

*CHAPTER II:  
RESEARCH METHODOLOGY and  
LITERATURE REVIEW.*

## RESEARCH METHODOLOGY

### **2.1 Research design:**

The researcher through in depth observation and field survey has made an attempt to identify stressors amongst the executives of the foundry units. Thus getting an insight into types of stressor, the impact and coping mechanisms. Hence, essentially it is exploratory in nature.(Kothari.C.R,2009)

### **2.2 The questionnaire**

In the study, data was collected for determining type of stressors, causes of stress, effect of stress on productivity ( by parameters like rate of absenteeism, behavioral problems, health problems ), the researcher has made an effort to collect information concerning the parameters related to these elements, either separately or as a whole. A number of variables were considered such as the socioeconomic (age, marital status, income, sex, qualification, occupation, designation) and other qualitative (that give non-numerical information)

A standardized test on “OCCUPATIONAL STRESS” BY Singh and Shrivastav was used for the study having items like role overload, role ambiguity, role conflict, strenuous working conditions, and unprofitability. The reliability index was ascertained for the standard test by Cronbach alpha to be 0.335 and validity 0.90. This was done to realize the correlation between stress and productivity and to comply with hypothesis formulation. The researcher has considered productivity by parameters like rate of absenteeism, health problems, behavioral problems. The parameters of productivity are determined at individual level. The data collection was performed solely by means of Questionnaire completion and personal interviews. Respondents replied to a number of statements using a 5-point Likert scale with 1 corresponding to “strongly disagree” and 5 to “strongly agree”.

### **2.3 Interview method**

The researcher conducted unstructured focus interview. Focused interview included focusing on respondent’s level of operation i.e. middle management and experience is

considered. The interview questions comprised of probing questions to understand mainly causes of stress, effect of stress in terms of behavioral problems, health problems. How do owners, MD, other top management personnel managing stress.

## **2.4 SAMPLE DESIGN**

**SAMPLING METHOD:** The researcher has undertaken non –probability sampling technique for the study. “PURPOSIVE SAMPLING” technique under non-probability sampling is being used by the researcher.

Purposive because only foundry units, with more than 25 employees have been considered as sample. The researcher has taken precaution that every foundry unit has at least two executives, and these foundry units are registered units under the respective association of Industrial Development Corporation, that shall be part of the sample under study.

**POPULATION: (N)** The researcher has selected two areas, viz MIDC SHIROLI and MIDC GOKUL SHIRGAON. From the said population, MIDC Shiroli has in operation 67 foundry units which are registered. MIDC Gokul Shirgaon has 30 foundry units. Total of 97 foundry units are considered as population.

**SAMPLE SIZE (n):** Through purposive sampling technique used by the researcher. With the defined population (N= 97), 20 foundry units from MIDC Shiroli and 10 from MIDC Gokul Shirgaon will be considered.

30% of the population (total 30 foundry units) is being selected by the researcher. The foundry units selected as a sample is a homogeneous sample in a way of number of employees considered. So 30% of entire population will justify the findings for the population study.

As respondent within the study Executives at different levels both at top level (comprising of owner, MD, is considered. Middle management (production manager, supervisors) and any other executive post if any will be considered.

**SAMPLING TABLE 2.4A**

POPULATION	N=97	SHIROLI AND GOKUL SHIRGAON MIDC, KOLHAPUR
SAMPLE N1-SHIROLI MIDC	N1=*67	SAMPLE SIZE=30 % OF ENTIRE POPULATION(N)
SAMPLE N2-GOKUL SHIRGAON MIDC	N2=*30	30%97= 30 FOUNDRY UNITS.
GRAND TOTAL SAMPLE SIZE	30 FOUNDRY UNITS	20 UNITS FROM SHIROLI MIDC AND 10 UNITS FROM GOKUL SHIRGAON MIDC
*REGISTERED WITH RESPECTIVE ASSOCIATIONS		

(Source: primary data)

**2.5 The adopted methodology**

An attempt is made to see the causes of stress i.e stressors namely of five types- role overload, role conflict, role ambiguity, compensation system and strenuous working conditions. Research on stressors suggest that,Role overload exists when role expectations are greater than the individual's abilities and motivation to perform a task (Schaubroeck, et al., 1989; Spector & Jex, 1998; Conley & Woosley, 2000)

The descriptive statistic for this stressor was calculated including mean, standard deviation, and Karl Pearson coefficient of correlation. Mean value shows that the respondents disagree to the fact that there is no role overload faced by them. Since the objective is to assert the impact of stressor, the researcher has successfully identified the relationship with productivity.

Second stressor is role ambiguity. Executives in the foundry play different roles both at professional and personal life .Ambiguity in the roles played affects the balance of demand and capabilities resulting into stress. Role ambiguity arises when individuals

do not have clear authority or knowledge about how to perform the assigned jobs ( **Mohd Kamel Idris, 2011**)The mean values shows that the respondents disagree to the fact that there are ambiguous about the different roles played.

Role conflict refers to incompatibility of expectations and demands associated with the role. For the respondents under study it is observed that they are not in any conflict especially interpersonal conflict due to the fact that there is clear comprehensions of job expectations, proper information about job, ease of new technique implementation in job.

Few other parameters under the study of occupational stressors are unprofitability and strenuous working conditions. As per descriptive statistic infers that this has been the main reason as a stressor leading to absenteeism, health and behavioral problems.

A recent study published in the American Journal of Health Promotion found that workers experiencing high stress were over two times more likely to be absent more than five times per year. Lost productivity and replacement costs make absenteeism a costly consequence (David Lee, 1999)

In terms of unprofitability what was revealed is that executive especially at the top level (owners of small scale foundry) faced with financial stressor. Financial concerns for this study included the frequency of frequency of stress about money problems interfering with work. These concerns may result from a felt discrepancy between income and expenses or may be the result of an unexpected event. Discussion with them lead to the fact that the credit period from the supplier was delayed more than decided. All this lead to personal financial inputs form the owners leading to problems The researcher has tried to analyse the effect of socioeconomic factors effect on stress. Namely age, income level, designation, occupation , experience, marital status . Statistics show that: the majority of cases of work-related mental-ill-health occur in those aged 35-44 and 45-54 years. Stress at Work (Ricardo Blaug, Amy Kenyon, Rohit Lekhi, feb 2007)

The researcher has tried to analyse the impact of stress on productivitiy.Because there was a limitation faced by the researcher considering the confidentiality of prodcutivitiy

data for executives, self identified labels like absenteeism , behavioural and health problems were taken. With a more diverse work force, the increased use of teams, in a service-based establishment, interpersonal demands on employees are increasing. This in itself creates tremendous stress.

Report indicates that interpersonal demands due to working with team members and supervisors were the most significant cause of burnout. Thus, in today's workplace, we have people who are already under stress from a variety of causes put into an interpersonal context that, by its nature, is very stressful (David Lee, 1999.)

The final objective of the research is to suggest to the organization(s) to implement stress management as a Hr practice.It was found in the research that most of them prefer supportive climate and counselling as a coping strategy.A number of studies by Dr Dennis Rose and colleagues between 2001-2004 have found a very strong link between Organizational Climate and employee reactions such as stress levels.As such an supportive climate would help enhance productivity because of recognition of efforts given and performance being rewarded by the employer ,( Rafferty A.E,Rose.D.M, 2004).

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## **REVIEW OF LITERATURE**

A review of literature provided different insights to the researcher on various parameters in the field of study of Stress. This chapter is divided into the following parts. Literature on

1. stress.
2. Workplace stress in manufacturing industries.
3. Stressors.
4. Productivity.
5. Organizational Stressor.
6. Stress and productivity.
7. Productivity Indices.
8. Coping mechanism of stress.

For inclusions the researcher has reviewed online journals, online articles, symposium articles, online archives and books.

### **2.6 STRESS**

(Fred Luthans, 1998), An adaptive response, mediated by individual differences and/or psychological processes, that is a consequence of any external action, situation, or event that places excessive psychological and or physical demands upon a person”

### **2.7 Work stress in manufacturing industries**

**Saanyo Moosa, May 2, (2010)**, “Stress management amongst employees of Bank” An Article in the website of [www.articlesbase.com](http://www.articlesbase.com). This study examines the influence of factors responsible for work stress among the employees in the public sector industries in Kerala, India.. It is observed that existence of the work related factors are responsible for work stress among all the categories of employees in these industries. It is also noted that relatively low level of control among workers is the main cause of work stress.



## **2.8 STRESSORS**

**Lehal Ritu and Nimarta Mann , (2012),**”Imapct of job stress on job invovement among bank executives” Nice journal of Business, Larson (2004) ,pg 56-58 in their research made use of Ivancevich and Matteson stress diagnostic survey and found that organisational stressor is the major source of stress than indivisual job factors concerning job stress for a large sample of internal auditors in USA.

## **2.9 PRODUCTIVITY**

**Ian Donald, Paul Taylor, and Sheena Johnson (2005)** in the study on real estate agents ( $N=62$ ) revealed a negative relationship between stress and productivity using a self-report measure of stress. The authors were reluctant, however, to draw strong conclusions from their findings because of issues such as the small sample size and application within only one occupation. This study also only looked at the relationship between stress outcome and productivity and did not investigate the potential relationship between stressors and productivity.

## **2.10 ORGANIZATIONAL STRESSORS**

**Brian Kreiss ( 2011)**, Buffett National Wellness Survey, United Kingdom, found that the top health concern cited by employers with respect to the establishment of employee wellness programs was workplace stress.

**Ian Donald, Paul Taylor, and Sheena Johnson (2005)** in their research paper “Work Environments, Stress, and Productivity: An Examination Using ASSET”,International Journal of stress management. have made the point that it is not appropriate to consider stressors and their direct relationship to performance. They argued that a direct link would not necessarily be expected as a result of individual differences in coping with stressors. Two individuals may be exposed to the same levels of stressor but may cope differently. Thus,one worker may experience stress, whereas another does not, even though they have the same work environment.

**In the research by Donald A. Buckingham, (May 2004) ASSOCIATIONS AMONG STRESS, WORK OVERLOAD, ROLE CONFLICT, AND SELF-EFFICACY IN MAINE PRINCIPALS, .** The findings are :(a) Eighty two percent of these Maine principals experience high or moderate levels of stress as a result of their jobs.(b) Stress is significantly associated with work overload and role conflict

## **2.11 STRESS AND PRODUCTIVITY**

**Ian Donald, Paul Taylor, and Sheena Johnson, 2005,** in their research on Stressful jobs and employee productivity: a study on managers, blue-collar workers and nurses have found that although there is strong evidence that there is a relationship between stressors and productivity, there may be some small differences as a function of job type.

**George Emm. Halkos and Dimitrios Bousinakis,(Feb 2008)** In their study, titled “The influence of stress and satisfaction on productivity” through Factor Analysis, using a random sample of 425 employees in the private and public sector, to investigate the effects of stress and job satisfaction, on the functioning of a company and influence on productivity , found that there is a correlation among a large number of qualitative and quantitative variables and their influence on productivity. The extracted factors showed us that productivity is an element affected by the two qualitative factors, stress and satisfaction. Increased stress leads to reduced productivity and increased satisfaction leads to increased productivity.

**Christina Mann Layne, (2001), M Phil Dissertation:** In the study for determining the relationship of occupational stress, psychological strain, and coping resources to the turnover intentions of rehabilitation counselors. It was found that Stress negatively impacts job satisfaction, performance , productivity

**Jacobs et al. (2007)** in 13 United Kingdom’s higher education institution, and by Donald et al. (2005) using 16,001 samples, utilized the ASSET model of stress. It was found that effect of stress on productivity has an influence of job factor.

In the study by **Jacobs et al. (2007)**, using performance measures of self-rated productivity, stressors or sources of stress like psychological well-being, resources and communication, commitment to the organization, commitment from the organization, pay & benefits, and work relationships significantly impacted non-academic and academic & research (A&R) staff.

In the study, using the performance measures of quality rating of research or Research Assessment Exercise (RAE), and teaching or Guardian Teaching Score (GTS), factors of productivity like control, job security, physical health, perceived commitment from organization, perceived commitment to organization, and work-life balance were significant to the A&R staff. Results showed that variations in the relationship between stress and performance depends on the type of category of staff and the type of performance measures used. This is the influence of the job factor.

**Donald et al. (2005)**, in a study has predicted self-rated productivity through stressors resources & communications, psychological well-being, and perceived commitment from the organization for the large sample

## **2.12 PRODUCTIVITY INDICES-ABSENTEEISM, BEHAVIOURAL PROBLEMS, HEALTH PROBLEMS**

**WebMD (2004)**, An online report has cited that Forty-three percent of all adults suffer adverse health effects from stress and among that Seventy-five to 90% of all doctor's visits are for stress related ailments and complaints. Stress is linked to six of the leading causes of death: heart disease, lung cancer, lung ailments, accidents, cirrhosis of the liver, and suicide. The Occupational Safety and Health Administration declared stress a hazard of the workplace. In terms of lost hours due to absenteeism, reduced productivity, and workers' compensation benefits, stress costs American industry more than \$300 billion annually. The lifetime prevalence of an emotional disorder is more than 50%, often due to chronic, untreated, stress reactions.

### **2.13 COPING MECHANISM OF STRESS**

**Christina Mann Layne, (2001)** in her Dissertation: The relationship of occupational stress, psychological strain, and coping resources to the turnover intentions of rehabilitation counselors found that as a Coping mechanism for stress – Psychological and physical resources can be used to counter the effects of occupational stress.

A number of studies by Dr Dennis Rose and colleagues between 2001-2004 have found a very strong link between Organizational Climate and employee reactions such as stress levels, (1,2,3).As such a supportive climate would help enhance productivity because of recognition of efforts given and performance being rewarded by the employer.Thus the nature of work demands an organisational support , which will be fruitful in enhancing the productivity at both individual and organisational level.

The study conducted by the researcher thus has helped to identify a gap through literature.Workplace stress is a profound stress affecting performance,turnover intentions,and even self rated productivity measures.Through the literature it has been observed that the organisational stress amongst the managers is low, however the following study has revealed moderate stress level and it is function of job role rather than job type.

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