

Occupational Stress as a moderator variable on the relationship between Motivation and Organizational Commitment of Managers

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Abstract

Human behavior is a complex phenomenon that has intrigued researchers for a long time. There is a need to develop greater understanding of the human mind and how it influences behavior. Globally, technological advances have resulted in changing societal values and norms. This has led to a variety of stresses and strains on human minds which try to cope up with it in order to maintain physical and psychological well-being.

In the last two decades, the world that we know has changed rapidly and irretrievably. The advent of accessible universal telecommunications, internet and social media and the recent global disruptions from Covid-19 has entirely changed the way organizations, individuals, and society function. Many of these societal impacts will have long to very long-term effects.

In the organizational context, stressful conditions can have deleterious consequences on the physical and mental health of the employees. The American Medical Association stated that stress was the cause of 80% to 85% of all human illness and disease. A recent survey showed that 70% to 90% of us feel stressed at work and outside. Occupational stress not only has direct impact on other organizational variables but moderating impact too on the relationship between various factors at work place, e.g. motivation and organizational commitment as explored in the present study.

Quality of work life is supposed to be the major goal of the organizations and their employees. This can be achieved by creating a work culture and environment which enriches the life of those who work. This develops and sustains the will to work and enhances the motivation and commitment level of the individuals to their work and work place.

In most organizations, their functioning is based on how the employees, especially the managers function. They are after all responsible for making organizational decisions, policies,

and rules and driving overall organizational culture. Their motivation and commitment to the organization decides to a great extent the future course and long term success of an organization.

In the present study, an empirical attempt has been made to find out the moderating effect of occupational stress on the relationship between motivation and the organizational commitment of managers. To this end, Organizational commitment Scale developed and standardized by Meyer and Allen (1984), Employee Motivation Schedule (EMS) developed and standardized by Srivastava (1984), and Occupational Stress Index developed and standardized by Srivastava and Singh (1981) were administered on a sample of 200 managers of Tata Refractory Ltd., Belpahar, Jharsuguda, Orissa. The sub-group analysis and moderated multiple regression analysis show that occupational stress has partially moderating effect on the relationship between motivation and organizational commitment of managers.

Keywords: Managers, Motivation, Occupational Stress, Organizational Commitment, Psychological well-being

1. Introduction

Organizational Commitment

The organizational commitment attitude has emerged out of the recent research literature as being important to understanding and predicting organizational behavior. As an attitude, organizational commitment is most often defined as the relative strength of an individual's identification with and involvement in a particular organization (Porter & Smith, 1970). It can be characterized by at least three factors:

- (1) A strong desire to remain a member of a particular organization;
- (2) A willingness to exert high levels of effort on behalf of the organization; and
- (3) A definite belief in, and acceptance of, the values and goals of the organization.

In other words, this is an attitude reflecting employees' loyalty to their organization and is an ongoing process, through which organizational participants express their concern for the organization and its continued success and well-being. The more committed an employee is to the organization, the greater the effort expended by the employee in performing tasks. In

addition, highly committed workers are likely to remain with the organization for longer periods of time.

Finally, given the contribution a highly productive trained employee can make to an organizational productivity, keeping such an employee should be a high priority for the organization. Even non-organizational factors such as the availability of alternatives after making the initial choice to join an organization, will affect subsequent commitment.

This multidimensional nature of organizational commitment has led to growing support for a three-component model proposed by Meyer & Allen (1991). The three dimensions are as follows: -

- 1) Affective commitment involves the employee's emotional attachment to, identification with, and involvement in the organization
- 2) Continuance commitment involves commitment based on the costs that the employee associates with leaving the organization.
- 3) Normative commitment involves the employee's feelings of obligations to stay with the organization.

There is considerable research support for this three-component conceptualization of organizational commitment.

Motivation

In organizational behaviour literature, work motivation is considered a basic psychological process. Broadly, work motivation pertains to the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort in person's job. (Katzell & Thompson, 1990).

Literally, motivation means incitement or inducement to act or move. In an organizational setting, it means to make a subordinate act in a desired manner. To motivate, therefore, is to induce, persuade, stimulate, even compel an employee to act in a manner which may help in attaining an organizational objective. Motivation really comprises all the internal urges described as desires, wishes, drives, etc. which make a person strive for doing a thing.

Webster defines the term "Motivate" as meaning to provide with a motive to impel or incite one to action. It may be a need, idea, emotion, or organic state that may prompt one to

action or work. Motivation is a buzzword of industry and a prevailing term in management. It is a process that starts with a physiological or psychological deficiency or need that activates a behavior or a drive aimed at a goal or incentive. Needs set up drives aimed at incentives. This is what the basic process of motivation is all about.

People have a variety of physical, social and physiological needs, and satisfying these needs becomes their personal goal. Organizations have a variety of incentives to induce people to work. These incentives include money, job security, status, recognition, and challenging jobs, improved working conditions and other facilities. Employees will be motivated to work if they find these incentives attractive. If these rewards are satisfactory, the worker will repeat his productive behavior. If they are not satisfying, the worker will be discouraged.

Motivation can be intrinsic or extrinsic. When a person derives a sense of satisfaction performing a job well, this is intrinsic motivation which satisfies the creative instinct in man. However, extrinsic motivation is external to the job or task. For example, financial incentives for doing a job well or giving higher production, praise from the superior for good work, recognition of good performance by the company in the form of public citation and award, admiration of fellow workers, and improved working conditions and other facilities.

Occupational Stress

Stress is something which makes one feel uncomfortable. It creates imbalance and individual tries to restore the state of balance.

Caplan (1971) defined stress as a condition in which there is a marked discrepancy between the demands made on an organism and the organism's capacity to respond to the consequences which will be detrimental to the organism's future in respect to condition essential to its well-being.

Cox (1978) defined stress as perceptual phenomenon arising from a comparison between the demand on a person and his ability to cope. An imbalance in this mechanism when coping is important gives rise to experience of stress and stress response.

Occupational stress can be considered as an accumulation of stressors, job related situations that are considered stressful "by most of us". For example, a stressful work situation

might be one with many demands placed upon the employee, with little time for meeting them and with increasing criticism from supervisors (Kazmi et al., 2023).

Alternatively, we could think about job stress as the stress experienced by an individual on a particular job. Such a consideration might include whether the employee was experienced or new to the job, whether he or she routinely coped well with circumstances or was a poor copier and what type of personality he or she brought to the job.

However, there is also an interplay between the person and the environment. Occupational stress can also be defined as the interaction of work condition with characteristics of the worker such that the demands of work exceed the ability of the worker to cope with them.

Each individual needs a moderate amount of stress to be alert and capable of functioning. Given that presence of more or less stress is inevitable; many researches sought to find out to what could be done to counteract stress so as to prevent its negative consequences.

2. Objective of the study

The objective of the present study was to find out the moderating effect of occupational stress on the relationship between motivation and organizational commitment of managers.

3. Hypothesis

Occupational stress is significantly affecting the relationship between motivation and organizational commitment of managers by acting as a moderator variable.

4. Design and Methodology

An attempt has been made to examine the moderating effect of occupational stress on the relationship between motivation and organizational commitment of managers. It is hypothesized that the correlation between motivation and organizational commitment will be high for low occupational stress group than the high occupational stress group. For this purpose, sub-group analysis and moderated multiple regression analysis were applied.

5. Sample

The study was conducted on 200 managers incidentally selected from Tata Refractory Ltd., Belpahar, Jharsuguda, Orissa. TRL is India's premier manufacturer of refractories. Outside India, TRL's refractories have found ready acceptance in International market affirming its world class reputation and commitment to the core. It was established in 1958 as a joint venture of Tata Steel and Didier Werke, AG, Germany. In 2011, Tata sold 51% of its shares to Krosaki Harima Corporation of Japan and the company's name was changed to TRL- Krosaki Refractories Ltd. The age of the respondents ranged between 24 to 60 years with the average age of 38 years. Their monthly income ranged from Rs. 6000/- to Rs. 20000/- with average monthly income of Rs. 12000/- Their qualifications ranged from Graduates, Eng. Diploma, ICWA, ACA to MBBS. All the managers included in the study were married males.

6. Procedure

The managers of TRL have been contacted one by one and requested to participate in the research study as subject for academic purpose. The subjects were asked to fill up personal data sheet. Occupational stress index, Employee Motivation Scale and Organizational Commitment Scale were administered to them. They had to respond on the questionnaire as per the instructions written for each questionnaire. The respondents were asked not to leave any item unanswered and give their candid responses as the information thus sought will be kept confidential and used for research purpose only.

7. Tools used

To study the variables in the present research work, the following psychometric devices were utilized:

Employee Motivation Schedule (EMS)

The level of motivation was assessed with the help of Employee Motivation Schedule developed and standardized by Srivastava (1984). It consists of 70 statements with four alternative responses, namely, always, mostly, seldom, and never.

The EMS assesses employees' motivation in relation to seven dimensions. The individual operating in context of industries and other employments are motivated by a number of needs, individually or in different combinations. The present EMS focusses upon following needs being manifest at work (job) which generate work motivations:

- (i) Need for personal growth: Improvement of self and of competence learning new things
- (ii) Need for Achievement: High production, goal achievement competition
- (iii) Need for Self-Control: Alert, sincere to job responsibilities, attainment of goal deadline
- (iv) Need for monetary gains: Immediate monetary gains or rewards, increments in salary or wages
- (v) Need for Non-financial Gains: Status, recognition, appreciation, prospects
- (vi) Need for social-affiliation and conformity: Participation, cooperation, group influence, group conformity
- (vii) Need for Autonomy and self-actualization

Reliability and validity of Schedule were computed. For the purpose, split-half and test-retest methods were applied to ascertain the reliability of the schedule of seven sub-scale.

The validity of the test was ascertained by computing correlation (bi-serial) between the scores on each item and the score on the sub-scale. The validity of the scale was further ascertained by correlating the scores on the Employee Motivation Schedule with the scores on the measures of job involvement and role stress.

Organizational Commitment Scale

The level of organizational commitment was assessed with the help of organizational commitment Scale developed by Meyer and Allen (1984). It consists of 16 items with 7 alternative responses, namely, strongly disagree, disagree, uncertain, undecided, agree, slightly agree, strongly agree. The 16 items comprising the two scales Affective Commitment Scale (ACS) and Continuance Commitment Scale (CCS) were factors analyzed using maximum likelihood estimation followed by varimax rotation. Two factor analysis were performed. The first specifying two factors (as suggested by Meyer & Allen (1984) and the second forcing no

specific number of factors. In the two-factor solution the 8 ACS items loaded on the first factor. Six of eight CCS items loaded strongly on the second factor. Respondents were required to give responses in degree of their agreement or disagreement with each statement by indicating one of the seven alternatives.

Reliability: Internal consistency reliability estimates (Cronbach's Alpha) were calculated for the two scales:

- (a) Affective Commitment Scale (ACS)
- (b) Continuance Commitment Scale (CCS)

Reliability coefficient for these scales were .88 and .70 respectively.

Scoring: Out of 16 items constituting the scale, four ACS items were 'negative' and remaining four were 'positive' in which 1,2,4 and 8 numbered items were negative and 9, 13, 14 and 16 items were positive.

In this organizational commitment scale, negatively worded items reversely scored prior to data analysis.

Occupational Stress Index (OSI)

The level of occupational stress was assessed with the help of occupational stress index developed and standardized by Srivastava and Singh (1981). It consists of 46 statements with five alternative responses, namely, strongly agree, agree, uncertain, disagree, and strongly disagree.

The index assesses perceived stress arising from the 12 dimensions of job life. The dimensions are role overload, role ambiguity, role conflict, unreasonable group and political pressure, under participation, responsibility for persons, powerlessness, poor peer relations at work, intrinsic impoverishment, low status, strenuous working conditions, and unprofitability.

Reliability of Occupational Stress index was determined by computing Cronbach's alpha coefficient which was found to be $r=0.90$. the internal consistency of the test was determined by computing odd-even method was found to be .935 (corrected by S.B. Formula).

Validity: Index of homogeneity and internal validity of individual items was determined by point biserial co-efficient of correlation (r_{pb}). The values of point biserial co-efficient ranged from .36 to .59.

Scoring: Out of 46 items constituting the index, eighteen items were ‘false-keyed’ and remaining 28 items were ‘true-keyed’. The possible scores for each item were ranged from one to five (strongly agree to strongly disagree). The index scores ranged in ascending order for the ‘true-keyed’ items and in descending order for the ‘false-keyed’ items.

The occupational stress scores will be determined by arithmetic summation of the scores endorsed to all the forty-six items. Thus, the maximum possible scores will be 230 and the minimum 46. The lower scores indicate lower degree of occupational stress and the higher scores higher degree of occupational stress.

8. Results and Discussion

The results are presented in a tabular form here. For determining the moderating effect of occupational stress on the relationship between motivation and organizational commitment of managers, subgroup analysis and moderated multiple regression analysis were computed.

TABLE-1

Relationship between Organizational Commitment and Motivation for Total Sample and Moderator based Sub-samples (N=200)

Nature of Sample	r	t-value	p
Entire Sample (N=200)	0.6592		0.01
Low Occupational Stress group (N= 98)	-0.0566	3.5364	0.01
High Occupational Stress group (N= 102)	0.4229		

In sub-group analytical strategy, the data was first analyzed using product moment correlation for the entire sample. The results shown in Table-1 indicate that before occupational stress effects were considered, organizational commitment was significantly positively related to motivation. When the sample was divided into the high and low group based on median occupational stress scores, there was very low negative relationship between the two variables for low stress group and low positive relationship for high stress group. However, the t-value was found to be significant. This indicates that occupational stress has significant moderating effect on organizational commitment and motivation relationship at 0.01 level.

Further, moderated multiple regression analysis is also computed to examine the potential moderating effects of occupational stress on organizational commitment and motivation relationship. Towards this goal, the occupational stress is used in two related multiple regression model. On the first, the organizational commitment scores are regressed on occupational stress and motivation scores to form the ‘Independent Predictor Model’ (Zedeck,1971).

The second regression model is three variable approach using the ‘Independent Predictor Model’ and adding to equation the interaction of occupational stress and motivation. This approach has been labeled as ‘Moderated Regression Model’ (Saunders, 1956).

To test the significance of difference between ‘Zero order correlation’ and ‘Independent Predictor Model’ and ‘Moderated Regression Model’, the F-ratios have been computed and are recorded in Tables 2 and 3.

TABLE - 2

Hierarchical MRC Analysis for Criterion (Y), Predictors (X₁ X₂) and Moderated Regression Model (X₁ X₂ X₃)

	RY	F	df	p
X₁	0.6592	152.1570	1, 198	0.01
X₁ X₂	0.6914	90.2341	2, 197	0.01
X₁ X₂ X₃	0.6929	60.3484	3, 196	0.01

**Y= Organizational Commitment, X₁ = Motivation, X₂ = Occupational Stress
 X₃ = Motivation x Occupational Stress (Interaction)**

TABLE – 3

Significance of Difference between Zero-order Correlation and Independent Predictor Model as well as between Independent Predictor Model and Moderated Regression Model

	Cum R₂Y	Increment	F	df	P
X₁	0.4345	0.4345	152.1570	1, 198	0.01
X₁ X₂	0.4781	0.0436	16.4434	1, 197	0.01
X₁ X₂ X₃	0.4802	0.0021	0.7792	1, 196	N.S.



**Y = Organizational Commitment, X₁ = Motivation, X₂ = Occupational Stress
X₃ = Motivation x Occupational Stress (Interaction)**

Table-2 indicates that the zero-order correlation between organizational commitment and motivation is found to be 0.6592. When overall organizational commitment is predicted using both motivation and occupational stress, R increases to 0.6914, $F(2, 197)=90.2341$. When we add motivation X occupational stress interaction term, the increased R is found to be 0.6929 which is significant at .01 level, $F(3, 196)=60.3484$. The difference between the zero-order correlation and independent predictor model is found to be significant at .01 level but the difference between independent predictor model and moderated regression model is not found to be significant (Table- 3). Thus, occupational stress has partially moderating effect on the motivation and organizational commitment relationship of managers.

The concept of commitment is used to account for the fact that people engage in consistent lines of activities (Becker, 1960). This consistency of behavior refers to a stable structure of personal needs. Work is central to one's life because it meets significant needs that people have. Individuals have stable needs and consistently act so as to maximize the possibility of satisfying them and in the process developing commitment to the organization which fulfills these needs. The individual invests time, effort, money on which he places high value to fulfillment of his needs which would be lost or deemed worthless at some perceived cost to the individual if he or she were to leave the organization. This threat of loss and his motivation to fulfill his needs that commits the person to the organization (Stevens and his associates, 1978). Mowday and his associates (1979) proposed that highly committed employees are thought to be motivated to exert high levels of energy on behalf of the organization. The individual's needs should be compatible and consistent with the organization's goals. Drucker (1955) in his practice of management puts that "it is the workers' motivation which generates a sense of commitment, a feeling that the job one does is important and significant". Ahmad (2000) found significant positive relationship between work motivation (overall and area wise) and organizational commitment. Stress in work place have a significant impact on commitment for organization and motivation of the employee. Buck

(1972), Kahn and his associates (1964), House and Rizzo (1972) and Sales (1970) view occupational stress as dysfunctional for organization.

Mathieu & Zajac (1990) have found negative correlation between stress and organizational commitment. Begley & Czajka (1993) concluded that stress increased job displeasure only when commitment was low. Ahmad (2000) found that the occupational stress has moderating effects on the relationship between organizational commitment and work motivation. Asha and his associates (2022) have found significant moderating effect of job stress on employee motivation and organizational commitment in teachers.

In summary, occupational stress has emerged as an important moderator variable in the motivation and organizational commitment relationship. The results of both subgroup analysis and moderated regression analysis are consistent with the argument that the relationship between motivation and organizational commitment will be higher in managers with low occupational stress rather than in managers with high occupational stress. Therefore, further research should be directed towards the discovery of other situational and personality factors that would permit a better understanding of the relationship between motivation and organizational commitment.

The stress management and coping strategies both at the personal and organizational level as well as identifying the causes leading to occupational stress and minimizing or eliminating them altogether if possible can help improve the bond between motivational level of managers and their commitment to the organization.

9. Suggestions for future research

Future researches can be conducted on the different levels of managers of public and semi-public sector organizations and on other samples like workers and supervisors. Other relevant variables, namely, family size of managers, age, religion, family and social responsibilities, psychological well-being, marital status etc. can also be taken into consideration. A similar study on female managers should be conducted. Other personality, situational, and attitudinal dimensions may be studied and their relationship ascertained.

10. References

Ahmad, K. (2000). Work motivation, occupational stress and mental health as predictor of organizational commitment. Unpublished Doctoral Dissertation, Dept. of Psychology, Lucknow University, Lucknow.

Asha S. et al (2022). Job Stress and its impact on Employee Motivation and Organizational Commitment. *Journal of Positive School Psychology*, 6(4), 4781-4790.

Becker, H.S. (1960). Notes on the concept of commitment. *American Journal of Sociology*, 66, 32-42.

Begley, T.M., & Czajka, J.M. (1993). Panel analysis of the moderating effects of commitment on job satisfaction, intention to quit, and health following organizational change. *Journal of Applied Psychology*, 78, 552-556.

Buck, V.E. (1972). Working under pressure, New York: Grane, Russack, and Company, London.

Caplan, R.D. (1971). Organizational stress and individual strain: A socio-psychological study of risk factors in coronary heart disease among administrators, engineers, and scientist Doctoral dissertation. The University of Michigan, University Microfilms No. 72-14822.

Cox, J.A., Hitt, M.A., & Stanton, W.W. (1978). An examination of the relationship of boundary relevance to hierarchical level, perceived environment uncertainty, and role-stress variable. Proceedings of the 38th Annual Meeting of the Academy of Management, 175-179.

Drucker, P.F. (1955). Management Science and the Manager.

<https://doi.org/10.1287/mnsc.1.2.115>

House, R.J., & Rizzo, J.R. (1972). Role conflict and ambiguity as critical variable in a model of organizational behavior. *Organizational behavior and human performance*, 10, 72-87.

Kahn, R.L., Wolfe, D.M., Quinn, R.P., Snack, J.D., & Rosenthal, R.A., (1964) *Organizational Stress: Studies in Role Conflict and Ambiguity*. Willey, New York.

Katzell, R. A., & Thompson, D. E. (1990). Work motivation: Theory and practice. *American Psychologist*, 45(2), 144–15. <https://doi.org/10.1037/0003-066X.45.2.144>

Mathieu, J.E. and Zajac, D.M. (1990). A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment, *Psychological Bulletin*, 108; 171-194.

Meyer, J.P. & Allen, N.J. (1984). Testing the “side bet theory” of organizational commitment: Some methodological considerations. *Journal of Applied Psychology*, 69, 372-378.

Meyer, J.P. & Allen, N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61-98.

Mowday, R.T., Steers, R.M. & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.

Porter, L.W., & Smith, F.J. (1970) The etiology of organizational commitment. Unpublished paper, University of California, Irwine.

Sales, S.M. (1970). Some effects of role-overload and role-underload. *Organizational Behavior and Human performance*, 5, 592-608.

Saunders, D. R. (1956). Moderator variables in prediction. *Educational and Psychological Measurement*, 16, 209–222. <https://doi.org/10.1177/001316445601600205>

Srivastava, A.K. (1984). Construction and standardization of Employee Motivation Schedule. Department of Psychology, Banaras Hindu University, Varanasi.

Srivastava A.K., & Singh, A.P. (1981). Occupational Stress Index (Unpublished), Department of Psychology, Banaras Hindu University, Varanasi (221005), India.



Kazmi, S. S. H., Shukla, J., Tripathi, R. K., & Zaidi, S. Z. H. (2023). Occupational Stress Among Middle-Aged Professionals in India. *Annals of Neurosciences*, 09727531231184299.

Stevens, J.M., Beyer, J.M. & Trice, H.M. (1978). Assessing personal, role and organizational predictors of managerial commitment. *Academy of Management Journal*, 21, 380-396.

Zedeck, S. (1971). Identification of moderator variables by discriminant analysis in a multipredictable group validation model. *Journal of Applied Psychology*, 55(4), 364-371. <https://doi.org/10.1037/h0031325>