

# Role of Occupational Stress to the Relationship between Job Satisfaction and Organizational Commitment

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## ***Abstract***

*Stress, the word whenever strikes the mind is usually interpreted in negative terms though in practice stress as a variable can be a good motivator if present only to a certain level (eustress), but when it crosses that minimum required limit and turns into distress, it may cause an employee loose interest in the job and hence reduce the job satisfaction level and hence may result into a lesser commitment to organization. It may even become such a big de-motivator that can even reduce the energy and zeal of an employee to even work any further. Thus this study is an attempt in finding out the relationship that organizational commitment shares with job satisfaction and the impact that occupational stress has on the relationship*

## **Introduction**

In general, productivity of an organization depends upon two major variables – employee's job performance and resource utilized. The resources illustrated here are raw materials and technology. If we take the resources as constant then saying that employee performance plays the most dominant role in the productivity of an organization will not be any exaggeration. Physical and psychological attributes are involved in determining the ultimate capacity for an individual and hence his/her performance. The psychological attributes include many job related attitudes and behaviors, from which the present study includes organizational commitment, job satisfaction and stress.

One of the biggest challenges that organizations face today is of the turnover and absenteeism of the employees. In today's promptly changing business environment, and the cut-throat competition, organizations all around the world need to utilize maximum potential of their human resources to stay ahead of the fierce competition and hence survive in the middle of the quest, but with not so committed employees and huge turnover rate the task seems to be out of sight. It can be easily said that most successful organizations are built on the

integral value of their human resources as satisfied, committed and involved employees almost always allow an organization to grow faster than similar competitive organizations. Well satisfied and committed workforce feels that organization value them and they are playing an essential role within their organization which significantly enhance both employees' as well as organizational performance (Shore & Martin, 1989; Meyer et al., 1989). Keeping the employee work-related attitudes up is always rewarding to a business as such employees are more productive and higher productivity usually results in higher profits (Denton, 1987).

## **Review of Literature**

While, extensive research has been done on organizational commitment, occupational stress and job satisfaction separately and also in relation to other variables, to whom these variables have served either as the consequences or as antecedents, but, there is a paucity of research on the relationship among these variables, which triggered the need for the current study. In this section of the study we will try to ascertain the nature of the variables under study and also find out the extent and direction of their behaviour with

other variables related to them.

*Organizational commitment (OC):* OC has an important place in the study of organizational behavior. This is in part, due to the vast number of works that have found relationships between organizational commitment and attitudes and behaviors in the workplace (Porter et al., 1974; Koch and Steers, 1978; Angle and Perry, 1981). Furthermore, Batemen and Strasser (1984) state that the reasons for studying organizational commitment are related to —(a) employee behaviors and performance effectiveness, (b) attitudinal, affective, and cognitive constructs such as job satisfaction, characteristics of the employee's job and role, such as responsibility and (d) personal characteristics of the employee such as age, job tenure etc.

Organizational commitment has been studied in all kinds of establishments, be it the public, private or non-profit sector, and even internationally. The importance of employee commitment in the workplace has been recognized all around the world for a long time now, what makes it more important is that, it has been found to be significantly related to performance of an organization; which turns out to be that the more the employees are committed, better the performance of the entire organization (Holden, 1998; Shore, & Martin, 1989; Meyer et al., 1989; Meyer et al., 1993; Meyer et al., 2002; Siders et al., 2001; Jaramillo et al., 2005). In fact, employee commitment has been found to be inversely related to turnover and absenteeism which makes it a key factor that determines the success of an organization in today's modern business world since, in the situation of increasing competition and constant technological advancements an organization needs to retain skilled, reliable and committed human resources to maintain its competitive position in the market (Feldman & Moore, 1982). At the same time, effectiveness, quality and productivity of employees' work still remain the major contributing factors to the progress of the company and employee

commitment is considered as key to quality and productivity improvements (Denton, 1987).

*Job Satisfaction (JS):* As a rational being we have a tendency of forming attitude towards different things that we encounter. In a similar way, work which occupies a major part of our lives, we form attitudes towards it and this can be referred to as Job Satisfaction. It reflects the extent to which employees enjoy their jobs. Therefore, it is an emotional response towards various facets. Job satisfaction is not a unitary concept, rather, a person can be relatively satisfied with one aspect of his or her job and dissatisfied with other aspects.

A large body of research has investigated the linkages between overall job satisfaction and organizational commitment (Baugh and Roberts, 1994; Elliott and Hall, 1994; Fletcher and Williams, 1996; Hamoton et al., 1986; Russ and McNeilly, 1995; Shore and Martin, 1989; Smith and Hoy, 1992; Wong et al., 1995) and most have them have found a positive relationship among the job-attitudes. Though there have been occurrences of negative relationships as well, where job satisfaction and commitment were found to be inversely related to each other (Tuzun, 2009). Williams and Hazer (1986) used a causal modeling approach to examine the determinants of organizational commitment and labor turnover. Their main conclusion was that a variety of variables (age, pre-employment expectations, perceived job characteristics, and the consideration dimension of leadership style) influence commitment indirectly via their effects on job satisfaction. In other words, job satisfaction mediated the effects these variables had on commitment. Similar conclusions were drawn by Mathieu and Hamel (1989), Iverson and Roy (1996), and Michaels (1994). A weaker conclusion was drawn by Price and Mueller (1981) who concluded that the influences of some, but not all, antecedents of commitment were mediated by job satisfaction.

*Stress:* In common terminology we understand

stress as the tension or pressure people feel in either personal or profession life. Our interest and hence the focus here is only with the stress related to the professional life of a person. Thus we may express it as a tension resulting from adverse or demanding circumstances in a job. A proper definition of stress was given by Schuler (1979) who defines it as a dynamic condition in which an 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 leads to various psychological, physiological, and behavioral difficulties. As it affects behavior, which in turn is also a function of attitudes (job related attitude) it makes it more relevant to check the moderation effects of stress on relationship among the job related attitudes in the present study (JS & OC). We all know that job stress is the outcome of various organizational and individual stresses. Researches provide solid evidence that various organizational stresses like, Role ambiguity, Role conflict, Role overload, task demands etc. increase the level of stress. Job related stress can cause job related dissatisfaction and a lesser level of satisfaction in the job and hence may also lead to lesser or even no commitment of the employees to the organization.

## Research Design and Methodology

### Objectives:

In the present research effort has been made to scrutinize empirically the impact of job satisfaction on commitment of employees and then to find how Occupational Stress affects this relationship by working as a moderator. There are two major objectives of the study which have been tested by formulating two null hypotheses which have been shown in the subsequent section. The objectives of the study have been enumerated below:

1. To find the impact of Job Satisfaction on the organizational commitment level of employees.
2. To find the role of Occupational Stress as a

moderator in defining the relationship between Job Satisfaction and Organizational Commitment.

### Hypotheses:

To fulfill the above mentioned objectives and also going through the available literature concerning relationship among organizational commitment, occupational stress and job satisfaction, the following two null hypotheses have been being formulated:

1. There is no significant relationship between Organizational Commitment and Job Satisfaction level of employees.
2. Occupational Stress does not significantly moderate the relationship between Job Satisfaction and Organizational Commitment.

### Design and Methodology:

The research is descriptive as well as exploratory one, as it describes the findings and the facts drawn out of the research and at the same time we may be exploring something new to some extent. Reinstating, this research is aimed at studying the relationship among the three variables viz., Organizational Commitment (referred to as OC hereafter), job satisfaction (referred to as JS hereafter) and occupational stress (referred to as OS hereafter) of industrial workers, where the role of stress will be checked as a potent moderator.

The study utilizes a 2X2 factorial design to establish if any, cause and effect relationship existing between criterion (OC) and predictor (JS) variable. For that the design works by creating two levels – High and Low – of the independent (predictor) variable in the question, which is supposed to be job satisfaction in this case.

The following basic analytical framework has been used that involves the following two logical steps:-

- (i) Independent variable (JS) has been split into

two groups – High and Low – with reference to the median of the variable score in question.

- (ii) The dependent variable (OC) score of workers corresponding to High and Low groups of the independent variable were noted and then these scores were taken as the bases for the computation of the various statistic used in this study.

Also, the technique of hierarchical multiple regression has been used to check the impact of moderator on the relationship between criterion and predictor variables. Baron & Kenny (1986) defined a moderator as a qualitative (e.g. sex, race, class etc.) or quantitative (e.g. level of satisfaction or motivation) variable that affects the direction and/or the strength of a relation between a predictor and criterion variable.

Baron and Kenny (1986) also suggested that it is possible via a common framework to capture both the correlational and the experimental views of the moderator variable by using a path diagram which is both a descriptive and an analytical procedure. This approach has been displayed in figure I (at the last) that captures the essential properties of a moderator variable.

Figure I shows three paths (causal) that feed into the criterion variable (OC): the impact of JS as a predictor (path a), the impact of OS as a moderator (path b) and the interaction or the product of these two paths (path c). The path of our interest is “path c” as moderation effect will only be considered valid if the interaction (path c) is significant. We are here not concerned with the significant main effects for the predictor and the moderator (paths 'a' and 'b'), as these are not directly relevant conceptually to testing the moderator effect.

Also, for a clearly interpretable interaction term it is desirable that the moderator variable be uncorrelated with both the predictor and the criterion, else the moderator will be termed a quasi-moderator.

Hierarchical multiple regression has been used here to check the moderation effect of OS on the relationship between OC and JS. The working of this regression is split into two steps, in the first step JS and OS as predictor are first introduced in the model and at the second step the product of the two (viz. JS and OS) is given as input into the model. The interpretation of the output of hierarchical multiple regression consists of checking the value and sign of the Regression Coefficient of the interaction term (product of JS and OS) and that will tell us the strength and direction of the moderation effect of occupational stress on the relationship between OC and JS. Also, first we need to check for the significance of the coefficient of the interaction term. OS will only be considered as a moderator if the coefficient of the interaction term is found to be significant, if in case the value of the coefficient is not significant then there is no moderation effect. Standardized values of the predictor and moderator variables have been used to minimize the measurement error and remove any scale effects from the product. This relationship can be established in an equation form as follows:

$$OC = \text{constant (intercept)} + a*(JS) + b*(OS) + c*(JS*OS)$$

OC – Organizational Commitment OS – Occupational Stress JS – Job Satisfaction  
a, b, c – Coefficients of the variables in the equation

Cohen's  $f^2$  (effect size measure) value has been further used to check the strength of moderation. Cohen's  $f^2$  effect size has already been defined by three different values. If the value approaches 0.02, 0.15 or 0.35 the moderation strength is termed small, medium or large, respectively. It is calculated as follows:

$$f^2 = [(R_2)^2 - (R_1)^2 / (1 - (R_2)^2)]$$

Where,  
( $R_2$ ) – Coefficient of determination for Regression model 2

$(R_1)$  - Coefficient of determination for Regression model 1

### Measures:

Three different standard structured questionnaires build by different experts have been used which have previously been used many times successfully in various industrial and banking setups and were further tested for their reliability and validity by the present researcher. For Occupational Stress, questionnaire developed by A. K. Srivastava and A. P. Singh (from the book by D. M. Pestonjee, 1993) tested for a high reliability with coefficient of alpha =.93 and an intrinsic validity score of 0.90 has been used. Job Satisfaction Scale developed by B. L. Dubey, K. K. Uppal, S. K. Verma and C. K. Maini has been used for the study. It consists of 25 questions with five point response dimension. It has also been tested for reliability with a test-retest score of 0.64 and an intrinsic validity score of 0.80. For OC, the Questionnaire developed by C. Balaji has been considered. The OCQ developed by C. Balaji (1987) has 15 items, six of which are negatively framed and reversed scored with seven-point response dimension. It has been tested for very high reliability with coefficient of alpha =.87 and an intrinsic validity score of 0.93.

### Sample:

Sample was collected from DLW, Varanasi, Uttar Pradesh, India, which is a government undertaking possessing both rural and urban characteristics. Data was collected from 280 employees who were selected through disproportionate stratified sampling from a total of approximately 1200 employees belonging to supervisor and managerial level (white collar), working in different unit, viz., production, administration, marketing, design, quality control, engineering, electrical, mechanical, stores etc.

### Data Analysis and Interpretation

Analysis was done with the help on the SPSS

software. The responses of employees were used as raw scores of the present study which were collected via the three previously mentioned measuring devices, namely, JS Scale, OC Scale and OS Scale.

To reach to any conclusions the study has utilized the following statistical techniques: Box Plot, Mean, Median, Quartiles, Standard Deviation, ANOVA and Hierarchical Multiple Regression Analysis. Both the hypotheses displayed earlier have been tested with the help of these statistics and an unambiguous interpretation has been crafted clearly explaining how and to what extent the OC of Workers gets impacted by JS and by how much level Occupational Stress moderates this relationship.

### Relationship between OC and JS:

The relationship first has been visualized through a box plot (Figure II) (at the last) to check if there is any difference between the medians of the two groups of OC (viz. high and low) divided on the basis of Median of Job Satisfaction high and low scores. Merely looking at the box plot gives us an idea as the difference is clearly visible. Besides box plot we also have calculated a few descriptive statistics which includes; mean, median, quartiles and standard deviation scores of OC of high and low JS groups and these have been shown in Table I (at the last), which also shows that there are differences in the mean scores of the variable under study. But, whether it is significant or not has been tested with the help of a parametric test, ANOVA (Table II) (at the last).

The output of ANOVA can be interpreted by looking at the p-value and that comes out to be significant which indicates that the variables under study viz. JS and OC are clearly related to each other. For comparison purpose we can check that the mean OC score of high JS group is higher as compared to mean OC scores of Low JS group, indicating that more satisfied employees are more committed towards their organizations and vice-versa.

The above obtained results suggest us to reject our first hypothesis that —there is no significant relationship between satisfaction and commitment, conversely it is established that the more satisfied the employees are the better will be their level of commitment to the organization in present the industrial settings.

### **Role of OS as a Moderator in the relationship between OC and JS**

As already discussed in the methodology we have checked the moderation impact of OS on the relationship between OC and JS with the help of Hierarchical Multiple Regression Analysis. To get a complete and correct interpretation we need to go through three different outputs of the Regression Analysis that explain the moderation impact.

First, we check Table III (at the last) that displays the model summary and shows that model 2 which was created after the interaction term (JS\*OC) enters the model 1 brings about a significant change in the value of  $R^2$  and hence indicates that interaction term significantly improved the model fit as F-change is also found to be significant.

Second is the ANOVA table shown in Table IV (at the last). This table tells us whether the overall model results in a significant degree of prediction of the criterion variable or not. Since both models show significant F-values we can say that yes it does. However, ANOVA does not tell us about the individual contribution of variables in the model.

To check for the individual contributions we go to Table V (at the last) which is the final output table. The value we need to check is located in second column which represents the coefficients of the predictor variable in the model. Here we are not interested in model 1 but the model of our concern is model 2 because it contains the coefficient of the interaction term (product of JS and OS) which comes out to be significant; this confirms us that stress is moderating in the relationship between JS and OC.

Next we need to find the strength and direction of this moderation. For direction, we need to check the sign of the interaction coefficient which is found to be negative, that tells us that stress reduces the strength of the relationship between OC and JS i.e., the more an employee will be under stress in his/her job the lesser will be the impact of his/her satisfaction on his/her commitment level i.e., stress weakens the relationship between OC and JS. Now, we need to calculate the value of Cohen's  $f^2$  to find out the strength of moderation. The value of Cohen's  $f^2$  comes out to be .019 i.e. a small level magnitude; hence the moderation effect of stress on the relationship between OC and JS is small but significant enough. It is also to be noted that here stress works as a pure moderator and not a quasi-moderator as from Table V it can be seen that the relationship between stress and OC (criterion variable) is not significant.

### **Conclusions & Implications**

OC stands for how strongly congruent the individual's and organization beliefs and its goals are. Enhancing and improving a positive work attitude is a must. Managers can increase employee commitment by first, trying to employ executives whose personal values are consistent with those of the organization's values. Second, a positive, satisfying work environment increases job satisfaction and it can in turn be important causative variables affecting the commitment level of workers in an industrial setup. The management should strive to ensure a good working environment by designing jobs (job enrichment) in such a way that it keeps the workers involved and satisfied and hence committed which will further strengthen an employee's desire to stay in the company.

Once an employee is satisfied, managers can proceed by strengthening the Employee's commitment levels. This can only be done by having check on the level of stress. As, it has been found out that OS does moderates the relationship between OC and JS by a significant amount and in

a negative way i.e., stress reduces the strength of relationship between satisfaction and commitment.

The present research only considered one attitudinal factor and does not take into consideration situational and personality factors for their impact on the commitment level of industrial workers with stress as a moderator. In order to have a better understanding of this complex phenomenon such factors should also be studied in other industries around the world.

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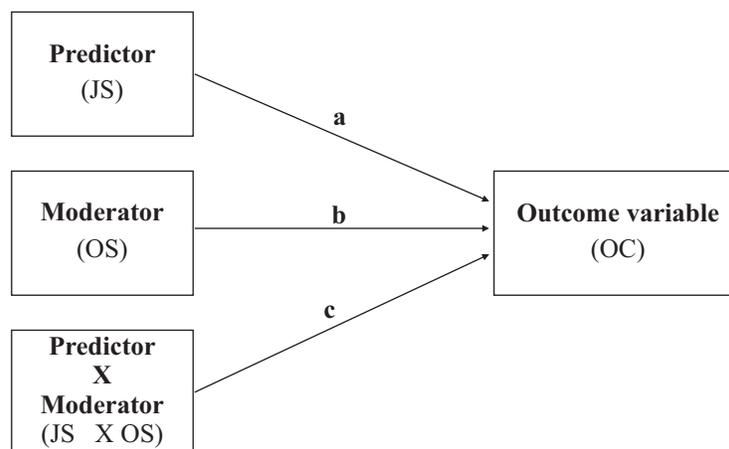
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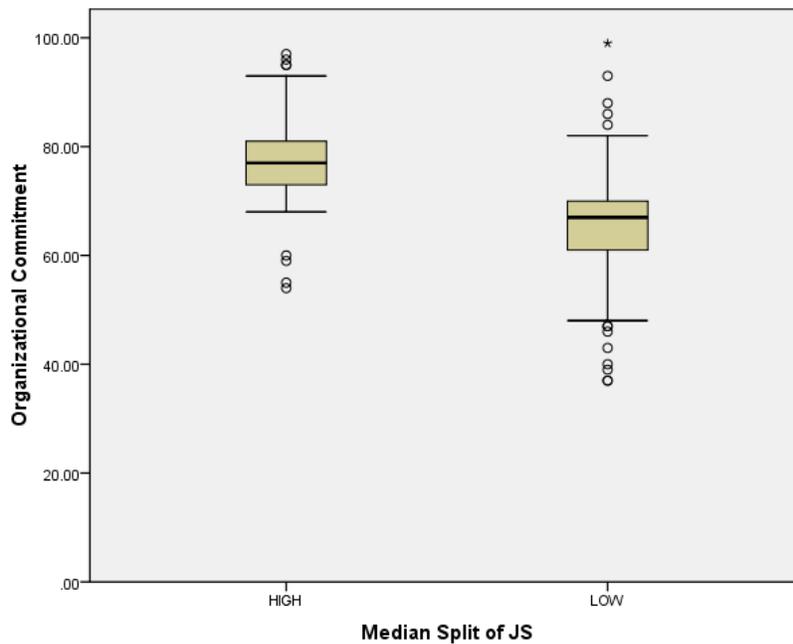
## APPENDIX

Figure I



Moderation Model

**Figure II**  
**Box Plot for OC on the basis of Median of JS scores:**



**Table I**  
**OC scores of workers in High and Low JS Groups**

Group	N	Mean	Median	Q1	Q3	SD
High Satisfaction	145	77.68	77	73	81	6.86
Low Satisfaction	135	65.45	67	61	70	10.26

**Table II**  
**Analysis of variance between the Mean OC scores of High and Low JS scores**

	Sum of Squares	Degree of Freedom	Mean Square	F	Sig. (P)
<b>Between Groups</b>	0445.635	1	10445.635	138.909	0.000
<b>Within Groups</b>	20904.933	278	75.198		
<b>Total</b>	10939.714	279			

**Table III**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.570	.325	.321	.325	66.820	2	277	.000
2	.623	.388	.381	.062	28.116	1	276	.000

**Table IV**  
**ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	10202.877	2	5101.438	66.820	.000
Residual	21147.691	277	76.345		
Total	31350.568	279			
2 Regression	12158.026	3	4052.675	58.280	.000
Residual	19192.542	276			
Total	31350.568	279			

**Table V Regression Coefficients:**

	Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	32.160	6.712		4.791	.000
	Job Satisfaction Scores	.437	.039	.554	11.132	.000
	Occupational Stress scores	.182	.114	.080	1.599	.111
2	(Constant)	24.575	6.564		3.744	.000
	Job Satisfaction Scores	.407	.038	.516	10.742	.000
	Occupational Stress scores	.197	.109	.086	1.812	.071
	Product of OS and JS	.087	.016	.253	5.302	.000