

“The Study of Work Place Environment and its impact on Employee Performance with special reference to the manufacturing sector of Nagpur”

Dr. Rashmi Gupta (M.Com, M.B.A)

*Dr. Ambedkar Institute of Management Studies and Research,
Deeksha Bhoomi, Nagpur-440010,
Nagpur University,
Maharashtra,*

Mr. Aveek Konar

Lt.Col.

Abstract: It is the quality of the employee’s workplace environment that most impact on the level of employee’s motivation and subsequent performance. How well they engage with the organization, especially with their immediate environment, influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and, ultimately, how long they stay in the job.

Most people spend fifty percent of their lives within indoor environments, which greatly influence their mental status, actions, abilities and performance. Better outcomes and increased productivity is assumed to be the result of better workplace environment. Better physical environment of office will boost the employees and ultimately improve their productivity. Various literature pertain to the study of multiple offices and office buildings indicated that the factors such as dissatisfaction, cluttered workplaces and the physical environment are playing a major role in the loss of employees’ productivity.

The quality of environment in workplace simply determine the level of employee’s motivation, subsequent performance and productivity. How well employees get along with the organization influence the employee’s error rate, level of innovation and collaboration with other employees, absenteeism and ultimately time period to stay in the job.

Keywords: Workplace Environment, performance, productivity, quality

❖ Introduction

Quality of Workplace Environment can be defined as :-

“The quality of relationship between employees and total working environment.

A ideal work environment is created by a boss or coworker whose actions, communication or behavior make doing your job impossible. This means that the behavior alter the terms, conditions, and/or reasonable expectations of a comfortable work environment for employees. Therefore, HR executives need to consider new strategies for recruiting and retaining best fit talents for their organizations. Higher salaries and compensation benefits may seem the most likely way to attract employees. However, quality of the physical workplace environment may also have a strong influence on a company’s ability to recruit and retain talented people. Some factors in workplace environment may be considered keys affecting employee’s engagement, productivity, morale, comfort level etc. both positively and negatively.

Although convenient workplace conditions are requirements for improving productivity and quality of outcomes, working conditions in many organizations may present lack of safety, health and comfort issues such as improper lightening and ventilation, excessive noise and emergency excess. People working under inconvenient conditions may end up with low performance and face occupational health diseases causing high absenteeism and turnover. There are many organizations in which employees encounter with working conditions problems related to environmental and physical factors.

In recent years, employees comfort on the job, determined by workplace conditions and environment, has been recognized as an important factor for measuring their productivity. This is particularly true for those employees who spend most of the day operating a computer terminal. As more and more computers are being installed in workplaces, an increasing number of businesses has been adopting ergonomic designs for offices and plant installations. Today, organizations around the globe are operating in an unprecedented, highly competitive seller’s market while employees as well as new recruits, have dynamic expectations from their employers and from their work environments. It is therefore imperative to understand the role the workplace

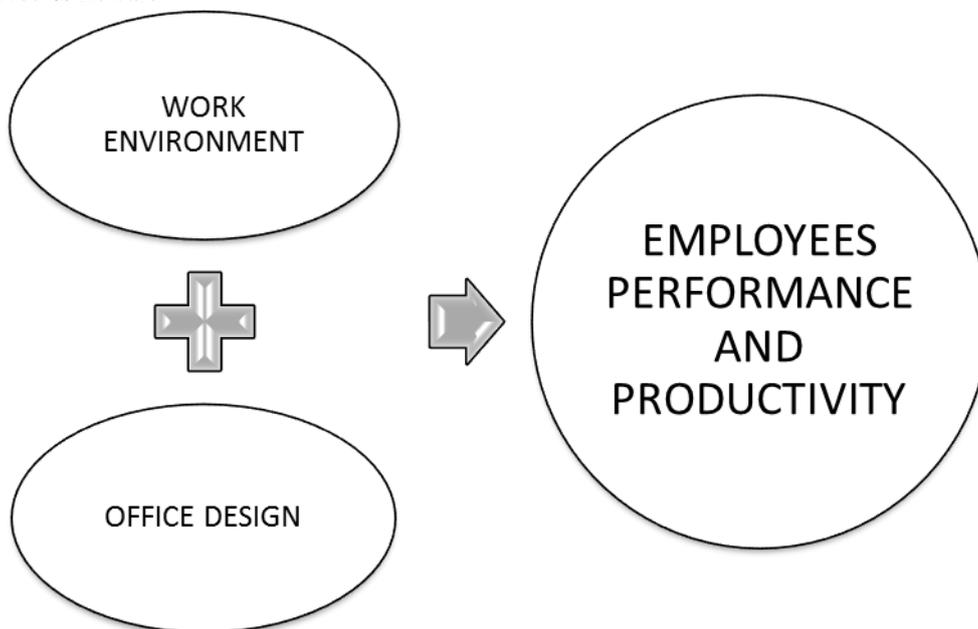
plays in recruitment and retention of employees and the way in which it can be used to achieve an organization's goals.

Factor influence and decide the Workplace Environment

Attitude
Environment
Opportunities
Nature of job

Stress Level
Career prospects
Challenge
Growth and Development

Risk Involved & Reward



❖ Review of Literature

Kohun (1992), defines working environment as an entirety which comprises the totality of forces, actions and other influential factors that are currently and, or potentially contending with the employee's activities and performance. Working environment is the sum of the interrelationship that exists within the employees and the environment in which the employees work. Brenner (2004) was of the opinion that "the ability to share knowledge throughout organizations depends on how the work environment is designed to enable 8 organizations to utilize work environment as if it were an asset. This helps organizations to improve effectiveness and allow employees to benefit from collective knowledge". In addition, he argued that working environment designed to suit employee's satisfaction and free flow of exchange of ideas is a better medium of motivating employees towards higher productivity.

Opperman (2002) defines working environment is a composite of three major sub environments: the technical environment, the human environment and the organizational environment. Technical environment refers to tools, equipment, technological infrastructure and other physical or technical elements. The technical environment creates elements that enable employees perform their respective responsibilities and activities. The human environment refers to peers, others with whom employees relates, team and work groups, interactional issues, the leadership and management. This environment is designed in such a way that encourages informal interaction in the work place so that the opportunity to share knowledge and exchange ideas could be enhanced. This is a basis to attain maximum productivity. Organizational environment include systems, procedures, practices, values and philosophies. Management has control over organizational environment. Measurement system where people are rewarded on quantity, hence workers will have little interest in helping those workers who are trying to improve quality. Thus, issues of organizational environment influence employee's productivity.

Employee Performance Sinha (2001) stated that employees' performance is depending on the willingness and also the openness of the employees itself on doing their job. He also stated that by having this willingness and openness of the employees in doing their job, it could increase the employees' productivity which also leads to the performance. Stup (2003) also explained that to have a standard performance, employers

have to get the employees task to be done on track as to achieve the organization goal or target. By having the work or job done on track, employers could be able to monitor their employees and help them to improve their performance. Furthermore, a reward system should be implemented based on the performance of the employees. This is to motivate the employees in order to perform more on their task.

Stup (2003) towards the success of the employees' performance. The factors are such as physical work environment, equipment, meaningful work, performance expectation, feedback on performance, reward for good or bad system, standard operating procedures, knowledge, skills and attitudes. Franco et al (2002) defined performance that relies on internal motivation but presence of internal factors such as necessary skills, intellectual capacity and resources to do the job clearly have an impact. As a consequence employers are supposed to provide appropriate working conditions in order to make sure the performance of employees meet the required standards.

❖ Objectives

- To analyze work place physical design.
- To determine the impact of work environment on employees' productivity.
- To analyze the impact of office design if any on gender of employees' performance
- To assess the effect of employees' health on their work performance.

❖ Research Methodology:

1. Type of Research

- Research type will be exploratory research.

2. Method of Data Collection

Primary data

1. Structured Questionnaire method.
2. In-depth Interview method.

Secondary data

1. Magazines, Business Journals.
2. Government website and other website.

3. Sampling Methodology:

The design of the sample is as follows:

Population: NAGPUR CITY

Sample Area = **'Bajaj Steel Industries Limited'**

Sampling technique: Simple Random method

Sample Size: 30 employees

Statistical tool: SPSS

4. Tools Used

- Five Point Rating scale is used for getting response.
- All analysis was done using the statistical package for social scientists (SPSS version 17). All data were entered and verified after effective coding. Data was then scrutinized in relation to the objective of the survey, otherwise with a potential abundance data; vast numbers of irrelevance summaries were produced. Checking of inconsistencies anomalies, missing values, outliers (say data cleaning) was done using SPSS syntax. Analysis was descriptive in nature. In the data presented in this report; results for each item are based upon the number of cases which had valid data for that item.
- Descriptive statistics was aimed at identifying the pattern of the data and consistency of the responses in each of the identified factors influencing the employee satisfaction and work environment of the university. Results were then presented in tables, pie-charts and graphs with emphasis on graph analysis. The employee satisfaction and work environment indexes representing the overall satisfaction level was calculated by weighted averaging of the independent factors indexes.

❖ Data Analysis and Interpretation

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items measure an underlying (or latent) construct.

To measure the reliability of the instruments used, Cronbach's alpha is used. According to Sekaran (2005), if the Cronbach's alpha is less than .6, this means that the instrument used has a low reliability (and thus has scope for some errors).

Reliability Statistics

| | |
|------------------|------------|
| Cronbach's Alpha | N of Items |
| .652 | 22 |

The Chronbach alpha calculated for this study is 0.65 which is well above the required. Hence the instrument designed is reliable.

Statistical data

Standard deviation (σ) is defined as the square root of the variance

A measure of the dispersion of a set of data from its mean. It is a number that tells you approximately how far the values in a data set deviate from the mean. The larger the standard deviation, the larger the deviation. The smaller the standard deviation, the smaller the deviation. If all of the values are equal, the standard deviation is equal to zero.

Descriptive Statistics

| particulars | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|------|----------------|
| Package | 30 | 1 | 4 | 2.07 | .828 |
| Rewards | 30 | 3 | 5 | 3.90 | .712 |
| Promotion | 30 | 1 | 5 | 3.67 | 1.213 |
| Salary | 30 | 2 | 5 | 3.87 | 1.008 |
| Input | 30 | 1 | 5 | 3.50 | 1.075 |
| Feedback | 30 | 3 | 5 | 4.20 | .714 |
| information | 30 | 2 | 5 | 3.80 | .961 |
| supervision | 30 | 1 | 5 | 3.67 | 1.155 |
| challenging | 30 | 2 | 5 | 4.03 | .890 |
| Sfeedback | 30 | 1 | 5 | 3.63 | .890 |
| Culture | 30 | 2 | 5 | 3.93 | .868 |
| Risk | 30 | 2 | 5 | 3.80 | .961 |
| Worklife | 30 | 1 | 5 | 3.20 | 1.186 |
| Stress | 30 | 1 | 5 | 3.70 | 1.088 |
| Expected | 30 | 1 | 5 | 3.13 | 1.306 |
| Growth | 30 | 1 | 5 | 4.13 | 1.008 |
| Coworker | 30 | 2 | 5 | 3.67 | .884 |
| Creativity | 30 | 1 | 5 | 3.93 | 1.048 |
| Refer | 30 | 1 | 5 | 3.43 | 1.431 |
| Biasness | 30 | 1 | 5 | 3.70 | 1.055 |
| Goals | 30 | 2 | 5 | 4.00 | .910 |
| Training | 30 | 1 | 5 | 3.83 | 1.053 |
| Valid N (listwise) | 30 | | | | |

Correlation:

Degree and type of relationship between any two or more quantities (variables) in which they vary together over a period; A positive correlation exists where the high values of one variable are associated with the high values of the other variable(s). A 'negative correlation' means association of high values of one with the low values of the other(s). Correlation can vary from +1 to -1. Values close to +1 indicate a high-degree of positive correlation, and values close to -1 indicate a high degree of negative correlation. Values close to zero indicate poor correlation of either kind, and 0 indicates no correlation at all.

Correlations table

| | total1 | total2 | total3 | total4 | total5 | total6 |
|---------------------|--------|--------|--------|--------|--------|--------|
| Pearson Correlation | 1 | .095 | .436* | .363* | .275 | .238 |
| Sig. (2-tailed) | | .619 | .016 | .048 | .142 | .205 |
| N | 30 | 30 | 30 | 30 | 30 | 30 |
| Pearson Correlation | .095 | 1 | -.021 | .101 | .256 | .440* |
| Sig. (2-tailed) | .619 | | .913 | .596 | .172 | .015 |
| N | 30 | 30 | 30 | 30 | 30 | 30 |
| Pearson Correlation | .436* | -.021 | 1 | .129 | .034 | -.064 |
| Sig. (2-tailed) | .016 | .913 | | .498 | .857 | .736 |
| N | 30 | 30 | 30 | 30 | 30 | 30 |
| Pearson Correlation | .363* | .101 | .129 | 1 | .135 | .484** |
| Sig. (2-tailed) | .048 | .596 | .498 | | .478 | .007 |
| N | 30 | 30 | 30 | 30 | 30 | 30 |
| Pearson Correlation | .275 | .256 | .034 | .135 | 1 | .203 |
| Sig. (2-tailed) | .142 | .172 | .857 | .478 | | .282 |
| N | 30 | 30 | 30 | 30 | 30 | 30 |
| Pearson Correlation | .238 | .440* | -.064 | .484** | .203 | 1 |
| Sig. (2-tailed) | .205 | .015 | .736 | .007 | .282 | |
| N | 30 | 30 | 30 | 30 | 30 | 30 |

*. Correlation is significant at the 0.05 level (2-tailed).

| Sr.No | Results |
|-------|--|
| 1 | Total 1 has significant correlation with total3 and total4 |
| 2 | Total2 has significant correlation with total1 |
| 3 | Total 3 has significant correlation with total1 and total6 |
| 4 | Correlation does not exist |
| 5 | Total 5 has significant correlation with total4 |
| 6 | Correlation does not exist |

Where,

Total1 signifies -compensation and promotional satisfaction.

Total2 signifies -communication.

Total3 signifies -supervision.

Total4 signifies -safety management.

Total5 signifies -job satisfaction

Total6 signifies -workplace policies.

Chi-Square Test

A test that uses the chi-square statistic to test the fit between a theoretical frequency distribution and a frequency distribution of observed data for which each observation may fall into one of several classes.

Chi-square test for Age and grand total

H01- Age is dependent of workplace environment

H02- Age is independent of workplace environment.

| Test Statistics | | | | |
|------------------|-------------------------|---------------------|--------------------|-------------------|
| | | age | Grandtotal | |
| Chi-Square | | 14.400 ^a | 8.933 ^c | |
| Df | | 17 | 3 | |
| Asymp. Sig. | | .639 | .030 | |
| Monte Carlo Sig. | Sig. | | .683 ^b | .028 ^b |
| | 99% Confidence Interval | Lower Bound | .671 | .023 |
| | | Upper Bound | .695 | .032 |

The above value is lower than standard value of 5.
So it proves that age is independent of workplace environment.

Chi square test for gender and grand total

H03- Gender is dependent of workplace environment
H04- Gender is independent of workplace environment.

| Test Statistics | | | | |
|-------------------------|-------------|--------------------|---------------------|--|
| | | Gender | Gralototal | |
| Chi-Square | | 4.800 ^a | 14.400 ^c | |
| Df | | 1 | 17 | |
| Asymp. Sig. | | .028 | .639 | |
| Monte Carlo Sig. | Sig. | .045 ^b | .683 ^b | |
| 99% Confidence Interval | Lower Bound | .040 | .671 | |
| | Upper Bound | .051 | .695 | |

The above value is lower than standard value of 5.
So it proves that gender is independent of workplace environment.

Chi square test experience and grand total

H05- Experience is dependent of workplace environment

H06- Experience is independent of workplace environment.

Test Statistics

| | Experience | Gratototal |
|-------------------------|---------------------|---------------------|
| Chi-Square | 12.133 ^a | 14.400 ^b |
| Df | 3 | 17 |
| Asymp. Sig. | .007 | .639 |
| Sig. | .007 ^b | .679 ^b |
| Monte Carlo Sig. | .005 | .667 |
| 99% Confidence Interval | Lower Bound | .667 |
| | Upper Bound | .691 |

The above value is lower than standard value of 5.

So it proves that experience is independent of workplace environment.

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|----|---------|---------|------|----------------|
| package | 30 | 1 | 4 | 2.07 | .828 |
| rewards | 30 | 3 | 5 | 3.90 | .712 |
| promotion | 30 | 1 | 5 | 3.67 | 1.213 |
| salary | 30 | 2 | 5 | 3.87 | 1.008 |
| input | 30 | 1 | 5 | 3.50 | 1.075 |
| feedback | 30 | 3 | 5 | 4.20 | .714 |
| information | 30 | 2 | 5 | 3.80 | .961 |
| supervision | 30 | 1 | 5 | 3.67 | 1.155 |
| challenging | 30 | 2 | 5 | 4.03 | .890 |
| sfeedback | 30 | 1 | 5 | 3.63 | .890 |
| culture | 30 | 2 | 5 | 3.93 | .868 |
| risk | 30 | 2 | 5 | 3.80 | .961 |
| worklife | 30 | 1 | 5 | 3.20 | 1.186 |
| stress | 30 | 1 | 5 | 3.70 | 1.088 |
| expected | 30 | 1 | 5 | 3.13 | 1.306 |
| growth | 30 | 1 | 5 | 4.13 | 1.008 |
| coworker | 30 | 2 | 5 | 3.67 | .884 |
| creativity | 30 | 1 | 5 | 3.93 | 1.048 |
| refer | 30 | 1 | 5 | 3.43 | 1.431 |
| baisness | 30 | 1 | 5 | 3.70 | 1.055 |
| goals | 30 | 2 | 5 | 4.00 | .910 |
| training | 30 | 1 | 5 | 3.83 | 1.053 |
| Valid N (listwise) | 30 | | | | |

❖ **Findings and Conclusions**

- 1) From the total number of respondents, 30% are from finance, 20% from R&D, 43% from marketing and 7% from admin.
- 2) From the overall study it can be concluded that the workers are not satisfied with the working conditions and the facilities provided
- 3) employer's interpersonal relationships with their managers were poor, we feeling do not exist among employees and their employers at the organization, employees have clear career advancement and a clear definition of task.
- 4) There exist a communication gap and absence of flow of information from the lower management to the upper management.
- 5) The employees are not able to balance their personal and professional life because of which there is a high stress level resulting into the requirement of flexible work pattern
- 6) The employees are not satisfied with the quality of supervision, training they are getting and the incentives they receive for their performance.
- 7) It is concluded from the whole study that the quality of work life helps in reducing the absenteeism in the work place, the facilities and services provided by the organization helps to increase sense and belongingness amongst the employees. It also enhances career growth and satisfaction of the employees towards organization..

Hypothesis Statement Status

HO- Workplace environment doesn't have any significant relationship with the performance of employees.

Do Not Accept

H1-Workplace environment has a significant relationship with performance of employees.

Accept

❖ **References**

- [1]. Sundstrom, E., Town, J.P., Rice, R.W., Osborn, D.P. and Brill, M. (1994), Office noise, Satisfaction, and Performance, *Environment and Behavior*, Vol-26(2), 195-222.
- [2]. Ryan, R. M., and Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, Vol-55, 68-78.
- [3]. Becker, F. O. (1981). *Workspace creating environments in organisation*. New York: Praeger.
- [4]. Brennan, A., Chugh, I., & Kline, T. (2002). Traditional versus open office design: A longitudinal field study. *Environment and Behaviour*, 34(3), 279-299.
- [5]. Chandrasekar, K. (2011). Workplace environment and its impact on organisational performance in public sector organizations. *International Journal of Enterprise Computing and Business System*, 1(1), 1-20.