

Application of Karasek's Model on Job Satisfaction of Malaysian Workers

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Abstract

The present study investigates the relationship between psychosocial work environment, namely, job demands, job control and social support and job satisfaction involving 1125 manufacturing workers in Malaysia. Specifically, the study aims at testing the hypotheses of the Job Demand-Control (JDC) model (Karasek, 1979) and Job Demand-Control-Support (JDSCS) model (Johnson & Hall, 1988; Karasek & Theorell, 1990). Using hierarchical regression, this study finds that both job demands and social support are related to workers' job satisfaction. The result reveals that job control neither related nor moderated the relationship between job demands and job satisfaction. Contrary to the prediction of JDSCS, the joint three-way interaction effect between job demands, job control and social

Keywords: Job satisfaction, Karasek's model, Malaysian workers.

I. INTRODUCTION

JOB Demand-Control (JDC) provides crucial determinants or work-related wellbeing and health and has been the influential work stress model in occupational health psychology since the 1980s (De Lange, Taris, Kompier, Houtman & Bongers, 2003; Lindfors et al., 2007). This model identifies two essential aspects of work environments: job demand and job control.

According to Karasek (1979) job demands are: the psychological stressors involved in accomplishing the workload, stressors related to unexpected tasks, and stressors of job-related personal conflict (p. 291)....

Job control, also referred to as decision latitude, is defined as a working individual's potential control over his task and his conduct during the working day (pp. 289-290).

Karasek's (1979) concept of decision latitude was composed of two constructs: decision authority, referring to employees' authority to make job-related decisions; and skill discretion, measuring the extent of skill that employees use on the job. In a later study, Jones and Fletcher (1996) defined job demands as the physical, psychological, social, or organisational aspects of jobs that require physical and/or psychological efforts, and are associated with physiological and/or psychological costs.

Fig.1 summarises the four types of jobs identified in Karasek's model. The dichotomy of job demands and job control produces: A. for the high strain job type- high job demands and low job control, B. for the active job type - high job demands and high job control, C. for the low strain job type – low job demands and high job control, and D. for the passive job type – low job demands and low job control.

Karasek's Job Demand-Control model (1979) hypothesised that a combination of high job demands and low job control produced job strain. The most negative impact of psychological strain was found to be among employees working with high job demands and low job control (high strain job). This postulation was known as the strain hypothesis.

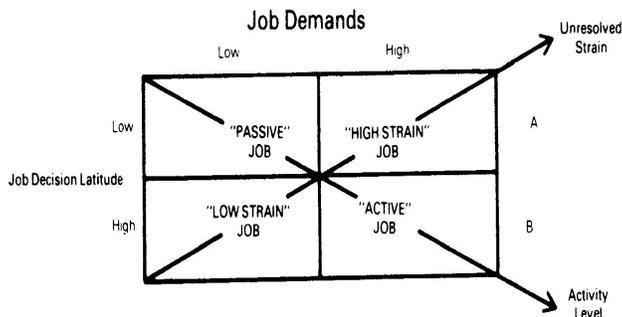


Fig.1 The Job Demand-Control model (Karasek, 1979)

In addition to the independent and additive contribution of job demands and job control in predicting wellbeing, the JDC model also postulated the buffer hypothesis (an interactive joint effect of job demands and job control) in which job control can moderate the negative consequences of high job demands on wellbeing. The model also includes the learning hypothesis which posits that the passive or active nature of a job can influence an employee's learning or growth. Employees who possessed high demands and control in their work environment (active jobs) became very productive and acquired new skills (Karasek, 1979). The passive job type was characterised as the job condition where employees experienced both low job control and low demands. Employees in this group faced difficulty in problem solving or tackling challenges and were unmotivated to participate in overall activities. However, numerous studies apply the JDC and JDCS models to test the strain hypothesis (e.g. Macklin, Smith & Dollard, 2006; Van Yperen & Hagedoorn, 2003) rather than learning hypothesis. This review focuses exclusively on research literature on the strain hypothesis.

Johnson (1986) argued that the JDC model mainly focused on job control as a potential psychosocial resource without considering social support which is as important as job control as a moderator. Thus, in 1988, it was proposed that Karasek's model be extended by the addition of social support as a third dimension. In the Job Demand-Control-Support model developed by Johnson and Hall (1988), the highest risk of poor health and wellbeing is expected when employees experience a high isolation-strain (iso-strain) job, that is, a job characterised by high job demands, low job control and low social support.

II. LITERATURE REVIEW

Reviews of studies conducted in three different phases by Van der Doef and Maes (1999) for the years 1979 to 1997, De Lange, Taris, Kompier, Houtman and Bongers (2003) for 1979 to 2000, and Hausser, Mojzisch, Niesel and Schulz-Hardt (2010) for 1998 to 2007, generally report consistent findings regarding strain and iso-strain hypotheses of the JDC and JDCS models. The strain hypothesis of the JDC model postulates that individuals experienced high strain and low levels of wellbeing whenever working with high job demands and low job control (Karasek, 1979). The JDCS model postulates the iso-strain hypothesis in which employees experience the job strain and low levels of wellbeing whenever working with high job demands, low job control and low

social support. Evidence shows that job demands, job control and social support create the main and additive effects on strain/wellbeing (De Lange et al., 2003; Hausser et al., 2010; Van der Doef & Maes, 1999).

A review of 20 years of empirical research using Karasek's model confirmed that high demand and low control work environments are associated with lower psychological wellbeing and job satisfaction, burnout and other forms of psychological distress (Van der Doef & Maes, 1999), and significantly impact on employee wellbeing (Noblet, 2003). An early study by Marshall, Barnett and Sayer (1997) involving 600 manufacturing and services industries in the United States found that job demands significantly affect workers' psychological distress. Some studies investigated the main and additive effects of JDCA variables and found that job demands, job control and social support were statistically predictive for wellbeing, reports of health risk, levels of psychological wellbeing, job satisfaction and fatigue (Chambel & Curral, 2005; Macklin, Smith & Dollard, 2006; Niedhammer, Chastang & David, 2008; Pelfrene et al., 2002; Rodriguez, Bravo, Peiro & Schaufeli, 2001; Van Yperen & Hagedoorn, 2003). In an experimental study involving 120 undergraduate students in Australia, Searle, Bright and Bochner (1999) found that job demands and social support have a significant main effect on stress and performance. These students showed poorer performance in conditions of high job demands and low control. Jobs that required psychological demands and low social support have also been found to have a negative impact on employee mental health, vitality and burnout (Escriba-Aguir & Tenias-Burillo, 2004) and job satisfaction (Huda et al., 2004). These jobs are also positively associated with anxiety, stress and depression (Edimansyah, et al., 2008).

On the other hand, no association was found between job control and psychological distress (Marshall et al., 1997), between job control and stress (Searle et al., 1999) and between job control and workers' stress, anxiety and depression Edimansyah et al. (2008).

Previous research findings into the role of social support on positive outcomes of employee wellbeing have been inconsistent and contradictory. For example, social support has been found to be associated with increased absenteeism among 10,308 non-industrial civil servants in London (Rael, Stansfeld, Shipley & Head, 1995). In later works, neither Pomaki and Anagnostopoulou (2003) nor Rasku and Kinnunen (2003) revealed that social support was a significant predictor of job satisfaction in Greek and Finnish teachers, respectively.

In contrast, supervisor support was found to increase the level of respondents' intrinsic motivation (Van Yperen & Hagedoorn, 2003), to increase performance (Bhathumnavin, 2003), to have strong associations with job satisfaction (Brough & Pears, 2004) and contribute to employees' psychological wellbeing (Gilbreath & Benson, 2004). Conversely, low social support was found to lead to severe outcomes for employees' psychological wellbeing (Escriba-Aguir & Tenias-Burillo, 2004).

In reviewing the literature, it is found that the main effect of JDCA variables on wellbeing is substantially supported and that a clear relationship is established between those variables with outcomes measured. However, the job demands x job control interaction is inconclusive, receiving only modest support (Chay, 1993; Van der Doef & Maes, 1999). Besides the inconsistencies in the literature regarding the moderating effect of job control, previous studies have indicated inconsistencies in the moderating effects of social support on wellbeing, work stress and occupational stress (Van der Doef & Maes, 1999; Dormann & Zapf, 2002; Brough & Pears, 2004).

A. Interactions Between Job Demands and Job Control

Van der Doef and Maes (1999) report that out of 31 studies that examined the moderating effect of job control on the relationship between job demands and strain/wellbeing outcomes, only fifteen partially supported

the buffering hypothesis of the JDC model. For instance, similar to Pelfrene et al. (2002) who did not find evidence for buffering effect of job control on the relationship between job demands and psychological distress, neither Pomaki and Anagnostopoulou (2003) nor Rasku and Kinnunen (2003) found buffering effect on teachers' wellness outcomes. Testing the buffer hypothesis of the JDC model, Niedhammer et al. (2008) also did not find evidence of the interaction between job demands x job control on health outcomes in self-reported health, sickness absence and work injury among French workers.

In contrast, other studies (e.g. Chambel & Cural, 2005; Macklin et al., 2006; Meier, Semmer, Elfering & Jacobshagen, 2008; Van Yperen & Hagedoorn, 2003) support the buffer hypothesis that job control buffers the demands and strain/wellbeing relationship. For example, Van Yperen and Hagedoorn's (2003) study involving 555 nurses in the United States found an interactive joint effect of job demands x job control on workers' fatigue, in which job control ameliorated the high psychological job demands and fatigue relationship. The study by Chambel and Cural (2005) involving 825 Portuguese university students also found a significant effect of two-way interaction in which job control mitigates the relationship between job demands and anxiety/depression.

B. Interactions Between Job Demands and Social Support

A few studies have shown positive results on the moderating effects of social support, but other studies have not. For example, a survey by Beehr et al. (1990) conducted among 225 nurses in the United States, showed that social support buffers the relationship between occupational stressors and individual strain. In addition, Chay's (1993) study involving 117 entrepreneurs confirmed that the protective role of social supports in the workplace has a strong buffering effect that mitigates stressors and enhances physical and psychological wellbeing. In that study, individuals with high social support were little affected by low job discretion, while those with low support showed more psychological illness.

Conversely, in a study of 119 two-career couples, Parasuraman, Greenhaus and Granrose (1992) established that social support did not mitigate the relationship between work role stressors, work family conflict and family role stressors, and wellbeing. Furthermore, social support buffers neither the relationship between job strain and psychological distress nor the negative effect of job characteristics on respondents' wellness (Pelfrene et al., 2002; Pomaki & Anagnostopoulou, 2003; Rasku & Kinnunen, 2003). Fujishiro (2005) also found that social support provides no moderating effect between stressors (i.e., role conflict and workload) and job strain and psychological wellbeing.

Cultural differences might contribute to the inconsistencies in the findings of these studies. Barak, Findler and Wind (2003) state that the structures of social support networks may vary from one culture to another. By taking into account Hofstede's dimensions of cultural differences based on nationality (power distance, individualism-collectivism femininity-masculinity and uncertainty-avoidance) ("Geert Hofstede cultural dimensions," 2009), the current review suggests the need for further investigation of social support in the Malaysian context, an example of collectivist culture (Bochner, 1994; Burns & Brady, 1992). Barak et al.'s (2003) study involving 950 workers in the United States (individualistic culture) and 114 workers in Israel (collectivistic culture) found that the structure of the social support network for the Israeli workers was highly interconnected compared to the social support network for the workers in the United States.

C. Interactions Between Job Demands, Job Control and Social Support

With regard to the three-way interaction effect, a review of the literature reveals inconsistent findings (e.g. Chambel & Cural, 2005; Pomaki & Anagnostopoulou, 2003; Rasku & Kinnunen, 2003; Rodriguez et al.,

2001; Searle et al., 1999). For example, Van Yperen and Hagedoorn (2003) reported a significant three-way interaction (job demands x job control x social support) on employees' intrinsic motivation. The interpretation of interaction showed that high job demands were associated with greater intrinsic motivation in a high control and low social support group, whereas high social support was associated with greater intrinsic motivation regardless of the level of job demands and job control.

Contrary to the prediction of the JDCS model, Rodriguez et al. (2001) found that the findings did not corroborate the assumption that low social support combined with low job control and high job demands is associated with increased job dissatisfaction. Contrary to the model prediction, increased job demands with increased job control (perceived job control and high internal locus of control), together with high social support are associated with higher job dissatisfaction. In this context, workers experienced a damaging effect of excess control specifically in high social support situations. Also relevant to testing three-way interaction is the study by Macklin et al. (2006) which reported the insignificance of the joint interactive effect of job demands x job control x social support on employees' psychological distress and job satisfaction.

III. RESEARCH OBJECTIVES AND HYPOTHESES

Since the review literature provides insights into the need to further investigate the prediction of the jdcs model, particularly in the eastern cultural setting, the objectives of the research are as follows:

- (A) To investigate the main effect of job demands, job control and social support on workers' job satisfaction (H1– job demands is negatively related to job satisfaction; H2 – job control is positively related to job satisfaction; H3 – social support is positively related to job satisfaction).
- (B) To investigate the extent to which job control buffers the negative effects of job demands on workers' job satisfaction. (H4– job control buffers the negative effects of job demands on job satisfaction).
- (C) To investigate the extent to which social support buffers the negative effects of job demands on workers' job satisfaction). (H5 – social support buffers the negative effects of job demands on job satisfaction).
- (D) To investigate the extent to which social support buffers the negative effects of high job demands and low job control (job strain) on workers' job satisfaction. (H6 – social support buffers the negative effects of high job demands and low job control on job satisfaction).

IV. METHODOLOGY

A. Participants

A sample of 1125 Malaysian manufacturing workers, consisting of 536 men (47.6%) and 589 women (52.4%) aged from 18 to 59 years participated in this study.

B. Measures

Job demands, job control and social support. Twenty-two items in the Job Content Questionnaire (JCQ), (Karasek, 1985) were based on the Job Demand-Control-Support (JDCS) model. The questionnaire measures five items of job demands derived from the core JCQ version (e.g. "I am free from conflicting demands that others make"). Job control consists of nine items (e.g. "My job allows me to make a lot of decisions on my own"), and eight items of social support (e.g. "People I work with are competent in doing their jobs"). Items of

JCQ were scored on a 4 point Likert-type scale, ranging from 1= strongly disagree to 4= strongly agree. Out of 22 items, 5 negative statements required reverse scoring. In the present study, Cronbach's alpha coefficients were .51 for psychological demands, .60 for job control and .84 for social support. A low internal reliability for the psychological job demands scale is comparable with previous research literature in Asian settings (Cheng, Luh, & Guo, 2003; Li, Yang, Liu, Xu & Cho, 2004).

Job satisfaction. This study measured the composite job satisfaction by using the Job Satisfaction Survey (JSS) developed by Spector (1997). Thirty-six items were used to assess total job satisfaction, using 9 subscales (each consisting of 4 items). These included pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work and communication. Respondents rated the favourable and unfavourable aspects of their jobs using a 6 point Likert-type scale ranging from 1= disagree very much to 6=agree very much. Respondents who agree with positively worded items (e.g. "I feel I am being paid amount for the work I do"), and disagree with negatively worded items (e.g. "There is really too little chance for promotion on my job") will have high scores on JSS, indicating higher levels of job satisfaction.

C.Procedure

Approval from the Victoria University Human Research Ethics Committee was obtained. Respondents were selected from a chosen industry, situated on the East and West Coast of Peninsula Malaysia, where more manufacturing companies are located (FMM Directory of Malaysian Industries, 2008) by approaching the top management team members (Chen, Sui, Lu, Cooper & Phillips, 2009), managers or employees with whom the researcher has professional connections or personal contacts (Lu, Gilmour, Kao & Huang, 2006). In each organisation, the contact person was the Human Resources Manager who helped the researcher in identifying the prospective respondents, and distributing and collecting the questionnaires. To ensure that the procedure of data collection followed by ethical considerations, the researcher included the information letter explaining the aim of the research, research instructions and confidentiality as well as the consent form. All the completed questionnaires were returned in sealed envelopes to the Human Resources Managers within two weeks.

D.Statistical Analysis

Hierarchical multiple regression was conducted to test the direct and moderating effect hypotheses (Cohen & Cohen, 1983). This technique has been widely used in work stress literature testing the JDC and JDCS models (e.g. Macklin, Smith & Dollard 2006; Niedhammer, Chastang & David, 2008). In this study, two-way interaction and three-way interaction were tested. Thus, this study created interaction terms by standardising the variables before multiplying the variables together as recommended as this technique is able to reduce the risk of multicollinearity (Cronbach, 1987; Dunlap & Kemery, 1987) The variables were introduced into the regression models in four successive steps. In the first step, demographic variables were entered into the model as control variables. In the second step, job demands and moderating variables including job control and social support were entered into the regression model. In the third step, two-way interaction was added into the model (job demands x job control, job demands x social support). In the final step, three-way interaction was entered into the model to complete the analysis (job demands x job control x social support). In terms of interaction effect, the effect reaches significance when it contributes to the relationship between predictor and criterion variables and vice versa. The graphical plot (Aiken & West, 1991) furthers explain the pattern of moderating effect.

V. RESULTS

All data entry and analyses were conducted using SPSS Version 17. Job demands, job control and social support were correlated with job satisfaction in the expected direction ($r = -.26$, $r = .11$, $r = .43$, respectively). A summary of the means, standard deviations and correlations between variables is shown in Table 1.

TABLE I
MEANS, STANDARD DEVIATIONS AND CORRELATIONS BETWEEN STUDY VARIABLES

Variables	<i>M</i>	<i>SD</i>	1	2	3	4
Job demands	33.84	4.28	-			
Job control	37.81	4.74	.07*	-		
Social support	23.37	3.33	-.21**	.26**	-	
Job satisfaction	132.66	19.50	-.26**	.11**	.43**	-

N=1125. All are significant at * $p < .05$; ** $p < .01$

Table 2 presents the results of regression analysis tested the main and moderating effects hypotheses. Control variables (gender, age, ethnicity and marital status) accounted for a significant increment explaining 1.9 percent of variance in job satisfaction. In the second step, job demands and social support together explained 21.4 percent Job demands ($\beta = -.173$) and social support ($\beta = .389$) were significantly related to job satisfaction, thus supporting H1 and H3. However, H2 was rejected since job control was insignificant related to job satisfaction.

TABLE II
HIERARCHICAL REGRESSION OF JOB SATISFACTION ON JOB DEMANDS, JOB CONTROL AND SOCIAL SUPPORT

	Standardized coefficient β			
	Step 1	Step 2	Step 3	Step 4
<i>Control variables</i>				
Gender	-.039	-.061*	-.056*	-.057*
Age	.028	.059*	.056	.056
Race	-.120***	-.116***	-.113***	-.112***
Marital status	-.041	-.030	-.029	-.030
<i>Predictor variables</i>				
Job demands (JD)		-.173***	-.171***	-.184***
Job control (JC)		.031	.030	.040
Social support (SS)		.389***	.383***	.380***
<i>Two- way interaction</i>				
JD x JC			.002	.013

JD x SS		.096**	.097***	
<i>Three-way interaction</i>				
JD x JC x SS			.043	
R^2	.019	.233	.243	.244
ΔR^2	.019***	.214***	.009**	.002
F change	5.51***	104.03***	6.85**	2.22
Df	4,1120	3,1117	2,1115	1,1114

* p< .05; **p<.01; ***p<.001

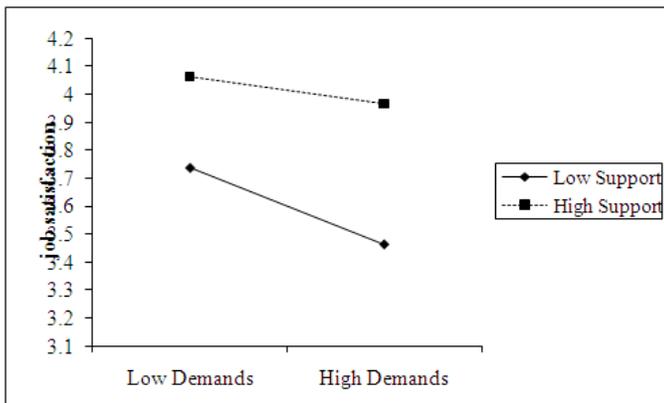


Fig.2 Social support as moderator between job demands and job satisfaction

Fig. 2 shows the interaction between job demands and social support. There was a negative relationship between job demands and job satisfaction for respondents with both low and high social support. There is much steeper negative relationship between job demands and job satisfaction for respondents with low social support and less pronounced for respondents with high social support. However, the level of job satisfaction is still remains higher for high support respondents as compared to low support. Social support has a positive moderator effect ($\beta = .97$) on the relationship between job demands and job satisfaction. Thus, employees with high social support were protected from the negative effect of job demands on job satisfaction.

VI. DISCUSSION AND CONCLUSIONS

The present study has tested the JDACS variables of job demands, job control and social support in predicting job satisfaction among 1125 Malaysian workers. Results confirm that psychological job demands, job control and social support contribute to workers’ job satisfaction. Therefore, this study has produced results that corroborate many findings of a great deal of previous work in this field (Escriba-Aguir & Tenias-Burillo, 2004; Huda et al., 2004; Noblet, 2003). More specifically, although the results of this study further support the negative consequences of high job demands and low job control on employee wellbeing are in many ways consistent with findings in the western context (e.g. Brough & Pears, 2004; Doef & Maes, 1999; Kivimaki et al., 2003), they do differ in some.

Findings of high job demands predicting low levels of employee wellbeing was largely consistent with Pomaki and Anagnostopoulou (2003) and Rasku and Kinnunen (2003). However, unlike the present study, these

researchers did not find significant effects of social support on employee wellness, nor did they find social support (which is a significant predictor of employee wellbeing in the current study) as a predictor of wellbeing (Chay, 1993; Pomaki & Anagnostopoulou, 2003; Rasku & Kinnunen, 2003). In other words, they found that social support had no main effect on wellness/health outcomes and psychological health.

Social support promotes wellbeing in the sense of promoting positive affect by influencing individuals' emotions, cognitions and behaviours (Cohen, Gottlieb & Underwood, 2000), as well as self belonging and self esteem. In the current study, social support received from both supervisors and co-workers played a significant role in enhancing employee wellbeing. In the Malaysian work context, Idris, Dollard and Winefield (2010) also found that discussion with superiors whenever a problem related to work occurred was regarded as supportive by employees. Furthermore, Spector, et al. (2007) found that people in collectivist societies have greater attachment to their co-workers when sharing experiences of adverse conditions in the workplace. This provides opportunities to discharge distressing emotions, receive encouragement, and generate positive emotions.

The current findings further supports a qualitative study in Malaysia conducted by Idris, Dollard and Winefield (2010) who found that job control was not regarded as an important as other factor that can affect their work related wellbeing. Huda et al. (2004), however, showed that job control was an important factor associated employees' job strain. Respondents in their study were Malaysian professionals and lecturers whose nature of work requires for challenging task, intellectual development and sense of control. On the contrary, respondents of this study consisted of employees from different position levels including where the majority belonged to assembly and supervisor groups, thus, the nature of performing the job was in group. The findings of this study concur with another study involving eastern country by Spector et al (2004) who discovered that as a collectivist society, Chinese workers emphasized social network, including the work group, as opposed to individualist focusing on personal control. The nature of collectivist society prefers collective rather than personal control: for example, the nature of Malaysian workers, since Malaysia is classified as having high power distance (Hofstede, 1991).

The inconsistencies of findings between Western and Asian contexts regarding employee perception on how psychosocial work environment variables affect levels of wellbeing might be attributed to cultural differences. According to Dilworth-Anderson and Marshall (1996) and Dunkel-Schetter, Sagrestano, Feldman and Killingsworth (1996), these inconsistencies are due to cultural differences in how job characteristics are constructed within specific cultures. For instance, as found in the current study, social support is the most dominant aspect of the psychosocial work environment predicting employee wellbeing. Similarly, Pal and Saksyik (2008) found that Indian but not Norwegian employees reported social support at the workplace as a significant job resource relating to employee stress. The most likely explanation to the similar perceptions of Malaysian employees of this study to Indian employees in Pal and Saksyik's study is that they both represent eastern societies and share similarly collective cultures. Collective societies tend to emphasize relationships in both work and personal lives to provide stronger social networks. This is consistent with the present study which focused that receiving social support from both supervisor and co-workers is the most valuable predictor of Malaysian job satisfaction.

A. Job Control As A Moderator Variable Between The Relationship of Job Demands and Job Satisfaction.

The results of this study demonstrated that job control did not moderate the negative consequences of job demands on job satisfaction. The prediction of JDC which postulates a joint interactive effect of job demands

and job control in prediction job satisfaction was not applied to the current study involving workers from collectivist society. This result is in agreement with previous studies (e.g. Pomaki & Anagnostopoulou, 2003; Rasku & Kinnunen, 2003; Verhoeven, Maes, Kraaij & Joekes, 2003). Therefore, failure to support the moderating role of job control in the current study can be attributed to the possibility of cultural differences. For example, a recent study by Bhagat, Krishnan, Nelson, Leonard, Ford and Billing (2010) revealed that job control moderated the stressors-strain relationship for countries with high scores of individualism (USA and New Zealand), but not for countries with low scores of individualism (German, South Africa, Spain and Japan). In other words, the role of job control in moderating the job demands and job satisfaction relationship as postulated by the JDC model which was developed by Karasek was not applied in the collectivist culture of Malaysian employees.

Another possible reason for nonsignificant moderating effect of job control in the current study is the different perception of employees on the job control. The current findings further support another recent finding in Malaysia by Panatik (2010). Since the education level of the majority of respondents in the current study was similar with those in Panatik's study, it is probable that the respondents have similar perceptions in terms of placing the importance of job control, that, prefers less control and assuming more control causes more job demands. In addition, the perception of employees "*increased control increased responsibility and often increased workload*" (Spector, 1986, p. 1014) hindered the significant moderating role of job control in predicting employee wellbeing in the current study.

B. Social Support As A Moderator Variable Between The Relationship of Job Demands and Job Satisfaction.

In the current study, social support not only exerts main effect on workers' job satisfaction, however, act as the moderator variable in the relationship between job demands and job satisfaction. This significant moderating effect of social support was consistent with the findings of Beehr et al. (1990) and Chay (1993). Employees benefit from working with high supportive supervisors and co-workers, thus their perception of experiencing high job demands were less likely to decrease their job satisfaction rather than their workmate with low social support. The most likely explanation of the significant moderating effect of social support in the current study is there is a match between stressor and the support that employee received (Terry, Nielsen & Perchard, 1993; Pelfrene et al., 2002). In other words, in the current study, social support received from workplace (supervisor and co-workers support) matched the stressor derived from the workplace (job demands), thus the significant moderating effect occurs.

C. Three-way interaction between job demands, job control and social support

The three-way interaction was not supported by the present data, similarly with previous studies (Pomaki & Anagnostopoulou, 2003; Rasku & Kinnunen, 2003). Thus, the extension of JDC and JDCS models among Malaysian workers in this study was not supported. Since only a few studies had tested the three-way interaction in the eastern cultural settings, particularly Malaysia, this interaction effect needs further investigation before reliable findings can be concluded. The current findings suggest that job control and social support contributes a more significant role in direct effect rather than moderating effect. Furthermore, this result may be explained by the fact that higher order interaction effects are statistically difficult to find (Mauno, Kinnunen & Ruokolainen, 2006). In sum, the current study which was investigated in the collective culture setting provide further evidence against the buffering effects hypotheses, which received a modest support from Western studies

In conclusion, the current study has shown that job demands and social support are the psychosocial aspect that related to worker's job satisfaction. Further, interactive effects of job demands and social support indicated that fostering support is important as receiving support from both supervisors and co-workers able to ameliorate the negative consequences of job demands. The strength of this study is that it is among the first to investigate JDC and JDCS using a non-Western sample of the manufacturing sector workers (Malaysian organizations); thus, the overall findings should contribute to further understanding of the cross-cultural aspects of job satisfaction. It is recommended that further research will employ cross-cultural study expanding the strength of the current study including comparison of Malaysia and Australia. Thus, future researchers will get a better understanding of either the JDCS variables will contribute significantly to employee wellbeing in both countries with different cultures, as there is a lack of comparative study involving developing countries (Burke, 2010)

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