

# **ORGANIZATIONAL STRESSORS AND JOB STRESS AMONG MANAGERS: THE MODERATING ROLE OF NEUROTICISM**

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## **Abstract**

The purpose of this paper is to: first, determine the influence of organizational variables (conflict, blocked career, alienation, work overload, and unfavourable work environment) on job stress among managers and, second, to examine whether this relationship varies according to the individual's level of neuroticism. Analyses of 285 responses using hierarchical regression revealed that three of the five organizational variables (conflict, blocked career, and alienation) had significant positive effects on job stress. Neuroticism was found to moderate the effects of the three organizational stressors (alienation, work overload, and unfavourable work environment) on job stress. Implications for managerial practice and future research are discussed.

# **ORGANIZATIONAL STRESSORS AND JOB STRESS AMONG MANAGERS: THE MODERATING ROLE OF NEUROTICISM**

## **Introduction**

The many challenges in the work environments, characterized by heightened competition, lack of time, more uncontrollable factors, lack of space, continuous technological development, conflicting demands from organizational stakeholders (Hall & Savery, 1986), increased use of participatory management and computerization (Murray & Forbes, 1986), greater uncertainty, and others have resulted in higher job stress. In the pursuit for organizational excellence, managers need to work under highly stressful circumstances. Managers in the manufacturing sector have been found to be experiencing high stress (Jestin & Gampel, 2002). The weakening of the global economy during the past few years has resulted in substantial downsizing and retrenchments. Such events among employees in local and foreign firms are inevitable given Malaysia's reliance on the industrial sectors particularly electronics, which account for 60 percent of its total exports (Bank Negara Malaysia, 2001). Although there have been several studies on job stress within the Malaysian context (for instance, Kuan, 1994; Bat, 1995; Aun, 1998; Yahya, 1998), these studies have been somewhat fragmented. Thus, the objectives of this study are: (1) to gauge the extent to which organizational variables (conflict, blocked career, alienation, work overload, and unfavourable work environment) affect job stress and, (2) to examine whether neuroticism moderates the relationship between these organizational variables and job stress.

## **Review Of Literature**

### *Organizational Factors as Sources of Stress*

Job stress has been defined as the nonspecific response of the body to any demands made upon it (Selye, 1976). It is considered to be an internal state or reaction to anything we

consciously or unconsciously perceive as a threat, either real or imagined (Clarke & Watson, 1991). Robbins (2001) defines stress as a dynamic condition in which the individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important. Stress can be caused by environmental, organizational, and individual variables (Matteson & Ivancevich, 1999; Cook & Hunsaker, 2001). Organizational-based factors have been known to induce job stress for employees at the workplace (Greenhaus & Beutell, 1985). These factors are commonly termed as organizational stressors since they serve as agents that trigger the various stress reactions (Von Onciul, 1996). Among the numerous organizational sources of stress, only five variables were investigated in this study namely conflict, blocked career, alienation, work overload, and unfavourable work environment.

Role conflict has been found to have a positive relationship with job stress (Roberts et al., 1997). When individuals are required to play two or more role requirements that work against each other, they are likely to experience job stress. This is because role conflicts create expectations that may be hard to reconcile. Foot and Venne (1990) discovered a positive relationship between barriers to career advancement and job stress. When employees perceived a lack of career opportunities, they are likely to feel uncertain about their future in the organization, which in turn, are likely to induce stress. Alienation at the work place can also lead to stress. Thoits (1995) in his study discovered that alienation has a positive effect on job stress. Feelings of alienation are likely to result when employees are required to work alone. According to Kanungo (1981), when workers believe there is a separation between their own job and other work related contexts, a sense of frustration that finally manifested in a behavioral state of apathy is likely to occur. This is particularly intense for employees with high social needs. Working

alone on one's job without social support from one's peers and supervisors would lead to job stress (Mirovisky & Ross, 1986; Eugene, 1999). Work overload both quantitatively and qualitatively has been empirically linked to a variety of physiological, psychological, and behavioral strain symptoms (Beehr & Newman, 1978; Roberts et al., 1997; Miller & Ellis, 1990). According to Greenhaus et al. (1987), heavy workload lowers one's psychological well-being resulting in job stress. Additionally, a work environment associated with unpleasant organizational climate, lack of privacy, a lot of hassle in conducting work, and distractions can result in higher stress (Miller & Ellis, 1990; Eugene, 1999). Thus, the first hypothesis of the study is as follows:

*H<sub>1</sub>: Organizational stressors (conflict, blocked career, alienation, work overload, and unfavourable work environment) will be positively related to job stress.*

#### *Personality Traits as Sources of Stress*

Past studies have indicated the potential impact of personality traits on job stress (Goldberg, 1993; Deary & Blenkin, 1996; Snyder & Ickes, 1985). Five personality dimensions that have been identified are neuroticism, extraversion, openness, agreeableness, and conscientiousness (Costa & McCrae, 1985; McCrae & Costa, 1991; Costa & McCrae, 1992; McCrae, 1992). The neuroticism domain reflects one's degree of emotional stability and adjustment. Extraversion assesses the extent to which individuals are assertive, active, and talkative. Openness measures the extent to which persons are open to new experiences, are creative and imaginative, and prefer variety. Agreeableness reflects the extent to which one is altruistic and cooperative. Conscientiousness measures one's self-control and purposefulness and is associated with academic and occupational achievement. Of these five personality dimensions, neuroticism has been found to have a

positive relationship with job stress (Deary & Blenkin, 1996; Tellegen, 1985; Birch & Kamali, 2001).

Neuroticism reflects one's tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt, and disgust (Costa & McCrae, 1992). According to previous scholars (Costa & McCrae, 1985; Costa & McCrae, 1992), a higher level of neuroticism implies a higher level of psychological distress, emotional instability and maladjustment. Hence, people with neuroticism traits are those who experience more negative emotions, which would be reflected in poor job attitudes, and high levels of job stress. Tellegen (1985) suggested that neuroticism functions as a warning system, activated by perceptions of environmental uncertainty, and tends to interfere with one's ability to adapt. Thus, individuals high in neuroticism are thought to be less able to both control their impulses and cope effectively with stress. In work settings, individuals high in neuroticism are emotionally unstable and experience negative affect (Costa & McCrae, 1985). Such information seem to suggest that these individuals are likely to perceive greater organizational stressors, which in turn, lead to higher job stress. Thus, one would expect the effects of organizational stressors on job stress among these individuals to be greater compared to those who are low in neuroticism. Therefore, the second hypothesis of the study is as follows:

*H<sub>2</sub>: The positive effects of organizational stressors (conflict, blocked career, alienation, work overload, and unfavourable work environment) on job stress will be stronger for people with high neuroticism than low neuroticism.*

Based on the above-mentioned discussion, the theoretical framework for this study is shown in Figure 1.

[Insert Figure 1 near here]

## **Methodology**

### *Subjects*

Participants in the study consisted of managers attached to twenty randomly selected electronic firms (both local and foreign) located on the island of Penang, Malaysia. A total of 400 questionnaires were distributed in proportion to the population of managers in these firms. Respondents were given three weeks to answer the questionnaires.

### *Measurements*

The predictor variables in this study were represented by five organizational variables namely conflict, blocked career, alienation, work overload, and unfavourable work environment. These variables were measured using a 25-item questionnaire (Davis et al., 2000). A 5-point response format ranging from (1) “Strongly Disagree” to (5) “Strongly Agree” was utilized. The mean scores were computed by averaging the scores for all the items associated with a particular stressor. The moderating variable in this study relates to the personality dimension of neuroticism. This trait was assessed using 12-items derived from the NEO Five Factor Inventory (Costa & McCrae, 1992). A 5-point response format ranging from (1) “Strongly Disagree” to (5) “Strongly Agree” was utilized. The mean score for neuroticism was obtained by averaging the scores for all the 12 items.

The criterion variable in this study is job stress. Job stress was measured using a 20-item screening inventory (Goldberg & Hillier, 1978) based on a 5-point response format ranging from (0) “Never” to (4) “Almost Always”. The job stress level for each respondent

was computed by summing the total scores for all the 20 items. Subsequently, the total scores obtained were averaged in order to gauge the overall job stress level for the sample in accordance to Davis et al.'s (2000) categorization as follows: 0-25 (coping adequately with job stress), 26-40 (suffering from job stress), 41-55 (suffering from high job stress), 56-80 (experiencing very high job stress or burnout).

### *Methods of Analyses*

Job stress can be influenced by personal factors (Matteson & Ivancevich, 1999). Six personal variables (age, gender, marital status, number of children, working experience, and job tenure) were controlled in the statistical analysis following previous researchers (Roberts et al., 1997; Smith et al., 1998; Rashed, 2001; Cooper et al., 1994). Since gender and marital status were categorical in nature, these variables were initially dummy coded. The first and second hypotheses were tested using a four-step hierarchical regression (Cohen & Cohen, 1975) where the control variables were entered in the first step, followed by the main effects of the five organizational variables (conflict, blocked career, alienation, work overload, and unfavourable work environment) in the second step. Neuroticism was added into the equation in the third step. In the final step, the five interaction terms were entered into the regression equation. The change in the F-value and the significance of the individual parameter was observed. If an interaction term is found to be significant, neuroticism is said to moderate the relationship between the relevant organizational stressor and job stress.

## **Results**

### *Response and Profile of Respondents*

Of the 400 questionnaires sent out, 285 useable responses were obtained representing a response rate of 71.25%. The sample profile is shown in Table 1.

[Insert Table 1 near here]

In terms of gender, more than half (56.8%) of the sample consisted of males with the remaining 43.2% being females. As for age, almost all the respondents (96.5%) were 40 years old and below. Of this, the largest proportion of respondents (37.9%) was less than 30 years old. Regarding marital status, a majority (52.3%) of respondents were married with the remaining 47.7% being singles. In terms of the number of children, a majority (50.5%) of the sample had no children. As for working experience, 54% of the sample had been working for more than 6 years. In terms of job tenure, 67.7% of the respondents had been in their current job for 5 years or less.

Table 2 depicts the reliabilities of the survey instruments.

[Insert Table 2 near here]

As seen from Table 2, the instruments used in this study were reliable, with coefficients ranging from 0.80 to 0.96, which exceeded the minimum acceptance level of 0.70 (Nunnally, 1978).

The mean score and standard deviations for each study variable can be observed from Table 3.

[Insert Table 3 near here]

From Table 3, it can be seen that the mean value for each of the organizational variables ranges from 2.51 to 3.01, with a standard deviation of 0.66 to 0.84. The mean score computed for job stress was 45.38 with a standard deviation score of 10.72. Based on Davis

et al.'s (2000) interpretation, this score indicates that respondents in this study, on the average, experience high job stress.

The results of the four-step hierarchical regression undertaken to test the first and second hypotheses of this study is shown in Table 4.

[Insert Table 4 near here]

As seen in Table 5, when the six personal variables were entered into the regression equation in the first step, the coefficient of determination ( $R^2$ ) was found to be 0.344 indicating that 34.4% of job stress is explained by the demographic variables. In step 2, by adding the five independent variables,  $R^2$  increased to 64.8%. This  $R^2$  change (0.304) is significant. This implies that the additional 30.4% of the variation in job stress is explained by the organizational variables (conflict, blocked career, alienation, work overload, and unfavourable work environment). From the second regression model, it can be observed that control variables (working experience and job tenure) did have significant influence on job stress. Working experience showed a significant and negative relationship with job stress at the 0.01 level. Job tenure also had a significant and negative relationship with job stress at the 0.05 level. As for the independent variables, only three of the five organizational stressors were found to have a positive influence on job stress. Specifically, blocked career ( $\beta = 0.426$ ), alienation ( $\beta = 0.403$ ), and conflict ( $\beta = 0.232$ ) were all found to have significant and positive relationships with job stress at the 0.01 level. These results provided partial support for the first hypothesis of the study. In the third step, neuroticism was entered into the equation in order to gauge its impact as an independent predictor. The  $R^2$  increased from 64.8% to 81.1% indicating a change of 16.3%, which is significant ( $p < 0.01$ ). In the fourth and final step, the five interaction terms were entered into the model. From Table 5, it can be

seen that the additional variance explained by the interaction terms (7.8%) was significant ( $p < 0.01$ ), indicating that there is a moderation effect. From the final regression equation, it can be observed that only three of the five interaction terms (Neuroticism\*Alienation, Neuroticism\*Work Overload, and Neuroticism\*Unfavourable Work Environment) were significant at the 0.01 level. The results derived from the final step provided partial support for the second hypothesis of the study.

#### *Moderating Effects of Neuroticism*

Based on the information gathered from Table 5, only three interaction terms (Neuroticism\*Alienation, Neuroticism\*Work Overload, and Neuroticism\*Unfavourable Work Environment) were significant at the 0.01 level. To portray the interactions between neuroticism and each facet of organizational variable more clearly, graphs were drawn. To draw the graphs, the facets were first recoded into three categories ie: Low, Moderate and High by dividing the respondents into three approximately equal group using percentile (0 – 33% = Low, 33.1 – 66% = Medium and 66.1 – 100% = High) for the organizational variables whereas median was used to recode the neuroticism variable into two categories (below median = low neuroticism, above median = high neuroticism). The results of the significant interactions are presented in Figure 2, 3 and 4 respectively.

[Insert Figure 2 near here]

As can be observed from Figure 2, the stress level of employees with low levels of neuroticism shows an increasing trend when the alienation level is low to moderate and a decreasing one when the alienation level moves from moderate to high. For employees with

high level of neuroticism, their job stress level decreases with low to moderate alienation level and increases as the alienation level moves from moderate to high.

[Insert Figure 3 near here]

As shown in Figure 3, the stress level of employees with low levels of neuroticism shows an increasing trend when the work overload level ranges from low to moderate and increases but at a decreasing rate when the level of work overload moves from moderate to high. For employees with high level of neuroticism, their job stress level decreases with low to moderate level of work overload and increases albeit slowly as the work overload level moves from moderate to high.

[Insert Figure 4 near here]

From Figure 4, generally, the stress level of employees with low levels of neuroticism shows an increasing trend when the unfavourable work environment level increases from low to high. Specifically, increase in job stress is at an increasing rate when the level of unfavourable work environment is perceived to range from moderate to high as opposed to when the level of unfavourable work environment is perceived to range from low to moderate. For employees with high level of neuroticism, their job stress level seems to remain constant when the level of unfavourable work environment is between low to moderate. However, the job stress level experienced by employees who have high neuroticism tend to decrease when the level of unfavourable work environment ranges from moderate to high.

## **Discussion and Implications**

The purpose of the current study was two-fold: first, to determine the effects of organizational stressors (conflict, blocked career, alienation, work overload, and unfavourable work environment) on job stress among managers within the electronics sector of Malaysia and, second, to test whether these relationships vary according to their level of neuroticism. The regression results from this investigation indicated that three out of five organizational variables namely conflict, blocked career, and alienation had positive relationships with job stress.

The finding on the positive relationship between conflict and job stress is consistent with those obtained by Roberts et al. (1997). When employees are required to fulfill conflicting role requirements, they are likely to experience job stress. This is because role conflicts create expectations that may be hard to satisfy. The finding pertaining to the positive relationship between blocked career and job stress supports those by previous researchers (Foot & Venne, 1990; Rahim, 1996). Seeing one's opportunities for career advancement being diminished is perceived as a threat, which in turn, leads to increased job stress.

The finding on the relationship between alienation and job stress is also consistent with those discovered by prior scholars (Kornhauser, 1965; Sashkin, 1984; Thoits, 1995). Alienation at the workplace suggests that employees may not be able to fulfill their social needs. Thus, this sense of isolation is likely to be viewed as a threat to the individual resulting in stress.

Work overload, on the other hand, was found to have no relationship with job stress. These findings may be related to the sample itself. It is possible that managers in the

electronics firms sampled may have attuned themselves to heavy responsibilities. Thus, this variable may not be viewed as an organizational stressor. Similarly, unfavorable work environment had no influence on job stress. One plausible explanation for this may be related to the fact that the mean score associated with unfavorable work environment is the lowest among the five organizational variables. In other words, the work environment perceived by the sample is relatively conducive. Hence, the strength of the relationship between unfavorable work environment and job stress may have been attenuated.

Neuroticism was found to moderate the relationships between three organizational stressors (alienation, work overload, and unfavourable work environment) and job stress. For employees with low neuroticism, when the alienation level is low to moderate, their stress level showed an increasing trend and a decreasing one when the alienation level moves from moderate to high. For employees with high level of neuroticism, their job stress level decreases with low to moderate alienation level and increases as the alienation level moves from moderate to high. This finding suggests that low to moderate levels of work alienation would be more preferable among employees with high neuroticism whilst moderate to high levels of work alienation would be more preferable among employees with low neuroticism.

In terms of work overload, the stress level of employees with low levels of neuroticism shows an increasing trend when the work overload level ranges from low to moderate and increases but at a decreasing rate when the level of work overload moves from moderate to high. For employees with high neuroticism, their job stress level decreases with low to moderate level of work overload and increases at a slow rate as the work overload level moves from moderate to high. This finding suggests that low to moderate levels of work overload would be more preferable among employees with high neuroticism. The stress

levels for employees with low neuroticism, however, continue to increase for various levels of work overload.

Additionally, the stress level of employees with low levels of neuroticism shows an increasing trend when the level of unfavourable work environment increases from low to high. Specifically, the increase in job stress is at an increasing rate when the level of unfavourable work environment is perceived to range from moderate to high as opposed to when the level of unfavourable work environment is perceived to range from low to moderate. For employees with high level of neuroticism, their job stress level seems to remain constant when the level of unfavourable work environment is between low to moderate. In contrast, the job stress level experienced by employees who have high neuroticism tend to decrease when the level of unfavourable work environment ranges from moderate to high. This finding suggests that moderate to high levels of unfavourable work environment would be more preferable among employees with high neuroticism. On the other hand, the stress levels for employees with low neuroticism continue to increase for various levels of unfavourable work environment.

From the managerial point of view, the findings from this research suggest that employing organizations need to attend to organizational factors that are likely to act as job stressors. In order to reduce stress among managers, organizations should communicate clearly its expectations, provide sufficient opportunities for their managers to move to higher positions in the organizational hierarchy, and build cohesive cross-functional work teams. Given that neuroticism did play the role of a moderator in the relationship between certain organizational stressors and job stress, organizations need to be aware: (1) not to place employees who experience high neuroticism in jobs that are

highly alienated since this would foster greater stress, (2) to place employees who experience high neuroticism in jobs that have less workload since this would reduce stress, and (3) to allow employees who experience high neuroticism to work under challenging working conditions since this may help reduce their stress level.

### **Conclusion and Suggestions for Future Research**

In conclusion, the contribution of this study rests on the identification of organizational-based stressors and the role played by the personality dimension of neuroticism as a moderator in the relationship between organizational stressors and job stress experienced by Malaysian managers at the workplace. Although several studies on job stress within the Malaysian context have been reported (such as Kuan, 1994; Bat, 1995; Aun, 1998; Yahya, 1998), each of them differs in terms of the variables selected (organizational-based, personal-based, or personality-based), the instruments used, and sample. The present study did not aim to construct a complete model of job stress for Malaysian employees but merely to extend one's knowledge about the influence of organizational-based factors and neuroticism on managerial job stress.

Nevertheless, the contributions of this investigation should be viewed in the light of three limitations. First, this study makes use of cross-sectional data, which limits inferences with regards to causality between the independent variables and the dependent variable. The use of a longitudinal approach would improve the ability to make causal statements. Second, this study is limited to managers within the manufacturing industry of Malaysia. Thus, the validity of the findings cannot be generalized to other job incumbents in other sectors. Future research may be conducted to compare the predictive validity of the model across different

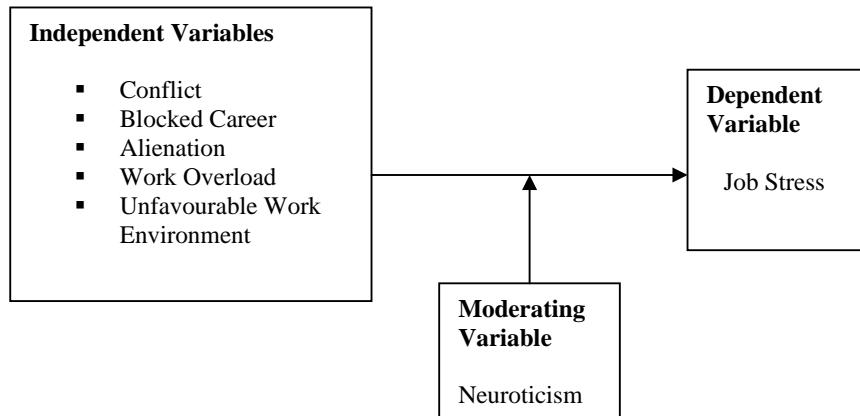
jobs and industries. Third, given that there may be other individual, occupational, organizational, and non-work factors that also affect and moderate stress, researchers interested in this area should try to explore these factors in future.

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**Figure 1:** Conceptual Framework of the Study

**Table 1: Sample Profile of the Respondents**

<b>Demographic Variables</b>	<b>Categories</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Gender	Male	162	56.8
	Female	123	43.2
Age	Less Than 30 years	108	37.9
	30 to 35 years	101	35.4
	36 to 40 years	66	23.2
	41 to 45 years	10	3.5
Marital Status	Single	136	47.7
	Married	149	52.3
Number of Children	None	144	50.5
	One	42	14.7
	Two	72	25.3
	Three	27	9.5
Working Experience	Less than 1 year	48	16.8
	1 to 5 years	83	29.1
	6 to 10 years	91	31.9
	11 to 15 years	53	18.6
	More Than 15 years	10	3.5
Job Tenure	Less than 1 year	110	38.6
	1 to 5 years	83	29.1
	6 to 10 years	87	30.5
	11 to 15 years	5	1.8

**Table 2:** Reliability Coefficients of the Instruments

<b>Variable</b>	<b>Cronbach's Alpha Value</b>
Conflict	0.8747
Blocked Career	0.8631
Alienation	0.8875
Work Overload	0.8518
Unfavourable Work Environment	0.8026
Neuroticism	0.9580
Job Stress	0.9182

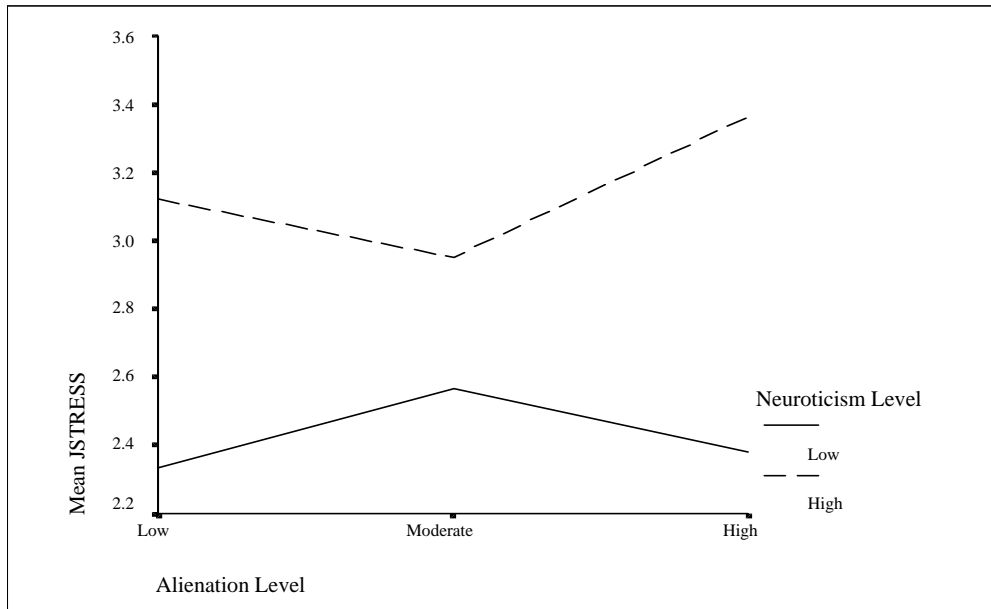
**Table 3:** Mean Scores and Standard Deviations of the Study Variables

<b>Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>
Conflict	2.667	0.716
Blocked Career	2.806	0.647
Alienation	2.652	0.839
Overload	3.011	0.736
Unfavourable Work Environment	2.506	0.663
Job Stress	45.382	10.719

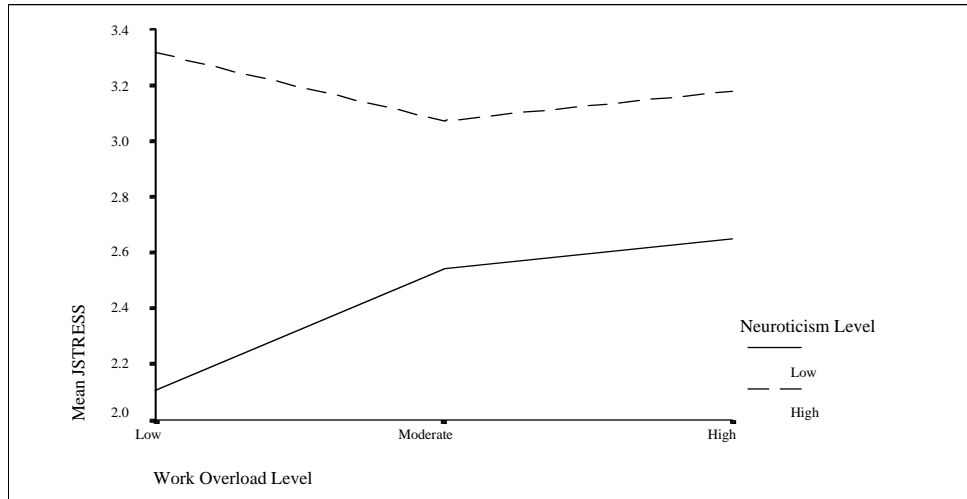
**Table 4:** Results of Hierarchical Regression Analysis

<b>Independent Variable</b>	<b>Std Beta Step 1</b>	<b>Std Beta Step 2</b>	<b>Std Beta Step 3</b>	<b>Std Beta Step 4</b>
<b>Control Variables</b>				
Gender	-0.072	-0.033	-0.075	-0.040
Age	0.136	0.089	-0.321**	-0.394**
Marital Status	0.016	0.078	0.134	0.409**
Number of Children	0.164	-0.090	-0.066	-0.463**
Work Experience	-0.117	-0.288**	-0.038	0.064
Job Tenure	-0.602**	-0.150*	0.170**	-0.153**
<b>Model Variables</b>				
Conflict		0.232**	0.095	-0.010
Blocked Career		0.426**	0.211**	0.074
Alienation		0.403**	0.210**	-2.685**
Work Overload		0.023	0.069	1.424**
Unfavorable Work Environment		0.092	-0.102*	1.958**
<b>Moderating Variable</b>				
Neuroticism			0.750**	2.302**
<b>Interaction Terms</b>				
Neuroticism*Conflict				-0.040
Neuroticism*Blocked Career				-0.275
Neuroticism*Alienation				3.312**
Neuroticism*Work Overload				-2.149**
Neuroticism*Unfavourable Work Environment				-3.045**
R <sup>2</sup>	0.344	0.648	0.811	0.889
Adj R <sup>2</sup>	0.329	0.633	0.802	0.881
R <sup>2</sup> Change	0.344	0.304	0.163	0.078
Sig. F Change	0.000	0.000	0.000	0.000

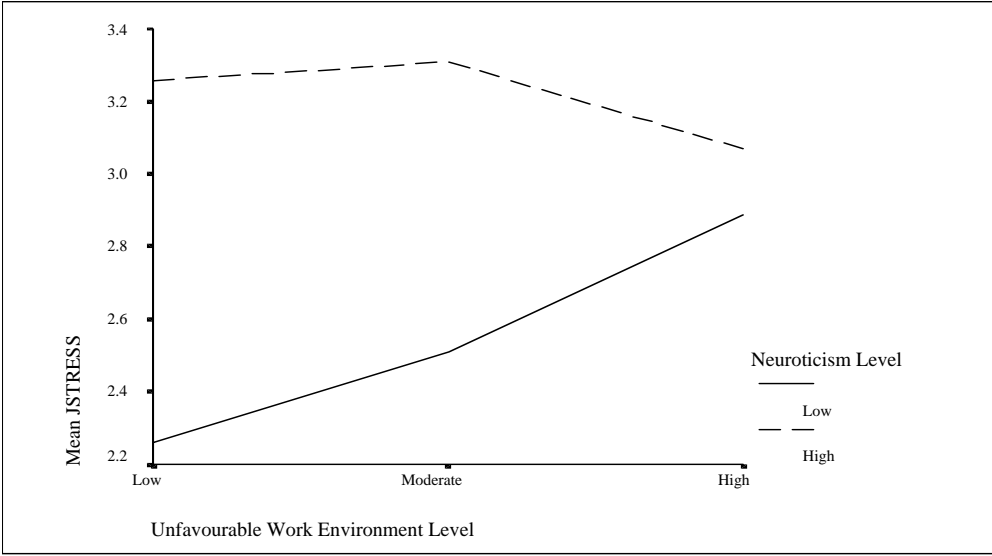
Note: \*p < 0.05, \*\*p < 0.01



**Figure 2:** Moderating Effect of Neuroticism on the Relationship Between Alienation and Job Stress



**Figure 3:** Moderating Effect of Neuroticism on the Relationship Between Work Overload and Job Stress



**Figure 4:** Moderating Effect of Neuroticism on the Relationship Between Unfavourable Work Environment and Job Stress