

Impact of Karasek's Job-Demand-Control-Support Model on the Employee Wellbeing in Sales Force of Pakistani Insurance Companies

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Abstract

This study investigated the effects of the Karasek's Job Demand-Control-Social Support (JDSCS) Model on employee well-being and quit intentions. Social support at work is measured by including both the peer support and the supervisor support. Furthermore, well-being is assessed by job satisfaction and burnout.

To investigate the associations between job characteristics (e.g. JDSCS), well-being and quit intentions, the data was collected from the sales employees of four major insurance companies of Pakistan. Standard self report questionnaires were used to collect data. Regression analysis was used to test the proposed hypotheses from 311 usable responses.

Results indicated that job characteristics were all linked with well-being, assessed by job satisfaction and burnout. In addition, burnout along with supervisor and peer support is significant predictor of quit intentions. Furthermore, burnout partially mediates the effect of peer support on quit intentions.

Keywords: Karasek's Job Demand-Control-Social Support (JDSCS) Model, Wellbeing, Job Burnout, Job Satisfaction, Peer support, Supervisor support and Intentions to leave

Introduction

The Job demand-control (JDC) model (Karasek, 1979) is among the most prominent theoretical frameworks in the research on work and wellbeing. This theoretical framework recognizes two important characteristics of work: psychological work demands and the degree of control employees have in their jobs. Later research expanded the model by adding a 'social support' dimension to the model (Johnson et al, 1989). Thus, the model is called Job demand-control-support (JDSCS) model (Karasek & Theorell, 1990). JDSCS model is based on three basic features of the job environment: (1) "job demands" placed on employees, (2) "job control" allowing employees to decide how to meet those demands, and (3) 'social support' to protect the individuals alongside the worst consequence of anxiety. Karasek (1979) described job demands as mental and emotional stressors existing in the job surroundings (e.g. long working hours or psychological work demands). Job control, on the other hand, has been illustrated as the employee's capacity to manage his/her personal actions (Karasek & Theorell, 1990). Social support at job refers to in general levels of help existing on the job

from both managers and colleagues (Payne, 1979). In psychological literature this model has been consistently used to examine employee wellbeing, however its application in organizational behaviour literature is very limited. In organizational behaviour literature, JDCS model can be used to study employee behaviour (e.g. absenteeism and turnover).

Rationale of the study

This study has following important contributions to make. First, supervisor and peer support are used to measure social support in workplace. Second, JDCS model is used to study employees' quit intentions. Finally, JDCS model is used to examine the direct and indirect influence (through wellbeing indicators) on intentions to leave. Third, this study will examine a unique study population that has not been examined before i.e. employees of the four major insurance companies of Pakistan. The work pressures in insurance companies make them an important case for studying employee wellbeing.

Aims of the study

Using JDCS model, the present study has the following aims:

1. Examine the impact of JDCS model on employee wellbeing assessed through job satisfaction and burnout.
2. Examine the impact of JDCS model on employees' quit intentions.
3. Examine the indirect effects of JDCS model on employees' quit intentions through employee wellbeing.

Literature Review

There are two versions of JDCS model: additive and interactive. The interactive (or buffer) hypothesis predicts that social support moderates the negative influence of high demands and low job control on wellbeing (Van der Doeff & Maes, 1999). The additive hypothesis of JDCS model predicts that employees' well-being will be higher when they perceive high support, high control and low demands (Wood, 2008). Both hypotheses have different implications. Evidence for moderating effects of social support suggests increasing job control and social support without any mention of the repercussions of high demands.

However, if wellbeing is affected by the additive influence of job demands, this strategy (high support and control) will not be effective. Thus, it is equally imperative to examine the additive effects of job demands, control, and support on employee wellbeing. Given the importance of the two versions of hypotheses, both have been empirically examined in the wellbeing literature. Although a majority of studies have examined both additive and moderating hypothesis, the moderating hypothesis has been reviewed by Van der Doeff & Maes (1999). Hence, this review pertains to the additive hypothesis concerning JDCS model and wellbeing.

Numerous studies have used additive hypothesis to study various indicators of wellbeing such as burnout (Bakker *et al.*, 2005; Melamid & Kushnir, 1991; Schufeli & Bakker, 2004), anxiety (Fletcher & Jones, 1993; Wood, 2008), job satisfaction (Lu, 1999; Pugliesie, 1999; de Jonge *et al.*, 2001; Fletcher & Jones, 1993; Cahill & Landsbergis, 1996), job distress (Bourbonnais *et al.*, 1996; Pelfrene *et al.*, 2002; Loscocco & Speitze, 1990; Roxburg, 1996), psychological disorder (Stansfeld *et al.*, 1995), exposure and vulnerability (Roxburg, 1997), psychological wellbeing (Sonntag & Zijlstra, 2006; de Jonge & Schufeli, 1998; Stansfeld *et al.*, 1995), and stress/strain (Cahill & Landsbergis, 1996) etc.

This hypothesis has received support in a number of cross sectional studies (Cahill & Landsbergis, 1996; de Jonge *et al.*, 2001; Fletcher & Jones, 1993; Loscocco & Spitze, 1990; Lu, 1999; Melamed & Kushnir, 1991; Pelfrene *et al.*, 2002; Roxburgh, 1996; Schufeli &

Bakker, 2004; Stansfeld et al, 1995), whereas received partial (e.g. Bourbonnais *et al.*, 1996) and no support for the hypothesized associations was found in others (Barnet & Brenan, 1995; Lerner *et al.*, 1994; Moyle, 1995).

The additive hypothesis was also examined in a few longitudinal studies along with interaction hypothesis (Johnson *et al.*, 1995; Kawakami *et al.*, 1992); however, these studies are generally non-supportive, except one (Johnson *et al.*, 1995). Support for the hypotheses pertaining to the association between demand-control-support and psychological or job related wellbeing in all other studies relates to be free of sample features (gender, population size, heterogeneity, plus occupation).

The inconsistent results of observed experiments of the model include resulted in a number of theoretical and methodological criticisms of JDCS (de Jonge & Kompier, 1997; Kristensen, 1995; Van Der Doeff & Maes, 1999). The first criticism levels that support has typically been measured as ‘supervisor support’. It is very imperative to consider the complex nature of social support (e.g. Payne, 1979). Different kinds of social supports have not been integrated in the JDCS model and, consecutively, have not been examined. Individuals in organizations are linked to each others as supervisors-subordinates or peers. Thus, social support construct can be expanded to include both kinds of supports available to each employee. This study will examine the ‘peer support’ along with ‘supervisor support’. Consistent with JDCS theory, following three conglomerate hypotheses will be tested.

H₁: Excessive job demands will have a significant positive effect on burnout while a negative effect on job satisfaction.

H_{1a}: Excessive job demands will have a significant positive effect on burnout.

H_{1b}: Excessive job demands will have a significant negative effect on job satisfaction.

H₂: Job control, supervisor support and peer support will have a negative impact on burnout.

H_{2a}: Job control will have a negative impact on burnout.

H_{2b}: Supervisor support will have a negative impact on burnout.

H_{2c}: Peer support will have a negative impact on burnout.

H₃: Job control, supervisor support and peer support will have a positive influence on job satisfaction.

H_{3a}: Job control will have a positive influence on job satisfaction.

H_{3b}: Supervisor support will have a positive influence on job satisfaction.

H_{3c}: Peer support will have a positive influence on job satisfaction.

The question ‘why employees leave’ have important managerial implications especially considering the separation, recruitment, and training costs. Numerous researchers have attempted to investigate the determinants of intentions to quit (e.g. Kramer et al., 1995; Porter & Steers, 1973; Price and Mueller, 1986; Saks et al, 1996). Among the variables that have been consistently reported as antecedents of turnover intentions are job satisfaction (e.g. Lum *et al.*, 1998; Igbaria & Greenhaus, 1992, Kahn *et al.*, 1964; Leong *et al.*, 1996). burnout (Leung & lee, 2006; Taylor *et al.*, 1990; Weisberg & Sagie,1999), work demands (Spector et al., 2007), job control (Spector, 1986; Boswell *et al.*, 2004), and social support (Freddolino & Heaney, 1992; Moore, 2002;Kalliath & Beck, 2001; Munn *et al.*, 1996).

Earlier research has recommended that to reduce intentions to quit work demands, supervisor support, job satisfaction, and burnout should be monitored actively. Spector et al. (2007) in a cross-national research of 5270 participants from 20 countries found a positive association between work demands (workload) and intentions to quit. They suggested that

excessive work demand placed on employees make it difficult for employees to cope with their family responsibilities. When employees feel that their work responsibilities are interfering with their family role, they think of changing their job. In a meta-analysis of job control and worker participation, Spector (1986) establish a significant negative association among job control and quit intentions.

Moore (2002) establishes that social support minimized the intensity of burnout among hospital nurses and indirectly, through burnout, minimized nurses' quit intentions. Similar direct and indirect findings were reported by Beck and Kalliath (2001). In another study, Freddolino & Heaney (1992) institute that peer support has a positive relationship with job satisfaction and negative relationship with quit intentions. Weisberg & Sagie (1999), in a sample of Israeli teachers, found that burnout positively and significantly influenced intention to leave. Similar findings were reported by others as well (Leung and lee, 2006; Taylor *et al.*, 1990). Job satisfaction has been recognized as the most consistent predictors of quit intentions. The meta-analysis of 155 studies, contributing 178 independent samples, (Tett and Meyer, 1993) has reported a negative association between job satisfaction and quit intentions. Thus, following hypotheses were derived:

H₄: Excessive demands and burnout will have a positive effect, while job satisfaction will have a negative effect on quit intentions.

H_{4a}: Excessive demands will have a positive effect on quit intentions.

H_{4b}: Burnout will have a positive effect on quit intentions.

H_{4c}: Job satisfaction will have a negative effect on quit intentions.

H₅: Job control, supervisor, and peer support will have a negative effect on quit intentions.

H_{5a}: Job control will have a negative effect on quit intentions.

H_{5b}: Supervisor support will have a negative effect on quit intentions.

H_{5c}: Peer support will have a negative effect on quit intentions.

Thus, an important point of contention is that JDCS theory can be used to predict employees' decision to stay with or leave the organization. Consistent with the earlier literature, job satisfaction, and burnout are used as indicators of employee wellbeing, in turn wellbeing is hypothesized to influence employees' intentions to quit. Taking H₁-H₅ together, we may say the burnout and job satisfaction mediate the association among job demands, control, support and intentions to quit.

Hypothesis 6: Job satisfaction may mediate the association between Job demands, job control, supervisor, and peer support and quit intentions.

H_{6a}: Job satisfaction may mediate the association between Job demands and quit intentions.

H_{6b}: Job satisfaction may mediate the association between Job control and quit intentions.

H_{6c}: Job satisfaction may mediate the association between supervisor and quit intentions.

Hypothesis 6d: Job satisfaction may mediate the association between peer support and quit intentions.

Hypothesis 7: Burnout may mediate the association between Job demand, Job control, supervisor, and peer support and quit intentions.

H_{7a}: Burnout may mediate the association between Job demands and quit intentions.

- H_{7b}: Burnout may mediate the association between Job control and quit intentions.
- H_{7c}: Burnout may mediate the association between supervisor and quit intentions.
- H_{7d}: Burnout may mediate the association between peer support and quit intentions.

Methodology

Sample and Procedure

Sample consisted of 420 employees of four SECP Registered and Listed General insurance companies. The services of these companies include motor, fire, marine, engineering, aviation, health, bond, and travel insurance. All employees received a printed copy of the questionnaires. The questionnaires were addressed by a cover up letter. The objectives of the present study were defined in few words in the Covering Letter, and the privacy and secrecy of the responses were highlighted as a considerable acknowledgement. The staff was asked for to fill out the survey in confidential and to return it to researcher. Of all the questionnaires sent 311 valid responses were received (74% reply rate). The total sample (N=311) identify 276 males (89%) and 35 females (11%). 211 participants had a permanent job position (68%). Mean organizational stay was 6.4 years (SD = 5.1 years). Most participants were aged between 26-45 years (70%).

Instruments and Measures

Demographic variables for instance gender and age, are incorporated as control variables that are likely to influence relationships between job characteristics and outcome variables (e.g. Karasek and Theorell, 1990; Kasl, 1989; De Jonge and Schaufeli, 1998). Unless otherwise mentioned all items were measured on a 5 point likert scale ranging from 1=strongly disagree to 5= strongly agree.

Burnout is measured using Singh et al. (1994) burnout inventory. The burnout inventory includes three subscales: depersonalization (8 items), reduced personal accomplishments (8 items), and burnout (8 items; e.g., “working with customers is really a strain for me”). Internal consistency for the burnout scale was 0.78 after removing two items (e.g. “I am working too hard for my customers” and “I work too hard trying to satisfy my co-workers”).

Job satisfaction was measured by a 7-items scale from WERS 2004 employee survey questionnaire. Internal consistency for the job satisfaction scale was 0.75 for all items.

Intention to quit was assessed by Colarelli’s (1984) three-item scale (e.g. “I am planning to search for a new job during the next twelve months”). Chronbach alpha for intention to quit scale was 0.82.

Job demands were assessed by a three-item questionnaire that incorporated items such as “working under time pressure, working hard, and job complexity” (e.g. De Jonge et al., 2001). The internal consistency of scale items was 0.69 which is well above the cut-off point of 0.6.

Job control was measured by a 5-item scale from WERS 2004 employee survey questionnaire. The items were assessed on a 5-point scale (e.g. “In general I am influential in the tasks I do in my job”). Participants responded to all items using a five point Likert scale with options (1) none to (5) a lot. The Cronbach alpha reliability co-efficient for this scale was 0.74.

Supervisor support was measured by using the Saks (2006) scale which is adapted from Rhoades et al. (2001). The scale consists of four items (e.g., “I feel that my supervisor

cares about my opinions”). The Cronbach alpha value for supervisor support scale was 0.74 after deleting one item (e.g., “supervisor shows very little concern for me”).

Peer support was adapted from Saks (2006) POS scale. The scale consists of eight items (e.g., “I feel that my colleagues really care about my wellbeing”). The Cronbach alpha value for peer support scale was 0.66.

Results

Table I presents the means, standard deviations, correlations and Cronbach alphas reliability of the variables in the study. The Cronbach alphas indicate acceptable reliabilities in the study sample. The reliabilities are presented in the diagonal column of Table 1.

First, it is noted that there is a considerable modest correlation among job demands, job control, supervisor and peer support and job satisfaction ($r = 0.232, p < 0.01$; $r = 0.343, p < 0.01$; $r = 0.160, p < 0.01$; $r = 0.294, p < 0.01$). Furthermore, job demand has no significant association with burnout ($r = 0.058, p > 0.05$) and job control, supervisor support, and peer support showed a significant negative association with burnout ($r = -0.180, p < 0.01$; $r = -0.122, p < 0.05$; $r = -0.415, p < 0.01$). Of all the variables, supervisor support and peer support has a significant negative correlation with intention to quit ($r = -0.230, p < 0.01$; $r = -0.281, p < 0.01$) and burnout has a positive correlation with intention to quit ($r = 0.157, p < 0.01$).

Table I. Mean, standard deviations, and inter-correlations between study variables

	JD	JC	SS	PS	JS	BO	QI
Job Demands (JD)	0.60	-	-	-	-	-	-
Job Control (JC)	.212**	0.74	-	-	-	-	-
Supervisor Support (SS)	.124*	.154**	0.74	-	-	-	-
Peer Support (PS)	.202**	.318**	.391**	0.66	-	-	-
Job Satisfaction (JS)	.232**	.343**	.160**	.294**	0.75	-	-
Burnout (BO)	.058	-.180**	-.122*	-.415**	-.070	0.78	-
Quit Intentions (QI)	-.068	-.070	-.230**	-.281**	.001	.157**	0.82
Mean	3.80	3.83	3.58	3.68	3.81	2.86	2.10
Std. Deviation	.668	.541	.573	.569	.487	.768	1.148

N= 311

* Significant at 0.05

** Significant at 0.01

Multiple regression analyses were used for data analysis. Each of the three dependent variables (job satisfaction, burnout, and intention to quit) was regressed simultaneously on the antecedent variables (job control, job demands, supervisor support, and peer support) to assess the direct effects. The results of regression are presented in Table II.

Results (Table II) indicate that job characteristics explain 17.5% variations in job satisfaction, and 20% variations in burnout, and 9.6% variation in intentions to quit. Hypotheses 1b, 3a, 3b, and 3c describe the relationship between four job characteristics (job demands, job control, supervisor, and peer support) and job satisfaction respectively. Of the job characteristic variables, job demands ($\beta = 0.138, p < 0.05$), job control ($\beta = 0.253, p < 0.01$)

and peer support ($\beta=0.171$, $p < 0.01$) are independently and significantly positively associated with job satisfaction. Supervisor support showed no significant effect on job satisfaction ($\beta=0.037$, $p > 0.05$). Thus, hypothesis 3b is rejected while 1a, 3a, and 3c are accepted.

Table II. Regression analysis of job satisfaction, burnout, and intentions to quit

Variables	Quit Intentions		Job Satisfaction		Burnout	
	β	t-value	B	t-value	B	t-value
Job demand	-0.009	-0.157	0.138	2.576*	0.159	2.994**
Job Control	0.028	0.479	0.253	4.567**	-0.081	-1.486
Supervisor Support	-0.142	-2.406*	0.037	0.658	0.041	0.744
Peer Support	-0.232	-3.742**	0.171	2.885**	-0.437	-7.497**
R	0.311		0.419		0.447	
R square	0.096		0.175		0.200	
F	8.167**		16.250**		19.153**	

** Significant at 0.01 level

* Significant at 0.05 level

Hypotheses 1a, 2a, 2b, and 2c describe the relationship between four job characteristics (job demands, job control, supervisor, and peer support) and burnout respectively. Consistent with the hypothesized effects, job demands have a significant positive influence on burnout ($\beta=0.159$, $p < 0.01$), while peer support had a significant negative influence on burnout ($\beta= -0.437$, $p < 0.01$). However, job control ($\beta=-0.081$, $p > 0.05$) and supervisor support ($\beta=0.041$, $p > 0.05$) showed no effect on burnout. Thus, hypothesis 1a and 2c are accepted while 2a and 2b are rejected.

Hypotheses 4a, 5a, 5b, and 5c describe the relationship between four job characteristics (job demands, job control, supervisor, and peer support) and quit intentions respectively. Results in Table 2 show that, of job characteristics, only supervisor ($\beta= -0.142$, $p < 0.05$) and peer support ($\beta= -0.232$, $p < 0.01$) showed a significant negative influence on intentions to quit. Thus, hypotheses 5b and 5c are accepted while 4a and 5a are rejected.

To test the hypothesis 4b and 4c, intention to quit was regressed on job satisfaction and burnout. The results of this regression are presented in Table 3. Job satisfaction and burnout explained 2.5% variations in the dependent variable which is quit intentions. The results (Table 3) indicate that, of the two variables, only burnout ($\beta = .158$, $p < .01$) seems significant predictor of intentions to quit whereas job satisfaction has no significant impact on quit intentions ($\beta= 0.013$, $p > 0.05$). Thus hypothesis 4b is accepted, while 4c is rejected.

Besides assessing the direct effects of job characteristics on intentions to leave, the indirect (or mediating) effects of job characteristics on intentions to leave were also assessed. To test the mediation (if any), Baron and Kenny's (1986) procedure was used which consisted of three conditions. These conditions are: (1) independent variables significantly predict mediators; (2) mediators significantly predict dependent variables; and (3) the effect of independent variables on dependent variables is weaker or null when the effect of mediators is taken into account.

Both conditions (1) and (2) are estimated. The results for condition (1), for both job satisfaction and burnout, are given in Table II. Condition (2) is estimated for quit intentions and their results are presented in Table III below.

The result of the regression analyses presented in Table II suggest that only Job demands and peer support had a significant relationship with job satisfaction ($\beta = .138$, $p < .05$; $\beta = .171$, $p < .01$) and burnout ($\beta = .159$, $p < .01$; $\beta = -0.437$, $p < .01$). In turn, only burnout is significantly related to quit intentions ($\beta = .158$, $p < .01$). Of the job characteristic variables, only supervisor support and peer support are significantly related to quit intention

(Table 2). However, supervisor support is not significantly related to job satisfaction and burnout. In addition, condition (2) is satisfied only for burnout since only burnout is significantly related to quit intentions (Table III). These results suggest that mediation can only be tested for the peer support on quit intentions via burnout as it is the only intervening variable which is coming significant with the dependent variable ‘quit intentions’. The remaining hypotheses for indirect mediating effects cannot be tested as the two conditions (condition 1 and 2) are not met for these hypothesized relationships. Thus, the results for condition (3) are estimated only for peer support and quit intentions via burnout (hypothesis H_{7d}) using hierarchical regression and the results are presented in Table IV.

Table III. Regression analysis of job satisfaction and burnout on quit intentions

Dependent Variable → Predictor ↓	<i>Intentions to Quit</i>	
	β	ΔR^2
Satisfaction	.01	
Burnout	.16***	.02*

N= 311

* $p < .05$, ** $p < .01$, *** $p < .001$

Table IV. Results of Regression Analyses for Mediation Effects of Burnout

Dependent Variable → Predictor ↓	<i>Intentions to Quit</i>	
	B	ΔR^2
Model 1		
Step 1		
Burnout	.16**	
Step 2		
Burnout	.14**	
Peer Support	-.26**	.08**

N= 311

* $p < .05$, ** $p < .01$, *** $p < .001$

When burnout was entered in the equation as a mediator, a reduction in the effect size of peer support was observed for intentions to quit (from $\beta = -.281$, $\Delta R^2 = 0.079$, $p < .01$ to $\beta = -.260$, $\Delta R^2 = 0.04$, $p < .05$) supporting the mediation hypothesis. These results reported that burnout partially mediates the relationship between supervisor support and intentions to quit. The mediation is partial as the direct link between peer support and quit intentions is still significant though magnitude has reduced. It should be noted that a full mediation will occur only if the indirect link is significant and direct link is insignificant.

Overall, job characteristics were all linked with well-being, assessed by job satisfaction and burnout. Results indicated that job demands, job control and peer support were significant predictors of job satisfaction, whereas job demands and peer support were significant predictors of burnout. Burnout along with supervisor support and peer support, are significant predictors of intentions to quit. Furthermore burnout partially mediates the effect of peer support on quit intentions. A summary of hypotheses accepted or rejected is given in Table 5.

Conclusion

This analysis of data has revealed a representation of employee wellbeing among insurance employees. Results have shown a strong relationship between job characteristics

and job satisfaction and burnout. In turn, wellbeing predicts employees' intentions to quit. The results match to the Karasek model that job demands, control and social support predict employee wellbeing. The main predictors for both job satisfaction and burnout are somewhat similar. Where job demands, control and peer support significantly predict job satisfaction, work demands and peer support predicts burnout. On the other hand only burnout is a significant predictor of quit intentions.

Limitations

The limitation of this study is that it is established on cross-sectional analysis, but reviews of the earlier studies examining the Karasek model propose that results do not differ significantly among the cross-sectional and longitudinal studies (de Lange *et al.*, 2003).

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