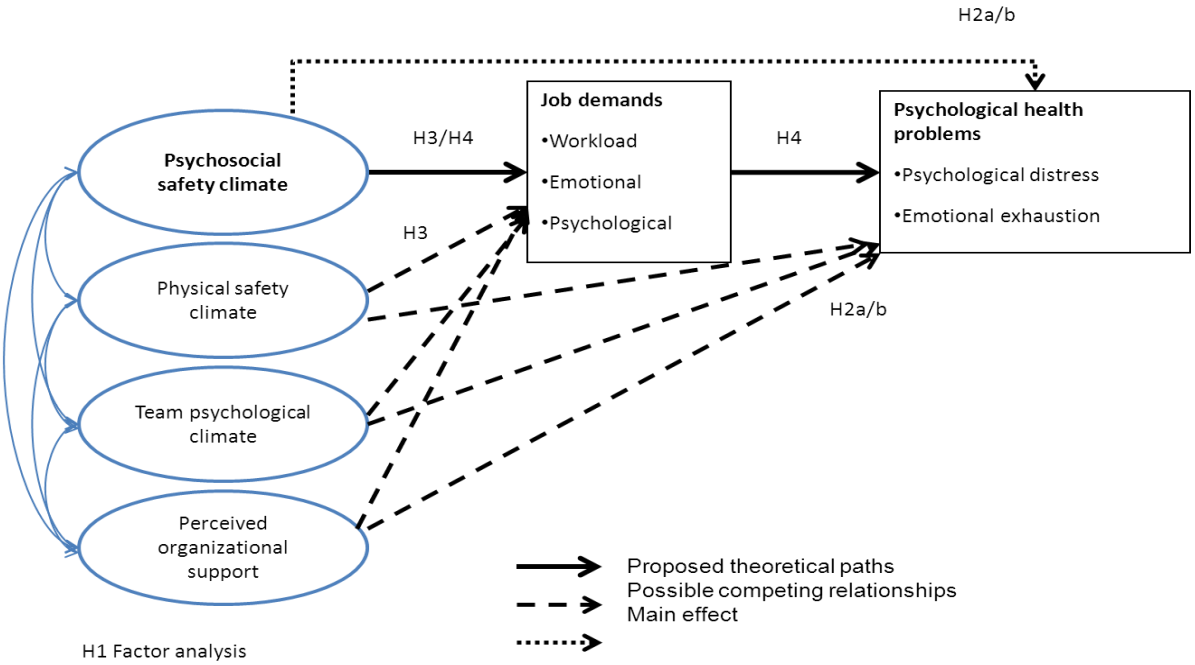


Fig. 1 Study Model

1.3 Psychosocial safety climate as precursor to working conditions

Psychosocial safety climate theory proposes a multilevel extension to current work stress theories because it is manifest at the level of the organization or team, and it precedes conditions at the job level. This relationship is expected since work conditions are designed at higher levels within the organization (Morgeson, Dierdorff, & Hmurovic, 2010).

According to the Job Demands-Resources model, job demands and job resources are two kinds of job conditions that can be found in every organization (Schaufeli & Bakker, 2004). Job demands are defined as "those physical, social, or organizational aspects of the job that require sustained physical and or psychological effort and are, therefore, associated with physiological and or psychological costs" (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007, p.122). Job resources are defined as "are those physical, social, or organizational aspects of the job that (i) are functional in achieving work-related goals, (ii) reduce job demands and the associated physiological and psychological costs, and (iii) stimulate personal growth and development" (Xanthopoulou et al., 2007, p.122).

Recent research positions safety climate as a resource within the Job Demands-Resources framework (Nahrgang, et al., 2011). Similarly psychosocial safety climate is regarded as an *organizational* resource (Law et al., in review), and related theory proposes a multilevel path whereby psychosocial safety climate is at the organizational or team level, and predicts lower level job demands. As a higher level resource we expect that psychosocial safety climate may assist workers achieve their work goals, reduce job demands and stimulate new ways of managing demands, because advice and assistance regarding allocation or sharing demands will be supplied, and guidance will be provided about preventing demands (e.g. bullying). Beyond these tangible resource functions, psychosocial safety climate reflects direct action by managers to design job demands at acceptable levels to ensure that employees' can adequately cope with them. In high psychosocial safety contexts managers will be aware of knowledge in the area that demonstrates that high job demands are a hazard or risk for psychological health injury. In the current study we used emotional demands, workload and psychological demands as indicators of job demands. Recent empirical evidence shows that psychosocial safety climate is negatively related to job demands (Dollard & Bakker, 2010; Idris, Dollard, & Winefield, 2011; Law et al., in review). As none of the other climate theories under discussion concern stress risk factors such as job demands we propose that:

H3. Psychosocial safety climate will be negatively related to job demands and more strongly so than the other climate measures.

Importantly the Job Demand-Resources theory proposes a health erosion pathway, such that chronic job demands will lead to exhaustion of employee mental and physical resources and reduced psychological health over time (Demerouti et al., 2001). There is ample evidence demonstrating the link between demands and psychological health problems (Bakker, & Demerouti, 2007; Hakanen, Schaufeli, & Ahola, 2008). Psychosocial safety climate theory proposes a multilevel extension to this health erosion path (Dollard & Bakker, 2010).

H4. Job demands will mediate the relationship between psychosocial safety climate and psychological health problems.

Shared perceptions are one of the major characteristics of organization climate, and in research this is usually accomplished by aggregating data gathered from many employees into a single organization-level (or team-level) variable (Neal & Griffin, 2006). A central element in the development of organizational climate is supervisory decision making. Variations in the development and implementation of policies, practices, and procedures

related to climate constructs should lead to climate variations between organizations and teams, as well as agreement within these clusters (Nembhard & Edmonson, 2006; Zohar & Luria, 2005). Accordingly we operationalized all climate measures at the work team level.

We aimed to test the robustness of our propositions by choosing two samples, one from an industrialized western economy (Australia) and another from an emerging eastern economy (Malaysia). Of interest is whether psychosocial safety climate would vary by culture. Given the relative history and influence of occupational health and safety regulations in the respective countries with most Australian states having relevant statutes by the 1970s (National Research Centre for Regulation, 2010), whereas the Malaysian Occupational Health and Safety Act was only enacted in 1994, and awareness remains relatively poor (Lugah, Ganesh, Darua, Retnewari, Rosnawati, & Sujatha, 2010), we expected that:

H5. Psychosocial safety climate and physical safety climate will be stronger in the Australian sample, compared with the Malaysian sample.

Finally given the traditions in both countries of focusing on physical hazards and physical health as opposed to psychosocial hazards and psychological health (Australian Productivity Commission, 2010) we expected that:

H6. Levels of physical safety climate will be higher than the psychosocial safety climate.

2. Research Method

2.1. Design and Participants

Full ethics approval was obtained and confidentiality was assured.

Australian sample. The study was cross-sectional with 126 employees (individual response rate 42%) from 16 (team-level response rate 89%) occupationally diverse work teams from same public sector organization in the primary health care sector. Work roles included medical practitioners, nurses, allied health professionals, primary health care workers, and administrative staff. A questionnaire was addressed to participants personally and was returned by mail direct to the researchers. The mean number of respondents per team was 7.9, range 3 to 13, and most (83%) had worked for over a year in the team.

Ages ranged from less than 25 years to over 65 years, with the most (36%) in the 45-54 age range. The percentages within the age ranges were equivalent to those in the organization population χ^2 (5) = 4.87, p = .43. In the sample 87% of the respondents were female and 13% were male, and this proportion matched the population (82% female; 18%

male), χ^2 (1) = 2.21, p = .13). Representativeness by age and gender gave confidence that the sample was representative of the overall primary health care directorate.

Malaysian sample. The study was cross sectional with 180 employees (80% response rate) from 31 teams (88.5% response rate) that were occupationally homogeneous but drawn from a wide range of organizations and types of business (i.e. broadcasting, media, manufacturing, university, hospital research agency, custom office, police, insurances, scientist, bank, consultancy), including private (62.8%) and public sectors (37.2%). Due to low participation rates noted using random samples in Malaysian social research (Sohail, Bhatnagar, & Sohal, 2006; Zain, Rose, Abdullah & Masrom, 2005), we used a professional and purposive sampling approach (Kinman & Jones, 2005). Participants ages ranged from 18 to 57 years with the most (58%) aged between 24 to 34 years, 54% were female, 46% had secondary schooling. Gender was representative of the national population of workers (Chi-square = 1.44, p = .23).

2.2. Measures

For the Malaysia study we used a Malay language questionnaire by translating scales and then using back-to-back translation.

2.2.1. Climate measures

Psychosocial safety climate. This was measured using the 12-item scale (Hall, et al., 2010). Prior multilevel research using the scale, involving a sample of 30 organizations (N = 220 Australian workers), showed good reliability (α = .95), acceptable homogeneity of within-group variance (rwg = .90), and acceptable between-group variance intra-class coefficient (ICC (1) = .12) (Law et al., in review). As mentioned the construct comprises four domains, each with three items (see Appendix 1). The referent for the scale was "Climate for psychological well-being in your team". Responses on a 5-point scale ranged from 1 (strongly disagree) to 5 (strongly agree), with a mid point, neither agree or disagree (Australia α = .97; Malaysia, α = .92).

*Team psychological safety. T*his was measured using the 7-item Team Psychological Safety Scale (Edmondson, 1999). An example items is "No-one on this team would deliberately act in a way that undermines my efforts". In general we found that responses to reverse items in the Malaysian sample were not reliable, and were therefore excluded. Responses were on a 4-point scale, 1 (strongly disagree) to 4 (strongly agree), (Australia α = .80, Malaysia α = .78).

Perceived organizational support. We used the 6-item Perceived Organizational Support scale (Eisenberger, et al., 2001), with slight modification to ensure respondents answered with reference to the team, e.g., "In my team, management is willing to help me if I need a special favor". The Malaysian study omitted the reversed item. Responses were on a 4-point scale, 1 (strongly disagree) to 4 (strongly agree), (Australia, α = .92; Malaysia, α = .91).

*Physical safety climate***.** We asked the same twelve questions as in the psychosocial safety climate measure (see Appendix 1) but changed the stem to 'climate for physical safety in your team; these questions relate to safety from physical injury or illness' and replacing words such as 'psychological health' for example with 'employees' safety'. The response scale was the same as for physical safety climate (Australia, α = .97, Malaysia, α = .93).

2.2.2. Psychological health problems

Psychological distress. The Australian study used the 12-item General Health Questionnaire (Goldberg, 1978) a valid and reliable measure of psychological impairment (Andrews, Hall, Teeson, & Henderson, 1999), e.g., "Have you recently felt you couldn't overcome your difficulties". A response format was: 0 (not at all); 1 (no more than usual); 2 (rather more than usual); and 3 (much more than usual) (Australia, α = .91).

Depression. The Malaysian study used the 9-item scale from the Patient Health Questionnaire (PHQ-9; Spitzer, Kroenke, & Williams 1999) e.g., "During the last month, how often were you bothered by feeling down, depressed or hopeless?" Items were answered from 1 (not at all) to 4 (nearly every day), (Malaysia, α = .86).

Emotional exhaustion. We used the 5-item Maslach Burnout Inventory exhaustion subscale (Schaufeli, Leiter, Maslach, & Jackson, 1996), e.g., "I feel used up at the end of the work day". Items were answered on a 7-point scale from 0 (never) to 6 (every day), (Australia α = .91, Malaysia α = .88).

2.2.3. Demand measures

Workload. Used only in the Malaysian sample, the scale incorporated two items: "I have too much work to do everything well", and "I never seem to have enough time to get everything done" (Cammann, Fichman, Jenkins, & Klesh, 1983). Items were answered on a 4-point scale: 1 (not agree) to 4 (strongly agree). Inter-item correlation for two items was .59. *Emotional demands.* This was assessed using four items from the Copenhagen Psychosocial Questionnaire (Kristensen, 2002), e.g., "Does your work put you in emotionally disturbing situations?" Responses were on a 4-point scale 1 (strongly disagree)

to 4 (strongly agree); (5-point scale for Malaysia, 0 – 4)): (Australia α = .67, Malaysia α = .80).

Psychological demands. This scale was examined by four items from the Job Content Questionnaire (Karasek, 1985), e.g., "My job requires working very fast". Items were answered on a 4-point scale: 1 (strongly disagree) to 4 (strongly agree), (Australia α = .67, Malaysia α = .60). We also constructed a composite demands measure standardizing scales (where scales vary) and adding the items together (Australia α = .69, Malaysia α = .79).

2.3. Statistical Analysis

To test Hypothesis 1 that psychosocial safety climate is a distinct construct we used confirmatory factor analysis and AMOS v7 software (Arbuckle, 2005). We assessed the fit of alternative factor structures, using Chi-square difference tests (Schermelleh-Engel, Moosbrugger, & Muller, 2003). Each of the latent climate measures was indicated by the items of the corresponding measure (4-factor structure see Figure 1); then we loaded each of the climate measures in turns onto the psychosocial safety climate measure whilst keeping the remaining two climate measures separate; an example of a competing three-factor model is: 1. (PSC + team psychological climate), 2. physical safety climate, and 3. perceived organizational support).

2.4. Aggregation procedures

To assess data suitability for aggregation we assessed evidence for within-group interrater agreement, using the mean $r_{(WG)(j)}$ (James, Demaree, & Wolf, 1984) The results confirmed very strong levels of agreement within teams for all climate measures (> .90, LeBreton & Senter, 2008) in both samples: e.g., psychosocial safety climate mean Australia, $r_{(WG)(j)}$ = .96 (SD = .21); Malaysia, $r_{(WG)(j)}$ = .97 (SD = .02).

Climate measures should also vary significantly between groups. Using one-way random effects ANOVA (F), we found in both samples significant F values indicating sufficient variance in psychosocial safety climate due to groups (see Table 1). The intra-class coefficient ICC (1) is a measure of between-group variance. This was .13 in the Australian, and .19 in the Malaysian, sample; this indicates that the percentage of variance in psychosocial safety climate due to team was 13% and 19% respectively. The group effects for team psychological safety were also significant, whereas the effects were much smaller for perceived organizational support and physical safety climate. The mean $r_{(WG)(j)}$

values, the F values and the ICC (I) values justify aggregating the climate measures to the team level.

2.5. Hypotheses testing

Given the multi-level nature of the data (individuals nested within teams) hierarchical linear modelling (HLM) was used to test Hypothesis 2 through to 6. We used HLM 6.06 software (Raudenbush, Bryk, Cheong, & Congdon, 2005), where Level 2 represents team data while Level 1 represents individual data. In each case we were trying to estimate the variance in the criterion measure due to between-group effects. This decomposition of variance into between- and within-group components is consistent with a meso-mediation approach that suggests that variance in outcomes of interest derive from predictors at multiple levels (Mathieu, Maynard, Taylor, Gilson, & Ruddy, 2007).

To test Hypothesis 2 we evaluated the between-group variance in individual outcomes due to the team level climate measures. Steps of the analysis are shown below. We first tested the relationship between psychosocial safety climate (PSC), grandmean centred, and distress.

$$\text{Level 1; Psychological distress} = \beta_0 + r$$

$$\text{Level 2; } \beta_0 = \gamma_{00} + \gamma_{01}\,(\text{PSC}) + u_0 \qquad (1)$$

Then we ran the same model with emotional exhaustion as the outcome. In a further series of analyses we alternated PSC with the other climate measures. In relation to Hypothesis 3 we inserted the composite demand measure as the outcome in Equation 1. To test the meditational Hypothesis 4 we also used:

$$\text{Level 1; Psychological distress} = \beta_0 + r$$

$$\text{Level 2; } \beta_0 = \gamma_{00} + \gamma_{01}\,(\text{PSC}) + \gamma_{01}\,(\text{Demands}) + u_0 \qquad (2)$$

To test the significance of the indirect effect of psychosocial safety climate on psychological health via job demands (i.e. psychosocial safety climate→job demands→psychological health) we used a formal test of the significance of the indirect effect by using the Monte Carlo method (Selig & Preacher, 2008) advocated as a better test than the Sobel test for assessing mediation in multilevel models (MacKinnon, Lockwood, & Williams, 2004). Given that Hypotheses 2- 4 were directional we considered one-tailed significance for these. Finally Hypothesis 5 and 6 were assessed using related, and unrelated, t-tests respectively.

3. Results

In accord with Hypothesis 1, we first tested the conceptual distinctiveness of psychosocial safety climate at the individual level using AMOS. We tested a factor structure where PSC was presented as a construct separate from each of the other climate measures (i.e., four factors in the model). Then we tested whether related constructs loaded on the PSC factor, and we noted that in every case the fit of these alternative models were significantly worse than the proposed four factor model as demonstrated by significant change in Chi-square scores (i.e., increased in every case). The results were: PSC + team psychological safety and two other factors, $\Delta\chi^2$ (3) = 191.87, $p < .001$ (Australia), $\Delta\chi^2$ (3) =180.75, $p < 0.001$ (Malaysia); PSC + perceived organizational support and two other factors, $\Delta\chi^2$ (3) = 261.30, $p < .001$ (Australian), $\Delta\chi^2$ (3) = 646.83, $p < 0.001$ (Malaysia); and PSC + physical safety climate, and two other factors $\Delta\chi^2$ (3) = 619.7, $p < .001$ (Australian), $\Delta\chi^2$ (3) = 821.00, $p < 0.001$ (Malaysia). This confirms Hypothesis 1 that PSC is a conceptually distinct construct. Standard regression weights for each PSC item loading on the PSC latent factor were adequate, ranging from .78 to .94 (Australia), and .53 to .81 (Malaysia).

Table 1 reports the intercorrelations of all variables at both the individual and team level. PSC at a team level is related to physical safety climate in the Australian sample, and team psychological safety in the Malaysian sample again suggesting the climate measures are different constructs.

Hypothesis 2a proposed that PSC would be more strongly related to psychological health than the other climate measures. We entered each of the group level independent measures separately due to low power in the models. Among the Australian sample, as shown in Table 2, only PSC was significantly and negatively associated with psychological distress (γ = -.18, SE = .11, t = -1.74, $p < .05$, 1-tailed) and exhaustion (γ = -.27, SE = .14, t = -2.01, $p < .05$, 1-tailed). These two effects were virtually identical in the Malaysian sample. Further across samples, of the twelve additional tests involving the other climate measures there was only one other significant effect. Results support Hypothesis 2a that PSC has the strongest association with psychological health compared with than any of the other climate measures. We conducted further tests using PSC and physical safety climate as simultaneous predictors of psychological health, and in 3 of 4 cases PSC was the stronger predictor (see Table 2), supporting Hypothesis 2b.

Table 1. Means, standard deviations, F values, ICC(1)s and Pearson bivariate correlations

Australian sample	*M*	*SD*	1	2	3	4	5	6	*7*	*F*	*ICC(1)*
1. Psychosocial safety climate	39.42	10.95	1	.18	.47	.83**	-.54*	-.60*	-.36	1.88*	0.13
2.Team psychological safety	16.86	2.96	.54**	1	.23	.50*	-.05	-.23	-.10	1.83*	0.11
3.Perceived org. support	17.17	3.52	.70**	.56**	1	.66**	-.44	-.38	-.07	1.44	0.04
4. Physical safety climate	47.99	8.67	.74**	.58**	.65**	1	-.46	-.43	-.32	1.39	0.04
5. Psychological distress	13.43	5.81	-.37**	-.22**	-.25**	-.31**	1	.74**	.42	1.03	0.004
6. Emotional exhaustion	14.59	7.53	-.44**	-.46**	-.39**	-.40**	.46**	1	.55*	1.27	0.03
7. Total demands	15.41	6.15	-.32**	-.31**	-.27**	-.31**	.41**	.58**		1.91*	0.11

Table 1. Means, standard deviations, F values, ICC(1)s and Pearson bivariate correlations (cont'd)

Malaysian sample	*M*	*SD*	1	2	3	4	5	6	7	*F*	*ICC(1)*
1. Psychosocial safety climate	26.03	4.32	1	.43*	.08	.25	-.22	-.29	-.40*	2.33***	0.19
2. Team psychological safety	8.60	2.68	.21**	1	.04	.16	.09	-.17	-.04	3.14***	0.26
3. Perceived org. support	18.75	3.22	.10	-.03	1	.65**	.03	-.70	.14	1.63*	0.10
4. Physical safety climate	28.49	4.19	.08	-.04	.50**	1	.28	-.27	.37*	1.40	0.06
5. Depression	14.49	3.66	-.10	.07	.02	.20**	1	.27	.67**	2.13**	0.18
6. Emotional exhaustion	11.89	4.94	-.21**	-.10	-.07	-.05	.37**	1	.44**	2.43**	0.14
7. Total demands[+]	0.00	1.81	-.12	-.07	.05	.10	.38**	.37**	1	3.62***	0.33

[+] We used standardized data due to responses scales differences for emotional demands (0 to 4), while workload and psychological demands used (1 to 4).

Note. * $p < .05$, ** $p < .01$. All climate measures at the individual level below the diagonal and at the team level above the diagonal. Org, organizational.

Table 2. Random coefficient modeling of psychological health measures regressed on climate measures

	Psychological distress			Psychological distress			Emotional exhaustion			Emotional exhaustion		
Australian Sample	*γ*	*SE*	*ratio*	*γ*	*SE*	*ratio*	*γ*	*SE*	*ratio*			
Psychosocial safety climate	-0.18	0.11	-1.74^	-0.24	0.08	-3.00*	-0.27	0.14	-2.01^	-0.45	0.13	-3.38**
Team psychological safety	-0.03	0.30	-0.11				-0.34	0.44	-0.76			
Organizational social support	0.09	0.09	1.00				-0.62	0.46	-1.35			
Physical safety climate	-0.19	0.17	-1.17	0.08	0.21	0.41	-0.25	0.21	-1.19	0.29	0.27	1.09
Malaysian Sample												
Psychosocial safety climate	-0.20	0.12	-1.73^	-0.29	0.14	-2.01*	-0.23	0.13	-1.75^	-0.17	0.13	-1.31
Team psychological safety	0.08	0.16	0.53				-0.14	0.12	-1.12			
Organizational social support	-0.02	0.20	-0.11				-0.08	0.16	-0.51			
Physical safety climate	0.26	0.27	0.94	0.36	0.25	1.42	-0.30	0.14	-2.15*	-0.24	0.14	-1.74^

Note. ^ $p < .05$ (1-tailed); * $p < .05$, ** $p < .01$; 12 separate models are performed per sample.

Table 3. Random coefficient modeling of job demands variables measures regressed on climate measures

	Workload			Emotional demands			Psychological demands			Total demands		
	γ	*SE*	*ratio*	*γ*	*SE*	*ratio*	*γ*	*SE*	*ratio*	*γ*	*SE*	*ratio*
Psychosocial safety climate	-0.45	0.17	-2.59**	-0.26	0.14	-1.75^	-0.39	0.13	-3.02**	-0.75	0.27	-2.71**
Team psychological safety	-0.07	0.17	-0.46	-0.03	0.15	-0.20	0.02	0.16	0.01	-0.07	0.29	-0.26
Org. social support	0.14	0.22	0.66	0.08	0.22	0.38	0.10	0.21	0.46	0.11	0.42	0.26
Physical safety climate	0.31	0.20	1.56	0.21	0.26	0.78	0.49	0.23	2.07*	0.43	0.51	0.80

Note. * $p < .05$, ** $p < .01$. 20 different models. Org, organizational. Malaysian sample only

Hypothesis 3 states that PSC is negatively related to job demands and the relationship is stronger for PSC than the other climate measures (see Table 3). In the Australian sample none of the climate measures were associated with the demand measures. In the Malaysian sample, in separate analysis of job demands we found that PSC was significantly negative related to workload (γ = -.45, t = -2.59, p < .01), emotional demands (γ = -.26, t = -1.75, p < .05, one tailed) and psychological demands (γ = -.39, t = -3.02, p < 01). The other climate measures in general were not related to demands. Hypothesis 3 is supported in the Malaysian sample only. Further using a composite demand measure we again found that PSC and no other climate measure was significantly negatively related to job demands (γ = -.75, t = -2.71, p < 01).

Hypothesis 4 predicted that job demands will mediate the relationship between PSC and emotional exhaustion; we found a significant indirect effect (95% Confidence Interval (CI), Lower Limit (LL) -0.27, Upper Limit (UL) -0.05 does not contain zero). Similarly we found a significant indirect effect of PSC on depression via job demands (95% CI, LL -0.45, UL -0.07). Together this confirms Hypothesis 4 in the Malaysian sample only (recall there was no association with demands in the Australian sample, a necessary precondition).

Support was found for Hypothesis 5, as the Australian sample had higher significantly higher levels of group PSC, t (45) = 10.22, p < .001 (mean difference 12.58) and physical safety climate t (45) = 22.20, p < .001 (mean difference 19.05) than the Malaysian sample[5].

Support was found for Hypothesis 6, that physical safety climate would be higher than psychosocial safety climate. We found significant support across the teams using matched samples t-test, t (30) = 4.95, p < .001 (mean group difference -8.56) in the Australian, and Malaysian work environments, t (60) = 3.81, p < .001 (mean difference -2.24).

[5] The Australian sample tests psychosocial safety climate within the health industry, within a single organization. Since the Malaysian sample covered many industries, across difference organizations, we compared the aggregate psychosocial safety climate of the Malaysia sample (M = 26.22, SD = 2.53, N = 31) with an Australia sample (see Law et al., in review) that similarly assessed psychosocial safety climate across organizations from a variety of industries (M = 41.00, SD = 5.33, N = 20); the psychosocial safety climate was significantly better in the Australian sample, t (49) = 13.33, p < .001; at the individual level emotional exhaustion the Australian sample (M = 11.27, SD = 7.55) was not significantly different than for the Malaysian sample (M = 11.89, SD = 4.94); psychological demands were significantly higher in the Australian sample (M = 11.09, SD = 2.03) compared to the Malaysian sample (M = 9.67, SD = 1.19), t (385) = 7.27, p < .001.

4. Discussion

The literature has been surprisingly silent in identifying a construct that would help employers meet their duty of care obligations at work in relation to the prevention of workplace stress and the protection of psychological health. Constructs such as organizational support, physical safety climate, and team psychological safety, are important and may coincidentally relate to psychological health but these constructs are not elaborated with the explicit implication that psychological health at work is an occupational health and safety issue that needs to be actively managed. Psychosocial safety climate is an emerging construct that explicitly focuses on psychological health and safety. Using confirmatory factor analysis, this study established that psychosocial safety climate is a conceptually distinct climate measure from related climate measures (team psychological safety, perceived organizational support, physical safety climate), and in support of its facet specificity, was more strongly correlated with psychological health outcomes than any of the other climate measures, in two culturally distinct samples. Psychosocial safety climate is proposed as a lead indicator of psychosocial risks. We confirmed that psychosocial safety climate was related to job demands, and again it was more strongly related to demands than the other climate measure. Here we uncovered mediation, which helps define a process whereby psychosocial safety climate affects psychological health; via its effect on the work environment. Within teams, psychosocial safety climate affects variation in job demands, and then team level job demands relate to between-team variance in psychological health.

The study supported the proposition that psychosocial safety climate makes a unique and important contribution to health related outcomes over and above that of physical safety climate. We constructed the physical safety climate scale so that it mapped the exact domain areas of psychosocial safety climate, but merely changed the items to reflect physical rather than psychological health. Clearly then the specificity of the different items assists in estimating a unique construct that is a superior indicator of psychological health outcomes.

Our research adds to literature by responding to recent calls for job stress research to shift to multilevel modeling (Bliese, Jex, Halverson, 2002; Probst, 2010). In line with meso-mediational paradigms (Mathieu, et al., 2007; Mathieu & Chen, 2011) and recent climate studies using multilevel approaches (Mearns, Hope, Ford & Tetrick, 2010; Zohar & Luria, 2005) we found that psychosocial safety climate as a specific climate resides at the

team level, and is beyond an individual phenomenon. Consistent with previous research (Dollard & Bakker, 2010) we confirmed the group level properties of psychosocial safety climate (i.e., adequate rwg, and ICC (1) cross-culturally. The percentage of variance accounted for in psychosocial safety climate due to team effects, 13% (Australia) and 19% (Malaysia), likely reflects the discretionary behavior of team managers to enact policies, practices and procedures in relation to psychological health and safety, thereby leading to these variations in psychosocial safety climate between teams. Similarly Dollard and Bakker (2010) found variation in psychosocial safety climate due to work team was 22%, and Law et al., (in review) reported 12% due to work organization.

Theoretically the results provide additional support for a multilevel theory of work stress that extends the current Job Demand-Resource theory, and begins with an upstream determinant (resource), psychosocial safety climate, that affects a psychological health erosion process via lower level job demands. Specifically the results corroborate other evidence supporting the extension of the health erosion hypothesis of the JD-R theory (Dollard & Bakker, 2010; Idris et al., 2011; Law et al., in review). The observation that psychosocial safety climate was higher in Australian work environments, but levels of psychological demands were higher, whereas levels of emotional exhaustion appear similar may seem at variance with this theoretical extension. However, there may be additional societal factors at play other than psychosocial safety climate that render Australian workplaces more demanding psychologically (i.e., how hard and fast one must work). Further higher levels of psychosocial safety climate in the Australian work context may enable the safe utilization of available resources (i.e., decision making latitude, control over work methods) to reduce the impact of existing demands (Dollard & Karasek, 2010), thereby reducing levels of exhaustion (in the face of high demands) in the Australian sample..

Practically actions taken to address any of the elements of psychosocial safety climate (see item list) will assist employers meet their duty of care obligations to protect workers from psychological injury. From a practical perspective knowing about shared perceptions of psychosocial safety climate will provide an “objective” lead indicator, for both internal and external use, regarding the quality of the working conditions designed for workers, and will also reflect what is important or a priority. As suggested by this study if managers have no concern for stress prevention and for the psychological health of workers, certain demands will prevail, such as high workloads, high emotional demands and high psychological demands that in turn will lead to depression. It is important to work with

supervisors and managers to assist them in understanding the health harming effects of chronic demands and the economic impact of absenteeism and presenteeism due to work stress to assist them to shift their values, attitudes and actions towards protection of worker psychological health.

Helping managers and teams to build strong policies, practices and procedures to prevent work stress will enhance psychosocial safety climate (see Dollard & Karasek, 2011; Dollard, 2011), and will help shape worker behavior as well. For example, previous research highlights that low psychosocial safety climate contexts are a precursor to hazardous behaviors such as bullying and harassment (e.g., Bond, Tuckey & Dollard, 2010; Law et al., in review). Employees learn whether such behaviors are rewarded and supported, or whether there will be serious penalties consistently imposed for engaging in bullying and harassment.

Our finding that more focus is given to physical safety climate than to psychosocial safety climate mirrors broader national findings by the Australian Productivity Commission (2010). They reported that much less attention is given to psychosocial hazards compared to physical hazards, by occupational health and safety (OHS) legislation and OHS inspectors. This pattern was also noted in the Malaysian sample suggesting a 'universal' trend. Further, work conditions were much worse in Malaysia as expected given the relatively recent history of occupational health and safety legislation in that country (Lugah, et al., 2010). These findings suggest that greater effort needs to be given to targeting the specific climate and psychosocial safety climate, to render workplaces less psychologically dangerous and to reduce the costs associated with stressful work. This research demonstrates that efforts to improve worker psychological health would be best achieved by focusing on psychosocial safety climate, rather than any of the other climate constructs.

4.1 Limitations of the study and future research

The confirmatory factor analysis of the climate measures was conducted at the individual level of analysis. However, given that these are climate measures, the analysis should be based on Level 2 group data (Mathieu & Taylor, 2007). This could only be achieved in the future by using samples with a greater number of Level 2 groups. Nevertheless we have no reason to suspect that the climate measures are not distinct at the group level, given the evidence that the climate measures behave differently depending on the criterion.

The study was cross-sectional so we cannot rule out the possibility that the experience of distress influences climate perceptions. However we do have evidence that psychosocial safety climate leads to a change in psychological health outcomes over time (Dollard & Bakker, 2010) and our research in progress does not find evidence for significant reversed effects. Furthermore by aggregating team level data we have accounted for individual subjectivity within the results, because we examine the between-group climate and between-group mediator/outcome relationships. This strategy also guards against common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We attempted to collect longitudinal data in the Australian sample, but the turnover of staff and low response rate rendered the data inadequate for analysis. Future research should endeavor to collect data at three separate time points to best test mediation (Huang, Hammer, Neal, & Perrin, 2004).

Use of objective data (e.g., injuries, sickness absence, accident reports) could also help to distinguish between climates. In the current study, given variable reporting procedures by organizations in Malaysia, and no team level data in the Australian sample, we could not to collect objective data. However, examination of psychological distress, and exhaustion was enough to provide evidence of the distinctive action of psychosocial safety climate compared with others climates on the outcome measurements.

We found that the Malaysian sample had difficulty dealing with reversed items in the team psychological safety scale and perceived organizational support scale. Accordingly we removed these items as they seriously compromised the scales' reliability, and this may have affected the validity of the measures. However in all cases we noted that the remaining items covered the main content areas that the construct is purported to cover.

Future research should also try to maximize the number of upper level groups in the sample in order to show psychosocial safety climate to work condition relationships. In the Australian sample psychosocial safety climate was not systematically related to demands as theoretically proposed (neither were the other climate measures - as expected). We believe this is due to low power rather than theory failure because we observed the relationship previously in an Australian sample within a single organization with greater number of Level 2 groups (Dollard & Bakker, 2010) and we see anticipated effects in the Malaysian sample.

Finally the results reporting differences between samples rely on the assumption that the items and scales carry the same meaning across different cultures, and this can be verified in the future through item response analysis (Shimazu, Schaufeli, Miyanaka, & Iwata, 2010).

5. Conclusion

The paper introduces a new construct to help focus research and public policy attention on psychological health and safety in the workplace. The study provides strong evidence that psychosocial safety climate is a unique climate construct that exists as a group phenomenon cross-culturally. Evidence suggests that psychosocial safety climate as a lead indicator of psychosocial risks, and psychological health in the workplace. These results provide important guidance for policy makers, OHS personnel, researchers, and practitioners; the climate to target to improve psychological health is psychosocial safety climate.

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Appendix 1. Psychosocial safety climate and physical safety climate measures

Climate for psychological well-being in your team

These questions relate to psychological health and safety in your team

Management commitment

- In my team, management acts quickly to correct problems/issues that affect employees' psychological health
- In my team, management shows support for stress prevention through involvement and commitment
- In my team, management acts decisively when a concern for an employee's psychological status is raised

Management priority

- In my team, management clearly considers the psychological health of employees to be of great importance
- Psychological well-being of staff is a priority for this organisation
- In my team, management considers employee psychological health to be as important as productivity

Organizational communication

- There is good communication here about psychological safety issues which affect me
- Information about workplace psychological well-being is always brought to my attention by my manager/supervisor
- In my team, my contributions to resolving occupational health and safety concerns regarding psychological well-being are listened to

Organizational participation

- Participation and consultation regarding psychological health and safety at work occurs with employees, unions and health and safety representatives in my workplace.
- Employees are encouraged to become involved in psychological health and safety matters
- In my organisation, the prevention of stress involves all levels of the organisation

Climate for physical safety in your team

These questions relate to safety from physical injury or illness:

Management commitment

- In my team, management acts quickly to correct problems/issues that affect employees' safety
- In my team, management shows support for injury prevention through involvement and commitment
- In my team, management acts decisively when a concern for an employee's safety is raised

Management priority

- In my team, management clearly considers the safety of employees to be of great importance
- Safety of staff is a priority for this organisation
- In my team, management considers safety to be as important as productivity

Organizational communication

- There is good communication here about safety issues which affect me
- Information about workplace safety is always brought to my attention by my manager/supervisor
- In my team, my contributions to resolving safety concerns are listened to

Organizational participation

- Participation and consultation regarding safety at work occurs with employees, unions and health and safety representatives in my workplace
- Employees are encouraged to become involved in workplace safety matters
- In my organisation, the prevention of workplace injury involves all levels of the organisation

Chapter Six

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Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysian workers

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Note: The presentation, including the referencing style used in this section is that preferred by the publishing journal.

Abstract

Orientation: Job characteristics are well accepted as sources of burnout and engagement amongst employees; psychosocial safety climate may precede work conditions.

Research purpose: We expanded the Job Demands and Resources (JD-R) model by proposing psychosocial safety climate (PSC) as a precursor to job demands and job resources. As PSC theoretically influences the working environment, the study hypothesized that PSC has an impact on performance via both health erosion (i.e. burnout) and motivational pathways (i.e. work engagement).

Motivation for the study: So far, integration of PSC in the JD-R model is only tested in a Western context (i.e. Australia). We tested the emerging construct of PSC in Malaysia, an Eastern developing country in the Asian region.

Research design, approach and method: A random population based sample was derived using household maps provided by Department of Statistics, Malaysia; 291 employees (response rate 50.52%) from the State of Selangor, Malaysia participated. Cross-sectional data were analysed using structural equation modelling.

Main findings: We found that PSC was negatively related to job demands and positively related to job resources. Job demands, in turn, predicted burnout (i.e. exhaustion and cynicism), whereas job resources predicted engagement. Both burnout and engagement were associated with performance. Bootstrapping showed significant indirect effects of PSC on burnout via job demands, PSC on performance via burnout and PSC on performance via the resources-engagement pathway.

Practical/managerial implications: Our findings are consistent with previous research that suggests that PSC should be a target to improve working conditions and in turn reduce burnout and improve engagement and productivity.

Contribution/value-add: These findings suggest that JD-R theory may be expanded to include PSC as an antecedent and that the expanded JD-R model is largely valid in an Eastern, developing economy setting.

Introduction

The aim of this research was to examine empirically a theoretical model of psychosocial safety climate (PSC). This emerging construct is defined as the 'policies, practices and procedures for the protection of worker psychological health and safety' (Dollard & Karasek, 2010, p. 208) that are largely influenced by senior management in organisations. We propose an integrative model where PSC is a precursor to work conditions (i.e. job demands and job resources) and in turn burnout, engagement and performance via mediation pathways. In particular, our theory builds on the premises of Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2007) and we see PSC as precursor for the health and motivation pathways espoused in that model. The research addresses a gap in the literature about the origin of job demands and job resources and in turn the model pathways.

The second aim is to examine the integrative PSC model in an Eastern culture and in an emerging economy to determine whether the assumptions of the model are emic (specific) or etic (general). So far, the JD-R model (Bakker, Demerouti, & Verbeke, 2004) and the PSC integrative model (Dollard & Bakker, 2010) have mainly been tested in Western nations. Research on psychosocial factors and work stress in Eastern countries such as Malaysia is lacking (Sadhra, Beach, Aw, & Sheikh-Ahmed, 2001), as it is in most developing countries (Chopra, 2009). Moreover, work and organizational (psychology) research is less advanced in Eastern countries (Burke, 2010). In short, knowledge development in the area is lacking precisely where it may be needed most (Kortum, Leka & Cox, 2008).

Psychosocial safety climate

Psychosocial safety climate theory brings together insights from the work stress and safety science literatures. Although numerous work stress studies have identified a range of important psychosocial aspects, none has specifically identified a psychosocial safety climate. Further, two disparate lines of research separately explain workplace physical and psychological health (Dollard & Bakker, 2010). The first, safety climate research, examines safety behaviours and perceptions and their influences on employees' physical health (Flin, Mearns, O'Connor, & Bryden, 2000; Zohar & Luria, 2005). The second focuses mainly on work conditions, job demands and resources, worker psychological health and motivational related outcomes.

Psychosocial safety climate is largely an indicator of the true priorities of an organisation towards competing climate interests, for example, a climate for productivity vs. a climate for psychological health. According to leading theorists in the safety climate literature, the best way to make sense of an organisation's true priorities is via perceptions of enacted policies, practices and procedures (Zohar & Luria, 2005). Other perceptual or sense-making cues may be derived from the divergence or convergence between what management *say* and what they *do* in relation to these operational aspects. These perceptions in aggregate provide a measure of climate, because PSC is argued to be a property of the organisation, team, or unit. Knowing about the climate will provide a good indication of the working conditions (i.e. job demands and job resources), worker psychological health, engagement and productivity of employees.

Psychosocial safety climate is characterised by:

1. management commitment
2. management priority
3. management and employee participation and involvement in stress prevention
4. organizational communication.

Evidence from the work stress literature highlights these factors as important components of successful organizational stress intervention projects (European Agency for Safety and Health at Work, 2002; Jordan, Gurr, Tinline, Giga, Faragher, & Cooper, 2003; Kompier & Kristensen, 2001). Evidence of these characteristics within organisations indicates varying levels of PSC, which will predict the kind of work environment experienced and the psychological reactions to these characteristics. Not unsurprisingly, these characteristics converge with factors identified in safety science research that typify a strong safety climate (Cox & Cheyne, 2000).

In consideration of the characteristics of PSC, an organisation which strongly emphasises employee psychological health and safety will create job demands that are both motivating and conducive to health (Dollard & Bakker, 2010). Communication systems will be in place so that risks can be *prevented,* identified and managed, for example, through better allocation of workload or greater opportunity for recovery. There will be strong participation and involvement of all levels of the organisation in stress prevention. This will lead to better information for continuous improvement and will render jobs less

stressful. Managers who have little regard, priority, or commitment for worker well-being (as in a low PSC environment) will ignore high demand scenarios and will not supply adequate resources. If PSC is an antecedent to working conditions, then conceivably it will lead to better health and work performance via these conditions.

Psychosocial safety climate as the other construct, not another construct

Despite a plethora of organizational climate constructs (for a review, see Kuenzi & Schminke, 2009), none appear to relate specifically to psychological health and safety (freedom from psychological harm) climate. The PSC construct shares some similarities with other safety climate constructs (Zohar, 1980) and team psychological safety (Edmondson, 1999) but is also different. PSC is an antecedent to working conditions that relate to psychological health and safety. The concept of PSC is derived in part from the notion that external factors affect how working conditions are created (see Sauter & Murphy, 2003); how senior management within the organisations reacts to such external forces determines PSC (Dollard & Karasek, 2010). For instance, the pressure of external competition may lead senior management to introduce lean production systems that are detrimental to workers' health. By using this principle, we believe that working conditions (i.e. job demands and resources) derive from initiatives of senior managers as discussed in the previous section.

It might be argued that PSC is related to psychological safety as defined by Edmondson (1999). Psychological safety is related to employees being safe and able to speak out without being rejected or punished (Baer & Frese, 2003); in turn employees' perception should enhance their work performance (Baer & Frese, 2003), or team learning behaviour (Edmondson, 1999). We expect that in high PSC climates, psychological safety will be an outcome. High PSC environments would also lead to greater safety in the form of freedom from more serious psychological injury that could arise from psychologically damaging actions of others, including bullying (see Bond, Tuckey, & Dollard, 2010).

Most climate studies have focussed on climate as an outcome variable, or as a mediator variable of working conditions. One unique aspect that distinguishes PSC from other climates (e.g. safety climate) is the fact that PSC is viewed as a precursor or antecedent variable to working conditions and not as an outcome or mediator. Empirically, recent studies demonstrate that PSC is clearly an antecedent to the work context and is associated with psychological health through its relationship with the working environment (Bond *et al.*, 2010; Dollard & Bakker, 2010). These studies show that PSC is a valid and

reliable construct in relation to work conditions, psychological health and work engagement.

Extended JD-R theory

The Job Demand-Resources (JD-R) model (Bakker & Demerouti, 2007) is a parsimonious heuristic model that synthesises a number of important health and performance related constructs. So far, the JD-R model has received much attention from scholars and has been tested in various countries, mainly in Western nations (Bakker, Demerouti, & Verbeke, 2004). PSC reflects management priorities, for example, where job resources will be allocated and what the workload will be; consequently, PSC will be associated with working conditions. In this paper, we explain how PSC triggers the key operational paths described in JD-R theory via its effect on job entities. A central assumption of the JD-R model is that every occupation has its own specific characteristics, described in terms of *job demands* and *job resources*.

Job demands refer to any aspect of the job that requires people to expend physical, cognitive and emotional effort (Bakker & Demerouti, 2007). In other words, they refer to 'things that have to be done' (Schaufeli & Bakker, 2004, p. 296). Job resources (e.g. job control and supervisory support), energise workers towards work goals and stimulate personal growth (Demerouti *et al.*, 2001) and can minimise the impact of job demands on employees' well-being (Bakker, Demerouti, & Euwema, 2005).

The JD-R model postulates that job demands and job resources trigger two kinds of psychological processes: namely, *health impairment* and *motivational* processes (Schaufeli & Bakker, 2004). Job demands may require sustained physical and/or psychological effort, hence, are associated with certain physiological or psychological costs (Bakker *et al.*, 2004). High demands without the opportunity for recovery will lead to overtaxing, resulting in exhaustion and health impairment. Job resources, by contrast, play either an intrinsic (e.g. fulfill human needs) or extrinsic motivational role (e.g. fulfill work goals) (Bakker & Demerouti, 2007) therefore will energize employee motivation (e.g. engagement) and lead to increased performance (Bakker *et al.*, 2007). In general, whilst job resources refer to any aspects of a job that facilitate work goals and reduce demands job resources also play a motivational role (intrinsic and extrinsic) for employees (Bakker & Demerouti, 2007).

Theoretically, the way PSC functions can be understood by augmenting the JD-R model. Firstly, we expect that in high PSC environments managers will be cognisant of the negative impact of chronic job demands and will have in place policies, practices and

procedures to ensure that workers are not unduly exposed to stress inducing work conditions. We expect that PSC is negatively related to job demands (*Hypothesis 1*, see Figure 1 with hypotheses identified).

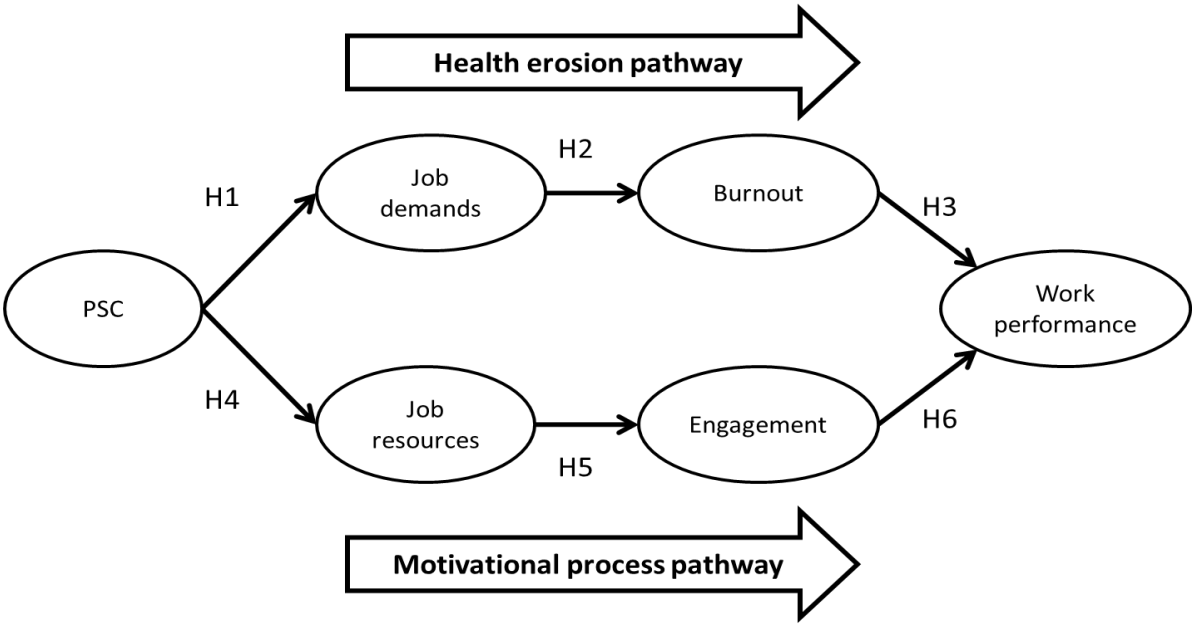


Figure1: PSC as precursor to job demands and job resources and its relationship to work performance through burnout and engagement

There is some empirical evidence for this. Dollard and Bakker (2010) found that organizational-level PSC predicted change in emotional demands and work pressure over time in education workers. Bond, Tuckey and Dollard (2010) also found that PSC was associated with bullying both cross-sectionally and longitudinally amongst police officers. In the present study, we investigated emotional demands and role conflict. Role conflict may be a particularly important predictor of burnout in Malaysia as suggested by recent research in nurses (Yunus, Mahajar, & Yahya, 2009) and in a Malaysian-based multinational company (Jamal, 2008). We investigate emotional demands on the basis that in Western studies there is strong evidence of the importance of emotional demands as a key stressor (Bakker, Demerouti & Schaufeli, 2003; Kristensen, 2002), however, there is scant research on this in Malaysia. Next, turning to the assumptions of the JD-R model, job demands are positively related to burnout (*Hypothesis 2*). There is very strong empirical evidence for this strain process and dozens of studies convincingly show that job demands are positively related to burnout (Korunka, Kubicek, Schaufeli, & Hoonakker, 2009; see

Schaufeli, Bakker & Van Rhenen, 2009 for a review). Theoretically, burnout is negatively related to performance in JD-R theory as well (*Hypothesis 3*). There is empirical evidence for a negative relationship between burnout and (objective) performance (Bakker *et al.*, 2008; Demerouti, Verbeke, & Bakker, 2005). Following Hockey's (1997) assumption regarding the passive coping mode, we assume that people who are trapped in negative affective-cognitive states (including burnout) are likely to reduce their work accuracy and effort as a mechanism to cope. In extreme cases, people may not pursue their tasks at all (Schaufeli & Bakker, 2004). In sum burnout may be related to reduced performance through an erosion of personal energy (Schaufeli & Bakker, 2004) and less striving for achievement (Halbesleben & Bowler, 2009).

Bringing these three hypotheses together, we propose (see Figure 1) that PSC is a trigger to the health erosion pathway of the JD-R model. Specifically, PSC is positively related to performance first through job demands and then through burnout (*Hypothesis 4).* The motivational process of the JD-R model is driven by the availability of resources (Schaufeli *et al.*, 2009). We argue that in high PSC environments, managers will ensure that adequate job resources are available for employees; in other words, PSC is positively related to job resources (*Hypothesis 5*). Therefore, managers will understand through good communication and feedback systems with employees, what job resources are required to help employees achieve both personal and work related goals. If management is concerned about employees' psychological health and safety, this will lead to a better working environment via a supply of various job resources (e.g. decision authority, supervisory support).

Whilst decision authority will give employees a lot of choice, such as more control over their tasks (Bakker *et al.*, 2005), supervisory support will help them to cope better with their job demands (Bakker *et al.*, 2005). Consequently, this will enable employees to remain engaged with their work. Social exchange theory is relevant here as well: employees supplied with adequate job resources, will react with more effort toward the organisation (Blau, 1964), with more organizational commitment (Hakanen, Bakker, & Schaufeli, 2006) and personal initiative (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008).

There is some indication that job resources such as job control and support are an issue in Malaysian work environments. For example, low decision authority is a source of job dissatisfaction in Malaysian academics (Huda, Rusli, Naing, Tengku, Winn & Rampal, 2004) and lack of supervisor support is associated with depression and stress (Edimansyah, Rusli, Naing, Rusli, Winn, & Ariff, 2008).

Turning again to the JD-R model, the next proposition is that job resources will be positively related to work engagement (*Hypothesis 6*). Again there is a large body of evidence to support this claim (Bakker & Leiter, 2010; Hakanen, Schaufeli, & Aloha, 2008; Schaufeli & Bakker, 2004; Schaufeli *et al.*, 2009) and job resources relate to employee engagement more strongly than job demands. However, neither of the two Malaysian studies examined the relationship between job resources and work engagement.

Finally, we expect that work engagement will be positively related to performance (*Hypothesis 7*). Although there is currently a lack of studies that examine the link between engagement and work performance (Bakker & Demerouti, 2008) there are several reasons why engaged workers should perform better than non-engaged workers (Bakker, 2009). Engaged workers often experience positive emotions such as happiness and enthusiasm. According to the broaden-and-build theory (Fredrickson & Branigan, 2005), positive emotions broaden one's focus and attention to a more expansive set of stimuli in the environment; when attention is broad the individual can develop and build personal skills and resources. For example, joy may encourage the exploration of novel situations and the development of new skills in problem solving. Secondly, engagement is related to health and this implies that workers are *able* to perform better. Finally, engagement may be closely related to positive work performance because of the focus and energy engaged worker bring to the task (Schaufeli & Bakker, 2004).

A recent meta-analysis that operationalised work engagement in terms of satisfaction with motivating resources, found that work engagement related positively to a range of business-unit performance outcomes (i.e. customer satisfaction, profitability, productivity, employee turnover and accidents) (Harter, Schmidt, & Hayes, 2002). The JD-R model disaggregates this relationship by defining work engagement separately from job resources and positive work outcomes (Bakker & Leiter, 2010; Bakker & Schaufeli, 2008). In consideration of this and bringing the motivational propositions together, we postulate that PSC triggers the motivation pathway; PSC is positively related to performance firstly through job resources and secondly through work engagement (*Hypothesis 8*).

Research design

Research approach

Recent study of job stress in Malaysia show that employees experience stress, depression and anxiety symptoms due to high job demands (Rusli, Edimansyah, & Naing, 2008). They

also report workers being trapped in jobs with high psychological demands and low job security (Edimansyah *et al.*, 2008). There is evidence of increased job insecurity in recent times with more than 100 000 local employees terminated from their jobs between 2002 and 2006 (Malaysian Trades Union Congress Bulletin, 2007). In insecure work contexts, employees are likely to endure work stressors. Neither the PSC nor the JD-R model has been tested in Malaysia, an Eastern developing economy and one of the most successful economies in South East Asia.

This study is a part of our project on psychosocial risk factors in Malaysia; the study furthermore trials a psychosocial surveillance tool within one state of Malaysia, namely Selangor. The sampling technique like most surveillance systems (71%) is random sampling from the working population (Dollard, Skinner, Tuckey, & Bailey, 2007). Ideally, climate studies focus on shared perceptions of climate and aggregate individual data to the organizational or unit level. However, according to data presented in a recent meta-analysis by Clarke (2006), only 17% of safety climate studies actually appear to do this. Population sampling poses a challenge when assessing climate phenomena as aggregation at the organizational level is not possible. Nevertheless, it is important to note that our study theorises and considers PSC as a property of the organisation. Despite this drawback, the population sample enables us to test the theories across many organisations, occupations and sectors to determine their general veracity.

Research method

Participants and procedure

We used a population-based sample in the present study. We used a household map provided by the Department of Statistics in Malaysia that provides a stratified random sample of houses representative of the wide socio-economic variations by location in the state of Selangor. This method is similar to that used in a study of job security in Taiwan (Chang & Lu, 2007). A questionnaire was distributed to every household and was collected three days after its distribution. Our sampling strategy required only one working adult participant from each household. We approached 576 employees and a total of 291 employees agreed to participate (response rate is 50.52%). The study was approved by University of South Australia Human Research Ethics Committee.

The proportion of males to females was 53% males and 47% females, with 87.9% of participants aged between 20 and 49 years old. In total, 47.4% of respondents had a

secondary school education and 58.1% lived in urban areas. The respondents were mainly Malay (68.7%), 24.1% was Indian, 3.8% was Chinese and the rest consisted of other ethnic groups.

Measurement instruments

Most of the instruments used in this study were translated using back-to-back translation, unless otherwise indicated.

Psychosocial safety climate: This was assessed using the PSC-12, a twelve item scale derived from Dollard and Kang's (2007) original 26-item version (Hall, Dollard, & Coward, 2010). The questionnaire measures four sub-dimensions of PSC each with three items. The response scale ranges from 1 ('strongly disagree') to 5 ('strongly agree'); example questions in each subscale include:

- 'In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health' (*management commitment;* $\alpha = 0.86$)
- 'There is good communication here about psychological safety issues which affect me' (*organizational communication;* $\alpha = 0.67$)
- 'Senior management clearly considers the psychological health of employees to be of great importance' (*management priority;* $\alpha = 0.80$)
- 'Participation and consultation in occupational health and safety issues occurred with employees, unions, and occupational health and safety representatives' (*organizational participation,* $\alpha = 0.77$).

These dimensions are inter-related and considered as underlying indicators of the latent construct PSC and are used as such in the SEM analysis.

Job demand: These were assessed using *emotional demands* (three items) and *role conflict* (four items), from the Copenhagen Psychosocial Questionnaire (COPSOQ; Kristensen, Hannerz, Hogh, & Borg, 2005). Answers were on a 5-point scale: 0 ('strongly *disagree*') to 4 ('*strongly agree*'). A sample question for emotional demands comprises 'Does your work put you in emotionally disturbing situations?' A sample question regarding work role conflict is 'Do you do things at work that are accepted by some people but not by others?' The reliability of the scales is $\alpha = 0.82$ and 0.82, respectively.

Job resources: We examined job resources by using two subscales: *supervisor support* and *decision authority* from the Job Content Questionnaire (JCQ) (Karasek *et al.*, 1998). *Supervisor support* was assessed using five items including; 'My supervisor/manager is concerned about the welfare of those under him/her' ($\alpha = 0.85$). The response formats used four points: 1 ('strongly disagree') and 4 ('strongly agree'). However, this scale also includes an additional point, 5 (I have no supervisor) for those people where supervision is not applicable. As there were only 2.8% of non-applicable responses, we treated these as missing values. *Decision authority* was assessed using two of the original three items, for example, 'My job allows me to make a lot of decisions on my own' ($\alpha = 0.63$). Response formats to both scales used four points: 1 ('strongly disagree') and 4 ('strongly agree'). We omitted a reversed item due to low reliability. Both of these scales are from the Malay version of the JCQ (Edimansyah *et al.*, 2008).

Burnout: This was examined using two sub-scales of the Maslach Burnout Inventory-General Survey (MBI-GS: Schaufeli, Leiter, Maslach, & Jackson, 1996). For *emotional exhaustion*, we used five items, for example, 'I feel emotionally drained from my work'. For *cynicism*, we used four of the original five items. Consistent with Bakker *et al.* (2008) and Schutte, Toppinnen, Kalimo and Schaufeli (2000), we omitted one item, 'I just want to do my job and not be bothered' due to low reliability. An example item is: 'I doubt the significance of my work'. Responses were scored on a 7-point scale: 0 ('never') to 6 ('always') ($\alpha = 0.83$ and 0.67, respectively).

Work engagement: We used the *vigor* and *dedication* subscales derived from a shortened version of the Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker, & Salanova, 2006) to measure work engagement. Each subscale was examined with three items and a seven point scale from 0 ('never') to 6 ('always'). Two sample questions include ($\alpha = 0.86$ and 0.83 respectively):

- 'At my work, I feel bursting with energy*'* (*vigor*)
- 'I am enthusiastic about my job' (*dedication*).

Performance: This was assessed using two questions from the World Health Organization Work Performance Questionnaire (HPQ; Kessler *et al.*, 2003). The self-report HPQ has been validated by comparing it with objective organizational performance amongst 3200 employees from four organisations (airline reservation agents, customer services, automobile company executives and railroad engineers). Good concordance was found between measures in all groups. The questions included in the present study were:

- 'Using the 0 (*the worst job performance*) to10 (*top performance*) scale, how would you rate your usual job performance over the past year or two?'
- 'Using the 0 (*the worst performance*) to 10 (*top performance*) scale, how would you rate your overall job performance on the days you worked during the past 4 weeks (28 days)?'

The reliability for this short scale is acceptable (α = 0.83); inter-item correlation for the two items is 0.71.

Statistical analysis

Firstly, we conducted a descriptive analysis to examine inter-correlations between all variables (see Table 1). Secondly, as we conducted a cross sectional study, we used Harman's one factor test to determine whether common-method variance is a serious problem (Podsakoff & Organ, 1986). An unrotated factor analysis of all study items yielded 11 factors in total explaining 60% of the variance. Given that a single factor did not appear and that a general factor did not account for most of the variance, common method bias is not viewed as a significant threat in our study (Podsakoff & Organ, 1986). Moreover the factors were generally the same as those used as indicators in Figure 2.

Thirdly, we tested a variety of models with structural equation modeling using AMOS version 17 (Arbuckle, 2003) and tested the progressive fit of models using the chi-square difference test. We evaluated our model by using five absolute fit indices (cf. Joreskog & Sorbom, 1986): the chi-square statistic (χ^2), goodness-of-fit index (GFI), comparative fit index (CFI), Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). For GFI, CFI and TLI, values greater than 0.90 are acceptable whereas for the RMSEA a value equal to or smaller than 0.08 is acceptable (Byrne, 2001).

We first assessed the null hypothesis model (M0). Then we tested the proposed full mediation model (M1) as shown in Figure 1. Note that in the research model, we allowed the structural residuals (i.e. measurement errors) of job demands and job resources and also burnout and engagement to covary. We then tested a partial mediation model (M2) with the following paths:

PSC → job demands → burnout → performance, PSC → job resources → engagement → performance, with PSC to all model variables, PSC → burnout, PSC → engagement and PSC → performance.

Further, we tested an alternative model that only included direct effects of PSC to more distal mediators and the dependent variable (M3), with the following paths:

PSC → burnout; PSC → engagement

PSC → performance.

Hypotheses were assessed against results in the final accepted model (M4). One-tailed significance levels are reported given that the hypotheses were directional**.**

Results

Descriptive statistics

Means, standard deviations and correlations between all variables are shown in Table 1.

Fit indices and comparisons of alternative models are shown in Table 2. Starting with the initial null hypothesis model (M0), the fit of the model was poor as expected. We then tested the mediation model (M1) with the paths:

PSC → job demands → burnout → performance, PSC → job resources → engagement → performance.

The proposed mediation model fit the data adequately (GFI = 0.94; CFI = 0.94; TLI = 0.93; RMSEA = 0.06). Against the M0 model, the M1 model showed a significant improvement with $\Delta\chi^2$ significant at $p < 0.001$ (see Table 2).

We then tested a partial mediation model (M2) with paths between:

PSC → job demands → burnout → performance, PSC → job resources → engagement → performance

and a path from PSC to all model variables,

PSC → burnout, PSC → engagement and PSC → performance

Table 1. *Means (M), Standard Deviations (SD) and Correlation Between the Study Variables*

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
PSC – Commitment	3.48	0.81	1.00											
PSC – Priority	3.48	0.76	.69**	1.00										
PSC - Communication	3.35	0.67	.56**	.64**	1.00									
PSC – Participation	3.55	0.74	.53**	.70**	.64**	1.00								
Emotional demands	1.40	0.80	-.13*	-.17**	-.05	-.17**	1.00							
Role conflict	1.48	0.73	-.10	-.05	-.02	-.06	.51**	1.00						
Decision authority	2.78	0.54	.05	-.01	.14*	.05	.11	-.02	1.00					
Supervisor support	3.20	0.61	.26**	.30**	.26**	.19**	-.14*	-.08	.13*	1.00				
Exhaustion	2.94	1.23	-.10	-.16**	-.04	-.14*	.23**	.22**	.13*	-.04	1.00			
Cynism	2.43	1.12	-.17**	-.17**	.06	-.20**	.35**	.37**	-.01	-.01	.43**	1.00		
Vigor	4.33	1.28	.18**	.27**	.21**	.30**	-.11	-.01	.12*	.23**	-.05	-.01	1.00	
Dedication	4.33	1.20	.23**	.32**	.35**	.40**	-.14*	-.12*	.14*	.26**	-.10	-.04	.80**	1.00
Productivity	6.85	1.62	.20**	.30**	.13*	.27**	-.23**	-.07	.04	.24**	-.06	-.13*	.32**	.36**

Note. $N = 291$ employees. * $p < .05$; ** $p < .01$.

We found that this model fit the data well with all fit indices showing reasonable values: GFI = 0.94; CFI = 0.95; TLI = 0.93 and RMSEA = 0.06. When contrasted to the previous proposed mediation model (M1), we found that the model showed an improvement and $\Delta\chi^2$ was significant at $p < 0.01$. All other fit indices were similar to the M1 model. Additional significant paths that accounted for the improved model and could be reasonably theoretically defended were:

PSC → burnout ($\beta = -0.15$; $p < .05$) and PSC → performance ($\beta = 0.17$; $p < 0.05$).

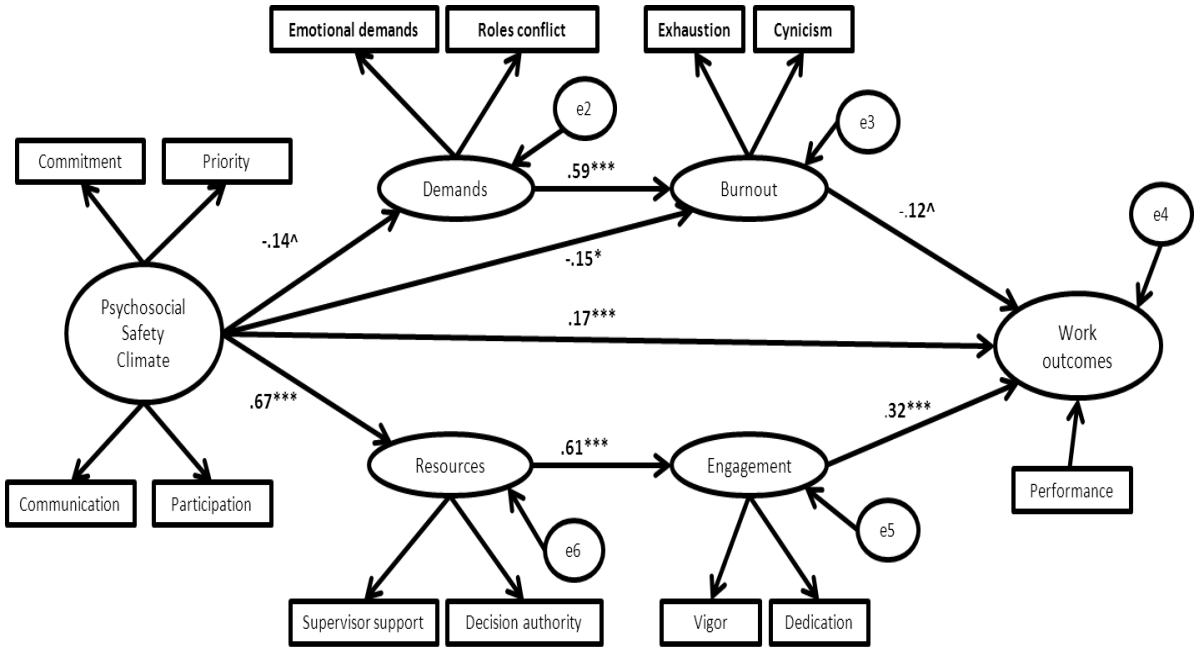
Theoretically, low PSC may be experienced as stressful in line with psychological safety theory, because they are a threat to the self (Semmer, McGrath, & Beehr, 2005). High PSC may result in a direct boost to performance that could be explained through social exchange theory but via factors other than the demands and resources specified in the model, or by psychological states other than engagement (e.g. commitment) and burnout.

Next, we tested an alternative direct effects model (M3) with only the following paths:
PSC→burnout; PSC → engagement
PSC → performance.

We found that M3 was not as good a fit with GFI = 0.89; CFI = 0.86; TLI = 0.83 and RMSEA = 0.10. Nevertheless, results here showed that PSC was related to performance ($\beta = 0.34$, $p < .001$); in other words, this provides some evidence that there is a direct effect to be mediated.

Our final model (M4), as illustrated in Figure 2, indicated that the best fitting model was:
PSC → job demands → burnout → performance
PSC→ job resources → engagement → performance

with additional paths PSC→burnout and PSC→performance (M1 plus the two additional direct paths).



Note. N = 291, *p < .05, ** p < .01, ***p < .001, ^ sig at one-tailed levels.

Figure 2. PSC as a precursor of job demands and resources, and its impact on performance through burnout and engagement

As shown in Table 2, adding these additional paths led to a significant improvement in M1 with GFI = 0.94, CFI = 0.95, TLI = 0.94, RMSEA = 0.06; $\Delta\chi^2$ was significant at $p < 0.01$. Moreover, it is important to note the sizeable standardised loadings of each PSC dimension on the latent PSC measure:

- commitment; 0.78
- priority; 0.88
- communication; 0.74
- participation; 0.77.

Our findings supported *Hypothesis 1* that PSC is negatively related to job demands (emotional demands and work conflict); with β = -0.14, $p < 0.05$. Our finding also supported *Hypothesis 2* that job demands are positively related to burnout (i.e. emotional exhaustion and cynicism) with $\beta = 0.59$, $p < 0.001$. Our analysis also revealed that burnout is negatively related to performance (Hypothesis 3), $\beta = -0.12$, $p < 0.05$ confirming the significant negative relationship between burnout and performance.

Table 2. *Fit Indices and Comparisons of Alternative Models for Integrating PSC in the JD-R Model*

	χ^2	*df*	GFI	CFI	TLI	RMSEA	AIC	$\Delta\chi^2$ (*df*) sig	Comparison
M0. Null model	1343.54	78	.94	.00	.00	.24	1370.86		
M1. Proposed mediation model	127.01	59	.94	.94	.93	.06	191.01	1216.53(19)***	M1-M0
M2 Partial mediation model	116.78	56	.94	.95	.93	.06	186.78	10.23(3)**	M2-M1
M3. Alternative direct effects model	238.63	63	.88	.84	.80	.11	322.30	111.62(4)***	M3-M1
M4. Final model	116.80	57	.94	.95	.93	.06	184.81	10.21(2)**	M4-M1

Note: * $p < .05$, ** $p < .01$; ***, $p < .001$; χ^2 goodness-of-fit statistic; GFI = Goodness of Fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion.

To test whether PSC is a trigger to the health erosion pathway of the JD-R model (Hypothesis 4), such that:

- job demands carries the indirect effect of PSC on burnout and
- burnout carries the indirect effect of job demands onto work performance

We utilized a bootstrapping method using AMOS software. Although the Sobel test is often used to test the mediation process, tests that are more direct are suggested. In particular, because the product of the effects of the paths comprising the indirect effect is non-normal, bootstrapping is recommended (Hayes, 2009; Preacher, Rucker, & Hayes, 2007). Bootstrap samples were derived by repeatedly estimating the coefficients with a minimum of 1000 bootstrap samples, each of which comprises *N* cases randomly sampled with replacement from the original sample (*N* = 291). Convention suggests the effect is significant if the 95% confidence intervals (CI) denoted by lower and upper bounds excludes the value of 0.

Our 1000 samples bootstrapping analysis indicated that the indirect effect of PSC on burnout via job demands was significant (indirect effect is = -0.09, 95% lower bootstrap CI = -0.233, upper CI, -0.005, $p < 0.05$). However, the indirect effect of job demands on performance via burnout was not supported (indirect effect = -0.053, 95% lower CI = -0.544, upper CI = 0.65; *n.s.*). The indirect effect of PSC on performance via burnout was significant, (indirect effect is = 0.81, 95% lower bootstrap CI = 0.47, upper CI, 1.26, $p < 0.01$). Thus, Hypothesis 4 is partially supported; PSC triggers the health erosion reaction via job demands to burnout, but not to performance. However, the effect of PSC on performance was additionally carried by burnout. In *Hypothesis 5*, we predicted that PSC is positively related to job resources and this was confirmed with a significant relationship ($\beta = 0.67$, $p < 0.001$). *Hypothesis 6* that job resources are positively related to work engagement was also supported ($\beta = 0.61$, $p < 0.001$). *Hypothesis 7* proposed that work engagement will be positively related to performance and this was confirmed in our study ($\beta = 0.32$, $p < 0.001$). Again, we used a direct test of the mediation motivation pathway as indicated in Hypothesis 8. Bootstrapping results showed that the indirect path between PSC and engagement was influenced by job resources (indirect effect = 0.938, 95% lower CI = 0.06, upper CI, 9.00, $p < 0.01$). Additionally, our analysis showed that engagement carried the effect of job resources on work performance (indirect effect = 1.030, 95% lower CI = 0.50, upper CI = 2.81, $p < 0.05$). Together, our finding suggests that when PSC is high, higher levels of job resources are supplied to fulfill employees' needs and this increases

employees' engagement. In turn, engagement carries the effect of resources on performance.

Discussion

We argued for an integrative model where PSC theoretically influences working conditions and influences work performance via the health erosion (burnout) and motivational (engagement) pathways espoused in the JD-R model. We tested the integrative model and, by implication, the JD-R model in a non-Western culture (i.e. Malaysia), to see whether the basic arguments derived from Western thinking are applicable in a different work context. Recently, Burke (2010) commented on how difficult it was to obtain details about workplace stress and engagement outside the Western context, due to a limited organizational research tradition in those areas. Whilst most psychological theories are developed in the Western tradition, we argued for the need to investigate how well the theories apply in other countries and cultures. Moreover, we tested the veracity of the extended JD-R model in a population-based sample: previous research integrating PSC in the JD-R model is restricted to single organisations or occupations.

We found support for the expanded health erosion pathway, that PSC has a negative relationship with burnout through job demands. Consistent with previous Western findings, we confirmed that role conflict and emotional demands contribute to burnout (e.g. Bakker *et al.*, 2005; Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Further, we found that in high PSC organisations, lower levels of job demands (i.e. emotional demands and role conflict) were evident. Although the concept of PSC and demands are grounded in the Western context, our Eastern findings are similar to those reported in the Western studies (Bond *et al.*, 2010; Dollard & Bakker, 2010). In general, the findings are consistent with our argument that working conditions are designed and created by managers (Morgeson & Humprey, 2008). Against expectations, we did not find that burnout carried the effects of job demands on performance.

Instead, we found that PSC was related to performance via burnout. Although we proposed that the negative direct effect of PSC to burnout may be plausible as an 'offence to self' stressor (Semmer *et al.*, 2005), the direct effect may also be explained by other demands not assessed in this study.

In the present study, we also predicted that PSC would enhance performance through its positive relationship with job resources and engagement. We found full support for this expanded motivation hypothesis. Managers who are concerned about employee

psychological health, provide enough job resources for their employees (i.e. supervisor support, decision authority) which boosts employee engagement and in turn work performance.

Although we proposed a fully mediated model, we did find significant direct effects between PSC and burnout and between PSC and performance as well. These relationships may indicate that additional job demands and job resources are at play in the mediated paths that were not measured in the study. Alternatively, it could indicate substantive direct effects. This needs to be explored in future research. Despite the finding of partially rather than fully mediated pathways the results support the major claim of PSC theory that PSC precedes work conditions.

The theoretical implications of our research are in general that the integrative PSC model is applicable in an Eastern, developing economy. In other words, the integrative model has etic qualities. Taken together, the evidence point towards the benefit of expanding the JD-R model to include PSC as a trigger to the main pathways of the model. Importantly, the evidence supports the proposition that PSC is a source of job demands and job resources and helps to answer the question, 'from where do job demands and resources arise?' When managers in organisations prioritise psychological health over productivity concerns we expect working conditions to be designed to be conducive to both health and work engagement (Dollard & Karasek, 2010).

In short, even though we were unable to discover relevant previous theory driven research from Malaysia to describe the psychological health and engagement in the workplace, our hypothesised model is largely applicable in an Eastern, collective, developing economy context.

Practical implications

Our findings are consistent with previous research that confirms that PSC could be a target to improve job resources and engagement (Dollard & Bakker, 2010). Indirectly and directly, high PSC contexts (high commitment from management, priority, communication and participation for worker psychological health and safety) should lead to increased performance. Although the impact of job stress on employee well-being and performance is well acknowledged (Bakker *et al.*, 2008; Demerouti *et al.*, 2005) we see that measurement of PSC could provide a useful tool to assist in the change of management practices and in turn worker health and effectiveness. Given that job stress prevention strategies are now becoming more popular in organisations (Noblet & LaMontagne, 2006) and also in

Malaysian workplace settings with initiatives from the government to promote healthy working conditions, we consider building a strong PSC may play a key role. Criticisms regarding current practices of job stress prevention suggest that they focus too much on the individual without consideration of working conditions (Noblet & LaMontagne, 2006); we believe that focussing on PSC can remedy this problem. Managers should be informed about of the importance of PSC in the workplace.

Limitations and future research

There are some limitations to the current research. The current study used cross-sectional data therefore causal conclusions regarding the direction of the proposed relationships cannot be drawn. However, previous longitudinal research lends some support to the proposition that PSC precedes work conditions (Bond, *et al.*, 2010; Dollard & Bakker, 2010). Further, our population-based study did not provide the opportunity for aggregation of data, therefore it is plausible that the perceptions of organizational PSC could be influenced by individual factors. Additionally one of the possible problems caused by cross-sectional research is common-method variance (Demerouti *et al.*, 2005). To assess this problem, we conducted the Harman test and found no common factor underlying all of our measures. Therefore, we believe that the relationships we report are substantive and not based on common method effects.

Consistent with previous research, we used a self-rated questionnaire to assess performance (i.e. Demerouti *et al.*, 2005). Although objective measurement could more reliably assess employee performance (i.e. Bakker *et al.*, 2008; Janssen, Lam & Huang, 2010), our respondents were from a variety of occupations and organisations, so it was impractical to use objective performance measures.

We operationalised PSC in terms of perceptions but another way to capture PSC would be to evaluate the change process in work stress interventions, as an effective intervention should lead to changes in PSC, that is, changes to policies, practices and procedures in relation to worker psychological health. One study has operationalised PSC in terms of actions, progress and process in a work stress intervention (Dollard & Karasek, 2010). The authors showed that high PSC enabled the utilisation of resources (i.e. decision influence); in other words, under conditions of high PSC the beneficial negative relationship between decision influence and change in emotional exhaustion and psychological distress held, whereas the strength of the relationship was reduced under conditions of low PSC. Further,

the dual functionality of PSC as a precursor to working conditions, as well as a potential ameliorator of them requires further investigation.

Future research could give attention to other types of job demands and job resources and other types of psychological symptoms (e.g. depression, anger) or other positive reactions (e.g. flow, Csikszentmihalyi, 1990) This is important, as recent Malaysian research found that employees are likely to express anger (Idris, Dollard, & Winefield, 2010) and depression in the face of high job demands (Edimansyah *et al.*, 2008). Future research should also employ a longitudinal design to confirm the directional effects suggested by the models.

Conclusion

The present study adds to the literature in several ways. It proposes and provides support for the proposition that PSC is a precursor to job demands and job resources and therefore is a likely trigger of the health erosion and work motivation paths as formulated in the JD-R model. The propositions of the PSC model and, by implication, the JD-R model are confirmed in a Malaysian sample quite diverse from those usually investigated, that is, an Eastern developing economy, which is largely Muslim. The research helps to build a more inclusive world picture of healthy productive work.

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Chapter Seven

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Psychosocial safety climate, work conditions, and emotions in the workplace: A Malaysian population-based work stress study

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Abstract

We integrated psychosocial safety climate (PSC) with the Job Demands and Resources (JD-R) framework to examine the impact of both job demands and job resources at work on employee depression, anger and engagement. Psychosocial safety climate refers to a climate for the protection of employee psychological health and safety. As PSC theoretically influences the working environment, we hypothesized that PSC would have an indirect effect on specific negative emotions (e.g., anger, depression) via job demands and an indirect effect on positive emotion (e.g., engagement) through job resources. We used a population based sample consisting of 269 public and private employees from State of Selangor, Malaysia. Overall, results using structural equation modelling showed that PSC negatively related to job demands and positively related to job resources. In mediated paths, job demands carried the effect of PSC on anger and depression, whereas job resources carried the effect of PSC on engagement. We also showed that job demands negatively related to engagement, and that the effect was carried by anger and depression. Using multi-group analysis, we found that the model was invariant within both the public and private sectors. These findings suggest that JD-R theory may be expanded to include PSC as an antecedent, and that the PSC model is largely valid in an Eastern, Muslim, developing economy setting.

Keywords: Psychosocial safety climate; JD-R model; Work engagement; Depression; Anger

In this paper we investigated the effects of organizational psychosocial safety climate (PSC) together with job demands and job resources, on negative and positive emotions in the workplace. PSC is defined as "policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard & Bakker, 2010, p. 580). We tested a theoretical model of PSC that extended the Job Demand-Resources (JD-R) framework of work stress and introduced PSC as an organizational antecedent to work conditions. Specifically, we examined the effects of PSC on emotions that are mediated via work conditions.

The JD-R model (Bakker & Demerouti, 2007) provides a theoretical framework that enables the exploration of both positive and negative pathways regarding psychology at work. Empirical studies support the proposition that chronic job demands (or stressors) are likely to contribute to negative aspects of emotions, such as burnout (Schaufeli & Bakker, 2004) or depression (Hakanen, Schaufeli, & Ahola, 2008). Evidence is also found supporting the proposition that job resources enhance employees' motivation in the form of engagement and flow (Bakker & Leiter, 2010). While the JD-R model postulates both positive and negative aspects of work, most studies have focused on burnout on the negative side, and engagement on the positive side. Only one study has used depression in the JD-R framework (Hakanen, Schaufeli, & Ahola, 2008). Our study therefore sought to uniquely examine a range of emotions, i.e., anger, depression and engagement, as outcomes of the JD-R model. Given that most studies of the JD-R model are conducted within Western cultures we sought to test the validity of this extended model in an Eastern sample of Malaysian employees.

SOCIO-CULTURAL CONTEXTUAL BACKGROUND OF MALAYSIA

Malaysia is one of the fastest emerging and most successful economies in South-East Asia (World Competitiveness Yearbook, 2007). It is considered a multi-ethnic country, as it includes Malays (50%), Chinese (35%), Indian (10%), and indigenous people (5%) (Pope, Musa, Singaravelu, Bringaze, & Russell, 2002). In general, Malaysia is a Muslim-dominated country but other religions are also freely[6] practiced (Neo, 2006). Although the

[6] The freedom of religious only applies to non-Malays. Malays ethnic, the native ethnic in Malaysia must profess the Muslim religion (see Neo, 2006).

three dominant groups have their own unique culture, in general, Malays and indigenous ethnics as the native groups receive special treatment and mainly dominate political parties and government policy making. In terms of cultural characteristics, the Malaysian culture is different from many Western cultures: it is collective rather than individualistic, is concerned to maintain harmonious relationships, has a high level of power distance, and shows much respect for elders and people in high positions (Abdullah, 1992). Malaysia is a country that holds conservative values (Schwartz, 1999), promoting obedience and self-discipline. Nevertheless, Malaysia shares similarities with developed countries as well, and is rated highly on education indicators (i.e., adult literacy), similar to some European nations (i.e., Sweden) and Australia (Georgas & Berry, 1995). Although traditional cultural values influence social behavior, including in the workplace (Georgas & Berry, 1995), we expect that cultural issues do not affect working conditions very much as assessed in this study, (particularly job demands and resources) because Malaysia has adopted Western systems (especially British) in job design (Malek, Mearns, & Flin, 2010; Pope et al., 2002) in education (Pope et al., 2002) and also uses British Common Law (Neo, 2006).

In relation to the emotional expression of work stress, Muslim workers are expected to follow the religious philosophy of *redha* and *tawwakal* and thereby be fully accepting of a situation and not show their negative emotions such as depression or anger even if it is difficult (Idris, Dollard, & Winefield, 2010). However, recent research in Malaysia found using in-depth interviews, that depression and anger were both significantly related to employees' perceptions of job stress (Idris et al., 2010). The results of both Eastern and Western studies show that job demands are correlated with depression (Chen, Siu, Lu, Cooper, & Phillips, 2009). Further Asian employees tend to manifest their anger via anxiety or depression rather than by expressing it directly (Liu, Spector, & Shi, 2007). However, since most Eastern (Asian) studies have focused mainly on Chinese employees and their workplaces, this study fills a gap regarding research on emotions in the workplace by examining the state of affairs in a different kind of Eastern country, specifically a Muslim country – Malaysia

PSYCHOSOCIAL SAFETY CLIMATE AND WORKPLACE CONDITIONS

According to the JD-R model, job demands refer to any aspect of the job that requires people to expend physical, cognitive and emotional effort (Bakker & Demerouti, 2007). Although job demands do not necessarily have negative effects, as some demands may provide a positive challenge (Podsakoff, LePine, & LePine, 2007), studies reveal that

employees who continually experience certain kinds of job demands (e.g., role conflict, emotional demands) are likely to experience negative emotional reactions and an erosion of health over time. This is particularly the case when people use personal resources and energy to deal with chronic demands (Bakker & Demerouti, 2007).

Job resources refer to any aspects of a job that facilitate work goals and reduce demands (Bakker & Demerouti, 2007). Job resources also play a motivational role (e.g., intrinsic and extrinsic) for employees. The JD-R model proposes two paths: (1) the health erosion pathway, which describes the relationship between job demands and burnout and (2) the motivation pathway, which describes the relationship between job resources and work motivation and production outcomes.

Psychosocial safety climate theory (see Figure 1) describes and explains the mechanisms via which PSC relates to workplace conditions work-related emotions and important work outcomes, by extending the JD-R model (Bakker, Demerouti, & Verbeke, 2004). Our theoretical framework was developed on the basis that PSC is an indicator of the extent of concern that employers have for employees' psychosocial well-being (Hall, Dollard & Coward, 2010), and that working conditions are largely created by senior management (Dollard & Karasek, 2010). Following Dollard and Bakker (2010), we consider PSC to be a precursor or precondition to both the health and motivation pathways of the JD-R model because of its relationship to both demands and resources. Employers who value psychosocial health (high PSC), will create job demands that can be effectively managed (i.e., workload, emotional demands). Communication systems will be in place so that risks can be identified and managed, for example through better allocation of workload, or by providing greater opportunity for recovery. There will be strong participation and involvement of all levels of the organization in stress prevention. Managers who have little regard for workers' well-being, such as in a low PSC environment will ignore high demand scenarios. Chronic exposure to demands will in turn trigger the erosion of health which manifests as emotional reactions and stress-related health outcomes (Dollard & Bakker, 2010). This leads to *Hypothesis 1*: PSC will negatively relate to work demands (see Figure 1).

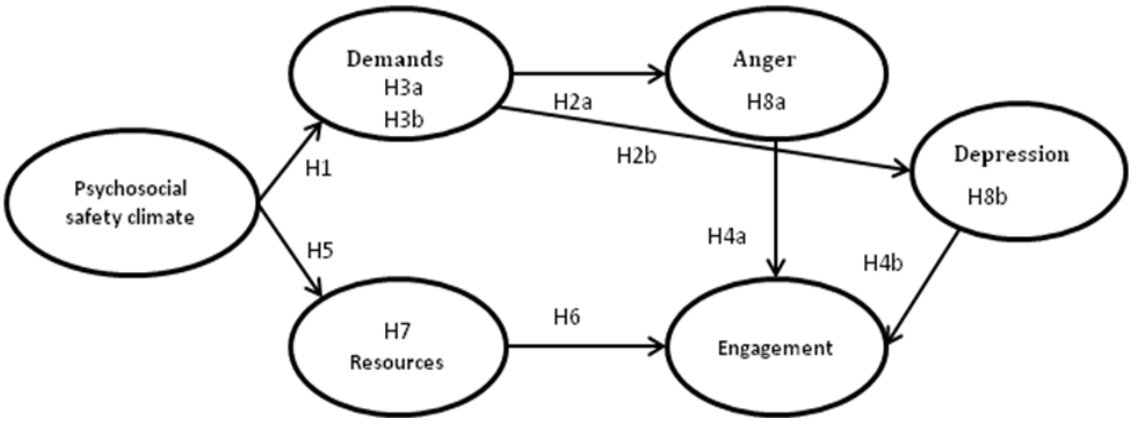


Figure 1. Study model: Psychosocial safety climate as a precursor of job demands and job resources and its relationship to emotions at work

The next step in the model concerns the relationship between job demands, anger and depression. Studies reveal that emotional demands (Xanthopoulou et al., 2007) and role conflict are sources of stress in the workplace. Anger is conceived as a negative affective-cognitive state and a common workplace emotion (Booth & Mann, 2005). Demands are likely to lead to anger via a number of processes, such as frustration (Neuman & Baron, 2005). According to the classic Dollard-Miller frustration-aggression hypothesis (Dollard, Doob, Miller, Mowrer, & Sears, 1939), anger and aggression may be the end result of built-up frustration. People may perceive that higher job demands are a result of unjust or unfair practices such as workload being unevenly distributed, and, feeling frustrated by being unable to achieve their work goals, may react in anger (Domalgalski & Steelman, 2007; Smith, Roman, Dollard, Winefield, & Siegrist, 2005; Spector, Fox, & Domagalski, 2006). In line with the Conservation of Resources (COR) approach, in the face of high demands, personal resource loss may also occur and in turn lead to anger, as is evident in studies of patients who suffered chronic obstructive pulmonary disorder (Lane & Hobfoll, 1992).

Empirical Western research shows that high job demands are associated with depression (Hakanen, Schaufeli, & Ahola, 2008; Siegrist, 2008). Two Eastern (Malaysian) studies have also found that psychological demands are associated with depression (Panatik, O'Driscoll, & Anderson, 2009). However, both of these Eastern studies used a very specific sample (i.e., technical workers), rather than population-based multi-occupational samples, raising questions over the generalizability of findings.

Studies confirming the relationship between workplace characteristics and anger and depression utilizing other job stress frameworks are well documented (Hoggan &

Dollard, 2007; Smith, Roman, Dollard, Winefield, & Siegrist, 2005). A commonly held belief is that in an Eastern Muslim collective culture, the norm is not to express anger directly, but to express it indirectly via anxiety (Liu, Spector & Shi, 2007). However, based on Idris et al.'s (2010) qualitative finding, we proposed to examine anger and depression as outcomes of the JD-R model. Thus, we predict *Hypothesis 2a*: Job demands will have a positive relationship with anger, and *Hypothesis 2b:* Job demands will have a positive relationship with depression.

So far we have proposed that PSC is related to demands, and job demands are positively associated with anger and depression. However, as Dollard and Bakker (2010) theorized, PSC may influence employees' health erosion, and negative emotional reactions such as exhaustion, depression and anger, through its effect on job demands. In essence this suggests that PSC is a trigger of demand related emotional reaction. Previous research (e.g., Dollard & Bakker, 2010; Idris, Dollard & Winefield; 2011) has found that job demands mediated the relationship between PSC and psychological strain (i.e., burnout). However, the relationship has not yet been tested in relation to specific negative emotions. Taken together, we propose an extended health erosion path, such that job demands will mediate the relationship between PSC and anger (*Hypothesis 3a*) and between PSC and depression (*Hypothesis 3b*).

Anger and depression are in turn likely to affect worker motivation. Following Hockey's (1997) proposition regarding the passive coping mode, we assume that people who are trapped in negative affective-cognitive states (e.g., anger) are likely to reduce their work accuracy and effort as a mechanism to cope. In extreme cases, people may not pursue their tasks at all (Schaufeli & Bakker, 2004). Glomb's (2002) qualitative research (N = 37 interviews) found that most employees reported that anger decreased their job performance (49%; n = 18), while only a few respondents indicated that anger enhanced their performance (19%, n = 7). People who feel angry or perceive that they have been treated unfairly tend to sabotage their work or become deliberately ineffective (Fox & Spector, 1999). We propose: *Hypothesis 4a*: *A*nger will negatively relate to work engagement, and *Hypothesis 4b:* Depression will negatively relate to work engagement. Next we address the resource-related motivational pathway of the model.

First, the relationship between PSC and job resources can be understood in terms of the priority that senior management gives to the psychological well-being of workers. If senior management prioritizes and values the psychological health of workers, then they will ensure that workers have enough resources to foster growth, learning and development

(Schaufeli, Bakker & Van Rhenen, 2009). In support of this, Dollard and Bakker (2010) found that PSC was positively associated with a change in job resources (skill discretion) over time. Therefore, we predict *Hypothesis 5:* PSC will positively relate to job resources.

The relationship between job resources and engagement is a core process in JD-R theory and can be explained using social exchange theory (Blau, 1964). Basically, if employers 'take care of employees' (Cropanzano & Mitchell, 2005, p. 882), employees will make an effort in their jobs and experience a positive affective-cognitive state. Employees' who receive reasonable resources from their work environment will invest their efforts toward their job (Schaufeli & Bakker, 2004). Therefore we propose, *Hypothesis 6:* Job resources will positively relate to work engagement.

Taken together, we propose that PSC will positively relate to engagement through job resources (*Hypothesis 7*).

Finally, we propose that anger (*Hypothesis 8a*) and depression (*Hypothesis 8b*) will mediate the relationship between job demands and engagement. Findings from previous studies suggest that negative emotions are associated with counter-productive behaviour (Spector & Fox, 2002), and workplace sabotage (Spector, Fox, & Domagalski, 2006). We expect that individuals who feel anger due to high job demands, will be more likely to decrease their job potential (i.e., work engagement), rather than invest more energy in their work. Similar to anger, depressed employees also are likely to be ineffective in their job because more time and resources needed to deal with depression, rather than be motivated at work. A study among 429 technical employees in a large telecommunication company in Malaysia, for example, found that depression mediated the relationship between job demands (e.g., responsibility demands) and job performance (Panatik, O'Driscoll, & Anderson, 2009).

To date only one study in Malaysia has been conducted using a similar framework. The study found that PSC was related to both burnout and positive emotions (e.g., engagement) via workplace conditions (Idris et al., 2011), and in turn related to employee performance. Using a different sample, we go further here by examining different types of negative emotions to test empirically whether depression and anger are predictable consequences of high demand work situations as they are in Western contexts. The null hypotheses for the study are that: (1) PSC is not related to demands and resources; (2) there is no mediated relationship between PSC and emotional responses, and engagement; and (3) there is no mediated relationship between job demands and engagement via emotions.

METHOD

Participants and Procedure

A survey was conducted in all nine districts in Selangor, a state of Malaysia, as part of a larger population-based study on psychosocial risk factors at work. Based on addresses provided by the Malaysian Statistical Department, 1,073 households were approached by research assistants during weekends and off-work days. Participation in the study was voluntary, and only those participants who were actively working were selected. In accord with a representative and independent sampling frame only one participant was chosen from each residence. From the total households selected, only 750 participants were willing to participate (70% response rate). As we only consider participants from the formal work sector, 174 participants who either self employed or worked for the informal sector (i.e., farmer) were omitted, resulting in 576 participants. A random sample of 269 participants was used in the current study. The remainder was used to study a different research question.

The research participants were 128 males (47.7%), and the majority of respondents were of Malay ethnicity (*N* = 219, 84%). Nine response age-range response choices were offered, ranging from under 20 to 62 and over (SD = 1.68), most respondents indicated they were between categories 2 and 6, ranging in ages between 20 and 49 (82.5%). Most were in non manager positions (*N* = 241, 91.6%) and only 22 respondents had a managerial position (8.2%). Six participants did not indicate their position. The level of education was mostly secondary school (*N* = 136, 50.9%), most were married (*N* = 182, 67.7%) and most (*N* = 167, 62.1%) worked for private organizations, with the remainder working in public sector agencies (*N* = 102, 37.9%).

Instruments

Unless otherwise indicated the instruments used in this study were translated into Malay by two native-speakers, using back translation (Brislin, 1970). Initially, the original English-language measures were translated into Malay by the first translator, and then the Malay questionnaires were back-translated into English by the second translator who had not seen the original English measures. Translators were trained in the field of psychology, and had been educated in Australia and the UK. As there were no discrepancies between the original and back translated version, the measurements in the study were considered to have meaning equivalence (Weeks, Swerissen & Belfrage, 2007) and were valid to use.

Demographic variables were gender, age, education, ethnicity and type of employer. Coding was as follows; for gender (1 = *male*, 2 = *female*), age (1 = *below 20*, 2 = *20 to 25*, 3 = *26 to 31*, 4 = *32 to 37*, 5= *38 to 43*, 6 = *44 to 49*, 7 = *50 to 55*, 8 = *56 to 61*, 9 = *62 and above*), education (1= *primary*, 2= *secondary*, 3= *diploma*, 4 = *technical certificate/diploma*, 5 = *bachelor*, 6 = *post graduate*), ethnicity (1 = *Malay*, 2 = *other)* and employer (1 = *public*, 2 = *private*).

Psychosocial safety climate was assessed by using a 12-item PSC scale (PSC-12) derived from the 26-item version (Hall, Dollard & Coward, 2011). The questionnaire contains four sub-scales: management commitment, organizational communication, management priority and organizational participation. The PSC scales have good validity and reliability as reported in previous research (Hall, Dollard, & Coward, 2011; Idris, Dollard & Winefield, 2011), with alpha values for the sub-scales ranging from 0.81 to 0.89. The response scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). Example questions are: "In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health" (management commitment), "There is good communication here about psychological safety issues which affect me" (organizational communication), "Senior management clearly considers the psychological health of employees to be of great importance" (management priority) and "Participation and consultation in occupational health and safety issues occurred with employees, unions, and occupational health and safety representatives" (organizational participation). We compared a four factor model of PSC against a one factor PSC. We used five absolute fit indices (cf. Joreskog & Sorbom, 1986): χ^2 goodness-of-fit statistic, GFI, CFI, TLI, and RMSEA. For GFI, CFI and TLI, values greater than .90 and smaller than 0.08 for RMSEA are acceptable (Byrne, 2001). We found that a four factor model with all fit indices at acceptable levels; GFI=.95, CFI=.97, TLI=.96, RMSEA=.06, fit the data better than a one factor model of PSC; GFI=.80, CFI =.82, TLI=.79, RMSEA=.14, and the differences between both models were also significant ($\Delta\chi^2(6) = 243$, $p < 0.001$). All subscales were intercorrelated as well, rendering the subscales ideal indicators of the latent construct PSC.

Job demands consisted of emotional demands and role conflict, which were assessed using the respective four-item scales from the Copenhagen Psychosocial Questionnaire (COPSOQ; Kristensen, Hannerz, Hogh, & Borg, 2006)**.** A four-point response scale was used: 1 (*strongly not agree*) to 4 (*strongly agree*). A sample question for emotional demands is**:** "Does your work put you in emotionally disturbing situations?"

A sample question regarding work role conflict is "Do you do things at work that are accepted by some people but not by others?"

Job resources were examined using the supervisor support and co-worker support subscales from the Job Content Questionnaire (JCQ; Karasek, 1979). Supervisor support was assessed using 5 items, for example: "My supervisor/manager is concerned about the welfare of those under him/her". Co-worker support was assessed using six items, for example: "People I work with are competent in doing their jobs". A reverse item, "I am exposed to hostility or conflict from the people I work with", was omitted as it showed low reliability. Responses for both scales were on four points: 1 (*strongly not agree*) to 4 (*strongly agree*). All of these scales are derived from the Malay version of the JCQ (Edimansyah et al., 2008).

Anger was assessed by the feeling anger and physical anger subscales of the State-Trait Anger Expression Inventory (STAXI; Spielberger, Reheiser, & Sydeman, 1995). Each comprised five items, and used a four-point response scale: 1 (*not at all*) to 4 (*very much so*). A sample item for *feeling anger* is, "I am furious", and for physical anger, "I feel like breaking things". The STAXI is regarded as a reliable and valid instrument to measure anger in both normal and psychiatric patients, and shows a strong relationship with other psychological and health symptoms (see Spielberger & Reheiser, 2009).

Depression was measured with nine items from the Patient Health Questionnaire (PHQ-9; Spitzer et al., 1999). Responses ranged from 1 (*not at all*) to 4 (*nearly every day*). A sample item is: "During the last month, how often were you bothered by feeling down, depressed or hopeless?"

Engagement was measured by using three subscales – vigor, dedication and absorption – derived from a shortened version of the Utrecht Work Engagement Scale (UWES-9, Schaufeli, Bakker, & Salanova, 2006). Responses were scored on a seven-point scale: 0 (*never*) to 6 (*always*). Each subscale was examined with three-items. Sample questions are: "At my work, I feel bursting with energy" (vigor), "I am enthusiastic about my job" (dedication) and "I am immersed in my work" (absorption). Alpha coefficients for the measures are shown in Table 1.

ANALYSIS STRATEGY

Prior to using structural equation modelling analysis to test hypotheses, we evaluated inter-correlations among all variables (see Table 1). Second, as we used a cross sectional study, we conducted Harman's one factor test to determine whether common-method

variance is a serious problem (Podsakoff & Organ, 1986). An unrotated factor analysis of all study items yielded 13 factors in total explaining 70.34% of the variance. Given that a single factor did not emerge, and that a general factor did not account for most of the variance, common method bias is not viewed as a significant threat in our study (Podsakoff & Organ, 1986).

Next the research model (see Figure 1) was tested using structural equation modelling (SEM) using AMOS 17 (Arbuckle, 2008). We evaluated our model by using five absolute fit indices (cf. Joreskog & Sorbom, 1986): χ^2 goodness-of-fit statistic, CMIN/*df*, GFI, CFI, TLI, and RMSEA. For GFI, CFI and TLI, values greater than .90 indicate an acceptable fit and a value smaller than 0.08 is acceptable for the RMSEA (Byrne, 2001). For CMIN/*df* (minimum discrepancy divided by the degrees of freedom) the value below 5 is considered acceptable, with lower values being superior (Johnson & Rapp, 2010). The measurement model comprised six latent measures (and their indicators); PSC, job demands, job resources, depression, anger, and engagement.

We followed Baron and Kenny's (1986) four-step approach to establish full mediation: (1) the independent measure is significantly associated with the outcome variable to confirm that there is an effect to be mediated, (2) the independent measure is significantly associated with the mediator, (3) the mediator is significantly associated with the dependent variable, controlling for the independent variable, and finally (4) in order to establish full mediation, the effect of the independent measure in step (3) is reduced to zero. Where step four is not met, then only partial mediation is indicated.

We first assessed the null hypothesis model (M0). We then tested the direct effect model (M1); PSC → demands, PSC → depression, PSC → anger, PSC → job resources and PSC → engagement, and all other paths were set to zero. We then tested a fully mediation model (hypothesized model) (M2); PSC → job demands, job demands → depression, job demands → anger, PSC → job resources, job resources → engagement, depression → engagement, and anger → engagement. Then we tested a partial mediation model (M3) that was to the same as M2 but with additional direct paths between PSC → depression, PSC → anger and PSC → engagement.

Competing models

Due to the cross sectional nature of the current study, we tested competing models to rule out the possibility of reversed effects (Cole, Walter, & Bruch, 2008). For example,

employees who suffer with negative emotions (e.g., depression, anger) may also report that they experience high job demands, and in turn low PSC. In parallel, engaged employees may report good job resources, and higher PSC. First, we tested a direct effect reverse model (M4) with a path from anger → PSC, depression → PSC, engagement → PSC, job demands→PSC and job resources→PSC. We followed this analysis by fully mediated reversed model, M5, that included a path between anger → demands, depression → demands, engagement → anger, engagement → depression, engagement → resources, demands → PSC and resources → PSC. Finally we tested another competing model, M6, a reversed partial mediation model, by adding to M5, a path between depression → PSC, anger → PSC and engagement → PSC.

Next we formulated a competing model to see whether PSC is a mediator between job demands and job resources, and the emotion variables. First, we modeled M7 with paths between demands → PSC, job resources → PSC, PSC → anger, PSC → depression, PSC → engagement, anger → engagement, and depression → engagement. We also created another model M8 to determine if PSC is a mediator between emotion variables and work conditions. Paths were from anger → PSC, depression → PSC, engagement → PSC, PSC → job demands, and PSC → resources.

Finally, we validated the hypothesized model M2 (see Figure 2), using multi-group analysis. We separated two random samples, consisting of public (N = 102) and private employees (N = 167). We compared two models M9 and M10; one when the paths of the measurement and structural models were constrained to be equal, and the second where the structural weights and structural residuals were estimated freely and the paths were not constrained to be equal, respectively. If there is no significant improvement in the model when the paths are estimated freely we can conclude that the models are equivalent, and there would be no support for the null hypotheses.

RESULTS

In Table 1, the means, standard deviation and correlation between the variables are presented.

Firstly, we analyzed the relationships between the demographic variables (i.e., gender, age, education and ethnicity) and the research variables. In general, most of the demographic variables were not related to research variables in the study so were not included in subsequent analyses. Correlations involving the demographic variables and research variables are shown in Table 1.

To test the eight proposed hypotheses, we first used the full sample to test our study model. Our analysis model (M1, M2, and M3) results are shown in Table 2. The model M1 did not fit the data well as the TLI value was below 0.90. All fit indices for the fully mediated model (M2) improved and the improvement was significant against the M1 model, with GFI, CFI and TLI (0.96, 0.99 and 0.98 respectively) and RMSEA (0.03) all at acceptable levels. All paths were also significant ($p < 0.01$). The fit indices for M3 model were also at an acceptable level, but the fit was not significantly better than the more parsimonious M2 model.

As shown in Table 2, none of the fit indices for M4 were satisfactory. For M5, all fit indices were satisfactory and all paths were significant ($p < .001$), except the path from demands→PSC. In comparison to M2, the Akaike Information Criterion (AIC) and the Chi-square to degrees of freedom ratio (CMIN/df) were higher than M2 indicating a worse fit. For the M6 model, all fit indices were satisfactory, but the AIC and CMIN/df were again higher than in M2 indicating a worse fit. Further, the paths between demands→PSC, depression→PSC, anger→PSC and engagement→PSC were not significant. For M7, none of the fit indices were as good as M2, and the path between job demands→PSC was not significant. The M8 model did not fit the data well as the value of TLI fell below .90, and none of the fit indices were as good as M2. In relation to the multi-group analysis we found that there was no significant improvement in the model when the paths are estimated freely so we conclude that M9 is a good fit to both the private and public sector data sets (equivalent to M2 the theoretical model). In other words, the model is invariant across groups, and the model M2 is validated. Taking all results together we determined that the best fitting model was M2. Next we assessed each of the hypotheses based on the results of M2 (see Figure 2).

Hypothesis 1 proposed that PSC is negatively related to job demands. Model M2 shows that PSC negatively and significantly relates to job demands ($\beta = -.24$, $p < .01$), confirming Hypothesis 1. This finding indicates that higher PSC in the organization will be associated with the creation of less job demands. Next, supporting *Hypothesis 2a* which proposed that job demands will have a positive relationship to anger, our analysis found that job demands is positively and significantly related with employee anger ($\beta = .52$, $p < .001$). In relation to *Hypothesis 2b*, we predicted that job demands will positively and significantly relate to depression. Results showed that there was a positive correlation between job demands and depression ($\beta = .61$, $p < .001$), again confirming our prediction.

Table 1

Means (M), Standard Deviations (SD) and Correlation Between the Variables

	M	*SD*	α	Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.PSC Communication	7.87	1.94	.73	3														
2.PSC Commitment	8.18	2.16	.85	3	.68**													
3.PSC Priority	8.52	2.12	.86	3	.63**	.61**												
4.PSC Participation	8.60	1.96	.76	3	.64**	.46**	.48**											
5.Emotional demands	1.24	0.78	.82	4	-.07	-.13*	-.12	-.08										
6.Role conflict	1.37	0.77	.83	4	-.13*	-.14*	-.15*	-.10	.50**									
7.Co-workers support	3.11	0.55	.87	6	.36**	.32**	.36**	.35**	-.23**	-.25**								
8.Supervisor support	3.13	0.78	.92	5	.36**	.38**	.32**	.35**	-.08	-.14*	.39**							
9.Depression	1.75	0.48	.90	9	-.19**	-.19**	-.19**	-.17**	.37**	.44**	-.27**	-.25**						
10.Feeling anger	6.70	3.14	.90	5	-.09	-.11	-.11	-.04	.36**	.29**	-.17**	-.14*	.42**					
11.Physical anger	5.30	2.50	.90	5	-.06	-.05	-.05	-.02	.33**	.27**	-.16**	-.07	.39**	.72**				
12.Vigour	4.35	1.30	.82	3	.23**	.25**	.25**	.23**	-.26**	-.21**	.29**	.20**	-.35**	-.29**	-.25**			
13.Dedication	4.50	1.34	.84	3	.22**	.24**	.24**	.19**	-.21**	-.20**	.26**	.19**	-.37**	-.29**	-.27**	.81**		
14.Absorption	3.80	1.47	.86	3	.28**	.03	.13*	.14**	-.13*	-.08	.21**	.17**	-.20**	-.18**	.18**	.64**	.63**	
Demographic variables					1	2	3	4	5	6	7	8	9	10	11	12	13	14
15.Gender					.02	-.04	.02	.03	-.07	-.06	.15*	.01	-.19*	-.11	-.14*	.05	.01	.03
16.Age					.15*	.17*	.13*	.08	-.08	-.08	.09	.08	-.23**	-.12*	-.17**	.13*	.12*	.11
17.Education					-.06	-.08	.03	-.08	.11	.05	.08	-.03	-.04	-.05	-.05	.09	.16*	.09
18.Ethnic					.04	-.02	-.03	-.05	-.04	.08	.05	.20**	-.07	.02	.01	.02	-.09	-.03
19.Employer					.02	.04	-.01	-.04	.03	-.02	-.03	.11	.04	.04	-.01	-.06	-.07	-.06

Note: *$p < .05$, ** $p < .01$, ***$p < .001$, $N = 269$.

Table 2

Comparison of Alternative Models

	χ^2	*df*	GFI	CFI	TLI	RMSEA	AIC	CMIN/DF	Δ (*df*), χ^2 sig	Comparison
M0. Null model	1690.80	105	.44	.00	.00	.23	1720.80	16.103		
M1. Direct effect model	202.483	71	.90	.91	.89	.08	270.48	2.582		
M2. Fully mediated model	88.566	69	.96	.99	.98	.03	160.56	1.284	(2), 113.917***	M2 vs M1
M3. Partial mediation model	83.107	66	.96	.99	.98	.03	161.10	1.125	(3), 5.45 n.s.	M3 vs M2
Competing reverse models (PSC as outcome)										
M4. Direct effect model	235.66	71	.89	.89	.86	.09	303.66	3.319		
M5. Fully mediated model	95.869	69	.95	.98	.97	.04	167.86	1.389		
M6. Partial mediation model	96.017	66	.95	.98	.97	.04	174.01	1.455		
Competing models (PSC as mediator)										
M7	165.658	69	.92	.94	.92	.07	237.65	2.401		
M8	213.069	71	.90	.91	.89	.09	299.53	3.001		
Multi-group										
M9. Constrained	208.41	155	.91	.97	.96	.04	318.41			
M10. Unconstrained	188.48	140	.91	.97	.96	.04	328.48		(15), 19.92 n.s.	M9 vs M10

Note. *N* =269. GFI=goodness-of-fit; CFI=comparative fit index; TLI=Tucker–Lewis index; RMSEA= root mean square error of approximation; AIC=Akaike Information Criterion; CMIN/*df* = minimum discrepancy divided by the degrees of freedom; M =model; PSC=psychosocial safety climate.
***p < .001

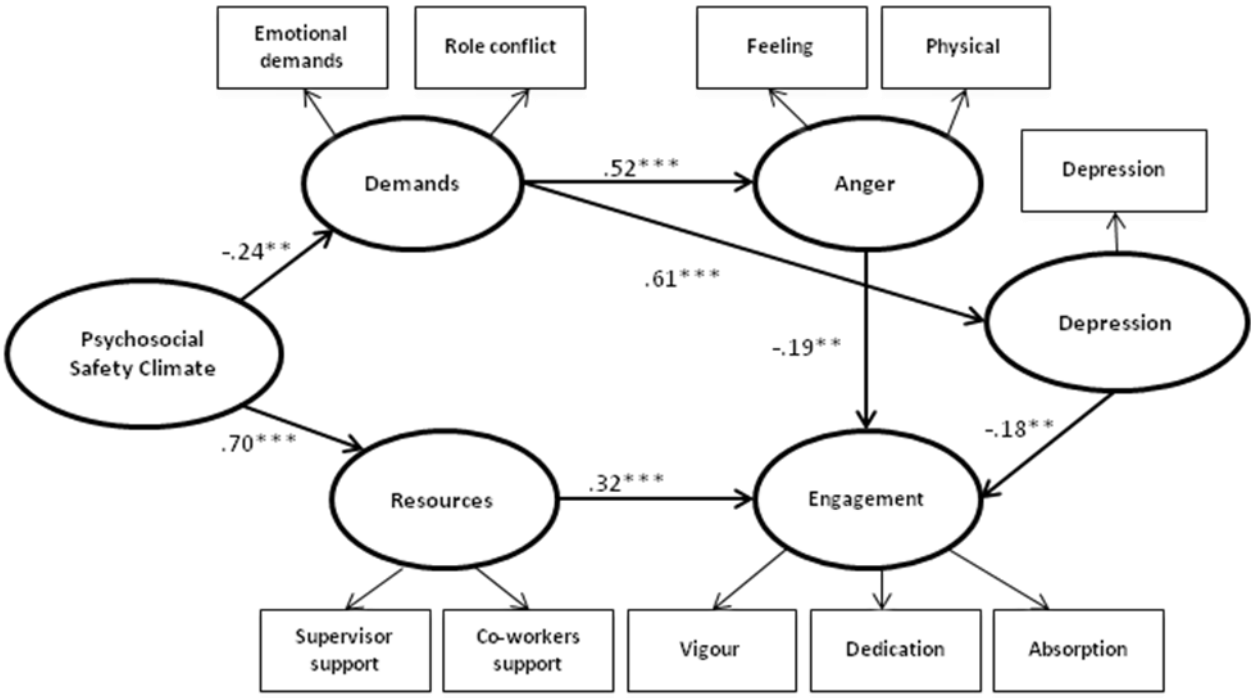


Figure 2. Psychosocial safety climate as a precursor of job demands and job resources and its relationship to emotions at work

Note: *$p < .05$, ** $p < .01$, ***$p < .001$, $N = 269$

To confirm the meditational hypothesis, and the extended health erosion pathway, that PSC influences the relationship to both anger (*Hypothesis 3a*) and depression (*Hypothesis3b*) through job demands, we assessed the significance of the indirect effect using the Sobel test. Our analysis revealed that job demands mediated the relationship between PSC and anger (indirect effect; β =.07, Sobel = -2.69, SE = 0.07, $p < 0.01$) and the relationship between PSC and depression (indirect effect; β = -.14, Sobel = -2.71, SE = 0.01, $p < .01$).

Although the often used Baron and Kenny (1986) mediation steps require a significant relationship between independent and outcome variable, recently Cole, Walter, and Bruch (2008) argued that this approach is sometimes limited, especially when the mediation process becomes more complex; thus the significant relationship between the antecedent and criterion variable is no longer necessary. Nevertheless, we found that in the direct effects model (M1) the relationship between PSC and anger was significant at the one-tailed level. As recommended by Cole et al., (2008) and also as suggested by Preacher and Hayes (2004), when testing a mediation effect, a significant indirect effect, confirmed using a Sobel test, is sufficient to indicate mediation in our data.

Hypothesis 4a and *4b* proposed that anger and depression are both negatively related to engagement. The results indicated that anger (β = -.19, $p < .01$), and depression (β = -18, $p < .01$) were both negatively and significantly related to engagement supporting *Hypothesis 4a* and *4b*.

In relation to the extended motivational pathway, first, *Hypothesis 5* proposed that PSC is positively related to job resources; we found that the relationship was positive and significant (β =.70, $p < .001$) confirming our hypothesis. Next, in *Hypothesis 6*, we proposed that job resources will be positively associated with work engagement, and the result (β = .32, $p < .01$) again supported our prediction. Finally to test the motivational pathway, that job resources mediated the relationship between PSC and engagement as predicted in *Hypothesis 7*, the Sobel test revealed that the indirect effect is significant (indirect effect, β = .04, Sobel = 1.85, SE = 0.06, $p < 0.05$ (one tailed)). In the main effects model the direct relationship between PSC and engagement was significant ($p < .001$). These findings support the proposition that high PSC will lead to high job resources that in turn relate to employee engagement in organizations, consistent with the extended motivational pathway of PSC theory (Dollard & Bakker, 2010; Dollard & Karasek, 2010).

In relation to *Hypothesis 8,* we proposed that (a) anger and (b) depression will mediate the relationship between job demands and engagement. In the main effects model the direct relationship between job demands and anger (β = .53), and job demands and depression (β = .61) were both significant $p < 0.01$. Our analyses revealed that anger mediated the relationship between job demands and engagement (indirect effect; β = -.08, Sobel = -2.24, SE = 0.10, $p <$ 0.05), and depression mediated the relationship between demands and engagement (indirect

effect; β = .03, Sobel's t = -2.16, SE = 0.09, $p < 0.05$). The results supported *Hypothesis 8a*, and *Hypothesis 8b* respectively.

Together our results supported the notion of PSC as an antecedent to working conditions (Dollard & Bakker, 2010), with high job demands leading to increased negative emotions, and job resources leading to increased employee engagement. In turn anger and depression are related to reduced employee engagement.

DISCUSSION

The main purpose of the present study was to evaluate the effect of PSC on work-related emotions (anger, depression, engagement) through job demands and resources. Based on the main assumptions of PSC theory proposed by Dollard and Bakker (2010) and Dollard and Karasek (2010), we tested an integrative model of psychosocial safety climate, that extends JD-R work stress theory (Bakker & Demerouti, 2007). We theorized that PSC would precede the health and motivation pathways of the JD-R model.

Our hypotheses were largely supported. In line with the extended health erosion pathway, PSC indirectly impinged on negative emotions (anger and depression), through job demands. PSC also indirectly affected positive emotions (i.e., work engagement) through job resources, consistent with the extended motivational pathway. The current findings supported the integrative framework of PSC and the JD-R model (Idris, Dollard, & Winefield, 2011). Our findings are also consistent with the JD-R model and show that job demands may adversely affect employee health, whereas job resources may improve employee engagement (Bakker, 2009; Schaufeli et al., 2009). Our finding of a significant relationship between job demands and indicators of psychological impairment, such as anger and depression, is a significant contribution to the literature since most empirical tests of the JD-R model focus on burnout (Hakanen, Schaufeli, & Ahola, 2008). Empirically we confirm that job demands affect negative emotions other than burnout. Interestingly, while most Asian studies have reported a link between the work environment and employees experiencing depression and low levels of well-being, most of these studies have been among non-Muslim communities (Liu, Spector, & Shi, 2007; Tsui, 2008). Jamal (2010) in his cross-cultural study across four countries (Canada, China, Pakistan and Malaysia) found that job demands related to burnout for all studied samples and showed that modern working conditions have a similar impact on employees'

psychological health cross-culturally. Our study among predominantly Malaysian Muslim employees revealed similar findings to studies of Western samples. It shows that work and working conditions influence the decline of employee well being, even in communities that are considered to be more tolerant of adverse situations (Idris, et al., 2010).

Furthermore, although negative emotions such as anger sometimes enhance employee motivation and their effort to achieve certain goals, this was not the case in our study. We found that anger and depression both negatively influenced employee engagement. In other words, even though engaged employees are expected to feel joy about their job (Bakker & Leiter, 2010), high job demands could reduce the positive impact of job resources. In particular anger and depression may reduce motivation. Employees who are trapped in anger or negative emotion (i.e., depression) may also intend to leave their organization, but may be unable to do so. This may be the case as in the context of our study, Malaysia, there is currently high job insecurity. To compensate employees may reduce their engagement. Theoretically the way anger relates to reduced work outcomes could also be due to a revenge, and a counterproductive kind of reaction (Fox & Spector, 1999; Spector et al., 2006), rather than via (or perhaps in addition to) exhaustion due to burnout.

A main theoretical innovation in our study was the exploration of specific negative emotions, anger and depression as an outcome of job demands. Our research shows this is an important theoretical addition. We find the demands to anger path is adequately described by 'health erosion' as negative emotions like anger/depression can be debilitating to health (e.g., cardiovascular disease, Smith et al., 2005).

Importantly tests of alternative reverse models did not provide any support for the notion that perceptions of work demands and work resources, and the experience of emotions affects the perception of PSC. This result is consistent with the theoretical idea that PSC is a property of the organisation and a precursor to job conditions (Dollard & Bakker, 2010).

In summary we found that higher PSC predicts better working conditions and enhances employees' engagement because workers experience less demands, and are less angry and depressed, and they also experience greater resources. Theoretically, the results imply that PSC is a precursor for working conditions that very much depends on senior managers who have the authority and discretion to design workplace tasks according to their values and priorities. Our results support extending work stress theory to include psychosocial safety climate to provide a

more comprehensive understanding of health and positive work outcomes. The results are relevant for establishing some goals for the development of PSC for both health and productivity related outcomes.

Limitations

As in any research the study design has limitations. First, we cannot partition the variance in PSC due to individual or organizational effects. This is because the study uses a population based approach, rather than an organizational approach. The reason is that the study is part of a larger project on psychosocial risk factors at work in Malaysia, and because Malaysian employers are reluctant to engage their organizations in research in this area (Sohail, 2003). The scientific implication is that although we expect cross-level effects of PSC in the model to be consistent with the hypotheses as outlined, (PSC clustered at the organizational level predicting individual outcomes), the effect sizes would be smaller (see Dollard & Bakker, 2010), compared to the effects as currently reported. This is because the effects currently combine both individual and group variance, i.e., variance due to organization membership). Nevertheless participants were selected from each district of the state of Selangor, therefore the potential for them to come from the same organisations is very slim.

Secondly the results are cross-sectional and we cannot claim causal relationships. We did however rule out reversed effects models. Further some previous longitudinal research supports the proposition that PSC is a precursor rather than an outcome of work conditions (e.g., Dollard & Bakker, 2010). Additionally we ruled out interpretation of results due to common method variance by conducting Harman's one factor test as in previous research (Bakker, Veldhoven, & Xanthopoulou, 2010). It is possible that the relationship could be due to third unmeasured variables. Further given a lack of psychological research using longitudinal designs, particularly in the Asian region, the current research at least contributes to more understanding of PSC and the JD-R model within an Asian context. Importantly the research imposed an etic account of PSC theory in a completely different culture; in other words this preliminary evidence suggests the main propositions of the PSC theory hold across cultures. We also found that the model was invariant by employment sector.

Although the way the constructs related to each other was invariant cross-culturally a factor that may emerge as a point of difference is the development of occupational health and

safety systems. It may be argued that as an emerging economy relevant occupational health and safety systems are nascent, relative to those one might expect in developed economies. The likely effect of this is that levels of PSC may be lower and working conditions worse than in developed economies (Ali, Abdullah, & Subramaniam, 2009). Further, cross-national research is needed to benchmark PSC and work conditions between the developed and developing countries, to investigate this issue further.

Third, the findings may depend on the job demands and job resources variables used in the current study. Other job demands and job resources variables could behave in different ways affecting the relationship between PSC and anger, depression and engagement. It is important to note that we tried but could not use a psychological demand measure from the JCQ-2 due to its unreliability possibly due to difficulties the sample had in interpreting reverse items.

Practical Implications

The development of PSC has implications for primary, secondary and tertiary prevention/intervention for work stress. The relationship between PSC and work conditions (Idris, Dollard, & Winefield, 2011), underscores the need for senior management to prioritise psychological health to be as important as production goals. This implication is consistent with the safety science literature that finds leadership in particular, transformational leadership as a key factor for personal safety-perceptions (Zohar & Tenne-Gazit, 2008). We see in this research that the PSC is a possible 'cause-of-the-causes'. Practically, knowing if managers value the psychological well-being of workers may provide insights into the kinds of work conditions and worker emotions (i.e. anger, depression, engagement) that may result in the organization.

Therefore a central target to improve the working conditions is systems management and system design. Without a proper design and management of work systems, unhealthy work prevails, and leads to employee stress. We see PSC as a system generator and contend that enhancing PSC is practical solution to promote employees' health, boost motivation and increase organization effectiveness. Leadership training and development is required to help managers understand the work stress process and its implications for engagement and productivity. With this greater understanding, management commitment and actions to

promote safety workplace may increase (Cox & Cox, 1991), along with a priority of regard for psychological health by management. Hopefully this in turn will lead to actions such that workers are exposed to fewer job demands, and increased job resources.

As a secondary intervention point, related research has underscored the social support potential of PSC as well, whereby PSC moderates the detrimental relationship between demands and negative emotions (Dollard & Bakker, 2010). As such a program within the workplace to enhance perceptions of PSC would be important (Dollard, 2011). However perceptions will be commensurate with the actual implementation of policies, practices and procedures for the protection and enhancement of psychological health. Participatory processes in the development of PSC, listening to contributions, risk assessment processes, and communication upward and downward have been suggested as useful process elements. Finally as a tertiary intervention point, policies, practices and procedures could entail assistance once a worker becomes injured such as the provision of employee assistance programs, rehabilitation, and improved return to work processes.

CONCLUSION

In conclusion, we found the support for Dollard and Bakker (2010) that PSC augments the health erosion and motivational pathways of the JD-R framework. Moreover, we found empirically that PSC affects employees' emotions other than burnout (as commonly proposed in JD-R theory). Although scholars agree employees' engagement is a crucial part of work effectiveness (see Bakker & Leiter, 2010), we see that the effect of negative emotions could reduce the potential of job engagement. Anger and depression may reduce employee motivation to achieve the work goals. Since PSC is related to both job demands and job resources, managers and supervisors should focus on building PSC which should result in increased work resources, and reduction in exposure to job demands.

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Chapter Eight

Submitting paper

Psychosocial safety climate as a tool for employee engagement and performance: A multilevel analysis

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Abstract

The current study investigated a multilevel resource model of worker performance. In particular we explored the multilevel effect of psychosocial safety climate (PSC) - a climate for psychological health - on individual level job resources (i.e. learning opportunities), engagement and performance. Since organizational factors design both working conditions and work, we theorized that PSC plays an important role by stimulating learning opportunities at the individual level. In addition, we hypothesized that learning opportunities mediate the relationship between PSC and engagement, and that engagement mediates the relationship between PSC and performance. We approached 427 employees from 56 organizations in Malaysia. Our analyses revealed that PSC predicted job engagement, particularly through learning opportunities, and in turn performance through job engagement. Overall, our findings support the role of PSC as an antecedent to positive work conditions and outcomes.

Introduction

Employers who focus on *human capital* are likely to boost employee motivation and performance (Bakker & Schaufeli, 2008). Over 20 years ago it was recognized that employees who receive opportunities to learn will be more productive and experience better well-being (Karasek & Theorell, 1990). In the current study, we investigate learning opportunities as a job resource that can boost employees' engagement and performance. We go a step further, however, to capitalize on the idea that organizations can create conditions that enable employees to develop their own abilities and grow personally and professionally (cf. Rau, 2006). Consistent with this idea, we study a novel way for organizations to design jobs that maximize employee engagement and performance by creating the right climate – a climate that values psychosocial health and safety and provides protection from psychological harm. We conceive that such a climate will boost employees' learning opportunities. As a type of job resource, learning opportunities will, in turn, stimulate intrinsic and extrinsic motivational processes helping to foster employees who are more engaged and who perform better in their workplace.

Our study contributes to the literature in several ways. Firstly, we proposed a novel construct of the impact of the PSC on learning opportunities, and how these processes influence job engagement and performance. So far, to our knowledge, there is no study among organizational climate scholars observing this element in their studies. Secondly, from the notion that working conditions are created, we postulate a new theoretical approach which seeks the management initiative of providing a better solution of job resources that may fulfill human needs in the workplace through more control and learning new things that might influence the employees' motivation and performance.

Learning opportunities as a driver of individual level motivation

Although learning behavior is sometimes considered as voluntary action by employees who are willing to improve their knowledge and skill without external pressure, jobs are not always a bad thing, as they create challenges and provide opportunities to learn new things (Idris, Dollard, & Winefield, 2011a). Furthermore, as working conditions are created by the

higher levels within organizations (Morgeson, & Humprey, 2008; Johns, 2010), it is possible that the organizational context will enhance the possibilities of learning and professional development (Bakker, Demerouti, Taris et al., 2003). The organization has the authority to create meaningful intrinsic satisfaction by providing opportunities for employees to utilise their skills and abilities to achieve valued goals (Vansteenkiste, Neyrinck, Niemiec, Soenens, De Witte, & den Broeck, 2007). This is expected because providing workers with learning opportunities is a way to improve their abilities or skills, and in turn enhance their commitment (Ng, Butts, Vandernberg, De Joy, & Wilson, 2006), health (Rau, 2006) and happiness (Rego & Pina e Cunha, 2009). The intrinsic motivating role of learning opportunities may lie in the satisfaction of basic human needs, personal growth and autonomy.

Motivation theorists such as Porter and Lawler (1968) argue that specific behavior at work is directed by either intrinsic motivation (people feel interested about something, and sometimes this action is voluntary) or extrinsic motivation (reward from outside). Derived from a similar concept, Gagne and Deci (2005) in their Self Determination Theory (SDT) proposed two types of human motivation called *autonomous motivation* and *controlled motivation*. Autonomous motivation is when people act due to feeling valued and engaged, in a similar way to intrinsic motivation. In contrast, controlled motivation involves a sense of acting due to pressure, and not because of intrinsic feelings from the individual.

Learning opportunities, as ascribed by this approach, may contribute to autonomous motivation, and also fulfil basic psychological needs particularly through support for autonomy and informative feedback (Deci & Ryan, 1985; Muller & Louw, 2004). In addition, learning opportunities provide employees with more control of their job, and indirectly will enhance their commitment and job satisfaction (Mikkelsen, Saksvik, & Ursin, 1999).

Learning opportunities can also be conceptualized as a job resource, defined as those physical, psychological, social or organizational aspects of the job that assist in achieving workplace goals and stimulate personal growth, learning and development (Bakker & Demerouti, 2007). The motivational pathway in the Job Demands-Resources (JD-R) model suggests that job resources play an important role in enhancing employee's engagement and job performance (Bakker, van Emmerik, & Van Riet, 2008; Hakanen, Schaufeli, & Ahola, 2008). This process might occur by boosting intrinsic motivation through the satisfaction of basic needs, as we have outlined above. Alternatively, job resources may also play an extrinsic

motivational role; an adequate supply of resources should foster a willingness and capability among workers to direct their efforts and abilities to work tasks (Meijman & Mulder, 1998).

So far, research has identified several types of job resources (e.g., supervisor support, job control, co-worker support and rewards) that operate as precursors to work engagement. In turn, recent research links engagement to job performance (Bakker, van Emmerik, & Van Riet, 2008). Learning opportunities have received some attention in this framework (Bakker, Demerouti, Taris, Schaufeli & Schreurs, 2003; Bakker, van Emmerik, & Euwema, 2006; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007) with results which are consistent with the motivational pathway.

Despite the limited research on learning opportunities in the JD-R model, the main contribution of our study lies not in studying learning opportunities as a resource that can foster engagement and performance. While most research on the JD-R model has focused on individual level mediation of the engagement process and job performance, we are interested in organizational factors that presage the individual motivational pathway. In particular, we propose a framework wherein the psychosocial safety climate at the team level enacts job resources (i.e., learning opportunities) at the individual level. The potential for predictors of engagement that reside beyond the task level at the organization or team level has been recognized recently. For example, if employees perceive that the organization provides them with a challenging climate and supportive environment (at the organizational or team level), it will influence employees' perceptions of working conditions (at the individual level), and indirectly lead to engagement and performance (Bakker, Albrecht, & Leiter, 2011). Ours is one of the first studies to consider the motivational pathway of the JD-R model as a multilevel phenomenon, thereby extending the JD-R model.

Taken together, we propose a model of the impact of learning opportunities on performance, particularly through job engagement. We however added PSC (to be discussed next) as the main pivotal construct climate that plays a role in influencing these lower level relationships. We illustrate our research framework in Figure 1.

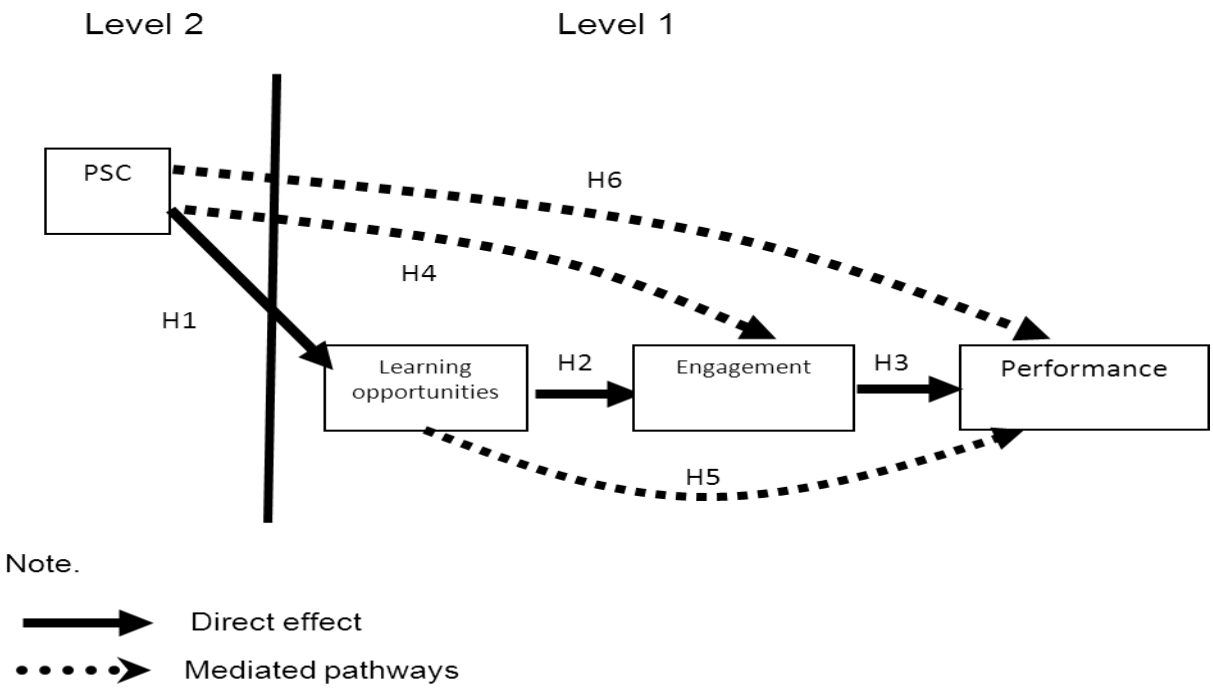


Figure 1. Hypotheses and research conceptual framework

PSC and its relationship to learning opportunities, engagement, and performance

PSC is a specific climate for psychological health and safety in the workplace. In their seminal work, Dollard and Bakker (2010) argued that PSC is a specific climate linked to psychological health but which is also related to employee motivation, particularly through job resources. IPSC consists of four major elements that are mainly related to psychological health and well-being, and are also drivers of employee motivation (Dollard & Bakker, 2010; Dollard, 2011): i) management support and commitment, ii) management priority, iii) organizational communication, and iv) organizational participation and involvement. We argue that PSC is a particular climate enacted by senior management, a climate that provides a context within which employees have more opportunity to develop their potential to achieve their job goals (Dollard, 2011), and have enough opportunities to learn.

Consistent with the ideology that working conditions are a feature of management initiative at the task level, we argue that PSC contributes to more learning and professional development. Perhaps, PSC operates as a safety 'signal', thus providing more safety to

employees by enhancing learning opportunities. If employees feel safe and they are not under threat, it is also safe to them to take risks to obtain more resources by learning new things and growing. This is consistent with the theory that climate provides safety as a specific characteristic with regard to what climate prioritizes in the organization (Law, Dollard, Tuckey & Dormann, 2011). As postulated in the conservation of resources (COR) theory (Hobfoll, 1998; 2001), it is argued that people are likely to protect their resources, as the resources help them to deal with demands and to avoid stressful situations. In addition, employees who obtain resources (i.e. learning opportunities) are also likely to invest more to produce an even better performance to achieve other resources, such as pay and status (Halbesleben, Harvey, & Bolino, 2009). In relation to this, as PSC is related to attention provided by managers, we see that managers and leaders who are committed to protecting employees' well-being, as would be characterized in a team or organization with high PSC, would also work to reduce unnecessary job demands and increase job resources at work. Indeed, in each unit or team, the leader's presence can contribute to allocation of team resources (Zaccaro, Rittman, & Mark, 2001).Thus, we predict that:

Hypothesis 1: PSC will positively relate to learning opportunities

As outlined above, job resources foster intrinsic motivation, particularly when employees perceive that resources provide meaningful satisfaction of basic psychological needs, which in turn will lead to increased employee engagement in their duties (van den Broeck, Vansteenkiste, de Witte, & Lens, 2008). High levels of resources also contribute to employees' extrinsic motivation by helping them to complete their tasks successfully (Bakker, Albrecht, & Leiter, 2011). A large body of evidence supports this claim (Bakker & Leiter, 2010; Hakanen, Schaufeli, & Aloha, 2008; Schaufeli & Bakker, 2004; Schaufeli et al., 2009). Hence, as a type of job resource, learning opportunities should promote engagement in the same way.

Moreover, eminent job stress scholars, Karasek and Theorell (1990), argued that learning opportunities may result in employees becoming intrinsically involved in their jobs, as it facilitates the employee to learn new things and develop problem solving skills in their jobs. Likewise, research supports the idea that learning opportunities will facilitate personal

challenges and employee motivation (Hirst, Van Knippenberg, & Zhou, 2009). In relation to why learning opportunities lead to workplace engagement, social exchange theory (Blau, 1964) offers an additional explanation. In general, if an employee receives adequate resources that fulfil their well-being, and perceives that employers take care of them, they will also invest more effort in their job as part of the exchange towards their organization (Cropanzano & Mitchell, 2005). In the context of learning opportunities as a resource, when employees are rewarded with adequate job resources they should in turn exert more effort for their organization, with more organizational commitment (Hakanen, Bakker, & Schaufeli, 2006) and personal initiative (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). Conversely, not having sufficient job resources will undermine employee performance, demonstrated by withdrawal and decreased commitment (Bakker, Demerouti, & Schaufeli, 2003; Demerouti et al., 2001). We therefore propose:

Hypothesis 2: Learning opportunities will positively relate to job engagement

Ideally, enhanced levels of engagement flow through to greater employee performance (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Saks, 2006). This is due to engagement which will foster employee happiness, and lead to employees to perceiving their job as part of their enjoyment. Engaged employees are willing to invest more energy to obtain their self-reward and satisfaction. In other words, job engagement is related to employees' mood in the workplace (Bakker & Leiter, 2010). Engaged employees look at the job in positive ways, seeing the job as challenging, even though they may be in a stressful situation (Bakker, Schaufeli, Leiter, & Taris, 2008). That is a reason why job engagement has been found to be more related to employee productivity (Idris, Dollard, & Winefield, 2011b). Engaged employees will be more productive, perform better and engage in organizational citizenship behavior (Rich, Lepine, & Crawford, 2010. For example, Halbesleben and Wheeler's (2008) study of 587 employees from various occupations in US organizations, found that job engagement predicted employees' performance (as rated by three types of measurement; self-rated, coworker rated and supervisor rated). This leads to the next hypothesis:

Hypothesis 3: Job engagement will positively relate to individual performance

Mediation process between variables

Since PSC is regarded as a specific climate that focuses on employees' psychological health, organizations that prioritize worker psychological health are likely to provide more job resources to their employees, because managers are aware that less resources make prevailing demands difficult to manage and can be stressful (Law, Dollard, Tuckey, & Dormann, 2011). This represents the role of PSC in preventing psychological harm through adequate resourcing to offset demands. Through the action of leaders and managers, PSC should also stimulate motivation. Managers (in high PSC organizations or teams) who value psychosocial health and safety will be aware of the importance of having meaningful work and will want to create conditions for employees to grow and develop, all of which should boost engagement. Hence, PSC should stimulate the motivational pathway of the JD-R model, mediated by job resources to enhance engagement.

Applying this reasoning to the context of our study, learning opportunities are expected to mediate the relationship between PSC and engagement. Although no studies have employed learning opportunities as a potential link between PSC and engagement, learning opportunities have been found to mediate the relationship between molar organizational climate and positive workplace behavior (Wilson, DeJoy, Vandernberg, Richardson & McGrath, 2004). Moreover, we see that learning opportunities have emerged as the best predictor of organizational commitment (Ng, Butts, Vandernberg, DeJoy & Wilson, 2006) and happiness (Rego & Pina e Cunha, 2009). This leads to the next hypothesis:

Hypothesis 4: Learning opportunities will mediate the relationship between PSC and job engagement

As discussed in the previous section, we described that learning opportunities contribute to employees' performance. In addition, we also predict that PSC is a core climate construct that enables employees to feel safe and protects them from psychosocial hazards. It also tends to make employees invest more effort to achieve work goals. This relationship, however, could be mediated through the impact of job engagement. Thus, this leads to the next hypotheses:

Hypothesis 5: Job engagement will mediate the relationship between learning opportunities and performance.

Hypothesis 6: Job engagement will mediate the relationship between PSC and performance.

The current study

This research investigates the influence of a specific aspect of organizational climate, the psychosocial safety climate (PSC) (Dollard & Bakker, 2010), on employee engagement and performance, particularly through its influence on one aspect of job resources, namely learning opportunities. In general, two approaches have been used by scholars to try to explain organizational climate: the *cognitive schema approach* and *shared perceptions approach* (Anderson & West, 1998). While some scholars believe that climate can be measured by using individuals' perceptions, or cognitive schemas, about their working environment (Jones & James, 1979; James & Sells, 1981), and this approach has dominated the literature of climate studies (see Clarke, 2006), another school of thought considers climate as a phenomenon that is shared among group members (Nembhard & Edmonson, 2006; Patterson, Payne & West, 1996; Zohar & Luria, 2005), i.e. a property of the organization. In the cognitive schema approach, individual perceptions of climate are used; in the shared perceptions approach, data is usually aggregated from many employees into a single organizational or team level (Neal & Griffin, 2006). We assessed PSC at team level, by using the shared perceptions approach, conceiving PSC as a property of the organization – conditions that the organization can create to maximize motivation, through job resources, and thus engagement and performance.

We use the following definition of team: 'the proximal work group as either the permanent or semi-permanent team to which individuals are assigned, whom they identify with, and whom they interact with regularly in order to perform work-related tasks" (Anderson & West, 1998, p. 236). Although the definition of a workplace team very much depends on the author's research perspective, we were interested in the "team in organizations" (Mathieu, Maynard, Rapp & Gilson, 2008), which describe a member's interaction in task completion and where interaction occurs on an infrequent basis (see Anderson & West, 1998; Mathieu,

Maynard, Rapp & Gilson, 2008). Using this definition, we were interested only in one team from each organization.

Assessing PSC at the team level generates a more objective account of the climate in the group in that the perceptions of individual employees are balanced against those of others. Based on knowing about the climate within an organization, we can predict levels of resources in organizations (Dollard & Bakker, 2010; Idris, Dollard, Coward & Dormann, 2011).

Method

Participants and Procedure

The current study used a cross-sectional approach with 427 employees from 56 organizations in the Malaysian private sector (59.3%) and public sector (40.7%). Using a combination of snowball techniques and professional connections, we approached organizational managers to undertake research in their organizations. We decided to use this approach because previous studies have noted that Malaysians are not keen to respond to the random sampling method (Ali, Abdullah, & Subramaniam, 2009; Sohail, Bhatnagar, & Sohal, 2006) and have demonstrated a very low rate of participation. Out of 75 organizations approached, 56 organizations agreed to participate (response rate = 74%). Following the organizations' consent to participate, we used the snowball technique which consisted of asking organizations to suggest one department to participate in the study. In general, most participants in the current study were male (50.6%), with a range of educational backgrounds (secondary school, 35.4%; diploma, 19.9%; and bachelor degree, 34.2%), and most worked in education (16.9%), services (10.8%), and manufacturing (6.3%) industries. The number of participants in each organizational team varied from 5 to 10.

Instruments

The instruments used in this study were translated into the Malay language using the back translation method (Brislin, 1970), unless otherwise indicated.

Psychosocial safety climate. We used a twelve-item PSC scale (PSC-12) (Hall, Dollard, & Coward, 2011). The questionnaire measures four sub-scales: *management*

commitment, organizational communication, management priority and *organizational participation*. The PSC sub-scales have good validity and reliability as reported in previous research (Hall et al., 2011; Idris, Dollard, & Winefield, 2011). Reported alpha values for these sub-scales ranged from 0.81 to 0.89. The response scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). Example questions are: "In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health" (*management commitment*); "There is good communication here about psychological safety issues which affect me" (*organizational communication*); "Senior management clearly considers the psychological health of employees to be of great importance" (*management priority*); and "Participation and consultation in occupational health and safety issues occurred with employees, unions, and occupational health and safety representatives" (*organizational participation*). The scale uses an organizational referent whereby participants are posed the question stem, "in your organization". The PSC scale has demonstrated group level attributes in previous research (ICC (1), ICC (2) and rwg), (Dollard & Bakker, 2011; Law et al., 2011), as well as discriminant validity from related measures such as team psychological safety (Edmonson, 1999), perceived organizational support (Eisenberger, Huntington, Hutchison, & Sowa, 1986) and physical safety climate (Zohar, 1980) (for details, see Idris, Dollard, Coward, & Dormann, 2011).

Learning opportunities were measured using the three-item scale of Bakker, Demerouti, Taris et al. (2003), including "My work offers me the opportunity to learn new things" and "I have sufficient possibilities to develop myself at work" and "I have an opportunity to develop my own special abilities". Item responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). These items overlap very strongly with those developed in the JCQ (Karasek & Theorell, 1990) that assess skill discretion, a form of job control.

Engagement. We used three subscales - *vigor, dedication* and *absorption* - derived from a shortened version of the *Utrecht Work Engagement Scale* (UWES) to measure work engagement (Schaufeli, Bakker, & Salanova, 2006). Responses were scored according to a seven-point scale: 0 (*never*) to 6 (*always*). Each subscale was examined using three items.

Sample questions are: "At my work, I feel bursting with energy*" (vigor)*; "I am enthusiastic about my job" *(dedication)*; and "I am immersed in my work" *(absorption).*

Job performance. We used six items to measure team performance (adapted from Hochwarter, Witt, Treadway & Ferris, 2006). Responses were scored using 1 (*strongly disagree*) to 5 (*strongly agree*). The sample items were: "My co-workers in this department find creative and effective solutions to problems"; and "My co-workers in this department strive to meet deadlines".

Aggregation procedures

To assess the suitability of PSC for aggregation we assessed evidence for within-group inter-rater agreement, using the mean $r_{(WG)(j)}$ (James, Demaree, & Wolf, 1984). The $r_{(WG)(j)}$ value $\geq$ 0.70 is appropriate to establish suitable levels of agreement within organizations (Mathieu, Maynard, Taylor, Gilson & Ruddy, 2007) PSC ($r_{(WG)(j)}$ = .95, SD = .03).

Group measures should also vary significantly between groups. Using one-way random effects ANOVA (F_{III}), we found significant F values, indicating sufficient variance in PSC due to groups (see Table 1). The intra-class coefficient ICC (1), a measure of between-group variance for PSC, was 0.18; this indicates that the proportion of variance in PSC due to random organization/team effects was 18%. ICC (2) was 0.94 providing high reliability of the PSC at the team levels. The mean $r_{(WG)(j)}$ values, F values, ICC (I) and ICC (2) values justified aggregating PSC measures to the organizational level.

Hypotheses testing

Given the multilevel nature of the data (individuals nested within teams), hierarchical linear modelling (HLM) was used to test all hypotheses. We used HLM 6.06 software (Raudenbush, Bryk, Cheong, & Congdon, 2005), where Level 2 represents team data while Level 1 represents individual data. To directly test our hypotheses including lower level effect and cross-level effect, we followed the several steps that are provided in Mathieu and Taylor (2007). Firstly, we ran the HLM equation to test the relationship of individual variables (learning opportunities, engagement and performance). At the first step, the performance variable was regressed on engagement and learning opportunities simultaneously (M1).

Level-1 Model: Performance= β_0+ β_1^* (Engagement) + β_2^*(Learning opportunities) + *r*
Level-2 Model: $\beta_0 = \gamma_{00} + U_0$
$\beta_1 = \gamma_{10}$
$\beta_2 = \gamma_{20}$

At the second step, we regressed engagement on learning opportunities (M2) and at the third step regressed performance on learning opportunities (M3). Examples of the HLM equations are as follows;

Level-1 Model: Engagement = β_0+ β_1^* (Learning opportunities) + *r*
Level-2 Model: $\beta_0 = \gamma_{00} + U_0$
$\beta_1 = \gamma_{10}$

For the next set of analyses to examine the effect of PSC, we regressed performance on PSC (M4). Then, using M5, we regressed performance on PSC and both lower level variables (learning opportunities and engagement) simultaneously. Steps of testings then followed with M6, regressed performance on PSC and engagement. M7 regressed PSC and learning opportunities. In M8, we tested the effect of PSC on engagement, and a final model (M9) regressed engagement on PSC and learning opportunities.

Examples of the HLM equations for cross-level effects were as follows:

Level-1 Model: Performance= β_0+ β_1^* (Engagement) + β_2^*(Learning opportunities) + *r*
Level-2 Model: $\beta_0 = \gamma_{00} + \gamma_{00*}$(PSC) + U_0
$\beta_1 = \gamma_{10}$
$\beta_2 = \gamma_{20}$

.

To assess mediation (H4, H5 and H6), we used the Monte Carlo Method (MCM) (Selig & Preacher, 2008) as this is advocated as a better test than the Sobel test when assessing mediation in multilevel models (MacKinnon, Lockwood, & Williams, 2004). We followed Baron and Kenny's (1986) mediation steps which require the following: (i) a significant relationship between independent and outcome variables (*X*→*Y* (for example PSC is significant with performance)); (ii) the independent measure is significantly associated with the mediator (X→M; PSC is significant to learning opportunities); (iii) the mediator is significantly associated with the dependent variable (M→Y; learning opportunities are significant with performance), controlling for the independent variable (PSC); and finally (4) in order to

establish full mediation, the effect of the independent measure in step (3) is reduced to zero. Where step four is not met, then only partial mediation is indicated. We then applied the MCM, which involved 95% confidence intervals (CI) and 20,000 repetitions.

Results

A correlation matrix showing relationships between variables, internal consistency reliability (α), ICC (I) and F values are presented in Table 1. The reliability for study variables ranged from 0.82 to 0.93 at the individual level, and indicates good scale reliability. Results for lower level HLM effects are detailed in Table 2, while cross-level effects are shown in Table 3.

We proposed in Hypothesis 1 that PSC is positively related to learning opportunities, and HLM analysis confirmed our hypothesis, $\gamma = 0.18$, $p < 0.001$ (M10). In support of Hypothesis 2, we found that learning opportunities predicted team engagement, $\beta = 0.25$, $p < 0.001$ (see M1). Next, we predicted and found in M1 that job engagement positively relates to performance, $\beta = 0.26$, $p < 0.001$, in support of Hypothesis 3.

The mediation process between variables

Hypothesis 4 proposed that learning opportunities mediate the relationship between PSC and job engagement. First, a cross-effect model (M10) showed that PSC is positively related to learning opportunities. In M8, PSC is also positive and significantly related to job engagement ($\gamma = 0.32$, $p < 0.001$). To test the mediation process between PSC and engagement through learning opportunities, we added learning opportunities into the PSC model (M9). Both PSC ($\gamma = 0.28$, $p < 0.001$) and learning opportunities ($\gamma = 0.24$, $p < 0.001$) remained significantly associated with job engagement to support the partial mediation process. Using the MCM, we found that learning opportunities significantly mediated the relationship between PSC and job engagement (95% CI, Lower Level = 0.0174, UL = 0.0761). This is support for Hypothesis 4 that learning opportunities at the individual level, mediated the relationship between organizational PSC and engagement at the individual level.

Next, in relation to Hypothesis 5, we predicted that job engagement will mediate the relationship between learning opportunities and performance. In the first instance, we saw a

direct effect between learning opportunities and work engagement (M3) ($\gamma = 0.33$, $p < 0.001$). When engagement was added into the model (M1), the path between engagement and team performance remained significant ($\gamma = 0.26$, $p < 0.001$. Indeed using the MCM, we found that there was a mediation process between learning opportunities and job performance via engagement (95% CI, Lower Level = 0.0523, UL = 0.0124). Thus, Hypothesis 5 was supported. Hypothesis 6 predicted that job engagement mediates the relationship between PSC and performance. As indicated in Table 3, there was a direct effect between PSC and performance ($\gamma = 0.24$, $p < 0.001$) (M4), and also between engagement and team performance ($\gamma = 0.26$, $p < 0.001$) (M1). When engagement was added into the PSC model (M6), both PSC and job engagement remained significant with performance ($\gamma = 0.15$, $p < 0.001$) and ($\gamma = 0.29$, $p < 0.001$) respectively suggesting partial mediation. The MCM confirmed the partial mediation process between PSC and performance through job engagement (95% CI, Lower Level = 0.0362, UL = 0.1099). Thus, Hypothesis 6 was partially supported.

Table 1. Means, standard deviations, reliability, and Pearson bivariate correlations

	M	*SD*	α	1	2	*3*	*4*
1. Psychosocial safety climate	38.15	7.37	.92	1			
2. Learning opportunities	11.76	2.18	.85	.32**	1		
3. Engagement	35.84	8.44	.93	.43**	.29**	1	
4. Team performance	18.71	2.77	.82	.45**	.39**	.34**	1

Note. * $p < .05$, ** $p < .01$, *** $p < 0.001$. N=427, team = 56

Table 2. HLM analyses on lower level relationships Level-1

	Dependent variables		
	Performance	Engagement	Performance
Model	**1**	**2**	**3**
Lower-level effects			
Engagement	.26 (.04)***		
Learning opportunities	.25 (.05)***	.27 (.04)***	.33 (.05)***

Note: N = 427 individuals, 56 organizations, *** $p < 0.001$, the first value is the parameter estimate, and value in parenthesis is the standard error.

Table 3. HLM analyses of cross-level effect of PSC on lower level outcomes

	Dependent variables						
	Performance	Performance	Performance	Performance	Engagement	Engagement	Learning opportunities
Model	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Lower-level effects							
Engagement		.23 (.04)***	.29 (.05)***				
Learning opportunities		.24 (.05)***		.30 (.05)***		.24 (.05)***	
Cross-level effects							
PSC	.24 (.05)***	.13 (.06)*	.15 (.06)**	.20 (.06)**	.32 (.06)***	.28 (.06)***	.18(.05)***

Note: N = 427 individuals, 56 organizations, *** $p < 0.001$. The first value is the parameter estimate, and value in parenthesis is the standard error.

Discussion

We proposed and tested a multilevel process model that examined PSC as a pivotal organizational climate that fosters workplace performance and engagement through learning possibilities. Our study adds to the literature by responding to recent calls for job stress research to shift to multilevel modelling (Bliese, Jex & Halverson, 2002; Probst, 2010). This is line with meso-mediational paradigms (Mathieu et al., 2007; Mathieu & Chen, 2011) and recent climate studies using multilevel approaches (Mearns, Hope, Ford, & Tetrick, 2010; Zohar & Luria, 2005). By employing the multilevel analysis, we advanced the PSC investigation (Dollard & Bakker, 2010) and the JD-R literature (Bakker & Demerouti, 2007) by not only investigating the potential motivational pathways at the individual level, but the cross-effect of PSC on motivational direction as a precursor to the individual level motivational process.

We predicted that PSC positively relates to learning opportunities. Consistent with PSC theory (Dollard & Bakker, 2010), we found that higher PSC was associated with more resources. PSC as a specific climate that protects employees from hazardous psychosocial threats, indirectly boosts employees to feel safer to enhance their learning opportunities reflecting growth and learning new skills. While PSC influenced resources, we found that learning opportunities in turn boosted engagement. This provides support for the motivation hypothesis of JD-R theory (Bakker & Demerouti, 2007) and the extended motivation hypothesis proposed by Dollard and Bakker (2010). Employees who are engaged are likely to make more effort to achieve work goals (Schaufeli & Salanova, 2011).

We sought evidence that the process of employees' motivation was particularly driven by PSC through job resources as depicted in recent studies (Dollard & Bakker, 2010; Idris, Dollard & Winefield, 2011; Law et al., 2011). Since most previous studies on PSC were only tested at the lower levels (Idris, Dollard & Winefield, 2011; Idris & Dollard, 2011), we predicted that the influence of PSC at the team level is due to cross-level effect on lower level entities. In other words, higher PSC at the team level indirectly enhances engagement through job resources. Our findings are consistent with previous studies to show that PSC as an aggregated measure, and indicator of organizational climate, boosted job resources (Law, Dollard, Tuckey & Dormann, 2011).

Again, our study found that job engagement functions as a source of mediation between learning opportunities and performance. This is consistent with the argument that

engagement is a strong predictor of positive work outcomes (Sonnetag, 2011). When the necessary resources are provided to employees, they will then work better because their energy to do the work, dedication to the work and absorption in the work are enhanced (cf. Bakker, Albrecht, & Leiter, 2011).

Consistent with JD-R assumptions (Bakker & Demerouti, 2007), we found that job resources at the task level are retained as tools for employee engagement. Our results suggest that several potential variables such as rewards for performance and possibilities for learning opportunities increase employees' motivation (Bakker, Demerouti, Taris et al., 2003). This is consistent with previous studies which have shown that when employees were provided with enough job resources, they had more motivation (Bakker, Albrecht, & Leiter, 2011), and their performance improved. Our findings imply that job resources at the individual level can enhance engagement, and indirectly also lead to employee performance. These results are expected since job engagement represents employee motivation (Schaufeli & Salanova, 2011), while employees' performance is more related to the result of employee efforts.

Limitations of the study and future research

This was a cross-sectional study and although we have theorized in terms of causality, we cannot draw conclusions regarding causal effects. However, by investigating between-group effects, via data aggregation to the team level, we can rule out the possibility that upper level effects were due to individual subjectivity bias. Future research could use objective data (e.g., objective performance reports, supervisor rating of performance) to help distinguish between the variables at the individual level and avoid the effects of common method variance for the associations between variables at the individual level. In the current study, given that most Malaysian organizations have strict confidentiality procedures, we decided not to collect objective data. In addition, due to the diversity in the participating organizations' businesses and operations, organizations have their own specific performance measures, and therefore using objective performance measures was not practical.

Furthermore, the current study only used PSC as a predictor of job resources. It would be worthwhile to test competing climates (e.g. safety climate, perceived organizational climate, climate for innovation), to ascertain the predictive validity of PSC in relation to motivational outcomes. This is important because PSC is a climate for

psychological health and safety of workers, rather than a climate for performance (i.e. team safety climate, climate for innovation). Preliminary research by Idris, Dollard, Coward, and Dorman (2011) has shown that PSC differs from other climates because it has the potential to predict both motivational and employees' psychological health. Recently researchers suggested that future research examine a specific 'climate for engagement' that could precede employee engagement (Bakker, Albrecht, & Leiter, 2011). Although PSC is specifically a 'climate for psychological health' the current evidence suggests that tangentially, but importantly, PSC may well be considered a 'climate for engagement and performance'.

There have been recent calls to examine the level of engagement at a daily level, as it was argued that employee engagement may fluctuate. It may also be the case that employee performance fluctuates as well (Bakker, Albrecht, & Leiter, 2011; Sonnentag, 2011). However, given that our study focuses on organizational climate, it would be difficult to access climate using this approach, since organizational climate is regarded as a stable phenomenon that occurs in organizations.

Conclusion

This study is of a novel construct PSC, and assesses the influence of organizational climate on several organizational motivational outcomes at the individual level, particularly via the medium of learning opportunities. We tested our PSC theory outside the Western context, to seek evidence of universality of PSC as precursor to intrinsic motivation in workplaces. This study adds to the literature by formulating and testing a multilevel model for learning opportunities, engagement and performance. The study demonstrated the importance of PSC as a precursor to work conditions (i.e. learning possibilities) linked to intrinsic and extrinsic motivation, and as a tool that enhances employees' engagement and performance. As one of the few studies to be published on this emerging climate construct, further research on PSC is needed. We contend that PSC can create a positive workplace environment and contribute to positive employee behavior at work in addition to protecting workers from psychological harm.

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Chapter Nine

Submitting paper

Psychosocial safety climate, emotional demands, burnout and depression: A longitudinal multilevel study in the Malaysian private sector.

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Abstract

The current study investigates a newly identified climate construct, psychosocial safety climate (PSC) as a precursor to job characteristics (e.g. emotional demands) and its relationship to emotional exhaustion and depression. It was argued that PSC, as a climate construct has cross-level effects on individual psychological outcomes. We also hypothesized the mediation process between PSC and emotional exhaustion was particularly through emotional demands. In addition, we predicted that emotional exhaustion mediated the relationship between emotional demands and depression. Using a longitudinal multi-level approach, employees in Malaysian private organizations were approached. At Time 1, data were collected from 36 organization (80 % responses rate), *N* = 253, and at T2 from 27 organizations (60%) and *N* = 117 (46%). Using hierarchical linear modelling (HLM), we found that there were cross-level effects of PSC on changing emotional demands and emotional exhaustion, but not depression. We also found that emotional demands mediated the relationship between PSC and emotional exhaustion, while emotional exhaustion mediated the relationship between emotional demands and depression. Our results suggest that PSC as important climate construct, contributes to decrease employees psychological problem in the workplaces, via working conditions.

Psychosocial safety climate (PSC; Dollard & Bakker, 2010) theory of work stress has emerged as one of the most important stress models that describe the origins of job characteristics. Drawing from the literature on safety and job stress, PSC has been defined as "policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard & Bakker, 2010, p. 580). PSC refers to a climate for freedom from psychological harm caused by workplace problems (Dollard & Bakker, 2010). Most work stress theories postulate work stress as having its origins in the way jobs are designed. PSC is largely determined by management, and indicates management priority for worker psychological health, and commitment and support for stress prevention; this includes designing jobs that are not stressful. Therefore PSC is theorised as a lead indicator of work conditions and in turn the psychological health and wellbeing of workers. In this paper we investigated the effects of organizational psychosocial safety climate (PSC) on job characteristics (i.e. emotional job demands), burnout (i.e. emotional exhaustion) and depression in the workplace. Specifically, we examined the effects of PSC at the organizational level, on other variables assessed at the individual level using a multi-level analysis.

Psychosocial safety climate is a newly identified organizational climate construct. PSC is conceived as a climate that is present in each type of organization, as it reflects *management commitment, organizational communication, management priorit*y and *organizational participation* in relation to employees' psychological health. As a specific climate construct for psychological health in the workplace, studies reveal that PSC is related to several aspects of psychological health such as burnout, depression and anger (Dollard & Bakker, 2010; Idris & Dollard, 2011; Law, Dollard, Tuckey & Dormann, 2011). Although, other organizational climates link to some aspects of psychological well being, the difference between PSC and other climates is the notion that PSC precedes the workplace environment, specifically psychosocial risk factors that in turn lead to psychological health problems (Dollard & Bakker, 2010; Hall, Dollard, & Coward, 2011). In other words, relationships to psychological health are particularly mediated by job characteristics, such as job demands and job resources, which are explained in the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007). Borrowing from the JD-R ideology, PSC, is linked to workplace burnout, particularly through the prism of job demands as described in several studies (Dollard & Bakker, 2010; Idris, Dollard, & Winefield, 2011; Law et al., 2011).

Thus, the current study aims to contribute further insights into how PSC behaves over time in relation to employee emotional demands, emotional exhaustion and depression in a more general way than previous studies by using a longitudinal design, and a multi-occupational sample. In addition we tested this Western conceived theory outside the Western context.

PSC as a multi-level phenomenon

So far, the debate about the concept of organizational climate is ongoing, particularly whether climate resides at the individual or group level (Anderson & West, 1999). Some scholars believe that climate is an individual perception of one's working environment (James & Sells, 1981; Jones & James, 1979), while others believe that climate is a shared phenomenon among group members (Nembhard & Edmonson, 2006; Patterson, Payne & West, 1996; Zohar & Luria, 2005). In the current study, we propose that PSC is a shared group level perception, and this is consistent with seminal work on PSC by Dollard and Bakker (2010). Our contention is that PSC is manifest at the level of the organization or team, and it precedes conditions at the job level.

Several studies have used multilevel modelling to assess how PSC relates to other variables (Dollard & Bakker, 2010; Idris Dollard, Coward, & Dormann, 2011; Law et al., 2011). Some population based studies have not been designed to assess organisational climate as a shared construct as data was collected at the individual level. Whilst these population based studies assess PSC across a wide range of industries, occupations and organisations, a limitation is that it is not possible to explain whether the effect of PSC on emotional exhaustion and depression is due to organizational or individual influences (Idris & Dollard, 2011; Idris, Dollard & Winefield, 2011). Further the cross-sectional nature of all of the studies except Dollard and Bakker (2010) means that the studies are unable to explain the causal effect of PSC and the study variables.

Given the nascent stages of empirical testing of PSC theory, this study aims to contribute to knowledge, by utilizing a multilevel approach (Mathieu & Taylor, 2007); this implies assessing PSC as an upper level or organisational precursor to job demands (i.e. emotional demands), and exploring how it influences depression and emotional exhaustion. We used emotional exhaustion in the current study because scholars argue it represents a core construct of burnout (Leiter & Maslach, 1988). In addition, we focused on the job demands component of JD-R theory as they are found to be more strongly related to

emotional exhaustion, by contrast to job resources, which seem to be more closely related to depersonalization (Leiter, 1993). We conducted the study using a longitudinal approach and conceptualized the research framework as illustrated in Figure 1**.**

Our research contributes to the job stress literature in several ways. First, to date, no studies have made a cross-level link between PSC→emotional demands→emotional exhaustion→depression. By using psychosocial safety climate as the antecedent to these processes, we emphasize the importance of organizational phenomena in the workplace.

The relationship between emotional demands, emotional exhaustion and depression

To date, scholars believe that burnout is an antecedent to depression, and not vice versa. In the mid-1990s, Leiter and Durup (1994) determined that burnout and depression have their own specific constructs. In their paper, Leiter and Durup explained that although burnout and depression could share some key characteristics (i.e. social withdrawal), in fact burnout was more related to job characteristics, while depression was associated with personal thoughts and emotions. More specifically, burnout is more relevant to specific stressors in the workplace, while depression resulted from all kinds of negative experiences (Bakker, Schaufeli, Demerouti, Janssen, van der Hulst & Brouwer, 2000). In a causal chain commencing with job stressors, burnout is considered a proximal variable and depression a more distal variable. Studies also show that job stressors are strongly related to burnout, rather than depression (Ahola et al., 2005), and burnout mediates the relationship between job stressors and depression (Ahola & Hakanen, 2007).

Although one study reported that high job demands increases the risk of depression (Clays et al., 2007), most studies agree that job characteristics lead to burnout rather than precede depression. Bakker et al. (2000) in their analysis of 154 Dutch teachers found that lack of reciprocity at work predicted burnout, while lack of reciprocity with partner/spouse predicted depression. They concluded that burnout resulted from work-related stress, while depression is associated with non-work events. Building on this theme, Bakker et al. (2000) reported that burnout leads to depression and not vice versa.

With reference to this relationship, Salmela-Aro, Savolainen and Holopainen (2009) in their study of adolescents in Finland found that school burnout predicted depression, and depression did not predict burnout. For example, Wieclaw et al. (2008) in their research on Danish employees found that high job demands were related to anxiety disorders, while

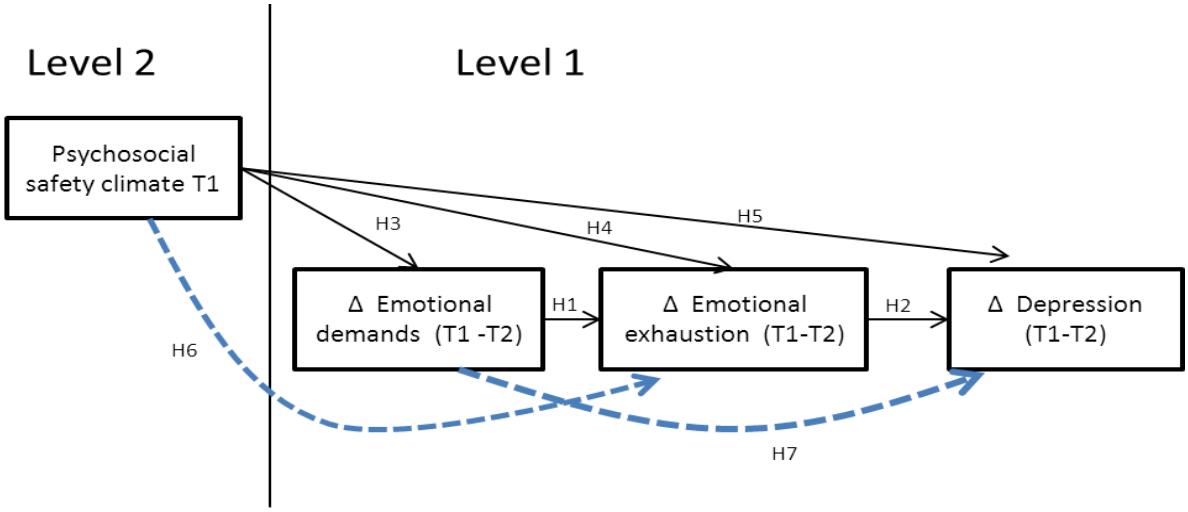
lower level job demands increased the risk of depression. This relationship may not occur in terms of job characteristics, since most studies so far have found that emotional demands predicted emotional exhaustion. A recent meta-analytical study by Nahrgang, Morgeson and Hofmann (2011) looked at 203 independent samples (N= 186,440) and confirmed that job demands (risks and hazard) were related to burnout particularly in the construction and transportation sector (r_c =24 and $r_{c=}$ .39, respectively). A similar meta-analytical study on papers published between 1981-2010 (Alarcon, 2011) found that job demands (i.e. role ambiguity, workload) are associated with burnout, especially the emotional exhaustion component. Similarly, Peng, Wong and Che's (2010) study of 418 insurance salespeople in western China found that emotional demands influenced emotional exhaustion. The findings in Idris, Dollard and Winefield (2011) confirmed a similar pattern, where emotional demands impacted on employees' burnout.

However, majority of the studies are is cross sectional, and only one study used a longitudinal design (Hakanen, et al., 2008), In addition, no studies used emotional demands as an antecedent to emotional exhaustion and depression. In addition, most of them were tested within specific occupations (i.e. dentists, see Ahola & Hakanen, 2007; teachers, see Bakker, 2009),and particularly in Western workplaces. In the current study, we examine these relationships in an occupationally heterogeneous Malaysian private sector workplace sample.

Bringing these themes together leads to

Hypothesis 1: A positive change (i.e. an increase) in emotional demands will positively relate to a positive change in emotional exhaustion, and

Hypothesis 2: A positive change in emotional exhaustion will positively relate to a positive change in depression.



Notes. H = Hypothesis, T1 = time 1, T2 = time 2, N (T1=253, T2=117)

Figure 1. Hypotheses and research model

Psychosocial safety climate and its link to emotional demands, employee burnout and depression

To date, studies have concluded that PSC may improve employees' emotional exhaustion, particularly through less job demands (Dollard & Bakker, 2010; Law et al., 2011) and PSC is also related to employee negative emotions such as anger and depression (Idris & Dollard, 2011). In their seminal work on PSC, Dollard and Bakker (2010) argued that PSC is a specific climate construct that is able to predict employees' psychological health. Moreover, a recent study found that PSC is a theoretically distinct construct from related variables such as organizational support, safety climate and team psychological safety (see Idris, Dollard, Coward & Dormann, 2011).

PSC is a particular climate that is concerned with employees' well-being, and we argue that it is associated with having less emotional demands. Theoretically in high PSC contexts, managerial concerns regarding employee psychological health would lead to ensuring that workers are not faced with unreasonable levels of job demands (Dollard, 2011; Dollard & Bakker, 2010). While there are some other similar climates that have predicted employees' well-being, such as organizational justice climate (Spell & Arnold, 2007) or perceived organizational support (O'Neill, Vandenberg, DeJoy & Wilson, 2009),

the focus of these constructs is not to predict job demands in the workplace. Empirical evidence for instance shows that PSC is a better predictor of demands compared with team safety climate and perceived organizational support (Idris, Dollard, Coward & Dormann, 2011). A longitudinal study found that PSC can predict changes in job demands over time (Dollard & Bakker, 2010), while other cross-sectional studies also resulted in similar findings (Idris, Dollard & Winefield, 2011). However, as most of these studies rely on the JD-R concept, the type of job demands being investigated has varied, for example bullying (Law et al., 2011), psychological demands and emotional demands (Dollard & Bakker, 2010). In relation to this, we predict:

Hypothesis 3: PSC Time 1 will predict a decrease in emotional demands.

PSC is theorised and shown empirically to be closely associated to job burnout (i.e. emotional exhaustion) particularly through job demands (i.e. psychological demands, see Dollard & Bakker, 2010). These relationships can be explained by using Conservation Resources Theory (Hobfoll, 2001**).** We argue that PSC as a specific climate in the workplace also plays a role as an organizational resource providing employees with a support mechanism (Law et al., 2011). Concentration on employees' well being indirectly creates a more conducive and effective team work environment (Mathieu & Taylor, 2007). We therefore expect this situation to create more happy workers and less tension in the workplace. Studies reveal that PSC at lower levels leads to burnout, depression and anger (Idris, Dollard & Winefield, 2011; Idris & Dollard, 2011; Law et al., 2011).

Thus, we predict:

Hypothesis 4: High PSC Time 1 predicts a decrease in emotional exhaustion, and

Hypothesis 5: High PSC Time 1 predicts a decrease in depression.

The above discussion leads us to posit two more hypotheses.

Hypothesis 6: High PSC Time 1 will predict a decrease in emotional exhaustion via a decrease of emotional demands and

Hypothesis 7: A positive change in emotional exhaustion will mediate the relationship between a positive change in emotional demands and a positive change in depression.

Method

Design and Participants

The current study used a multi-level longitudinal design with 117 employees from 27 private sector businesses/organizations in Malaysia. The gap between Time 1 (T1) and Time 2 (T2) was three months. Due to low response rates using random sampling methods in Malaysia workplace studies (Ali, Abdullah, & Subramaniam, 2009; Sohail, Bhatnagar, & Sohal, 2006), we used a combination of snowball and professional connection techniques. At T1, we approached 45 organizations and 36 (80%) organizations were willing to participate (N = 253 individual participants). At T2, we approached the same organizations of whom only 27 (60%) were willing to participate (N = 157, 62 % of original). However, after we matched T1 to T2 data, 30 respondents were omitted because they were new respondents that did not respond at T1 (N = 25) and some of them had not filled in the questionnaires (N = 15).

Following the organizations' consent to participate, we used the snowball technique which consisted of asking organizations to suggest one department that could participate in this study. In general, most participants at T1 were male (52.2%), with a range of educational backgrounds (secondary school, 30.4%; diploma, 19.0%, and bachelor degree 34.8%), and most worked in manufacturing (10.7%), insurance (8.9%), education (8.3%), grocery/hypermarket (8.3%) and services (7.9%). At T2, most of the participants worked in manufacturing (12.8%), grocery (13.7%) and services (10.3%). The number of participants in each organizational team at both T1 and T2 ranged from 5 to 10.

Instruments

The instruments used in this study were translated into the Malay language using the back translation method (Brislin, 1970), unless otherwise indicated.

Psychosocial safety climate. We used a twelve-item PSC scale (PSC-12) (Hall, Dollard, & Coward, 2011). The questionnaire measures four sub-scales: *management commitment*, *organizational communication*, *management priority* and *organizational participation*. The PSC sub-scales have good validity and reliability as reported in recent research (Hall, Dollard, & Coward, 2011; Idris, Dollard, & Winefield, 2011). Reported

alpha values for these sub-scales ranged from 0.81 to 0.89. The response scale ranges from 1 (*strongly disagree*) to 5 (*strongly agree*). Example questions are: "In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health" (*management commitment*); "There is good communication here about psychological safety issues which affect me" (*organizational communication*); "Senior management clearly considers the psychological health of employees to be of great importance" (*management priority*); and "Participation and consultation in occupational health and safety issues occurred with employees, unions, and occupational health and safety representatives" (*organizational participation*). The scale uses an organizational referent whereby participants are posed the question stem, "in your organization". The PSC scale has demonstrated group level attributes in previous research using the ICC (1), ICC (2) and rwg (Dollard & Bakker, 2011; Law et al., 2011).

Emotional demands were assessed using the respective four-item scales from the Copenhagen Psychosocial Questionnaire (COPSOQ; Kristensen, Hannerz, Hogh, & Borg, 2006). A four-point response scale was used: 1 (*strongly not agree*) to 4 (*strongly agree*). A sample question is**:** "Does your work put you in emotionally disturbing situations?"

Emotional exhaustion. We used the 5-item Maslach Burnout Inventory exhaustion subscale (Schaufeli, Leiter, Maslach, & Jackson, 1996), e.g., "I feel used up at the end of the work day". Items were answered on a 7-point scale from 0 (never) to 6 (every day).

Depression was measured with nine items from the Patient Health Questionnaire (PHQ-9; Spitzer et al., 1999). Responses ranged from 1 (*not at all*) to 4 (*nearly every day*). A sample item is: "During the last month, how often were you bothered by feeling down, depressed or hopeless?"

Analysis Strategy

Given the multilevel data that nested between organization and individuals, we used hierarchical linear modelling (HLM, Raudenbush et al., 2005). Individual (Level 1) and organizational (Level 2) variables were standardized within levels as recommended by Mathieu and Taylor (2007). We followed Schaufeli, Bakker and Van Rhenen (2009) by assessing the change of T1-T2 in the variables as residual scores (emotional demands, emotional exhaustion and depression) and included them into the HLM analysis. We expect these variables would change over time. The change scores were calculated by regressing the T2 score on the relevant T1 score using SPSS version 17 software. We used the

standardised residual score indicating differences between the predicted and observed probabilities of the T2 variables in the analysis. The use of residual scores to indicate change overcomes error inflation that might occur when difference scores are used (Cronbach & Furdy, 1970; Schaufeli et al., 2009)

Samples

HLM requires utilising two samples one at the individual level, and the other aggregated at the organisational level. They are matched by the organisation identifier. This means that the sample used to comprise the upper level data can differ from the lower level sample. Following the procedure described by Dollard, Tuckey, and Dormann (2011), we used all data from T1 to measure PSC climate in the upper level data set. For the lower level data set we used the matched repeated measures sample of T1 and T2 responses (N = 117).

Aggregation procedure

Prior to HLM analysis, we first used a range of tests to confirm whether it made sense to aggregate PSC T1 assessed at the individual level, to the organizational level. We used mean $r_{(WG)(j)}$ (James, Demaree, & Wolf, 1984). The result shows very strong agreement within an organization for PSC T1. The results confirmed very strong levels of agreement within teams for PSC measures (> .90) (LeBreton & Senter, 2008), T1 mean $r_{(WG)(j)}$ = .96 (SD =.03). We also assessed ICC (1) for PSC T1 and found that it was .11, and as recommended by Bliese (2000), values ranging from .05 to .20 are reasonable for the aggregation procedure. ICC (2) for PSC at T1 = .91 show a good reliability for PSC. F_{III} value for PSC = 2.03, $p < 0.001$ again providing further rationale for data aggregation.

Hypotheses testing

We followed Mathieu and Taylor (2007) to assess our study hypotheses. First, we evaluated lower level (Level 1) variables, to see the effect of the variables on each other. We regressed Δ depression on both Δ emotional exhaustion and Δ emotional demands simultaneously (model 1). In model 2, Δ emotional exhaustion was regressed on Δ emotional demands. Next, we regressed Δ depression on Δ emotional demands (model 3).

The second stage of the analyses included testing the cross-level effect of PSC (T 1) on lower level outcomes and mediators variable (Δ emotional demands, Δ emotional exhaustion and Δ depression) First, in model 4, we assessed the cross-level effect of PSC

T1 on Δ depression. Next we regressed Δ depression on all lower variables (Δ exhaustion and Δ emotional demands) and PSC T1 (model 5). In model 6, we regressed Δ depression on both PSC T1 and Δ exhaustion. In the next part of our analysis (model 7) we regressed Δ depression on PSC T1 and Δ emotional demands. Models 8 and 9 are only concerned with emotional exhaustion. In model 8, we regressed Δ emotional exhaustion with PSC T1, and followed this by adding Δ emotional demands to the model (model 9). The final model only tested the effect of PSC on Δ emotional demands.

We followed Baron and Kenny's (1986) mediation steps which require the following: (i) a significant relationship between independent and outcome variable ($X \rightarrow Y$ (for example PSC is significantly related to Δ exhaustion); (ii) the independent measure is significantly associated with the mediator (X→M; PSC is significantly related to Δ emotional demands); (iii) the mediator is significantly associated with the dependent variable (M→Y; Δ emotional demands is significantly related to Δ exhaustion), controlling for the independent variable (PSC); and finally (4) in order to establish full mediation, the effect of the independent measure in step (3) is reduced to zero. Where step four is not met, then only partial mediation is indicated.

Further in relation to mediation hypotheses (H6 and H7), we used a Monte Carlo test for mediation (Selig & Preacher, 2008) because this has been suggested as a better test than the Sobel test when assessing mediation in multilevel models (MacKinnon, Lockwood, & Williams, 2004). In each testing, we run a Monte Carlo at 95% confidence interval (CI) and 20,000 repetitions.

Results

Table 1 presents a descriptive analysis. Results for HLM analysis are shown in Tables 2 and 3. A summary of the findings is presented in Figure 2.

Hypothesis 1 predicted that a positive change in emotional demands would be related to a positive change in emotional exhaustion. As indicated in Table 2 the results demonstrate that Δ emotional demands is positively and significantly associated with Δ emotional exhaustion ($\beta = .23$, $p < 0.01$).This finding supports Hypothesis 1.

We also found support for Hypothesis 2 which predicted that Δ emotional exhaustion would positively relate to an increase in depression ($\beta = 0.25$, $p < 0.01$). Model 5 shows a strong relationship between Δ emotional exhaustion and Δ depression even after we controlled for Δ emotional demands and PSC T1 at the upper level.

In relation to Hypothesis 3, we predicted that high PSC T1 would predict a decrease in emotional demands. As shown in Table 3 (model 10), PSC was negatively and significantly associated with Δ emotional demands (β = -0.20, $p < 0.05$). This is support for Hypothesis 3.

In Hypothesis 4 we predicted that high PSC T1 would predict a decrease in emotional exhaustion. Consistent with our prediction, we found that PSC T1 is negatively and significant associated with Δ emotional exhaustion (β = -0.25, $p < 0.01$) (Model 8). Thus, Hypothesis 4 is supported.

Hypothesis 5 indicated that PSC T1 is would predict decrease in depression. However, we were unable find support for this hypothesis. The analysis revealed that there was no cross-level effect of PSC T1 on depression T2 (β = -0.09, *n.s*). Thus Hypothesis 5 is rejected.

Next, in relation to Hypothesis 6, we expected Δ emotional demands would mediate the relationship between PSC T1 and Δ emotional exhaustion. We used the regression value from model 10 as the value for the direct effect between PSC to Δ emotional demands (γ = -.20, SE = .08), and the parameter estimate from model 9 estimating the relationship between Δ emotional demands with Δ emotional exhaustion (β = .21, SE = .09). Using a Monte Carlo test, results reveal that PSC has effects on decreasing emotional exhaustion through changing emotional demands T2 (95% confident interval (CI), lower level (LL) = -.1021, upper level (UL) = -.0026. Thus, Hypothesis 6 is supported.

In Hypothesis 7, we predicted that Δ emotional exhaustion will mediate the relationship between Δ emotional demands and Δ depression. Result suggests that Δ emotional exhaustion has an indirect effects on the relationship between Δ emotional demands and Δ depression (95% CL, LL = 0.00962, UL = 0.1249). Thus Hypothesis 7 is supported.

Table 1. Means, standard deviations, reliability and Pearson bivariate correlations

	M	*SD*	α	1	2	3	4	5	6
1. Psychosocial safety climate T1	3.50	4.52	.89	1					
2. Emotional demands T1	1.39	2.59	.76	-.02	1				
3. Emotional demands T2	1.45	2.52	.83	-.04	.34**	1			
4. Emotional exhaustion T1	3.15	5.44	.87	-.24*	.28**	.17*	1		
5. Emotional exhaustion T2	3.11	4.89	.91	-.21	.25**	.37**	.37**.	1	
6. Depression T1	1.82	4.11	.86	-.28**	.23*	.21*	.39**	.24*	1
7. Depression T2	1.74	4.04	.87	-.01	.14	.35**	.14	.24**	.38**

Note. * $p < .05$, ** $p < .01$, *** $p < 0.001$. $N = 117$

Table 2**.** HLM analysis of lower level outcomes

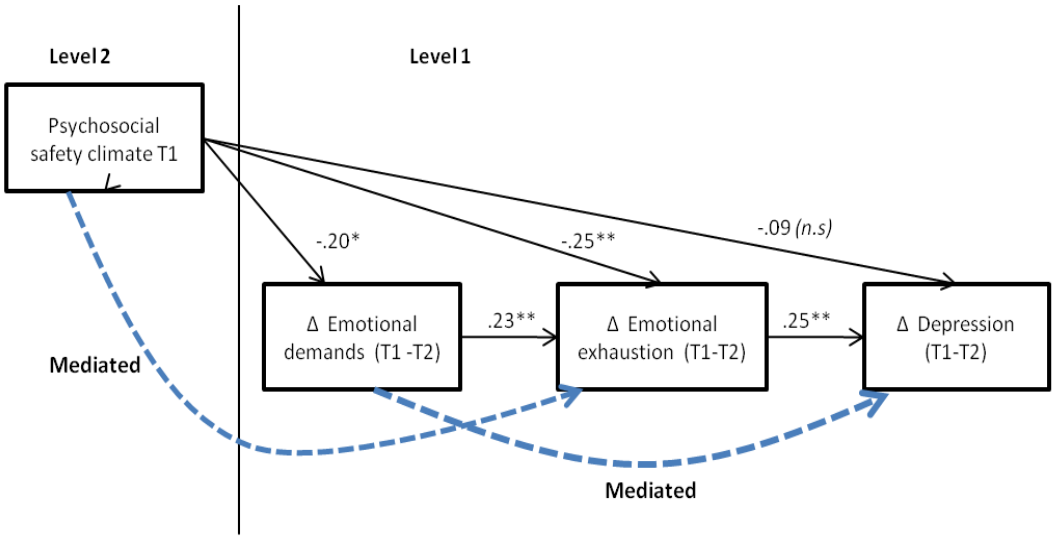
	Dependent variables		
	Δ Depression	Δ Emotional exhaustion	Δ Depression
Model	**1**	**2**	**3**
Lower-level effects			
Δ Exhaustion	.25 (0.08)**		
Δ Emotional demands	.23 (0.13)	.23 (0.09)**	.29 (0.08)**

Note: N = 117 individuals, 27 organizations, *** $p < 0.001$, ** $p < 0.01$, *, $p < 0.05$,
The first value is the parameter estimate, and value in parenthesis is the standard error.

Table 3. HLM analyses of cross-level effect of PSC on lower level outcomes

	Dependent variables						
	Δ Depression	Δ Depression	Δ Depression	Δ Depression	Δ Exhaustion	Δ Exhaustion	Δ Emotional demands
Model	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Lower-level effects							
Δ Exhaustion		.26 (.08)**	.30 (.09)**				
Δ Emotional demands		.23 (.13)		.29 (.13)*		.21 (.09)*	
Cross-level effects							
PSC T1	-.09 (.14)	.02 (.12)	-.01 (.13)	-.03 (.11)	-.25 (.09)**	-.21 (.13)	-.20 (.08)*

Note: N = 117 individuals, 27 organizations, *** $p < 0.001$, ** $p < 0.01$, *, $p < 0.05$. The first value is the parameter estimate, and value in parenthesis is the standard error.



Notes. H = Hypothesis, T1 = time 1, T2 = time 2 , ** $p < .01$, * $p < .05$.

Figure 2. The final model

Discussion

The major objective of this current study was to test the longitudinal cross-level relationship of the newly identified climate construct, PSC, on employees' psychological health. We utilized a multi-level analysis to examine the effect of PSC on change in emotional demands, emotional exhaustion and depression over time. In addition, we sought evidence for a meditational relationship between PSC and emotional exhaustion, particularly through emotional demands. We also tested the meditational process between emotional demands, emotional exhaustion and depression at the individual level.

Consistent with PSC theory, we found that high levels of organisational PSC predicted a decrease in emotional demands over time. This validates previous research on PSC (Dollard & Bakker, 2010) which found that PSC is able to predict job demands over time. In our study, we see that PSC can predict change in emotional demands within a period of three months, in particular as PSC increases, the emotional demands decrease. This confirms previous cross-sectional findings on PSC (Idris, Dollard, Coward, & Dormann, in press; Idris, Dollard & Winefield, 2011) and longitudinal research assessing change in emotional demands over 12 months (Dollard & Bakker, 2010).

Importantly, we also found support for the contention that emotional demand mediates the relationship between PSC and exhaustion. We see that higher PSC in the workplace was able to decrease exhaustion over time, particularly through decrease of emotional demands. Our meditational findings support the result of previous population based studies (Idris, Dollard & Winefield, 2011; Law et al., 2011).

However, our prediction that PSC is related to depression was not supported .We expect these relationship could not appear as depression symptom is more distal from PSC. In other word, stressor at work has temporary ordered sequences of differences stress reaction and take longer time to develop (Dormann & Zapf, 2002). As explain in Mohr's (1991) study, depression is resulted from several processes, and connected with various psychological symptoms. It started from stressor →irritation→anxiety →depression. Along this process, there are also connected with several psychological symptoms (e.g. psychosomatic complaints, reduced self-esteem) that may take depression longer to develop. Since we only used 3 months gap between T1 and T2, we expect these relationship could be present if the longer period of study was used. For example, Dormann and Zapf (2002) required two years in their study to demonstrate the effect of stressor on depression.

Consistent with the JD-R theory (Bakker & Demerouti, 2007), we found that emotional demands lead to employees' emotional exhaustion. This situation is expected since other studies found that emotional job demands do affect employees' emotional exhaustion more consistently than other symptoms (de Jonge & Dormann, 2006; Peng, Wong & Che, 2010). This finding agrees with the argument in some recent job stress theories such as: firstly, the Job Demands and Resources (JD-R) model (Bakker & Demerouti, 2007); and secondly, the match hypotheses (de Jonge & Dormann, 2006), of the Demand Induced Strain Compensation model, which proposes that demands are likely to have the greatest impact in the domain in which they reside (i.e. emotional exhaustion).

The current study, as expected, found that emotional exhaustion is associated with depression. This was consistent with previous findings (Hakanen, Schaufeli & Aloha, 2008) and supports the argument that emotional exhaustion and depression are distinguishable constructs (Leiter & Durup, 1994). In addition, we found that emotional exhaustion mediated the relationship between emotional demands and depression. Again, we found support for the notion that those employees who had prolonged burnout symptoms may become be trapped in depression.

Emotional exhaustion, nonetheless, mediated the relationship between emotional demands and depression. This result shows that emotional demands also contributed to employees' depression, particularly through emotional exhaustion. This finding supported previous findings on the mediation process of emotional exhaustion (Hakanen, Schaufeli & Aloha, 2008).

Theoretical and practical implication

Theoretically, we found a support for the notion that PSC could represent a universal organizational climate construct. This may reflect the importance of organizational resources such as PSC in the workplace to protect employees from psychosocial hazards. So far, scholars has formed consensus regarding the importance of resources to protect employees from harm (c.f. Conservation of Resources Theory; Hobfoll, 2001). In other words, while emotional demands may affect employees' emotional exhaustion, PSC is an important resource that may help employees to deal with job stress (Hobfoll & Freedy, 1993). We see that the over period of three months, PSC is able to predict change in emotional demands and exhaustion. Therefore PSC has a relative short latency in relation to its predictive effects. PSC is proposed as a lead indicator of work conditions (Law et al., 2011) and changes could be associated with fairly quick effects on work conditions. Results also highlight the important theoretical contribution of upper level organisational factor such as PSC, into work stress models.

Our study introduces a new concept of job stress prevention in the workplaces. Helping managers to understand the importance of psychological health and PSC will help them to provide better support to employees', and create better working conditions. Previous studies on PSC for example show how it reduces the effects of some negative workplace problems such as reduce bullying and harassment (Bond, Tuckey & Dollard, 2010, Law et al., 2011). With a regard to other workplace stressors, PSC could reduce their effect on employee well being and chronic psychological problems. It may benefit both organizations and employees, as it can reduce some problems related to job stress such as low productivity, low absenteeism, and decrease potential of counterproductive behaviour and also increase employees' psychological health and motivation.

We maintain that a commitment to preventing burnout in the workplace should be a priority by creating the right climate in the workplace. Organizational practice through commitment and support is likely to create a more healthy and safety working environment

(DeJoy, Della, Vandernberg & Wilson, 2010). Therefore a higher level of PSC will minimize emotional exhaustion. To date, much effort has been spent trying to demolish burnout in the workplace. In some cases, employees were to blame as a result of being unable to overcome some work stress issues (Dewe & O'Driscoll, 2002). However, we believe that focusing on organizational change will provide the best solution because it is the management in general who create the job conditions (Johns, 2010; Morgeson, Dierdorff & Hmurovic, 2010), and control what is done to employees (Dollard & Karasek, 2010). Thus, we view building PSC as one solution - an important organizational initiative to combat workplace burden.

Strengths and limitations of the study

The current study used a multilevel longitudinal design, considered to be important recent methodological improvement for the job stress field (Bliese, Jex, & Halverson, 2002; Probst, 2010). Using this strategy means that all relationship involving PSC are not due to common method problems, time of testing effects, or personal bias. Hierarchical linear modelling assists in overcoming these problems that plague much of the work stress literature. For the relationships uncovered at the lower level, some measurement issues could underlie significant relationships between these variables. For each of the variables we were able to control for baseline measures, and therefore we were able to draw conclusions about change in demands, being associated with simultaneous change in exhaustion and depression, while accounting for random upper level unit effects; this is an improvement on research that simply examines cross-sectional relations.

Some limitations in this study need to be addressed here. The current study referred only to private sector employees in Malaysia. We are therefore not able to generalize the results to the whole gamut of organizations such as those in the public sector. The results could also vary if we used other job demands and other outcomes variables.

In addition, the current study only utilized self-report questionnaires. As the focus of this type of study is on employees' psychological health, the best way to assess the relationship between study variables is to use objective measurements, rather that self report data. In some cases, depression measurement could be useful if tested by clinical measurement or physiological data, rather than survey questionnaires. However, given the current study is conducted in private sector businesses, it was difficult to gather objective measurements. Finally, it is not common in Malaysian organizations to provide support to

researchers who want to survey them (Ali, Abdullah, & Subramaniam, 2009). Nonetheless we envisage that our study does at least provide useful data about the workplace situation in Malaysia and the role of PSC as it relates to work conditions and psychological health outcomes.

Finally our study was only a two-wave panel study, and using three wave data collection or longer period of exposure could provide stronger evidence of PSC as the stimulus of a mediated path towards burnout and depression. For example antecedents are measured at Time 1, mediators at Time 2 and outcomes are measured at Study 3 (Huang, Hammer, Neal, & Perrin, 2004). Furthermore, using different types of mediation would also provide insights into how different types of job demands react differently with PSC and the outcomes variables.

Conclusion

In conclusion we found support empirically for the notion that PSC triggers a multi- level process that affects individual level job demands and psychological health (Dollard & Bakker, 2010). In addition, we strongly supported the notion that PSC reduces emotional exhaustion, particularly through its negative relationship with emotional demands. Our finding suggests that PSC is able to predict change in emotional demands and emotional exhaustion over a period of three months. Moreover, we also discovered that emotional exhaustion mediated the relationship between emotional demands and depression. Due to the strong effect of PSC on employee psychological health, managers and organizations should take the necessary efforts to building and enhancing PSC in their workplaces.

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Chapter Ten

Conclusion, limitations, future research and implications

10.0 Introduction

Reports from around the world illustrate how working conditions are becoming worse for workers (Dollard et al., 2007). This situation is not only affecting Western economies' workforces, but other regions as well. Psychosocial risk factors at work are regarded as common problems in developing countries. Recent research evidently shows that the working environment in newly industrialized countries and developing economies is more risky in contrast to the situation in well-developed countries (Kortum, Leka, & Cox, 2011). Along with the lack of a research tradition (Burke, 2010), and without awareness and political will to combat hazardous job stress (Kortum, Leka, & Cox, 2010), the situation of working conditions in most developing countries appears grim. This is in contrast to the most developed countries. In the European nations, for example, the agenda to create better workplace practices and a priority for employees' psychological health has received greater attention from the policy makers (Kortum, Leka, & Cox, 2010). With the impact of globalization, employees are expected to produce more profits for organisations and the working conditions are becoming more hazardous to employees. In Asia, Tsui (2008) shows an increasing number of employees suffer psychological problems as a result of poor working conditions. Thus, these observations us to make an intensive study that associates working conditions, psychological health and employees' performance in the current thesis.

In the current thesis, we integrated mixed methods, using qualitative (individual interviews and focus group) and quantitative approaches (population survey and organisational survey) to obtain a clear picture of psychosocial risk factors at work in Malaysia. We initiated our research with individual interviews, followed by a focus group to obtain a concise idea about working conditions and its relationship to employees' psychological health. In the second stage of the study, data were obtained from the two time data collection population-based, household survey in the State of Selangor, Malaysia. The final stage of the study was conducted using a longitudinal approach among 427

employees from 56 organisations (T1) and 275 employees (42 organisations) at T2 in Kuala Lumpur, Malaysia.

10.1 Summary of main findings

This research highlights important findings that contribute to the understanding of the nature of job stress and the issues related to workplace conditions in Malaysia. As most of the findings have been discussed in each individual paper, in this section we only discuss the main findings briefly.

In Chapter 2 our analysis revealed that Malaysian and Western employees had similar conceptions of job stressors, such as workload and deadlines; however, job control was not emphasised much by Malaysian employees in contrast to what was found in a previous Western study (Kinman & Jones, 2005). Low job control may not be relevant as part of job stress in collective and Asian countries (Nauta, Liu, & Li, 2010). This finding could reflect cultural perspectives because employees outside of the West may have their own specific perception on what is regarded as a workplace stressor (Burke & El-Kot, 2009; Glazer & Gyurak, 2008). Interestingly, external factors (e.g., globalization) were identified by workshop attendees as another factor that led to job stress supporting the notion of neo-capitalism and the changing nature of work as another threat to Malaysian employees' well-being. Similarly, although Malaysian and Western counterparts have agreed that individual strategies are more important in reducing job stress (see Idris, Dollard & Winefield, 2010), Malaysian employees seem to use different strategies: as they indicated 'talk to manager' is more important, while in Kinman and Jones' (2005) study, these authors reported that employees tend to use a 'time management' method. Psychological outcomes such as anger looked likely as a manifestation of job stress in our interviews; however, anger was reported in Kinman & Jones' (2005) study. These findings illustrate how culture influences employees' interpretations and reactions to workplace stressors, and these findings reveal that only the right interventions that reflect the cultural context may prevent and/or buffer the impact of job stress. For example, while in the West, employees are expected to have good time management as part of stress management strategies, whereas Malaysian employees revealed that talking to their manager is a stress management solution. This could reflect the power distance and collective culture of Malaysia.

In addition to individual interviews, in Chapter 3, by using a focus group approach, we specifically intended to examine the concept of 'job demands' and 'job resources' from the employees' perspective. As discussed in Chapter 1, most of the job stress theories have been developed in a Western context. In recent years, another job stress theory was introduced, namely the JD-R model (Bakker & Demerouti, 2007) with the notion that working conditions not only particularly influence employees' negative psychological problems as often examined in psychology (Schaufeli, 2004), but also affect employees' motivation and engagement. So far, the JD-R model has been investigated in several developed countries such as Netherlands, Sweden, Australia and Finland. To our knowledge there are no studies that have used the JD-R model in Malaysia. In our qualitative study, we found that several job demands and job resources were similar to those reported in the West. For example Malaysian job demands include deadlines and workload. However organisational politics were found to be one aspect that was represented as job demands in Malaysia, a variable that has not been mentioned in previous JD-R studies (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Bakker, Demerouti & Euwema, 2005, Hakanen, Bakker, & Schaufeli, 2006). Social support however was perceived as the most common job resource among Malaysian participants – reinforcing this cultural specific aspect that relates to a collective culture.

In the Chapter 4, we also examined the relationship between globalization and job demands and resources, and how these relationships influence job satisfaction and employees' burnout. In a previous chapter (see Chapter 2) our analysis revealed that external factors such as globalization were also regarded as a job stressor. Built upon Sauter and Murphy's (2003) argument about the influence of external organizational factors on job characteristics and the JD-R model (Bakker & Demerouti, 2007), we formulated globalization as a precursor for working conditions. We found that globalization positively related to job demands and negatively related to job resources, underlining the importance of external or upstream factors and their effects on work conditions. So far, discussion about globalization and the impact of the changing nature of work has been conceptualized in job stress literature (Landsbergis, 2003; Sparks, Faragher & Cooper, 2001), but studies in this area are still limited.

In line with our concern about organizational factors or upstream factors that could affect work conditions, we explored the role of PSC in work stress theory. At the outset it was important to see whether PSC is a construct that could be distinguished from other

similar climate constructs. In our multi-level analysis, in Chapter 5, we contrasted PSC with three other organisational climate constructs that includes safety climate, team climate and organisational support. Our concern was to explore and distinguish the concept of PSC from other climates constructs, and explore its relationship to emotional exhaustion, engagement and depression. We found that while PSC is significantly related to all of these outcomes (Malaysian sample), not all other climates were significantly related to such outcomes. This provided support to the notion that PSC is related to employees' emotional reactions. Moreover, PSC was related to job demands (workload, psychological demands and emotional demands) and job resources (rewards), while there was no relationship between the other climate measures and job demands and job resources. Again, our study empirically supported Dollard and Bakker's (2010) argument, and was also in line with Hall, Dollard and Coward's (2010) findings that PSC is a specific climate that precedes job characteristics. We see that PSC between levels influences job characteristics across levels, providing strong evidence that PSC is flowing from the higher ranking of the organisation and affecting lower level job entities. Our findings were consistent with the assumption that climate may reside at the upper level of organisations (Zohar & Luria, 2006), and was also consistent with the argument that the organisation creates the working environment, specifically by the climate in the organisation (Morgeson, Dierdorff, & Hmurovic, 2010).

In Chapter 6, we integrated PSC into the JD-R model (Bakker & Demerouti, 2006) and examined how PSC was able to boost employees' productivity. We found that job demands mediated the relationship between PSC and burnout, while job resources carried the indirect effect of the PSC to job engagement relationship. Both burnout and engagement were found to be associated with employee performance. This study, again empirically shows that while PSC exists in organisations it would boost employees' performance and reduce negative psychological health (i.e. burnout) to support the notion of health erosion and a motivational pathway. We found that PSC could be a specific target for improving employees' performance through conducive working conditions.

A central theme in our thesis was to investigate the notion of PSC as a precursor for working conditions and to investigate how these relationships influence employees' emotions in the workplace. As depicted in Chapter 7, our research revealed support for PSC being negatively related to job demands and being negatively related to job resources. We discovered that support and priority from management on psychosocial well-being, through PSC, led to a better workplace environment (low job demands; high job resources), and

influenced both positive and negative aspects of employees' emotions. We found that while job demands led to anger and depression, job resources influenced job engagement. Our findings supported the notion of PSC as an important climate in the workplace (Dollard & Bakker, 2010; Hall, Dollard, & Coward; 2011), as it has implications for reducing negative emotions and enhancing employees' motivation.

As discussed in Chapter 8, we found that PSC as a specific facet climate construct also boosts job performance particularly through job resources (i.e. learning opportunities) and job engagement. In this chapter, we only utilized learning opportunities as we see that this variable has its own uniqueness, particularly in job stress theory. We found that PSC at the upper level influences the mediator and outcomes variables at individual levels. Thus, this implied that PSC is a relevant climate for working conditions that also creates more possibilities for employees' learning opportunities and new skill development, and indirectly boosts employees' performances particularly through job engagement.

Finally, using longitudinal data (N = 117), we attempted to see the effect of upper level PSC T1 on changes of emotional demands, emotional exhaustion and depression at T2. We found that PSC at the upper level can predict the changing of emotional demands and emotional exhaustion over time, but not depression. The result could be explained due to the nature of PSC as a specific climate that relates to work-related outcomes. Finding no direct relationship between PSC and depression could be due to the distal nature of the effect (Dormann & Zapf, 2002). The process of developing depression may take a long period of time even up to two years (Dormann & Zapf, 2002) and several psychological processes. We believe that using long time lags of study could offer different results, particularly regarding the consequences of the impact of PSC on depression. At the individual level, we found that emotional exhaustion mediated the relationship between emotional demands and depression finding support for the view that exhaustion may influence employees' depression.

In summary, we conclude the need for multilevel theory (see Figure 1) in work stress research and consider the findings in three important contextual ways.

10.1.1 The Malaysian context

We discovered that workplaces in Malaysia, a country that was previously a British colony, were not too different from their Western counterparts. We found that Malaysian

employees experienced similar job stressors (i.e. deadlines, emotional demands, workload) to what was reported in some Western studies. However, there are a few differences for some concepts, such as 'work fast' and 'work hard'. In most research, 'work hard' and 'work fast' were regarded as negative aspects of job demands. But, we found that 'work fast' and 'work hard' represented positive job demands in our study. We also found that job control appeared not very important to Malaysian employees (at least it was beyond their conscious awareness in the qualitative studies) but when job control was measured in empirical studies is showed effects as we have seen previously in Western studies. Thus, future research is needed to see whether the differences between the concepts are due to differences in terminology, or due to a difference in perspectives, i.e., in the way that Malaysians are looking at their job characteristics.

10.1.2 The impact of globalization

Although most discussion of globalization's impact was dominated by Western literature, we discovered that Malaysian employees have been aware of the impact of globalization as part of their job stress. This emerged in the qualitative study without specifically asking them about external factors associated with job stress. An additional survey (see Chapter 4) revealed that globalization created job conditions (i.e., high emotional demands, low social support), that are less conducive for employees health (i.e., burnout) and motivation (i.e., low job satisfaction). Job stress theories so far have put too much emphasis on job characteristics, and our research suggests that there is a need to include globalization as a job stressor.

10.1.3 The relevance of PSC

We discovered that PSC is an important precursor to positive working conditions. Our findings suggest the universality of PSC as an important climate in workplaces that leads to employees' health motivation and protects them from psychological hazards. In comparison to Australia, we found that the PSC was significantly lower in Malaysian workplaces. Nevertheless PSC behaved theoretically as expected in Western contexts. It appears that PSC represents a higher-level contextual factor, and has it impacts on task level and individual level processes. Our findings are also consistent with the argument that the multilevel approach is more relevant in assessing the job stress process, as the individual approach seems unable to explain higher level phenomenon (Bliese & Jex, 2002; Bliese,

Jex & Halverson, 2002). So far, most research on job stress still focuses on the individual; the preventative implications from this research is limited when it does not consider upper level factors that also have an effect on employee job stress (Bliese, Jex & Halverson, 2002). Our research provides evidence for the role of PSC in the work stress process. We have reason to believe that PSC is an upperlevel construct that flows from management initiative, and effects job demands and job resources.

10.2 Limitations and future research

10.2.1 Cross-sectional issues

In several studies we relied on cross-sectional data (Chapters 4, 6, and 7). At first, our study actually used longitudinal design. However, complications developed as it was discovered that participants at T2 were not always the same participants at T1 (i.e. spouse filled out the questionnaires on behalf of T1 participants, or son answered the questionnaires on behalf of their father/mother). We detected this problem when participants at T1 indicated that he/she were a specific gender, but at T2 using a similar code they indicated a different gender type from T1. Some people indicated that they had attended university at T1, while at T2 we found some people clarified that they only had attended high school. Therefore we could not analyze the collected data using a longitudinal analysis. Instead of using longitudinal data, we decided it was better for us to only analyze data separately by using cross-sectional analysis. As we did not ask participants' names, just an identifier so it was difficult to track the previous participants.

Complications with cross-sectional designs include common method variance, particularly when assessing relationships between variables that are at the individual level. However, in Chapters 5, 8 and 9, we utilized a multi-level analysis that helps to reduce any problems associated with common method variance in the previous studies. In addition, in Chapter 9 we utilized longitudinal data that may reduce some limitations of cross-sectional data.

10.2.2 The issues of PSC measurement

Organisational PSC was measured by using individual perceptions which could affect our results. In Chapters 6 and 7, we used PSC that was measured at a lower level (individual), although PSC was referenced to the organisational level. A limitation of the method was

that the issue of whether PSC was due to organisational level or individual perception was unexplained. An advantage of the approach was that the community or population based study allowed us to investigate PSC across a wide range of industries that may not have been accessible through organizational contact. However, we improved our study by using multi-level data, and used aggregated data from a range of organisations to overcome the issue of level of analysis. This approach is a recently developed methodology and is suggested as appropriate for the study of organizational climate (Zohar & Luria, 2005). We believe that our approach, using a population based, and between-organisational based study can be interpreted as complementary to each other enriching our understanding of the nature of PSC and its relationship to job characteristics, employees' psychological health and motivation.

10.2.3 Western concept of measurements

As with most studies from developing countries, the current study relies on a questionnaire and research concept from the West. As found in some studies from outside Western perspectives (Burke & El-Kot, 2009), sometimes not all variables behave similarly to what were found in the Western literature. However, we took several steps to ensure that the questionnaires and translations of the measurement concept in the current study were valid and reliable. First, we used back translation to ensure the accurate meaning of the questionnaires. We also conducted a pilot test to check that the items could be understood by participants.

For some questionnaires, especially for JCQ, we used a Malay-validated questionnaire (Edimasyah et al., 2008). In addition, we utilized both qualitative and quantitative methods, which offer an implicit picture of psychosocial risk factors in the Malaysian context.

However, there are also limitations that need to be addressed here. Some items (i.e. 'work hard' and 'work fast'), appeared not to behave according to the Western findings. In most Western research, 'work hard' and 'work fast' are often regarded as negative aspects of job demands. However, we found these items represent positive job demands for Malaysian employees. They were not correlated negatively with burnout, but were positively associated with job engagement. This observation needs further research attention.

10.3 Future research directions

Our study on the integration of PSC into the JD-R model is the first study outside the Western context to do this. In addition, there was no known study using the JD-R model to examine the job stress phenomenon in Malaysia. Thus, future research should consider examining the relevance of PSC with other job demands and job resources variables. It also possible to investigate the direction of PSC in relation to challenge and hindrance stressors. Recently, LePine, Podsakoff and LePine (2005) distinguished challenge and hindrance stressors. As in the current study, PSC only predicted the most common job demands that are regarded as negative – we could find different findings if other types of stressors were included in the model of analysis.

A comparison of PSC with other climates may also be useful for obtaining insight into the relationship between other climates, job characteristics and health. Other climate constructs could behave differently with examined variables. For example, so far, in relation to employees' health, the safety climate is often used to measure the relationship with employees' safety behaviour and injuries (Zohar & Luria, 2008), while PSC is related to psychological health. Future research using both PSC and the safety climate in predicting psychological and physical health could help our understanding on the separate concepts of both climates. We expect that while PSC is related to psychological health, the safety climate is not. In a similar vein, we expect that the safety climate strongly predicts physical health, while PSC does not.

In addition, in the current study, PSC is expected to emerge as part of management initiatives through team leaders. Although this argument was built from several influential organisational climate theorists (Schneider, 2000; Zohar & Luria, 2005), however in some respects, barriers at the task level could limit team leader capacity to initiate such a climate. For example middle managers may not always have enough time and control to carry out their own responsibilities thus limiting their capacity to provide useful resources in

supervision (Butterfield, Edwards, &Woodall, 2004), and in most cases they need to be trained to promote management inititiaves (McGurk, 2009). Future study could consider the extent to which middle level of management (i.e. team leader) has the ability to build and promote PSC. Beyond organisational factors, consideration could be given to external factors (e.g. social, economic, technological and demographic forces) that could influence management capacity to build PSC (see Dollard & Karasek, 2010). The current research investigated globalisation demands and PSC in separate models. Future research may fruitfully examine the link between them.

As most parts of the thesis relied on the JD-R model, we need to test the PSC with other job stress models. For example, does PSC behave similarly with different types of demands and resources as proposed in the Demand Induced Strain Compensation (DISC) model (de Jonge & Dormann, 2006). This is important as the JD-R model does not distinguish between different types of demands, for example, cognitive demands, physical demands or emotional demands, as in the DISC model. PSC may reflect in different processes with different types of job stress models.

While most of discussions in the thesis focus on PSC as a antecedent to working conditions, there is a possibility that other factors influence PSC, so future should investigate what are the precursors to PSC? Since PSC resides as a higher level of organizational construct, there may be other higher level elements that influence organizational policies (i.e., government policy), that in turn affect PSC; any future research that explain the possibilities of a precursor to PSC, such as leadership for PSC, will be meaningful.

Another issue that is important for future research is using an objective measurement of PSC (i.e. data obtained from managers/supervisor) and how it leads to different types of job demands. Objective performance measures (supervisor rating or actual performance measure) are also useful as an indicator for performance, rather than using a self-rated questionnaire. We expect that by using this approach, we can advance the research methodology and also be able to reduce the problem of common method variance.

Finally, we found that although AMOS and HLM are software that are often used among scholars, they have limitations. AMOS is only able to investigate individual data, and is not for complex multilevel data. Although HLM is able to deal with both levels of analysis and is often used to assess multilevel data (Mathieu & Taylor, 2007; Mathieu, Maynard, Taylor, Gilson. & Ruddy; 2007), there are some critics of HLM, particularly

when dealing with the mediation process, as it was found that it does not produce accurate values for estimation (Preacher, Zyphur, & Zhang, 2010). HLM is unable to measure the influence of group variance on individual levels due to confounded estimates of variances between groups (Zhang, Zyphur, & Preacher, 2009). In their recent study, Preacher, Zyphur and Zhang, (2010) have suggested using multilevel structural equation modelling (MSEM) to overcome the problem of HLM methods in examining multilevel data, particularly in accessing the mediation process. Thus, we suggest that future research could utilize different software, such as Mplus (Muthén & Muthén,1998–2007).

10.4 Implications

The findings of this study have implications not only for Malaysian organisations, but also can be applied to Western organisations. It was found that organisational stressors adversely affect employees' well-being, particularly through job demands. Employees who are trapped with high job demands are potentially affected by negative emotions such as burnout, anger or depression. However, with enough job resources, employees' motivation can be enhanced. However, given priority and participation by organisations (high PSC), it would be able to create better working conditions, and improve employees' productivity. Since each climate has its own specific target, PSC is considered a climate which enhances employees' well-being and motivation. To ensure that the organisation becomes more effective, it is necessary for managers and organisations to build PSC in the workplace, and part of this includes building a conducive work environment for employees.

The importance of PSC seems a crucial factor in developing countries. The low levels of observed PSC could explain a more wide ranging scenario in developing countries: effort and awareness to combat psychosocial risks are still poor (Kortum, Leka & Cox, 2010). Thus, to improve the situation, we see that 'political will' is needed, that requires attention from various elements such as policy makers, organization, labor union, and employees. With involvement from each sides, it may be possible to theoretically transfer PSC into the real work setting, to not only create a better workplace environment, healthy employees and profitable organizations, but finally to transform the country to more advanced stage as an emerging economy.

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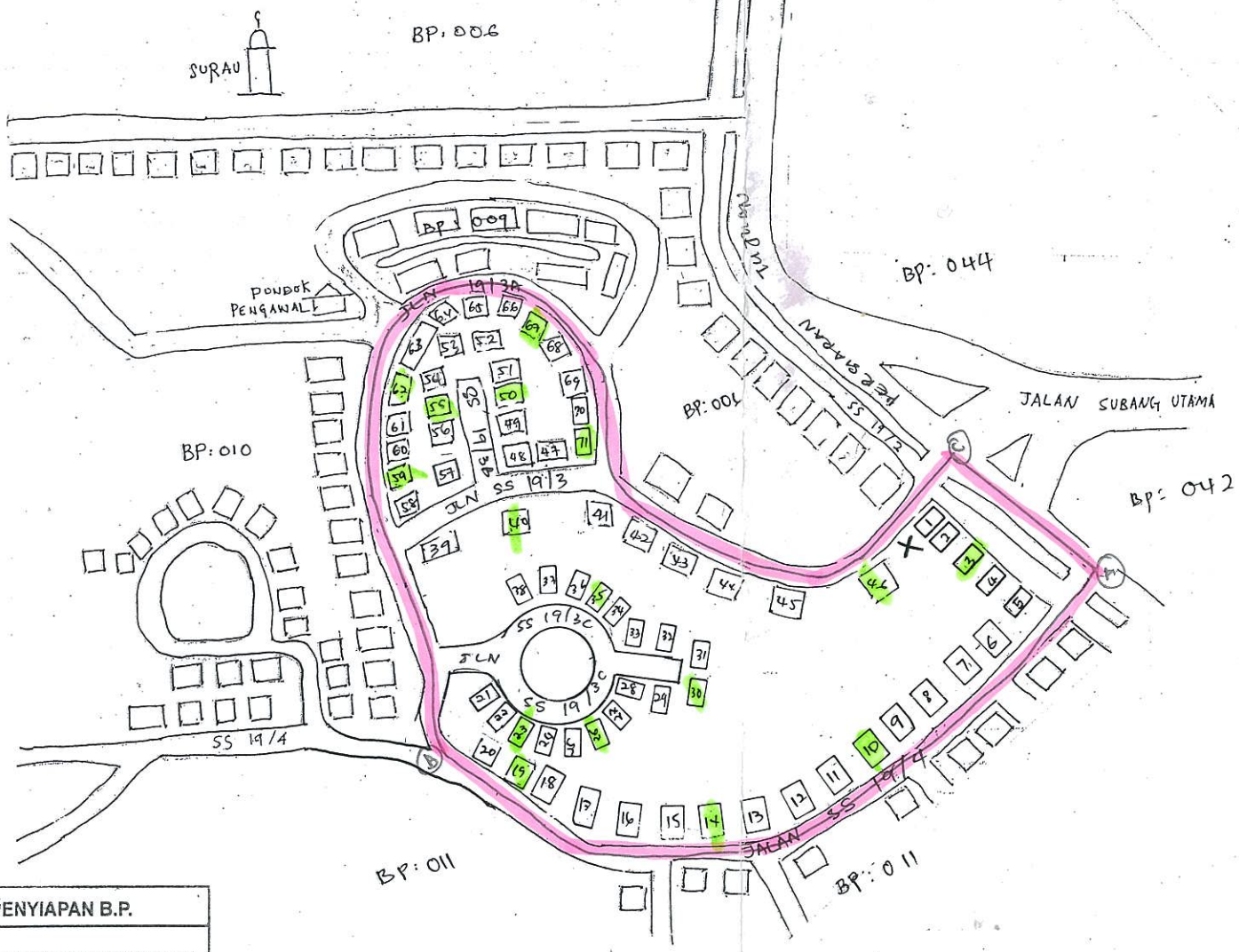
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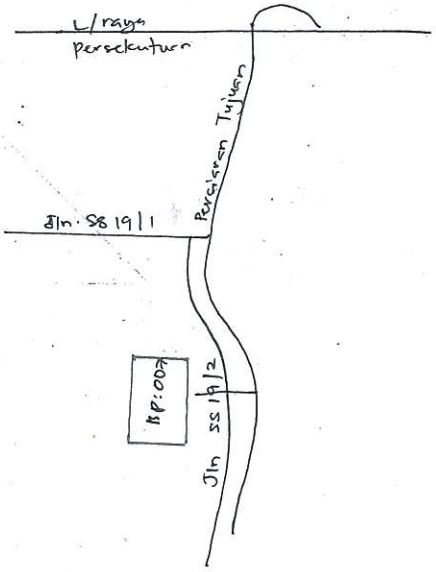
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JABATAN PERANGKAAN MALAYSIA

BUTIR-BUTIR PENGENALAN B.P.

	Kod
Negeri ..... Selangor	1 0
Daerah Pentadbiran ..... Petaling	0 5
Daerah Banci	1 9
No.Lingkungan	
No.B.P.	0 0 X





BUTIR-BUTIR PENYIAPAN B.P.

Pecahan Blok Oleh .....

Tarikh .....

Surehan Peta B.P. Oleh ..... MERIAM YAACOB

Tarikh 26/11/08

Punca Peta Kasar ..... Banner 2000

PETUNJUK

	Sempadan Daerah/Jajahan
	Sempadan Mukim/Daerah
	Jalan Raya
	Jalan Tanah (Secondary Road)
	Jalan Kaki Footpath)
	Sempadan B.P.
X	Tempat Permulaan UB

SURVEY 1 and SURVEY 2

1. FEEL AT WORK: ENGAGEMENT AND BURNOUT

The following 14 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

DESCRIPTION	NAVER	ALMOST NAVER / A FEW TIMES A YEAR OR LESS	RARELY / ONCE A MONTH OR LESS	SOMETIMES / A FEW TIMES A MONTH	OFTEN / ONCE A WEEK	VERY OFTEN/ A FEW TIMES A WEEK	ALWAYS / EVERY DAY AT MY WORK, I FEEL BURSTING WITH ENERGY
1. At my work, I feel bursting with energy	⓪	①	②	③	④	⑤	⑥
2. At my job, I feel strong and vigorous.	⓪	①	②	③	④	⑤	⑥
3. I am enthusiastic about my job.	⓪	①	②	③	④	⑤	⑥
4. My job inspires me.	⓪	①	②	③	④	⑤	⑥
5. When I get up in the morning, I feel like going to work.	⓪	①	②	③	④	⑤	⑥
6. I feel happy when I am working intensely.	⓪	①	②	③	④	⑤	⑥
7. I am proud of the work that I do.	⓪	①	②	③	④	⑤	⑥
8. I am immersed in my work.	⓪	①	②	③	④	⑤	⑥
9. I get carried away when I am working.	⓪	①	②	③	④	⑤	⑥

2. BURNOUT

Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

DESCRIPTION	NAVER	ALMOST NAVER / A FEW TIMES A YEAR OR LESS	RARELY / ONCE A MONTH OR LESS	SOMETIMES / A FEW TIMES A MONTH	OFTEN / ONCE A WEEK	VERY OFTEN/ A FEW TIMES A WEEK	ALWAYS / EVERY DAY AT MY WORK, I FEEL BURSTING WITH ENERGY
1. I feel emotionally drained from my work.	⓪	①	②	③	④	⑤	⑥
2. I doubt the significance of my work.	⓪	①	②	③	④	⑤	⑥
3. Working all day is really a strain for me.	⓪	①	②	③	④	⑤	⑥
4. I can effectively solve the problems that arise in my work.	⓪	①	②	③	④	⑤	⑥
5. I feel burned out from my work.	⓪	①	②	③	④	⑤	⑥
6. I feel I'm making an effective contribution to what this organization does.	⓪	①	②	③	④	⑤	⑥
7. I have become less interested in my work since I started this job.	⓪	①	②	③	④	⑤	⑥
8. I have become less enthusiastic about my work.	⓪	①	②	③	④	⑤	⑥
9. In my opinion, I am good at my job.	⓪	①	②	③	④	⑤	⑥
10. I feel exhilarated when I accomplish something at work.	⓪	①	②	③	④	⑤	⑥
11. I feel used up at the end of the workday	⓪	①	②	③	④	⑤	⑥
12. I have accomplished many worthwhile things in this job.	⓪	①	②	③	④	⑤	⑥
13. I just want to do my job and not be bothered	⓪	①	②	③	④	⑤	⑥
14. I feel tired when I get up in the morning and have to face another day on the job.	⓪	①	②	③	④	⑤	⑥
15. I have become more cynical about whether my work contributes anything.	⓪	①	②	③	④	⑤	⑥
16. At my work, I feel confident that I am effective at getting things done.	⓪	①	②	③	④	⑤	⑥

3. **PSYCHOSOCIAL SAFETY CLIMAT**

The questions/statements in this section ask about the Organizational safety Culture and Climate in relation to Psychological Well-being at workplace. Please circle the one number for each question that comes closest to reflecting your opinion about it.

DESCRIPTION	STRONGLY AGREE	AGREE	NEITHER AGREE OR DISAGREE	DISAGREE	STRONGLY DISAGREE
1. In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health.	①	②	③	④	⑤
2. Senior management acts decisively when a concern of an employees' psychological status is raised.	①	②	③	④	⑤
3. Senior management show support for stress prevention through involvement and commitment.	①	②	③	④	⑤
4. Psychological well-being of staff is a priority for this organization.	①	②	③	④	⑤
5. Senior management clearly considers the psychological health or employees to be of great importance.	①	②	③	④	⑤
6. Senior management considers psychological health to be as important as productivity.	①	②	③	④	⑤
7. There is good communication here about psychological safety issues which affect me.	①	②	③	④	⑤
8. Information about workplace psychological well-being is always brought to my attention by my manager/supervisor.	①	②	③	④	⑤

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	DESCRIPTION	STRONGLY AGREE	AGREE	NEITHER AGREE OR DISAGREE	DISAGREE	STRONGLY DISAGREE
9.	My contributions to resolving occupational health and safety concerns in the organization are listened to.	①	②	③	④	⑤
10.	Participation and consultation in psychological health and safety occurs with employees', unions and health and safety representatives in my workplace.	①	②	③	④	⑤
11.	Employees are encouraged to become involved in psychological safety and health matters.	①	②	③	④	⑤
12.	In my organization, the prevention of stress involves all levels of the organization.	①	②	③	④	⑤

4. JOB SATISFACTION

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	DESCRIPTION	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE OR DISAGREE	AGREE	STRONGLY AGREE
1.	All in all I am satisfied with my job.	①	②	③	④	⑤
2.	In general, I don't like my job.	①	②	③	④	⑤
3.	In general, I like working here.	①	②	③	④	⑤

5. DEPRESSION

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	DESCRIPTION	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS	NEARLY EVERYDAY
1.	During the last month, how often were you bothered by little interest or pleasure in doing things?	①	②	③	④
2.	During the last month, how often were you bothered by feeling down, depressed, or hopeless?	①	②	③	④
3.	During the last month, how often were you bothered by poor appetite or overeating?	①	②	③	④
4.	During the last month, how often were you bothered by feeling bad about yourself -or that you are a failure or have let yourself or your family down?	①	②	③	④
5.	During the last month, how often were you bothered by trouble falling or staying asleep OR sleeping too much?	①	②	③	④
6.	During the last month, how often were you bothered by feeling tired or having little energy?	①	②	③	④
7.	During the last month, how often were you bothered by trouble concentrating on things, such as reading a newspaper or watching television?	①	②	③	④
8.	During the last month, how often were you bothered by moving or speaking so slowly that other people could have noticed OR - the opposite - being so fidgety or restless that you have been moving around a lot more than usual?	①	②	③	④
9.	During the last month, how often were you bothered by thoughts that you would be better off dead or thoughts of hurting yourself in some way?	①	②	③	④

6. PRODUCTIVITY

1. On a scale from 1 to 10 where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate the usual performance of most workers in a job similar to yours?

1	2	3	4	5	6	7	8	9	10

2. Using the same 0-to-10 scale, how would you rate your usual job performance over the past year or two?

1	2	3	4	5	6	7	8	9	10

3. Using the same 0-to-10 scale, how would you rate your overall job performance on the days you worked during the past 4 weeks (28 days)?

1	2	3	4	5	6	7	8	9	10

4. Using the same 0-to-10 scale, where 0 is no affect and 10 is the most affect, during the last 4 weeks (28 days) how much did your health problems affect your productivity at work?

1	2	3	4	5	6	7	8	9	10

7. ANGER

A number of statements that people use to describe themselves are given below. Read each statement and then circle the appropriate number to indicate how you feel right now. There are no right or wrong answers. Do not spend too much time on any one statement. Mark the answer that best describes your present feelings.

	HOW I FEEL RIGHT NOW	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1.	I am furious	①	②	③	④
2.	I feel irritated	①	②	③	④
3.	I feel angry	①	②	③	④
4.	I feel like yelling at somebody	①	②	③	④
5.	I feel like breaking things	①	②	③	④
6.	I am mad	①	②	③	④
7.	I feel like banging on the table	①	②	③	④

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	HOW I FEEL RIGHT NOW	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
8.	I feel like hitting someone	①	②	③	④
9.	I feel like swearing	①	②	③	④
11.	I feel like kicking somebody	①	②	③	④
13.	I feel like screaming	①	②	③	④
15.	I feel like shouting out loud	①	②	③	④

8. JOB RESOURCES

Please circle the one number for each question that comes closest to reflecting your opinion about it.

A: JCQ -Support Supervisor Social Support

	STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	I HAVE NO SUPERVISOR
1.	My supervisor/manager is concerned about the welfare of those under him/her	①	②	③	④	⑤
2.	My supervisor pays attention to what I am saying	①	②	③	④	⑤
3.	I am exposed to hostility or conflict from my supervisor	①	②	③	④	⑤
4.	My supervisor/manager is helpful in getting the job done.	①	②	③	④	⑤
5.	My supervisor is successful in getting people to work together	①	②	③	④	⑤
6.	I am treated with respect by my supervisor/manager.	①	②	③	④	⑤
7.	People I work with are competent in doing their jobs	①	②	③	④	⑤
8.	People I work with take a personal interest in me	①	②	③	④	⑤
9.	I am exposed to hostility or conflict from the people I work with	①	②	③	④	⑤
10.	People I work with are friendly	①	②	③	④	⑤
11.	The people I work with encourage each other to work together	①	②	③	④	⑤
12.	People I work with are helpful in getting the job done	①	②	③	④	⑤
13.	I am treated with respect by my co-workers	①	②	③	④	⑤

9. JOB DEMANDS – PSYCHOLOGICAL

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1.	My job requires working very fast.	①	②	③	④
2.	My job requires working very hard.	①	②	③	④
3.	I am not asked to do an excessive amount of work.	①	②	③	④
4.	I have enough time to get the job done.	①	②	③	④
5.	Some demands I face at work are in conflict with other demands at work.	①	②	③	④
6.	I have to work through my breaks and lunch/dinner in order to catch up at	①	②	③	④

10. DECISION AUTHORITY

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1.	My job allows me to make a lot of decisions on my own	①	②	③	④
2.	On my job, I have a very little freedom to decide how I do my work	①	②	③	④
3.	I have a lot of say about what happens on my job	①	②	③	④

12. GLOBAL STRESS QUESTIONS

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	DESCRIPTION	VERY UNTRUE	SOMEWHAT UNTRUE	SOMEWHAT TRUE	VERY TRUE
1.	Is your job insecure because of competition from world trade?	①	②	③	④
2.	Do you have to work harder because of competition from world trade?	①	②	③	④
3.	Do you loose power and influence over the way things go at your workplace because of competition from world trade?	①	②	③	④
4.	I have enough time to get the job done.	①	②	③	④
5.	Some demands I face at work are in conflict with other demands at work.	①	②	③	④

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13. EMOTIONAL DEMANDS

Please circle the one number for each question that comes closest to reflecting your opinion about it.

DESCRIPTION	NEVER/ HARDLY EVER	SELDOM	SOMETIMES	OFTEN	ALWAYS
1. Does your work put you in emotionally Disturbing situations?	⓪	①	②	③	④
2. Is your work emotionally demanding?	⓪	①	②	③	④
3. Do you get emotionally involved in your work?	⓪	①	②	③	④
4. Does your work require that you get personally involved?	⓪	①	②	③	④

14. ROLES CONFLICT

DESCRIPTION	NEVER/ HARDLY EVER	SELDOM	SOMETIMES	OFTEN	ALWAYS
1. Do you do things at work, which are accepted by some people but not by others?	⓪	①	②	③	④
2. Are contradictory demands placed on you at work?	⓪	①	②	③	④
3. Do you sometimes have to do things, which ought to have been done in a different way?	⓪	①	②	③	④
4. Do you sometimes have to do things, which seem to be unnecessary?	⓪	①	②	③	④

SECTION L: DEMOGRAPHIC DATA

INSTRUCTIONS: Please answer each question by checking off the one answer that best fits your job situation.

Gender	☐ Male ☐ Female
Age	☐ Below 20 years ☐ 20 to 25 years ☐ 26 to 31 years ☐ 32 to 37 years ☐ 38 to 43 years ☐ 44 to 49 years ☐ 50 to 55 years ☐ 56 to 61 years ☐ 62 years and above
Education	☐ Primary school ☐ Secondary ☐ Diploma/HSC ☐ Technical certificates/diploma's (e.g. Sijil Kemahiran Malaysia, Polytechnic, IKM, Pusat Giat MARA etc.) ☐ Bachelor Degree ☐ Post Graduate (Master/ PhD)
Marital Status	☐ Single ☐ Married ☐ Divorced/Separated ☐ Widowed
If you are married, how many child that you have?	☐ Have no child ☐ Below two ☐ 3 to 5 ☐ 6 and above
District	Please specify _____
Living areas	☐ Urban ☐ Rural
Numbers of household	☐ 3 and below ☐ 4 to 6 ☐ 7 to 9 ☐ 10 and above
Your accommodation status	☐ Rental ☐ Owned ☐ Employer provided ☐ Family owned ☐ Other
Race	☐ Malay ☐ Chinese ☐ Indian ☐ Others
Religion	☐ Muslim ☐ Christian ☐ Buddhist ☐ Hindu ☐ Others

Nationality	☐ Malaysian ☐ Other (Please specify)
Type of Occupation (e.g. transportation, services, information technology, construction etc.)	Please specify _____
Your employer	☐ Government ☐ Semi government / government owned company ☐ Local-owned private company ☐ Foreigner-owned private company ☐ Others
Position in Organization	☐ Non-executive ☐ Executive ☐ Specialist ☐ Managers
Working hours (include overtimes, extra tasks etc.)	Per Day _____(Hours) Per Week _____(Hours)
Working experience	☐ Below two years ☐ 3 to 5 years ☐ 6 to 8 years ☐ 9 to 11 years ☐ 12 years above
How many times you change your jobs in past 5 years?	☐ Not change ☐ Below 2 times ☐ 3 to 5 times ☐ 6 to 9 times ☐ 10 and above
Your salary	☐ Below RM 1000 ☐ RM 1001 – RM 2999 ☐ RM 3000 – RM 4999 ☐ RM 5000 – RM 6999 ☐ RM 7000 – RM 8999 ☐ RM 9000 – RM 10,999 ☐ RM 11,000 and above
Distance your workplace from your home	☐ Below 10km ☐ Between 10km to 20km ☐ Between 20km to 30km ☐ Between 30km to 40km ☐ Between 40km to 50 km ☐ 50 km and above

SURVEY 2

1. FEEL AT WORK: ENGAGEMENT AND BURNOUT

The following 14 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 0 to 6) that best describes how frequently you feel that way.

DESCRIPTION	NEVER	ALMOST NEVER / A FEW TIMES A YEAR OR LESS	RARELY / ONCE A MONTH OR LESS	SOMETIMES / A FEW TIMES A MONTH	OFTEN / ONCE A WEEK	VERY OFTEN/ A FEW TIMES A WEEK	ALWAYS / EVERY DAY AT MY WORK, I FEEL BURSTING WITH ENERGY
1. At my work, I feel bursting with energy	⓪	①	②	③	④	⑤	⑥
2. At my job, I feel strong and vigorous.	⓪	①	②	③	④	⑤	⑥
3. I am enthusiastic about my job.	⓪	①	②	③	④	⑤	⑥
4. My job inspires me.	⓪	①	②	③	④	⑤	⑥
5. When I get up in the morning, I feel like going to work.	⓪	①	②	③	④	⑤	⑥
6. I feel happy when I am working intensely.	⓪	①	②	③	④	⑤	⑥
7. I am proud of the work that I do.	⓪	①	②	③	④	⑤	⑥
8. I am immersed in my work.	⓪	①	②	③	④	⑤	⑥
9. I get carried away when I am working.	⓪	①	②	③	④	⑤	⑥

2. BURNOUT

Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

DESCRIPTION	NEVER	ALMOST NEVER / A FEW TIMES A YEAR OR LESS	RARELY / ONCE A MONTH OR LESS	SOMETIMES / A FEW TIMES A MONTH	OFTEN / ONCE A WEEK	VERY OFTEN/ A FEW TIMES A WEEK	ALWAYS / EVERY DAY AT MY WORK, I FEEL BURSTING WITH ENERGY
1. I feel emotionally drained from my work.	⓪	①	②	③	④	⑤	⑥
2. I doubt the significance of my work.	⓪	①	②	③	④	⑤	⑥
3. Working all day is really a strain for me.	⓪	①	②	③	④	⑤	⑥
4. I can effectively solve the problems that arise in my work.	⓪	①	②	③	④	⑤	⑥
5. I feel burned out from my work.	⓪	①	②	③	④	⑤	⑥
6. I feel I'm making an effective contribution to what this organization does.	⓪	①	②	③	④	⑤	⑥
7. I have become less interested in my work since I started this job.	⓪	①	②	③	④	⑤	⑥
8. I have become less enthusiastic about my work.	⓪	①	②	③	④	⑤	⑥
9. In my opinion, I am good at my job.	⓪	①	②	③	④	⑤	⑥
10. I feel exhilarated when I accomplish something at work.	⓪	①	②	③	④	⑤	⑥
11. I feel used up at the end of the workday	⓪	①	②	③	④	⑤	⑥
12. I have accomplished many worthwhile things in this job.	⓪	①	②	③	④	⑤	⑥
13. I just want to do my job and not be bothered	⓪	①	②	③	④	⑤	⑥
14. I feel tired when I get up in the morning and have to face another day on the job.	⓪	①	②	③	④	⑤	⑥
15. I have become more cynical about whether my work contributes anything.	⓪	①	②	③	④	⑤	⑥
16. At my work, I feel confident that I am effective at getting things done.	⓪	①	②	③	④	⑤	⑥

3. PSYCHOSOCIAL SAFETY CLIMATE

The questions/statements in this section ask about the Organizational safety Culture and Climate in relation to Psychological Well-being at workplace. Please circle the one number for each question that comes closest to reflecting your opinion about it.

DESCRIPTION	STRONGLY AGREE	AGREE	NEITHER AGREE OR DISAGREE	DISAGREE	STRONGLY DISAGREE
1. In my team, in my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health.	①	②	③	④	⑤
2. In my team, senior management acts decisively when a concern of an employees' psychological status is raised.	①	②	③	④	⑤
3. In my team, senior management show support for stress prevention through involvement and commitment.	①	②	③	④	⑤
4. In my team, psychological well-being of staff is a priority for this organization.	①	②	③	④	⑤
5. In my team, senior management clearly considers the psychological health or employees to be of great importance.	①	②	③	④	⑤
6. In my team, senior management considers psychological health to be as important as productivity	①	②	③	④	⑤
7. There is good communication here about psychological safety issues which affect me.	①	②	③	④	⑤

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	DESCRIPTION	STRONGLY AGREE	AGREE	NEITHER AGREE OR DISAGREE	DISAGREE	STRONGLY DISAGREE
8.	Information about workplace psychological well-being is always brought to my attention by my manager/supervisor.	①	②	③	④	⑤
9.	In my team, my contributions to resolving occupational health and safety concerns in the organization are listened to.	①	②	③	④	⑤
10.	Participation and consultation in psychological health and safety occurs with employees', unions and health and safety representatives in my workplace.	①	②	③	④	⑤
11.	Employees are encouraged to become involved in psychological safety and health matters.	①	②	③	④	⑤
12.	In my organization, the prevention of stress involves all levels of the organization.	①	②	③	④	⑤

4. DEPRESSION

Please circle the one number for each question that comes closest to reflecting your opinion about it.

	DESCRIPTION	NOT AT ALL	SEVERAL DAYS	MORE THAN HALF THE DAYS	NEARLY EVERYDAY
1.	During the last month, how often were you bothered by little interest or pleasure in doing things?	①	②	③	④
2.	During the last month, how often were you bothered by feeling down, depressed, or hopeless?	①	②	③	④
3.	During the last month, how often were you bothered by poor appetite or overeating?	①	②	③	④
4.	During the last month, how often were you bothered by feeling bad about yourself -or that you are a failure or have let yourself or your family down?	①	②	③	④
5.	During the last month, how often were you bothered by trouble falling or staying asleep OR sleeping too much?	①	②	③	④
6.	During the last month, how often were you bothered by feeling tired or having little energy?	①	②	③	④
7.	During the last month, how often were you bothered by trouble concentrating on things, such as reading a newspaper or watching television?	①	②	③	④
8.	During the last month, how often were you bothered by moving or speaking so slowly that other people could have noticed OR - the opposite - being so fidgety or restless that you have been moving around a lot more than usual?	①	②	③	④
9.	During the last month, how often were you bothered by thoughts that you would be better off dead or thoughts of hurting yourself in some way?	①	②	③	④

5. PRODUCTIVITY

1. On a scale from 0 to 10 where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate the usual performance of most workers in a job similar to yours?

0	1	2	3	4	5	6	7	8	9	10

2. Using the same 0-to-10 scale, how would you rate your usual job performance over the past year or two?

0	1	2	3	4	5	6	7	8	9	10

3. Using the same 0-to-10 scale, how would you rate your overall job performance on the days you worked during the past 4 weeks (28 days)?

0	1	2	3	4	5	6	7	8	9	10

4. Using the same 0-to-10 scale, where 0 is no affect and 10 is the most affect, during the last 4 weeks (28 days) how much did your health problems affect your productivity at work?

0	1	2	3	4	5	6	7	8	9	10

6. JOB RESOURCES

Please circle the one number for each question that comes closest to reflecting your opinion about it.

A: JCQ -Support Supervisor Social Support

	STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	I HAVE NO SUPERVISOR
1.	My supervisor/manager is concerned about the welfare of those under him/her	①	②	③	④	⑤
2.	My supervisor pays attention to what I am saying	①	②	③	④	⑤
3.	I am exposed to hostility or conflict from my supervisor	①	②	③	④	⑤
4.	My supervisor/manager is helpful in getting the job done.	①	②	③	④	⑤
5.	My supervisor is successful in getting people to work together	①	②	③	④	⑤
6.	I am treated with respect by my supervisor/manager.	①	②	③	④	⑤
7.	People I work with are competent in doing their jobs	①	②	③	④	⑤
8.	People I work with take a personal interest in me	①	②	③	④	⑤
9.	I am exposed to hostility or conflict from the people I work with	①	②	③	④	⑤
10.	People I work with are friendly	①	②	③	④	⑤
11.	The people I work with encourage each other to work together	①	②	③	④	⑤
12.	People I work with are helpful in getting the job done	①	②	③	④	⑤
13.	I am treated with respect by my co-workers	①	②	③	④	⑤

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University of South Australia

KAJIAN PSIKOSOSIAL DI TEMPAT KERJA

INI MERUPAKAN KAJIAN PSIKOLOGI. SEMUA KENYATAAN YANG ANDA BERIKAN BAGI MENJAYAKAN KAJIAN INI AKAN DIRAHSIAKAN. LAPORAN KAJIAN INI HANYA DIGUNAKAN BAGI TUJUAN AKADEMIK DAN BUKANNYA UNTUK MEMBERIKAN MAKLUMBALAS KEPADA MAJIKAN ATAU PIHAK-PIHAK LAIN YANG BERKAITAN DENGAN PEKERJAAN ANDA. KAJIAN INI DITAJA SEPENUHNYA OLEH UNIVERSITI MALAYA DAN KEMENTERIAN PENGAJIAN TINGGI MALAYSIA.

SOAL SELIDIK INI MEMPUNYAI 2 BAHAGIAN: BAHAGIAN 1 DAN II

KERJASAMA ANDA DI DAHULUI DENGAN UCAPAN TERIMA KASIH

KOD PENYELIDIK

KOD RESPONDENT

KOD KAWASAN

TARIKH

TELEFON

1. SEMANGAT KERJA

Di bawah ini terdapat 9 kenyataan yang menggambarkan pekerjaan anda. Tandakan pada 0 sekiranya anda tidak mempunyai sebarang perasaan berkaitan dengan kenyataan. Sekiranya anda mempunyai sebarang perasaan, tandakan berapa kerap (1 hingga 6) perasaan yang paling dekat yang menggambarkan mengenai kenyataan yang diberikan. Jawab dengan ikhlas dan jujur. Tidak ada betul dan salah.

KENYATAAN	TIDAK PERNAH	HAMPIR TIDAK PERNAH/ BEBERAPAKALI SETAHUN ATAU KURANG	KADANG-KADANG/ SEKALI SEBULAN ATAU KURANG	SELALU/ BEBERAPAPA KALI SEBULAN	SERING/ SEKALI SEMINGGU	KERAP/ BEBERAPAPA KALI SEMINGGU	SANGAT KERAP/ SETIAP HARI
1. Di tempat kerja, saya rasa penuh tenaga.	0	1	2	3	4	5	6
2. Bila membuat kerja, saya rasa kuat dan bertenaga.	0	1	2	3	4	5	6
3. Saya bersemangat / teruja dengan pekerjaan saya.	0	1	2	3	4	5	6
4. Pekerjaan saya memberi inspirasi kepada saya.	0	1	2	3	4	5	6
5. Bila saya bangun pagi, saya berkeinginan untuk pergi bekerja.	0	1	2	3	4	5	6
6. Saya gembira bila saya bekerja bersungguh-sungguh.	0	1	2	3	4	5	6
7. Saya bangga dengan apa yang saya lakukan.	0	1	2	3	4	5	6
8. Saya tenggelam / asyik dengan pekerjaan saya.	0	1	2	3	4	5	6
9. Saya terbawa-bawa bila saya bekerja.	0	1	2	3	4	5	6

2. BURNOUT

Di bawah ini terdapat 14 kenyataan yang menggambarkan pekerjaan anda. Tandakan pada 0 sekiranya anda tidak mempunyai sebarang perasaan berkaitan dengan kenyataan. Sekiranya anda mempunyai sebarang perasaan, tandakan berapa kerap (1 hingga 6) perasaan yang paling dekat yang menggambarkan mengenai kenyataan yang diberikan. Jawab dengan ikhlas dan jujur. Tidak ada betul dan salah.

KENYATAAN	TIDAK PERNAH	BEBERAPAKALI DALAM SETAHUN ATAU KURANG	SEKALI SEBULAN ATAU KURANG	BEBERAPAPA KALI DALAM SEBULAN	SEKALI SEMINGGU	BEBERAPAPA KALI SEMINGGU	SETIAP HARI
1. Saya rasa kehabisan / keletihan emosi daripada pekerjaan saya.	0	1	2	3	4	5	6
2. Saya rasa amat letih dipenghujung waktu kerja.	0	1	2	3	4	5	6
3. Saya penat bila bangun pagi dan perlu hadapi sehari lagi bekerja.	0	1	2	3	4	5	6
4. Bekerja sepanjang hari adalah tekanan kepada saya.	0	1	2	3	4	5	6
5. Saya secara efektif boleh menyelesaikan masalah yang timbul oleh pekerjaan saya.	0	1	2	3	4	5	6
6. Saya rasa saya terlalu letih dengan pekerjaan saya.	0	1	2	3	4	5	6
7. Saya rasa saya memberi sumbangan yang berkesan kepada apa yang dijalankan oleh ornasasi ini.	0	1	2	3	4	5	6
8. Saya menjadi semakin kurang minat dengan pekerjaan saya sejak saya mula bekerja.	0	1	2	3	4	5	6
9. Saya menjadi kurang semangat dengan kerja saya.	0	1	2	3	4	5	6
10. Saya berpendapat saya bekerja dengan bagus.	0	1	2	3	4	5	6
11. Saya berasa girang apabila berjaya menyempurnakan sesuatu pekerjaan.	0	1	2	3	4	5	6
12. Saya telah menyempurnakan banyak perkara berfaedah dalam kerja ini.	0	1	2	3	4	5	6
13. Saya hanya mahu melakukan kerja saya dan tidak mahu diganggu.	0	1	2	3	4	5	6
14. Saya menjadi lebih sinikal samaada kerja saya ada menyumbangkan apa-apa.	0	1	2	3	4	5	6
15. Saya ragu-ragu dengan kepentingan kerja saya.	0	1	2	3	4	5	6
16. Dalam pekerjaan saya, saya melaksanakan sesuatu tugasan dengan berkesan.	0	1	2	3	4	5	6

3. PERSEKITARAN PSIKOSOSIAL TEMPAT KERJA

Kenyataan berikut adalah 12 kenyataan berkaitan dengan persekitaran kesejahteraan psikologi di tempat kerja anda. Sila tandakan pada nombor yang paling menggambarkan mengenai apa yang paling dekat berkaitan dengan diri anda.

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Di tempat kerja saya, pihak pengurusan bertindak cepat dalam menangani masalah/isu yang boleh menjejaskan kesihatan psikologi pekerja.	1	2	3	4	5
2. Pihak pengurusan bertindak secara bijak apabila ada perkara-perkara yang berkaitan dengan status psikologi pekerja dikemukakan.	1	2	3	4	5
3. Pihak pengurusan atasan menunjukkan sokongan bagi mencegah tekanan melalui campurtangan dan komitmen	1	2	3	4	5
4. Kesejahteraan psikologi kakitangan adalah keutamaan untuk organisasi tempat saya berkerja.	1	2	3	4	5
5. Pihak pengurusan secara jelas memberikan tumpuan terhadap kesihatan psikologi pekerja sebagai satu keutamaan.	1	2	3	4	5
6. Pihak pengurusan mengambilkira kesihatan psikologi pekerja sama penting dengan produktiviti.	1	2	3	4	5
7. Di tempat kerja saya, terdapat maklumbalas yang baik berkaitan keselamatan psikologi yang boleh menjejaskan saya.	1	2	3	4	5

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8. Maklumat-maklumat berkaitan dengan kesejahteraan psikologi tempat kerja selalu dibawa untuk dibincangkan oleh pengurus/penyelia atasan saya.	①	②	③	④	⑤
9. Sumbangan saya dalam menyelesaikan masalah kesihatan dan keselamatan pekerjaan dalam organisasi didengar.	①	②	③	④	⑤
10. Penyertaan dan pandangan di antara pekerja, kesatuan sekerja dan wakil dari pihak berkaitan dalam membincangkan hal-hal keselamatan dan kesihatan psikologi wujud di tempat kerja saya.	①	②	③	④	⑤
11. Pekerja adalah digalakkan untuk turut serta dalam hal-hal yang berkaitan dengan keselamatan dan kesihatan.	①	②	③	④	⑤
12. Pencegahan tekanan melibatkan semua peringkat pekerja dalam organisasi.	①	②	③	④	⑤

4. KEPUASAN KERJA

Kenyataan di bawah ialah bagi menggambarkan mengenai situasi kerja anda. Sila tandakan pada kenyataan yang paling tepat dengan diri anda.

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Secara keseluruhan, saya puas hati dengan pekerjaan saya.	①	②	③	④	⑤
2. Secara amnya, saya tidak suka dengan perkerjaan saya.	①	②	③	④	⑤
3. Umumnya, saya suka bekerja di sini	①	②	③	④	⑤

5. KEMURUNGAN

Di bawah ini terdapat 9 kenyataan yang menggambarkan mengenai diri anda. Tandakan pada nilai yang paling hampir dengan diri anda.

KENYATAAN	LANGSUNG TIDAK PERNAH	KADANG-KADANG	SANGAT KERAP	SETIAP HARI
1. Sepanjang bulan lepas, berapa kerap anda terganggu oleh kehilangan minat atau nikmat untuk membuat sesuatu?	①	②	③	④
2. Sepanjang bulan lepas, berapa kerap anda berasa kecewa, murung atau tiada pengharapan?	①	②	③	④
3. Sepanjang bulan lepas, berapa kerap anda hilang selera makan atau makan secara berlebihan?	①	②	③	④
4. Sepanjang bulan lepas, berapa kerap anda berperasaan buruk mengenai diri sendiri - atau merasakan anda sebagai orang yang gagal, kecewakan diri sendiri atau menghampakan keluarga anda?	①	②	③	④
5. Sepanjang bulan lepas, berapa kerap anda merasa payah untuk tidur, berterusan tidur atau terlalu banyak tidur?	①	②	③	④
6. Sepanjang bulan lepas, berapa kerap anda berasa begitu letih atau kurang tenaga?	①	②	③	④
7. Sepanjang bulan lepas, berapa kerap anda sukar untuk memberikan penumpuan terhadap sesuatu perkara, seperti membaca surat khabar atau menonton televisyen?	①	②	③	④
8. Sepanjang bulan lepas, berapa kerap anda terganggu oleh keadaan bergerak atau bercakap dengan sangat perlahan sehingga disedari orang lain, atau sebaliknya-jadi tak tentu arah, kelam kabut, asyik bergerak lebih kerap dari kebiasaannya?	①	②	③	④
9. Sepanjang bulan lepas, berapa kerap anda terganggu dengan berfikir adalah lebih baik untuk mati atau mencederakan diri sendiri dengan beberapa cara?	①	②	③	④

6. PRODUKTIVITI

Kenyataan ini bagi menggambarkan prestasi kerja anda. Sila jawab dengan JUJUR dan PALING TEPAT dengan diri anda.

1. Dengan menggunakan skala 0 ke 10, di mana skala 0 ialah yang paling buruk mengenai prestasi kerja, dan 10 ialah yang paling baik, berapakah nilai prestasi kerja anda dibandingkan dengan kebanyakan pekerja lain yang melakukan kerja yang sama dengan anda?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
2. Menggunakan skala yang sama, dari 0 ke 10, berapakah nilai prestasi kerja anda sepanjang setahun atau dua tahun terakhir ini?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
3. Menggunakan skala yang sama, 0 hingga 10, berapakah nilai keseluruhan prestasi kerja anda sepanjang hari anda berkerja dalam tempoh 4 minggu terakhir ini (28 hari)?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
4. Menggunakan skala yang sama, 0 – tidak sama sekali menjejaskan anda, 10 paling menjejaskan, bagaimanakah anda rasakan dalam tempoh 4 minggu ini (28 hari), masalah kesihatan telah menjejaskan produktiviti kerja anda?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

7. JUMLAH JAM KERJA

1. Berapa jumlah jam keseluruhannya anda berkerja dalam 7 hari hari lalu. Nyatakan jumlah jam. Jika lebih dari 97 jam, nyatakan 97 jam sahaja.

   (Jumlah jam, 00 -97)

		JIKA TIDAK BERKAITAN, TANDAKAN (√)	

2. Berapa jumlah jam kerja yang majikan anda jangkakan dari anda dalam 7 hari kerja per minggu? Jika pelbagai, nyatakan purata sahaja. Jika lebih dari 97 jam, nyatakan 97 sahaja.

   (Jumlah jam, 00 -97)

		JIKA TIDAK BERKAITAN, TANDAKAN (√)	

3. Dalam tempoh 4 minggu (28 hari) yang lalu, berapa hari kerja yang anda tidak datang keseluruhannya disebabkan oleh masalah fizikal atau mental? (Nyatakan hanya hari kerja yang berkaitan dengan kesihatan anda, bukannya kesihatan pihak lain (misalnya menjaga orang sakit).

   (Jumlah jam, 00 -97)

		JIKA TIDAK BERKAITAN, TANDAKAN (√)	

4. Dalam tempoh 4 minggu yang lalu (28 hari), berapa hari kerja yang anda tidak hadir sepenuhnya disebabkan oleh alasan yang lain (termasuk bercuti)? (Jumlah hari, 0-28)

   (Jumlah jam, 00 -97)

		JIKA TIDAK BERKAITAN, TANDAKAN (√)	

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8. SKALA MARAH

Terdapat 15 kenyataan di bawah yang biasanya digunakan untuk menggambarkan mengenai diri sendiri. Baca setiap kenyataan dan bulatkan nombor yang sesuai dengan APA YANG ANDA RASAKAN SEKARANG INI. Tidak ada betul atau salah. Jangan menggunakan terlalu banyak masa untuk satu-satu kenyataan. Tandakan pada jawapan yang PALING HAMPIR merujuk kepada apa yang anda rasakan sekarang.

Apa yang saya sekarang ini	LANGSUNG TIDAK	SEDIKIT	SEDERHANA	SANGAT
1. Saya begitu geram.	1	2	3	4
2. Saya sedang meradang.	1	2	3	4
3. Saya sedang marah.	1	2	3	4
4. Saya rasa mahu menjerit pada seseorang.	1	2	3	4
5. Saya rasa seolah-olahnya mahu pecahkan barang-barang.	1	2	3	4
6. Saya berasa sangat marah.	1	2	3	4
7. Saya sepertinya mahu menghentakkan meja.	1	2	3	4

Apa yang saya rasakan sekarang ini	LANGSUNG TIDAK	SEDIKIT	SEDERHANA	SANGAT
8. Saya rasa ingin memukul seseorang.	1	2	3	4
9. Saya rasa mahu menyumpah.	1	2	3	4
10. Saya rasa terganggu.	1	2	3	4
11. Saya rasa mahu menendang seseorang.	1	2	3	4
12. Saya rasa mahu mencarut sekuatnya.	1	2	3	4
13. Saya rasa mahu menjerit.	1	2	3	4
14. Saya rasa mahu menghentak seseorang.	1	2	3	4
15. Saya rasa mahu memekik sekuat hati.	1	2	3	4

9. SUMBER SOKONGAN PEKERJAAN

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

A: JCQ –Sokongan Sosial Penyeliaan

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU	SAYA TIDAK ADA PENYELIA
1. Penyelia saya mengambil berat mengenai kebajikan orang bawahannya.	1	2	3	4	5
2. Penyelia saya memberikan perhatian terhadap apa yang saya katakan.	1	2	3	4	5
3. Saya terdedah kepada kemarahan atau percanggahan pendapat dengan penyelia saya.	1	2	3	4	5
4. Penyelia memberi bantuan dalam memastikan kerja-kerja saya dapat disiapkan.	1	2	3	4	5
5. Penyelia saya berjaya mengajak orang lain bekerja bersama-sama.	1	2	3	4	5
6. Saya dilayan dengan sopan/hormat oleh penyelia/pengurus.	1	2	3	4	5
7. Rakan-rakan sekerja saya berkemampuan dalam melakukan kerja mereka.	1	2	3	4	
8. Rakan-rakan sekerja mengambil berat tentang saya.	1	2	3	4	
9. Saya terdedah kepada kemarahan dan percanggahan pendapat dengan mereka yang bekerja dengan saya.	1	2	3	4	
10. Rakan-rakan sekerja saya adalah peramah.	1	2	3	4	
11. Rakan-rakan saya sering memberi galakan antara satu sama lain untuk bekerjasama.	1	2	3	4	
12. Rakan-rakan sekerja saya membantu bagi memastikan kerja- kerja disiapkan.	1	2	3	4	
13. Saya dilayan dengan sopan/rasa hormat oleh rakan sekerja saya.	1	2	3	4	

B: Politik Organisasi

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Pilih kasih dan bukan merit yang tentukan kejayaan seseorang di sini.	1	2	3	4	5
2. Dalam organisasi ini, ganjaran hanya boleh dicapai dengan kerja kuat.	1	2	3	4	5
3. Ada satu kumpulan individu dalam jabatan saya yang selalu dapat apa yang dikehendaki sebab tiada siapa yang mahu mencabar mereka.	1	2	3	4	5
4. Orang di dalam organisasi ini cuba untuk menaikkan diri mereka dengan menjatuhkan orang lain.	1	2	3	4	5
5. Saya lihat perubahan dalam polisi di sini dilakukan hanya bagi memenuhi kepentingan sesetengah individu, bukannya kepada tugas atau organisasi.	1	2	3	4	5
6. Tiada tempat untuk manusia 'yes-men' di sini. Idea yang baik adalah sangat diharapkan walaupun mungkin tidak bersetuju dengan orang atasan	1	2	3	4	5

C: Tuntutan Kerja - Birokratik

KENYATAAN	SANGAT SALAH	SALAH	BETUL	SANGAT BETUL
1. Di sini, kami ada tatacara kerja untuk semua situasi.	1	2	3	4
2. Saya perlu ikuti tatacara kerja yang ketat pada sepanjang masa.	1	2	3	4
3. Saya selalu menyemak untuk pastikan saya berpandu kepada peraturan.	1	2	3	4
4. Saya perlu melalui banyak peraturan dan birokrasi untuk menyempurnakan tugasan saya.	1	2	3	4

D: Tuntutan Kerja - Psikologikal

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU
1. Pekerjaan saya memerlukan saya bekerja dengan sangat pantas.	1	2	3	4
2. Pekerjaan saya memerlukan saya bekerja bersungguh- sungguh.	1	2	3	4
3. Saya tidak diminta /disuruh untuk melakukan kerja-kerja secara berlebihan.	1	2	3	4
4. Saya mempunyai masa yang cukup untuk menyiapkan kerja saya.	1	2	3	4
5. Kerja-kerja saya berhadapan dengan percanggahan untuk melakukan kerja yang lain juga.	1	2	3	4
6. Saya terpaksa meneruskan kerja ketika waktu rehat/ waktu makan bagi memastikan kerja dapat diselesaikan.	1	2	3	4

Bersambung ke muka sebelah...

E: Pembuatan keputusan

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU
1. Pekerjaan saya membenarkan saya membuat keputusan sendiri.	1	2	3	4
2. Semasa bekerja, kebebasan saya membuat keputusan sendiri adalah amat terbatas.	1	2	3	4
3. Saya mempunyai banyak hak untuk menentukan pekerjaan saya.	1	2	3	4

F: Skala Tekanan Global

KENYATAAN	SANGAT SALAH	SALAH	BETUL	SANGAT BETUL
1. Adakah pekerjaan anda tidak lagi selamat oleh kerana persaingan dari dagangan dunia?	1	2	3	4
2. Adakah anda perlu bekerja lebih kuat kerana persaingan dari dagangan dunia?	1	2	3	4
3. Adakah anda kehilangan kuasa dan pengaruh di tempat kerja kerana saingan dari dagangan dunia?	1	2	3	4
4. Sedikit sangat yang boleh saya buat untuk mengubah perkara penting dalam hidup saya.	1	2	3	4
5. Apa yang berlaku pada masa depan kebanyakannya bergantung kepada diri saya sendiri.	1	2	3	4

Tuntutan Emosi

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

KENYATAAN	SANGAT SEDIKIT/ LANGSUNG TIDAK	SEDIKIT	KADANG-KADANG	KERAP	SANGAT KERAP
1. Adakah kerja anda meletakkan anda dalam situasi terganggu emosi?	0	1	2	3	4
2. Adakah kerja anda menuntut anda melakukannya secara emosi?	0	1	2	3	4
3. Adakah anda perlu melibatkan emosi anda dalam pekerjaan?	0	1	2	3	4
4. Adakah kerja anda memerlukan anda terlibat secara pribadi?	0	1	2	3	4

Konflik Peranan

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

KENYATAAN	SANGAT SEDIKIT/ LANGSUNG TIDAK	SEDIKIT	KADANG-KADANG	KERAP	SANGAT KERAP
1. Adakah di tempat kerja anda, ada hal-hal pekerjaan yang diterima oleh sesetengah orang tetapi tidak oleh orang lain?	0	1	2	3	4
2. Adakah anda diminta melakukan sesuatu pekerjaan yang bertentangan dengan tugas anda?	0	1	2	3	4
3. Adakah anda adakalanya diminta melakukan satu-satu pekerjaan, yang memerlukan anda melakukan dengan cara yang berbeza dengan kebiasaan pekerjaan anda?	0	1	2	3	4
4. Adakah anda rasa adakalanya anda diminta melakukan kerja yang tidak berkaitan?	0	1	2	3	4

Konflik Kerja & Rumah

Sila nyatakan jawapan anda mengikut tahap persetujuan anda terhadap pernyataan tersebut menggunakan 5 skala di bawah

KENYATAAN	AMAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	AMAT SETUJU
1. Masa yang dihabiskan untuk bekerja menghalang saya daripada mengambil bahagian dalam aktiviti dan tanggungjawab rumah tangga.	1	2	3	4	5
2. Saya terpaksa mengecualikan aktiviti keluarga disebabkan tanggungjawab pekerjaan.	1	2	3	4	5
3. Masa yang dihabiskan untuk menunaikan tanggungjawab keluarga selalu bertindih dengan tanggungjawab pekerjaan.	1	2	3	4	5
4. Masa yang dihabiskan dengan keluarga menyebabkan saya tidak dapat menghabiskan masa melakukan aktiviti yang dapat membantu kerjaya saya.	1	2	3	4	5
5. Saya terpaksa mengecualikan aktiviti pekerjaan disebabkan masa yang perlu dihabiskan untuk tanggungjawab rumah tangga.	1	2	3	4	5
6. Saya terlalu letih untuk melibatkan diri dalam aktiviti/ tanggungjawab rumah tangga apabila balik dari kerja.	1	2	3	4	5
7. Saya selalunya berasa sangat tertekan apabila balik dari kerja sehingga ia membantutkan sumbangan saya kepada keluarga.	1	2	3	4	5
8. Kadangkala, apabila saya balik ke rumah, saya berasa tertekan untuk melakukan perkara yang saya sukai disebabkan tekanan di tempat kerja.	1	2	3	4	5
9. Saya selalunya terbeban dengan masalah keluarga semasa bekerja disebabkan tekanan semasa di rumah.	1	2	3	4	5
10. Saya menghadapi masalah untuk menumpukan perhatian terhadap kerja disebabkan selalu tertekan dengan tanggungjawab keluarga.	1	2	3	4	5
11. Tekanan dan kebimbangan daripada kehidupan rumah tangga saya selalu melemahkan kemampuan saya melakukan kerja	1	2	3	4	5
12. Kaedah penyelesaian masalah yang saya gunakan di tempat kerja adalah tidak berkesan dalam menyelesaikan masalah di rumah.	1	2	3	4	5
13. Sikap yang berkesan dan perlu bagi saya di tempat kerja adalah sebaliknya semasa di rumah.	1	2	3	4	5
14. Sikap yang menjadikan saya pekerja yang efektif di tempat kerja tidak menjadikan saya ibu bapa atau pasangan yang lebih baik.	1	2	3	4	5

Bersambung ke muka sebelah...

15. Sikap yang berkesan di rumah adalah tidak berkesan di tempat kerja.	①	②	③	④	⑤
16. Sikap yang berkesan dan perlu bagi saya di rumah adalah sebaliknya semasa di tempat kerja.	①	②	③	④	⑤
17. Kaedah penyelesaian masalah yang berkesan digunakan di rumah nampaknya tidak begitu berguna di tempat kerja.	①	②	③	④	⑤

Komitmen Organisasi

Di bawah merupakan kenyaataan anda dengan organisasi. Sila tandakan kenyataan yang paling hampir dengan anda.

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Adakah anda mahu menghabiskan usia pekerjaan anda di organisasi ini?	⓪	①	②	③	④
2. Adakah anda gembira memberitahu orang lain berkenaan tempat kerja anda.	⓪	①	②	③	④
3. Adakah anda merasakan masalah organisasi adalah masalah anda juga?	⓪	①	②	③	④
4. Adakah anda merasakan organisasi tempat kerja anda sekarang sebagai sesuatu yang sangat penting dalam hidup anda?	⓪	①	②	③	④

Kesihatan umum

Berikut ialah kenyataan yang mungkin berkaitan dengan kesihatan anda dalam tempoh sebulan terakhir ini. Sila tnadakan berapa kerap anda mengalaminya, atau tidak sekiranya tidak berkenaan.

KENYATAAN	SANGAT JARANG/ TIDAK PERNAH	SESEKALI	SELALU	KERAP	KERAP SANGAT
1. Seselma	⓪	①	②	③	④
2. Sakit kepala	⓪	①	②	③	④
3. Sengal-sengal otot / sakit badan	⓪	①	②	③	④
4. Sakit belakang / tengkuk / leher	⓪	①	②	③	④
5. Keletihan	⓪	①	②	③	④
6. Pening kepala	⓪	①	②	③	④

Bahagian II: SOAL SELIDIK DEMOGRAFI

ARAHAN: Sila pilih satu jawapan yang paling tepat mengenai diri anda

Jantina	• Lelaki • Perempuan
Umur	• Bawah 20 tahun • 20 - 25 tahun • 26 - 31 tahun • 32 - 37 tahun • 38 - 43 tahun • 44 - 49 tahun • 50 - 55 tahun • 56 - 61 tahun • 62 dan ke atas
Pendidikan	• Sekolah Rendah • Sekolah Menengah • Diploma/ Sijil Tinggi Pelajaran Malaysia • Sijil Kemahiran/Diploma (cth. Sijil Kemahiran Malaysia, IKM, Pusat Giat MARA, Polytechnic dsb.) • Ijazah Sarjana Muda • Lepasan Ijazah (Sarjana/ PhD)
Status Perkahwinan	• Bujang • Berkahwin • Bercerai/Berpisah • Janda/Duda
Jika anda berkahwin, berapa bilangan anak anda?	• Tiada anak • Kurang daripada 2 • 3 hingga 5 • 6 dan ke atas
Daerah	Nyatakan _____
Kawasan Kediaman	• Bandar • Luar bandar
Bilangan isirumah	• 3 dan ke bawah • 4 - 6 • 7 - 9 • 10 dan ke atas
Status kediaman	• Sewa • Kepunyaan sendiri • Disediakan majikan • Milik keluarga • Lain-lain

Etnik	• Bumiputera-Melayu • Bumiputera- lain • Cina • India • Lain-lain
Agama	• Islam • Kristian • Buddha • Hindu • Lain-lain
Warganegara	• Malaysia • Lain-lain: Nyatakan:_____
Sektor Pekerjaan	• Pertanian/Perburuan/Perhutanan • Perikanan • Perlombongan dan Kuari • Pembuatan • Bekalan Elektrik, Gas dan Air • Pembinaan • Perdagangan Jual Borong/Runcit, Baiki Kenderaan Bermotor, Barangan Persendirian & Isirumah • Hotel dan Restoran • Pengangkutan, Penyimpanan dan Komunikasi • Kewangan • Aktiviti Hartanah, Penyewaan dan Perniagaan • Pentadbiran dan Pertahanan Awam, Keselamatan Sosial Wajib • Pendidikan • Kesihatan dan Kerja Sosial • Aktiviti Perkhidmatan Komuniti, Sosial dan Persendirian Lain • Isirumah Persendirian dan Pekerja Bergaji • Organisasi dan Badan di Luar Wilayah • Lain-lain: Nyatakan_____

Majikan anda	• Kerajaan • Separuh kerajaan/ Syarikat Milik Kerajaan • Syarikat swasta milik orang tempatan • Syarikat swasta pemilikan luar • Lain-lain: Nyatakan_____
Kategori Pekerjaan	• Pentadbiran dan Pengurusan • Profesional
	• Juruteknik dan Kerja yang Berkaitan • Kerja Perkeranian • Pekerja Perkhidmatan, Kedai dan Jualan • Kerja Mahir Pertanian dan Perikanan • Kerta Pertukangan dan Berkaitan • Operator dan Pemasangan Logi dan Mesin • Pekerja Am • Lain-lain (Nyatakan):_____
Pengalaman kerja	• Kurang dari dua tahun • 3 - 5 tahun • 6 - 8 tahun • 9 - 10 tahun • 11 tahun dan lebih
Berapa kerap anda bertukar kerja dalam tempoh 5 tahun terakhir ini	• Tidak berubah • Kurang 2 kali • 3 - 5 kali • 6 - 9 kali • 10 dan lebih
Pendapatan	• Bawah RM 1000 • RM 1001 – RM 2999 • RM 3000 – RM 4999 • RM 5000 – RM 6999 • RM 7000 – RM 8999 • RM 9000 – RM 10,999
Jarak dari rumah anda ke tempat kerja	• Kurang 10km • 10km - 20km • 20km - 30km • 30km - 40km • 40km - 50 km • 50 km dan lebih

University of South Australia

SLIP Biodata

NAMA ORGANISASI:

(digunakan bagi tujuan follow up untuk kajian kali ke dua sahaja)

NAMA ANDA:

(digunakan bagi tujuan follow up untuk kajian kali ke dua sahaja)

TAHUN LAHIR:

Organisasi	☐ Kerajaan ☐ Swasta ☐ Badan bukan kerajaan ☐ Lain-lain
Aktiviti utama perniagaan/perkhidmatan	Nyatakan (cth. Pendidikan, Pembuatan, Perundingan, Perkhidmatan, dll.)
Jabatan anda?	Nyatakan (cth. kewangan, Pemasaran, Pengeluaran, Percetakan dll.)
Berapa banyak pekerja di jabatan ini termasuk anda?	Nyatakan
Pekerjaan anda seperti yang tertulis dalam surat tawaran kerja?	Nyatakan (cth. pegawai tadbir, guru, jurutera, operator pengeluaran, juruteknik, dll.)
Pendidikan terakhir anda?	Nyatakan (cth. universiti, sekolah menengah, sekolah rendah dll.)
Jantina anda?	☐ Lelaki ☐ Perempuan
Ethnik anda	☐ Melayu ☐ Cina ☐ India

1. SEMANGAT KERJA

Di bawah ini terdapat 9 kenyataan yang menggambarkan pekerjaan anda. Tandakan pada 0 sekiranya anda tidak mempunyai sebarang perasaan berkaitan dengan kenyataan. Sekiranya anda mempunyai sebarang perasaan, tandakan berapa kerap (1 hingga 6) perasaan yang paling dekat yang menggambarkan mengenai kenyataan yang diberikan. Jawab dengan ikhlas dan jujur. Tidak ada betul dan salah.

KENYATAAN	TIDAK PERNAH	HAMPIR TIDAK PERNAH/ BEBERAPAKALI SETAHUN ATAU KURANG	KADANG-KADANG/ SEKALI SEBULAN ATAU KURANG	SELALU/ BEBERAPAPA KALI SEBULAN	SERING/ SEKALI SEMINGGU	KERAP/ BEBERAPAPA KALI SEMINGGU	SANGAT KERAP/ SETIAP HARI
1. Di tempat kerja, saya rasa penuh tenaga.	⓪	①	②	③	④	⑤	⑥
2. Bila membuat kerja, saya rasa kuat dan bertenaga.	⓪	①	②	③	④	⑤	⑥
3. Saya bersemangat / teruja dengan pekerjaan saya.	⓪	①	②	③	④	⑤	⑥
4. Pekerjaan saya memberi inspirasi kepada saya.	⓪	①	②	③	④	⑤	⑥
5. Bila saya bangun pagi, saya berkeinginan untuk pergi bekerja.	⓪	①	②	③	④	⑤	⑥
6. Saya gembira bila saya bekerja bersungguh-sungguh.	⓪	①	②	③	④	⑤	⑥
7. Saya bangga dengan apa yang saya lakukan.	⓪	①	②	③	④	⑤	⑥
8. Saya tenggelam / asyik dengan pekerjaan saya.	⓪	①	②	③	④	⑤	⑥
9. Saya terbawa-bawa bila saya bekerja.	⓪	①	②	③	④	⑤	⑥

2. BURNOUT

Di bawah ini terdapat 14 kenyataan yang menggambarkan pekerjaan anda. Tandakan pada 0 sekiranya anda tidak mempunyai sebarang perasaan berkaitan dengan kenyataan. Sekiranya anda mempunyai sebarang perasaan, tandakan berapa kerap (1 hingga 6) perasaan yang paling dekat yang menggambarkan mengenai kenyataan yang diberikan. Jawab dengan ikhlas dan jujur. Tidak ada betul dan salah.

KENYATAAN	TIDAK PERNAH	BEBERAPAKALI DALAM SETAHUN ATAU KURANG	SEKALI SEBULAN ATAU KURANG	BEBERAPAPA KALI DALAM SEBULAN	SEKALI SEMINGGU	BEBERAPAPA KALI SEMINGGU	SETIAP HARI
1. Saya rasa kehabisan / keletihan emosi daripada pekerjaan saya.	⓪	①	②	③	④	⑤	⑥
2. Saya rasa amat letih dipenghujung waktu kerja.	⓪	①	②	③	④	⑤	⑥
3. Saya penat bila bangun pagi dan perlu hadapi sehari lagi bekerja.	⓪	①	②	③	④	⑤	⑥
4. Bekerja sepanjang hari adalah tekanan kepada saya.	⓪	①	②	③	④	⑤	⑥
5. Saya secara efektif boleh menyelesaikan masalah yang timbul oleh pekerjaan saya.	⓪	①	②	③	④	⑤	⑥
6. Saya rasa saya terlalu letih dengan pekerjaan saya.	⓪	①	②	③	④	⑤	⑥
7. Saya rasa saya memberi sumbangan yang berkesan kepada apa yang dijalankan oleh ornasasi ini.	⓪	①	②	③	④	⑤	⑥
8. Saya menjadi semakin kurang minat dengan pekerjaan saya sejak saya mula bekerja.	⓪	①	②	③	④	⑤	⑥
9. Saya menjadi kurang semangat dengan kerja saya.	⓪	①	②	③	④	⑤	⑥
10. Saya berpendapat saya bekerja dengan bagus.	⓪	①	②	③	④	⑤	⑥
11. Saya berasa girang apabila berjaya menyempurnakan sesuatu pekerjaan.	⓪	①	②	③	④	⑤	⑥
12. Saya telah menyempurnakan banyak perkara berfaedah dalam kerja ini.	⓪	①	②	③	④	⑤	⑥
13. Saya hanya mahu melakukan kerja saya dan tidak mahu diganggu.	⓪	①	②	③	④	⑤	⑥
14. Saya menjadi lebih sinikal samaada kerja saya ada menyumbangkan apa-apa.	⓪	①	②	③	④	⑤	⑥
15. Saya ragu-ragu dengan kepentingan kerja saya.	⓪	①	②	③	④	⑤	⑥
16. Dalam pekerjaan saya, saya melaksanakan sesuatu tugasan dengan berkesan.	⓪	①	②	③	④	⑤	⑥

3. PERSEKITARAN PSIKOSOSIAL TEMPAT KERJA

Kenyataan berikut adalah 12 kenyataan berkaitan dengan persekitaran kesejahteraan psikologi di tempat kerja anda. Sila tandakan pada nombor yang paling menggambarkan mengenai apa yang paling dekat berkaitan dengan diri anda.

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Di tempat kerja saya, pihak pengurusan bertindak cepat dalam menangani masalah/isu yang boleh menjejaskan kesihatan psikologi pekerja.	①	②	③	④	⑤
2. Pihak pengurusan bertindak secara bijak apabila ada perkara-perkara yang berkaitan dengan status psikologi pekerja dikemukakan.	①	②	③	④	⑤
3. Pihak pengurusan atasan menunjukkan sokongan bagi mencegah tekanan melalui campurtangan dan komitmen	①	②	③	④	⑤
4. Kesejahteraan psikologi kakitangan adalah keutamaan untuk organisasi tempat saya berkerja.	①	②	③	④	⑤
5. Pihak pengurusan secara jelas memberikan tumpuan terhadap kesihatan psikologi pekerja sebagai satu keutamaan.	①	②	③	④	⑤
6. Pihak pengurusan mengambilkira kesihatan psikologi pekerja sama penting dengan produktiviti.	①	②	③	④	⑤
7. Di tempat kerja saya, terdapat maklumbalas yang baik berkaitan keselamatan psikologi yang boleh menjejaskan saya.	①	②	③	④	⑤

Bersambung ke muka sebelah...

8. Maklumat-maklumat berkaitan dengan kesejahteraan psikologi tempat kerja selalu dibawa untuk dibincangkan oleh pengurus/penyelia atasan saya.	①	②	③	④	⑤
9. Sumbangan saya dalam menyelesaikan masalah kesihatan dan keselamatan pekerjaan dalam organisasi didengar.	①	②	③	④	⑤
10. Penyertaan dan pandangan di antara pekerja, kesatuan sekerja dan wakil dari pihak berkaitan dalam membincangkan hal-hal keselamatan dan kesihatan psikologi wujud di tempat kerja saya.	①	②	③	④	⑤
11. Pekerja adalah digalakkan untuk turut serta dalam hal-hal yang berkaitan dengan keselamatan dan kesihatan.	①	②	③	④	⑤
12. Pencegahan tekanan melibatkan semua peringkat pekerja dalam organisasi.	①	②	③	④	⑤

4. KEMURUNGAN

Di bawah ini terdapat 9 kenyataan yang menggambarkan mengenai diri anda. Tandakan pada nilai yang paling hampir dengan diri anda.

KENYATAAN	LANGSUNG TIDAK PERNAH	KADANG-KADANG	SANGAT KERAP	SETIAP HARI
1. Sepanjang bulan lepas, berapa kerap anda terganggu oleh kehilangan minat atau nikmat untuk membuat sesuatu?	①	②	③	④
2. Sepanjang bulan lepas, berapa kerap anda berasa kecewa, murung atau tiada pengharapan?	①	②	③	④
3. Sepanjang bulan lepas, berapa kerap anda hilang selera makan atau makan secara berlebihan?	①	②	③	④
4. Sepanjang bulan lepas, berapa kerap anda berperasaan buruk mengenai diri sendiri - atau merasakan anda sebagai orang yang gagal, kecewakan diri sendiri atau menghampakan keluarga anda?	①	②	③	④
5. Sepanjang bulan lepas, berapa kerap anda merasa payah untuk tidur, berterusan tidur atau terlalu banyak tidur?	①	②	③	④
6. Sepanjang bulan lepas, berapa kerap anda berasa begitu letih atau kurang tenaga?	①	②	③	④
7. Sepanjang bulan lepas, berapa kerap anda sukar untuk memberikan penumpuan terhadap sesuatu perkara, seperti membaca surat khabar atau menonton televisyen?	①	②	③	④
8. Sepanjang bulan lepas, berapa kerap anda terganggu oleh keadaan bergerak atau bercakap dengan sangat perlahan sehingga disedari orang lain, atau sebaliknya-jadi tak tentu arah, kelam kabut, asyik bergerak lebih kerap dari kebiasaannya?	①	②	③	④
9. Sepanjang bulan lepas, berapa kerap anda terganggu dengan berfikir adalah lebih baik untuk mati atau mencederakan diri sendiri dengan beberapa cara?	①	②	③	④

5. PRODUKTIVITI

Kenyataan ini bagi menggambarkan prestasi kerja anda. Sila jawab dengan JUJUR dan PALING TEPAT dengan diri anda.

1. Dengan menggunakan skala 0 ke 10, di mana skala 0 ialah yang paling buruk mengenai prestasi kerja, dan 10 ialah yang paling baik, berapakah nilai prestasi kerja anda dibandingkan dengan kebanyakan pekerja lain yang melakukan kerja yang sama dengan anda?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
2. Menggunakan skala yang sama, dari 0 ke 10, berapakah nilai prestasi kerja anda sepanjang setahun atau dua tahun terakhir ini?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
3. Menggunakan skala yang sama, 0 hingga 10, berapakah nilai keseluruhan prestasi kerja anda sepanjang hari anda berkerja dalam tempoh 4 minggu terakhir ini (28 hari)?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
4. Menggunakan skala yang sama, 0 – tidak sama sekali menjejaskan anda, 10 paling menjejaskan, bagaimanakah anda rasakan dalam tempoh 4 minggu ini (28 hari), masalah kesihatan telah menjejaskan produktiviti kerja anda?	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

6. SUMBER SOKONGAN PEKERJAAN

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

A: JCQ –Sokongan Sosial Penyeliaan

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU	SAYA TIDAK ADA PENYELIA
1. Penyelia saya mengambil berat mengenai kebajikan orang bawahannya.	①	②	③	④	⑤
2. Penyelia saya memberikan perhatian terhadap apa yang saya katakan.	①	②	③	④	⑤
3. Saya terdedah kepada kemarahan atau percanggahan pendapat dengan penyelia saya.	①	②	③	④	⑤
4. Penyelia memberi bantuan dalam memastikan kerja-kerja saya dapat disiapkan.	①	②	③	④	⑤
5. Penyelia saya berjaya mengajak orang lain bekerja bersama-sama.	①	②	③	④	⑤
6. Saya dilayan dengan sopan/hormat oleh penyelia/pengurus.	①	②	③	④	⑤
7. Rakan-rakan sekerja saya berkemampuan dalam melakukan kerja mereka.	①	②	③	④	
8. Rakan-rakan sekerja mengambil berat tentang saya.	①	②	③	④	
9. Saya terdedah kepada kemarahan dan percanggahan pendapat dengan mereka yang bekerja dengan saya.	①	②	③	④	
10. Rakan-rakan sekerja saya adalah peramah.	①	②	③	④	
11. Rakan-rakan saya sering memberi galakan antara satu sama lain untuk bekerjasama.	①	②	③	④	
12. Rakan-rakan sekerja saya membantu bagi memastikan kerja- kerja disiapkan.	①	②	③	④	
13. Saya dilayan dengan sopan/rasa hormat oleh rakan sekerja saya.	①	②	③	④	

Bersambung ke muka sebelah...

B: Tuntutan Kerja - Psikologikal

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU
1. Pekerjaan saya memerlukan saya bekerja dengan sangat pantas.	①	②	③	④
2. Pekerjaan saya memerlukan saya bekerja bersungguh- sungguh.	①	②	③	④
3. Saya tidak diminta /disuruh untuk melakukan kerja-kerja secara berlebihan.	①	②	③	④
4. Saya mempunyai masa yang cukup untuk menyiapkan kerja saya.	①	②	③	④
5. Kerja-kerja saya berhadapan dengan percanggahan untuk melakukan kerja yang lain juga.	①	②	③	④
6. Saya terpaksa meneruskan kerja ketika waktu rehat/ waktu makan bagi memastikan kerja dapat diselesaikan.	①	②	③	④

7. **PEMBANGUNAN KERJAYA**

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Pekerjaan saya sekarang memberikan saya peluang mempelajari perkara baru.	①	②	③	④	⑤
2. Saya mempunyai banyak peluang untuk mengembangkan potensi saya di tempat kerja.	①	②	③	④	⑤
3. Saya mempunyai peluang untuk mengembangkan bakat istimewa saya.	①	②	③	④	⑤

8. **PEMBUATAN KEPUTUSAN**

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU
1. Di dalam organisasi/syarikat ini, saya mempunyai pengaruh bagi sebarang keputusan yang dibuat oleh kumpulan/jabatan kerja saya.	①	②	③	④
2. Di dalam syarikat/organisasi ini, semua pihak adalah terlibat dalam membuat keputusan penting.	①	②	③	④
3. Di dalam syarikat/organisasi ini, saya diberitahu terlebih awal bagi sebarang keputusan penting.	①	②	③	④

9. **GANJARAN UNTUK PRESTASI**

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Jika prestasi kerja saya memuaskan, saya menerima pujian dan penghargaan daripada ketua saya.	①	②	③	④	⑤
2. Jika prestasi kerja saya memuaskan, saya berpeluang untuk mendapat bonus dan kenaikan gaji.	①	②	③	④	⑤
3. Jika prestasi kerja saya cemerlang, saya mempunyai peluang untuk membangunkan/merancang projek atau strategi kerja saya sendiri.	①	②	③	④	⑤

10. **PRESTASI**

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	TIDAK PASTI	SETUJU	SANGAT SETUJU
1. Rakan sekerja saya di jabatan ini mencari kaedah penyelesaian yang kreatif dan berkesan apabila dihadapkan masalah pekerjaan.	①	②	③	④	⑤
2. Rakan sekerja saya di jabatan ini mampu beradaptasi dengan setiap perubahan peraturan dan polisi syarikat.	①	②	③	④	⑤
3. Rakan sekerja saya di jabatan ini berkerja bersungguh-sungguh seolah-olah syarikat ini adalah kepunyaan sendiri.	①	②	③	④	⑤
4. Rakan sekerja saya di jabatan ini bersungguh-sungguh bagi mencapai sasaran kerja (deadlines).	①	②	③	④	⑤
5. Saya mempunyai peluang untuk mengembangkan bakat istimewa saya.	①	②	③	④	⑤
6. Rakan sekerja saya di jabatan ini menggalakkan rakan-rakan yang lain untuk melakukan lebih dari apa yang diminta.	①	②	③	④	⑤
7. Rakan sekerja saya di jabatan ini mencipta persekitaran kerja yang berkesan dalam menjalin hubungan di antara satu sama lain.	①	②	③	④	⑤

11. TUNTUTAN EMOSI

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

KENYATAAN	SANGAT SEDIKIT/ LANGSUNG TIDAK	SEDIKIT	KADANG-KADANG	KERAP	SANGAT KERAP
1. Adakah kerja anda meletakkan anda dalam situasi terganggu emosi?	⓪	①	②	③	④
2. Adakah kerja anda menuntut anda melakukannya secara emosi?	⓪	①	②	③	④
3. Adakahanda perlu melibatkan emosi anda dalam pekerjaan?	⓪	①	②	③	④
4. Adakah kerja anda memerlukan anda terlibat secara pribadi?	⓪	①	②	③	④

Bersambung ke muka sebelah...

12. BEBAN TUGAS

KENYATAAN	SANGAT TIDAK SETUJU	TIDAK SETUJU	SETUJU	SANGAT SETUJU
1. Saya mempunyai beban tugas yang begitu banyak bagi memastikan kerja saya dapat disiapkan.	①	②	③	④
2. Saya tak mempunyai masa yang cukup bagi menyiapkan kerja-kerja saya.	①	②	③	④

13. KONFLIK PERANAN

Sila jawab semua soalan dengan menandakan pilihan jawapan yang paling sesuai dengan pekerjaan anda. Jika anda merasakan tiada jawapan yang paling tepat, sila tandakan jawapan yang paling hampir sekali.

KENYATAAN	SANGAT SEDIKIT/ LANGSUNG TIDAK	SEDIKIT	KADANG-KADANG	KERAP	SANGAT KERAP
1. Adakah di tempat kerja anda, ada hal-hal pekerjaan yang diterima oleh sesetengah orang tetapi tidak oleh orang lain?	⓪	①	②	③	④
2. Adakah anda diminta melakukan sesuatu pekerjaan yang bertentangan dengan tugas anda?	⓪	①	②	③	④
3. Adakah anda adakalanya diminta melakukan satu-satu pekerjaan, yang memerlukan anda melakukan dengan cara yang berbeza dengan kebiasaan pekerjaan anda?	⓪	①	②	③	④
4. Adakah anda rasa adakalanya anda diminta melakukan kerja yang tidak berkaitan?	⓪	①	②	③	④