

Can We Blame the Climate of an Organization for the Stress Experienced by Employees?

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Abstract

The environment of workplace has received much attention in research in human resource literature. However, its impact on employee's behavior such as stress has not been established widely. This research explores the relationship between stress and organizational climate among employees of a large manufacturing organization. A sample of 625 employees was selected using convenience sampling method to measure the level of occupational stress and organizational climate. Pearson's correlation coefficient was computed to study the relationship between the two variables. To identify the predictors of occupational stress with organizational climate as a criterion, stepwise regression analysis was calculated. The findings indicate that there exists a negative significant correlation between the two variables under study. Regression analysis reveals that support system, decision-making, motivational level, and warmth as climate factors, significantly predict occupational stress. The findings are significant for management practitioners, organizational psychologists, and human resources personnel since it empirically directs them to focus on diagnosing the climate of the organization, especially giving importance to strengthen the support system and empowering employees with decision-making power which, if neglected, may cause stress to employees.

Keywords

Work environment, job satisfaction, culture, employee engagement, employee perception, role of work

Introduction

“Work is worship” adage followed by many employees shows their work commitment which requires them to spend more than half of their day in their organizations. Overwork can limit an individual's capacity to work causing occupational or work stress. Occupational stress is defined as the adverse employee reaction to excessive work pressure or other types of demands placed on them, which has serious productivity and human behavior consequences (Cooper & Marshall, 2011; Muthuvelayutham & Mohanasundaram, 2012). Occupational stress remains a critical issue of research and clinical attention. Competition levels in industry has pressurized organizations to maximize the potential of their

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workforce, leading to employees being exhausted and enervated (Adenike, 2011; B.B. Arnetz, Lucas, & J.E. Arnetz, 2011). A high level of work stress is associated with low levels of job satisfaction, and is also a predictor of job dissatisfaction which may indicate a greater propensity to leave the organization.

Research has established direct relationship between organizational climate and stress and thus, employee's performance. Climate of an organization has a direct impact on the performance of the employees (Young, 2012).

Thus, a good organizational climate is instrumental in higher employee satisfaction, better interpersonal relations, and consequently, higher productivity. It is the responsibility of the management to deal with organizational level factors to minimize the levels of stress among the employees. This is possible by considering various organizational climate factors which will indicate specific sources of stress (Pareek, 1993).

This article presents a study undertaken in a large manufacturing organization in India to study the relationship between various organizational climate (OC) dimensions and occupational stress. The aim of this study was to determine whether occupational stress has a significant relationship with organizational climate, with a view to draw attention of the human resource professionals, and organizational development practitioners, to understand and emphasize on creating a climate that prevents development of occupational stress. Significantly, in a manufacturing industry employees interact with their machines as much as they do with their colleagues. Second part of the article reviews recent research on the subject, particularly relationship between employee productivity and stress, causes of stress, and relationship between different elements of organizational climate and stress. Next, we outline the methodology adopted for the study, which is followed by the data analysis and discussions on the outcomes. The final section of the article lists conclusions drawn from the study.

Review of Literature

Stress & Productivity: Stress negatively affects an individual's functioning at workplace and accordingly impacts an organization's productivity. Reduced efficiency, decreased capacity to perform, dampened initiative and reduced interest in work, increased rigidity of thought, lack of concern for the organization and colleagues, and loss of responsibility are symptoms of stress at work (Kimura, 2009; Muthuvelayutham & Mohanasundaram, 2012). Stress is measured by several occupational outcomes such as job satisfaction, organizational commitment, and employee withdrawal behavior (Adenike, 2011; Cooper & Marshall, 2011).

In order to develop and enhance workforce capabilities, and to successfully compete in the global markets, organizations embark on future-oriented human resource strategies. Organizations strive to employ self-motivated and organized employees, and thus, enhance organizational effectiveness, growth, and productivity (Cooper & Marshall, 2011; Kimura, 2009). Less stressed employees usually have greater job satisfaction, share cordial relations with colleagues, and show signs of high level of engagement and commitment towards their organizations (Arnetz et al., 2011). However, it is important that the engagement level of a workforce has to be consistently maintained.

Causes of Occupational Stress

Much research is available on the causes of occupational stress. Studies on “role stress” have extensively contributed to the knowledge on occupational stress. These factors include role overload, self-role distance, role isolation, inter-role distance, role stagnation, role expectation conflict, role ambiguity, and role inadequacy (Pareek, 1993). Kammeyer-Mueller and Wanberg (2003) stated that a clearly defined role decreases absenteeism and lateness, indicating either absence or lower levels of stress. Researches on occupational stress in Indian context also reveal that stress is experienced due to role overload, intrinsic impoverishment, and status variable among teachers and executives (Nayak, 2008).

Workload which entails both having excessive and little work has been identified as one of the sources of stress. Working under time pressure taxes an individual’s ability to cope at work, eventually leaving a stressed employee (Hong & Kaur, 2008). The environmental conditions such as long work hours, strict and inflexible work schedules, unpredictable working hours, and poorly designed shift systems have been found to be some root causes of employee stress. With constant market growth, employees have become conscious of their career growth. New employees not only concentrate on monetary satisfaction but also on career growth opportunities, and facilities provided by an organization. Lack of prospect to grow and learn can cause stress. Interpersonal needs, if not satisfied, can be a foundation of employee stress. Inadequate, inconsiderate, or unsupportive supervision, poor relationships with co-workers, bullying, harassment and violence, isolated or solitary work are some of the interpersonal factors that can cause stress (Cooper & Marshall, 2011).

Poor leadership, lack of clarity about organizational objectives and structure are also pertinent factors causing stress (Panchanatham, Kumaraswamy, & Vanitha, 2006). The role of leaders is crucial for efficient functioning of the organization. The leadership style practised in the organization largely moderates the level of stress among their subordinates. Subordinates of coercive leaders are more stressful as compared to subordinates of non-coercive leaders (Panchanatham et al., 2006).

Fear of knowledge obsolescence and individual team interactions accounted for high levels of stress in software professionals (Rajeshwari & Anantharaman, 2003). Rapid change of the modern working life associated with increasing demands of learning new skills, and higher productivity, and expectations of better quality of work are factors of increasing stress among the workforce (Kulkarni, 2006).

Employees suffer from stress as a result of continuous noise pollution by way of sudden high frequency acoustic shocks, emphasizing on the working conditions (Sudhashree, Rohith, & Shrinivas, 2005). Working conditions are an important part of organizational climate and play a pivotal role in development of occupational stress. Donald and Siu (2001) investigated the relationship between environmental conditions and employee health among Chinese white and blue-collar samples, and examined the role of organizational commitment as a stress moderator. The results show that environmental conditions at work are positively related with job satisfaction, and physical and mental health. Support system is an integral component of organizational climate and can affect employee stress levels. Social isolation and lack of social support are associated with higher morbidity (Visweswaran et al., 1999) and lower life expectancy. Furthermore, low workplace support is shown to increase the rate of absenteeism (Melchior, Niedhammer, Berkman, & Goldberg, 2002), while high support at work decreased the intentions to quit the job (Brough & Frame, 2004).

Fairness and justice is another significant element of organizational climate which has always been an issue of distress (Marko, Mika, & Klaus, 2001). In work settings, employees often value the rewards

they receive to match their contributions to the organization. Employees also evaluate the fairness of the decision-making procedures used by organizational representatives, to judge whether the procedures are consistent, unbiased, accurate, correctable, and representative of worker concerns and opinions (Marko et al., 2001). Participation in decision-making process at work ensures job involvement and engagement. Robinson, Perryman, and Hayday (2004) stated that one of the chief drivers of employee engagement is involvement of employees in decision making, so that employees feel that they can be heard and that their ideas and views are valued. Engagement and stress share an inverse relationship which leads us to conclude that lack of decision-making prospects can cause occupational stress. This can be supported by a study by Slate, Wells, and Johnson (2003) where they investigated the role of participatory management in causing stress. The results of their study stated that employee's perception of participation in workplace decision making was an important variable in relation to job satisfaction and stress. More recently, Kalleberg, Nesheim, and Olsen (2009) have shown that autonomy and consultation in decisions reduce job stress.

Organizational Climate, Stress, and Productivity

The key elements of organizational climate are as follows: concern towards employees, interpersonal relations, degree of control, individual freedom, type of organizational structure, management style and orientation, reward system, conflict management, and degree of trust (Moran & Volkwein, 1992). The study of climate of an organization is necessary for an insight into important dimensions such as communication, cooperation, creativity, employee satisfaction, and morale.

There have been several studies which support that organizational climate and occupational stress share an inverse relationship. A study by Arnetz et al. (2011) reveals that there is a strong relationship between organizational climate, occupational stress, and employee's mental health; however, it was mediated by the effects of organizational efficiency.

Young (2012) explores the role of work climate in influencing employee's perceptions of intra-individual conflict in a Middle Eastern context. The findings of the study revealed that feelings of frustration and perceptions of role and goal conflict among participants were largely determined by the factors of work climate. Linzer et al. (2002) found that stress and the subsequent of making errors among physicians are associated with organizational climate and office environment. Climate of an organization, especially intimacy, consideration, influence, dynamism, and morale are causes of stress (Keenan & Newton, 2011). Closed environment elements such as separation, lack of interest and commitment towards their jobs, emphasis on productivity, interference, and motivation reduce creativity in the personnel and increase their stress.

Recent research reveals that an engaged workforce directly associates with organizational climate perceptions (Walker, 2011). It is essential that the environment of a workplace remains healthy and conducive to maximize the performance of an employee (Walker, 2011). When the environment around the work is not healthy and conducive, it becomes difficult to focus attention and perform well. Consequently, adversely it affects employee turnover, absenteeism, fitness, commitment towards work, and thus, results in exceeded deadlines, increased accident rates, increased customer complaints, and poor organizational image. These behavioral manifestations of employee stress show an association between well-being of employees and climate of an organization (Moran & Volkwein, 1992).

Leaving a job is an extreme and important decision taken by an employee. In this context, Hong and Kaur (2008) studied the relationship between organizational climate, employee personality, and intention to leave. Study results revealed that organizational climate had a significant association with employees' intention to leave. These climate factors included reward system, structure, responsibility, and support. The correlation analysis indicated a strong negative relationship between these climate factors and employees' intention to leave. Some researches further indicate that stress is one of the several factors why employees leave their job. Layne, Hohenshil, and Singh (2004) studied the relationship between occupational stress, psychological strain, and coping resources to the turnover intentions of rehabilitation counselors found that occupational stress produced the most influence on turnover intentions. Thus, a relationship between stress, climate, and turnover can be established. This perhaps may indicate that the relationship between stress and organizational climate leads to employee turnover.

One of the key factors that may influence employees' perceptions of involvement has been found to be organizational climate by Shadur, Kienzle, and Rodwell (1999), as they examined the relationship between employees' perceptions of involvement which included job satisfaction, employee stress and commitment, and organizational climate. The results showed that supportive climates significantly predicted each of the employee involvement variables. This finding illustrates the relationship between stress and climate, that is, a supportive climate in the organization impacts the levels of stress among the employees. Kimura (2009) studied the relationship between stress reactions of employees and organizational climate in manufacturing corporations. Stress was found to be dependent on accepting the climate of the workplace, co-operative and supportive relationships among co-workers, communication particularly with regard to self-esteem and need for approval and favorable relations with supportive bosses.

Linzer et al. (2002) investigated the impact of organizational climate on physicians and their patients. The study concluded that physician stress is prevalent in primary care; stress and the likelihood of making errors are associated with organizational climate and office environment. Primary care offices could be made safer by emphasizing on information systems, promoting a culture of quality, and improving the hectic environment.

A large pool of research has concluded that organizational climate significantly predicts job satisfaction (Adenike, 2011) and engagement (Walker, 2011). It is clear from the results that climate factors do have an impact on employee stress.

Social support is an integral part of human life. Not receiving support from colleagues, superiors, and subordinates can be a threatening situation. It is essential to maintain cordial relations with people around. A support system at workplace ensures an employee's effective performance. Providing both socio-emotional and instrumental support confirms satisfaction. Viswesvaran, Sanchez, and Fisher (1999) found that social support had a threefold effect on work stressor-strain relations. Social support reduced the strains experienced, mitigated perceived stressors, and moderated the stressor-strain relationship. Baker, Israel, and Schurman (1996) examined the role of control and support in occupational stress. The results showed that control and social support were strongly related with negative job feelings. However, they further found that effect of social support was found to depend on the type of support and from whom the support was provided. Social support system is required for a healthy functioning. With social support comes a sense of belongingness, an increased sense of self-worth, and feeling of security. Palmer, Cooper, and Thomas (2004), in their model on work stress, laid emphasis on cultural factors that are potential sources of stress. Support factor was seen as one of the many potential hazards.

Their explanation of support included the encouragement, sponsorship, and resources provided by the organization.

Methodology

Considering an increase in stress levels among employees, the present study focuses on investigating the relationship between organizational climate and occupational stress. Further, this study also investigates the organizational climate factors and demographic factors such as age and work experience that significantly predict occupational stress. To study the relationship between occupational stress and organizational climate, a convenience sampling method was employed to collect data from a large-scale manufacturing industry.

The scales used to measure the purpose of assessment are standardized tools with Indian norms, Organizational Climate Scale (OCS) developed by Chattopadhyay and Agarwal (1976). The scale has been widely used to measure the employee's perception of organizational climate. The five-point scale consisted of 70 items which measured in total 11 climate dimensions of performance standards, communication flow, reward system, responsibility, conflict resolution, organizational structure, motivational level, decision-making process, employees' perception, role of work, leadership, support system, warmth, and identity problems.

To assess the level of stress, Occupational Stress Index (OSI) developed by Srivastava and Singh (1981) was employed. This scale consisted of 46 items and measured 12 components of job life which causes stress including role overload, role ambiguity, role conflict, group and political pressures, responsibility for persons, under-participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions, and unprofitability.

Results and Discussion

A usable sample of 625 respondents was obtained. Sample age group ranged from 21 years to 60 years, and the mean age for the sample obtained was 36 years. The mean for total years of work experience was 12.62 years.

The Occupational Stress Index is divided into five groups (1–5): Very High, High, Medium, Low, and Very Low, which is consistent with earlier studies (Motowidlo, Packard, & Manning, 1986; Richardson & Rothstein, 2008). Table 1 shows the descriptive statistics for the five groups of Occupational Stress Index.

One-way ANOVA analysis of Occupational Stress Index was done to study if there exists a significant difference between five groups of Occupational Stress Index. Table 2 shows the result of ANOVA analysis for mean difference between five groups of OSI.

Results show that there is significant difference between five groups of OSI. Since there exist significant differences among five groups of OSI, post hoc test helps in determining the homogeneous subset of means that are not different from each other (Armstrong & Hilton, 2006). The post hoc test for multiple comparisons between five groups of OSI depicts that significant mean difference exists between groups: 1–3, 1–4, 1–5, 2–4, 2–5, 3–5, and 4–2. The homogeneous subsets provide an alternative way of

Table 1. Descriptive Statistics of Five Groups of OSI

Descriptive Statistics OSI								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	121	128.8595	17.6471	1.6043	125.6831	132.0359	88.00	188.00
2.00	121	127.1736	20.9534	1.9049	123.4021	130.9450	77.00	184.00
3.00	190	122.2632	20.0635	1.4556	119.3919	125.1344	72.00	184.00
4.00	120	117.9417	20.8980	1.9077	114.1642	121.7191	67.00	189.00
5.00	73	114.7260	18.4701	2.1618	110.4166	119.0354	71.00	159.00
Total	625	122.7808	20.2972	0.8119	121.1864	124.3752	67.00	189.00

Table 2. ANOVA Analysis of Five Groups of OSI

ANOVA OSI					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14,403.048	4	3,600.762	9.200	0.000
Within Groups	242,669.921	620	391.403		
Total	257,072.970	624			

finding and displaying post hoc tests and are considered more appropriate when group sizes are quite different (Duncan, 1957; Lee, Ryu, & Chung, 2000). According to Tukey and Duncan's test, groups listed in the same subset are not significantly different. Further, both tests are used for unequal group size (Kramer, 1957; Woo, Chae, & Choi, 2010). It shows that according to Tukey, HSD (honestly significant difference) test groups 5–4, 4–3, 3–2–1 are not significantly different. Further based on Duncan test, groups 5–4, 4–3, 3–2, and 2–1 are not significantly different.

One-way ANOVA analysis for the 12 components of job life was done to find the significant mean difference between five groups of each component of job life. The 12 components—role overload (RO), role ambiguity (RA), role conflict (RC), unreasonable group and political pressure (UGPP), responsibility for persons (RP), under-participation (U), powerlessness (P), poor peer relations (PPR), intrinsic impoverishment (II), low status (LS), strenuous working conditions (SW), and unprofitability (UNP)—show that there exists a significant difference between five groups of RA, RC, UGPP, RP, U, P, II, LS, SW, and UNP.

Further, post hoc test suggest that significant mean difference exists between certain groups of components as role ambiguity, role conflict, under-participation, powerlessness, low status, to name some. Table 3 shows the descriptive statistics for five groups of Organizational Climate Index.

Table 3. Descriptive Statistics of Five Groups of OCI

	Descriptive Statistics OCI							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	121	226.7190	34.0972	3.0997	220.5817	232.8563	129.00	318.00
2.00	121	231.3140	38.2703	3.4791	224.4256	238.2025	138.00	316.00
3.00	190	236.4632	33.9361	2.4620	231.6067	241.3197	141.00	334.00
4.00	120	251.4833	32.7837	2.9927	245.5574	257.4092	160.00	315.00
5.00	73	255.9452	29.9522	3.5056	248.9568	262.9336	192.00	321.00
Total	625	238.7392	35.6187	1.4247	235.9413	241.5371	129.00	334.00

Table 4. ANOVA Analysis for Five Groups of OCI

	ANOVA OCI				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66,238.988	4	16,559.747	14.153	0.000
Within Groups	725,423.502	620	1,170.038		
Total	791,662.490	624			

One-way ANOVA of Organizational Climate Index was done to study if there exists a significant mean difference between five groups of OCI. The results are shown in Table 4 and interpret that there is a significant difference between five groups of OCI. The post hoc test for multiple comparisons depicts that significant mean difference exists between groups: 1–4, 1–5, 2–4, 2–5, 3–4, and 3–5. The homogeneous subset shows that according to Tukey HSD test, groups 1–2–3, 4–5 are not significantly different. Further, according to Duncan test, groups 1–2, 2–3, and 4–5 are not significantly different.

One-way ANOVA of 11 components of climate dimensions was done to find the significant mean difference between five groups of each component in the organizational climate. The 11 components—performance standards (PS), communication flow (CF), reward system (RS), responsibility (R), conflict resolution (CR), organizational structure (OS), motivational level (ML), decision-making process (DMP), support system (SS), warmth (W) and identity problems (IP)—show that there exists a significant difference between groups of all 11 components. The post hoc test suggests that significant mean difference exists between certain groups of components such as performance standards, conflict resolution, organization structure, and support system, to name some. The hypothesis is stated as there is negative significant relationship between occupational stress and organizational climate. To study the hypothesis, Karl Pearson's correlation coefficient was computed. Table 5 shows that there exists a

Table 5. Pearson's Correlation Coefficient Between Occupational Stress and Organizational Climate

		Correlations	
		OSI	OCI
OSI	Pearson Correlation	1.000	-0.714(**)
	Sig. (2-tailed)	-	0.000
	N	625	625
OCI	Pearson Correlation	-0.714(**)	1.000
	Sig. (2-tailed)	0.000	-
	N	625	625

Note: **Correlation is significant at the 0.01 level (2-tailed).

significant negative relationship between occupational stress and organizational climate. This further signifies the existence of inverse relationship between both the variables.

This research further aimed to identify the predictors of occupational stress. It was hypothesized that perception of organizational climate variables will significantly predict occupational stress. A stepwise regression was computed to identify the predictors of occupational stress. Table 6 represents the model summary. It shows the best model with minimum standard error and highest *R*-square value. The model consists of OSI as dependent variable and SS, DMP, ML, W, CR, R, and AGE as independent variables. Table 7 represents the ANOVA analysis for the stepwise regression model. Table 8 represents the coefficients of stepwise regression. It further shows the climate factors that significantly predict occupational stress are SS, DMP, ML, and W.

Table 6. Model Summary of Stepwise Regression with Dependent Variable OSI

Model Summary				
Model	R	R-square	Adjusted R-square	Std. Error of the Estimate
I	0.720	0.519	0.513	14.1619
Predictors: (Constant), SS, DMP, ML, W, CR, R, AGE				

Table 7. ANOVA Analysis for Stepwise regression

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
I	Regression	133,328.468	7	19,046.924	94.969	0.000(g)
	Residual	123,744.502	617	200.558		
	Total	257,072.970	624			
Dependent Variable: OSI						

Table 8. Coefficients of Stepwise Regression

Model	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	217.906	4.395		49.585	0.000
SS	-0.849	0.162	-0.239	-5.236	0.000
DMP	-0.699	0.174	-0.180	-4.018	0.000
ML	-0.581	0.200	-0.130	-2.900	0.004
W	-0.704	0.263	-0.108	-2.681	0.008
CR	-0.485	0.194	-0.114	-2.502	0.013
R	-0.588	0.258	-0.075	-2.276	0.023
AGE	-0.167	0.083	-0.058	-2.007	0.045

Dependent Variable: OSI

Conclusions

The findings of this study are better applicable to the manufacturing industry as the sample constituted of employees belonging to this industry. Our findings bring us to the conclusion that there is a significant inverse relationship between occupational stress and organizational climate. Thus, stress among employees is caused due to the climate of the organization, especially as indicated by the results of stepwise regression analysis. These climate factors are poor support system and lack of participation in decision making, lack of motivation, and warmth. Thus, the hypothesis that organizational climate factors will significantly predict occupational stress has been partially accepted.

Organizational development practitioners may focus on assessing the perception of climate among employees and consequently develop interventions focusing on building a healthy climate. The policies developed and practised should emphasize on developing a good social support system. In this regard, managers may be trained on creating an environment of nurturance. Rather than exercising a bureaucratic management, the senior management could involve subordinates and employees in the decision-making process. The management of an organization should pay attention to the well-being of their employees which can be managed and improved by careful transformation of the climate of the organization.

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