2.0 INTRODUCTION

Stress is a major emotional problem in the modern world. Stress is becoming a global phenomenon affecting all categories of workers. Stress is generally considered as a negative and undesirable emotional element. Stress can be classified into 3 types the negative, the positive and the neutral. Negative stress is distress. This has to be de-stressed. Anxiety, tension, worry, strain, fear, anger, hatred etc., are examples. This type of stress causes confusion and exasperation. Positive stress is exciting and challenging. These emotions are experienced in challenging job, exciting promotion, friendship, the prospect of meeting successfully an unexpected situation etc. known as eustress, opposite of distress.

There is mental stress which arises from normal day to day events like change of job, minor illness, and performance targets to be achieved or even a casual visit by the boss to the house unexpectedly. Different people have different tolerance levels of stress in regard to both intensity and duration. Optimum stress will lead to high performance and high level motivation with consequential job satisfaction stress thus causes emotional as well as physical damage to the workers. Physical applications of the worker results in absenteeism and the like, while emotional applications results in accidents, conflicts, interpersonal relations problems, etc., A variety of variables have been under investigation in order to identify the sources of stress and its relationship with physical illness. A review of literature in the present study aims to highlight the different variables relation to stress and stress in turn leading to physical illness and proneness in an organizational setting. White collar stressors are usually more related to the worker’s role in the organization or the task’s duties and expectations that identify the worker’s position in the organization.

Kahn et.al (1964) view stress as an environmental characteristic thought to effect people adversely. Mechanic (1970) defines stress as a state where in expected functioning gets disrupted.
Psychological stress has been explained by the stimulus dimension (Appley and Trumbell, 1981) or the response dimension (most clinical studies). Stress is defined by a set of circumstances under which an individual cannot respond adequately or instrumentally to environmental stimuli or can so respond only at the cost of excessive wear and tear on the organism for example chronic, fatigue, tension, worry, physical damage, nervous breakdown etc.

Following section will review briefly the studies and researches on Occupational Stress, General health and Proneness to psycho-medical illness.

2.1 OCCUPATIONAL STRESS

In this section studies have been divided in to Indian and Western studies.

According to Suttle (1977) by improving the quality of working life the mental health of the workers is improved. He held that improved quality of work life lends to healthier, more satisfied and more productive employees and more efficient, adaptive and profitable organizations. Quality of working life refers simply to the objective, situational on the job environmental conditions plus the subjective experience of the workers related to such work. Kanungo (1982) has viewed the concept of work involvement and work alienation as apposite poles of the same phenomena. Studies show that stressful working conditions are actually associated with increased absenteeism, tardiness, and intentions by workers to quit their jobs—all of which have negative effects on the bottom line.

2.2 INDIAN STUDIES

Many western and some Indian researchers have found the relationship between stress, psychological symptoms and your mental health. The psychological symptoms are by and large conflict, overload and ambiguity.

Panda (1983) conducted a study on Indian organization and found that mental overload is a prominent factor in producing stress among organizational workers. The job with which one is engaged satisfies the needs of the individual and the degree of mental health due to on the job conditions is reduced.
Work occupies a major portion of one’s life in terms of both time spent and importance. It contains the potential for many forms of gratification and challenge and harm. It is not surprising that people at times find work life stressful. Indeed, stress at work is so common place that one tends to accept it as part of the necessary frustration of daily living. It is often assumed the manager and executives because of the typical nature of their work are more vulnerable than non-managers to the ravages of stress.

The review of literature is presented to view the nature of the variables co-related with psychological problems faced by the employees of various organizations. There are few studies cited here reading on the variables. Some studies conducted by Mishan and Bhatacharya (1984) on the executives and non-executives of private organizations suggested that social support can counter balance the experiences and painful events and evaluate the functional relationship between work environment, work culture and psychological well-being.

The study by Siddarwada Urs and D’souza. (2005) aimed at comparing the occupational stress level as experienced by executives, managers, and engineers. The sample consisted of 135 respondents who were white collared employees (69 executives, 42 managers and 24 engineers) exclusively different from blue and green collared employees, who responded on the Occupational Stress Index (Shrivastava & Singh, 1984). The results revealed that executives have highest role overload and strenuous working conditions. Engineers are said to possess the highest score in role ambiguity, role conflict, unreasonable group and political pressure, under participation, and powerlessness; lowest scores in low status and overall highest occupational stress. Managers have least strenuous working conditions as compared to executives and engineers. Strategies for coping with stress have been discussed.

In an study by Menon and Akilesh (1992) viewed that the stress among executives in an organizations may be high when compared to that in their counter facts, the fact that Indian executives perform in more complicate environment than their counterparts in western countries. This makes the Indian managers extremely susceptible to pressure.
Menon and Akhilesh (1994) in an empirical inquiry examined 128 managers in terms of the stress they experienced. The managers representing personnel, marketing, finance, etc., revealed that the stressors identified were not found to be dependent on age, hierarchical level or tenure in the organization. On the other hand, stress is viewed as being functionally dependent (i.e., dependent on the department to which the manager belongs).

A study by Abraham and David (1994) on relationship of job stressors to job performance linear or inverted ‘U’ – evaluated the relationship between stressors and job performance for 281 employees. They were interviewed four times about 6 weeks apart. 210 subjects also nominated a “significant other” from their work life to provide information about the focal subject’s performance. Stressors examined were role ambiguity, role conflict and job insecurity. Strain, job dissatisfaction, anxiety, depression and anger were examined as potential stressors. Technical and social aspects of subject’s job performance were measured separately, as were absenteeism and tardiness. A zero-order Pearson correlations were either significant and in predicted directions or were essentially zero. All relationships were monotonic, suggesting that for these stressors, their optimal amounts are generally zero. Results are discussed in terms of arousal and activation, information processing and expectancy theory.

Raju and Madhu (1994) in a study on Organizational level and role stress – examined the influence of organizational level on stress in 457 employees of an Indian Zinc manufacturing company. A scale of role conflict (RC) and role ambiguity (RA) by J.R. Rizzo et. al (1970) was used to obtain data. Subjects at higher organizational levels experienced significantly lower RC and RA than subjects at lower organizational levels. It is concluded that subjects promoted to higher organizational levels developed skills to cope with RC and RA and perhaps did not perceive the stressful nature of some events. Significant differences in mean RC and RA scores were not observed for middle and lower organizational level subjects.

Mishra and Kumar (2001) in an exploratory study of performance and role stress in a power plant examined the relationship between human functional states performance and role stress in a sample of 30 junior level managers who were classified as high performers and low performers. Those with less than 6yrs of experience constituted
the low experience group and those with more than 6yrs of experience were in the high experience group. Subjects were administered the human functional state, rating scale and the organizational role stress scale and behavioral problems they had faced in their organization over past 6 months. Results revealed that human functional states were not significantly related to either performance or to job experience. In the low experience group, a significant negative correlation was seen between human functional states and perceived role stress. On the basis of an analysis of subject’s narratives, suggestions were made for improving human functional states in the organization.

Kumar and Murthy (1999) in a study relating to 100 women managers found that the most frequent stressor for women managers was office politics. The possible reason could be that the women generally have less experience in corporate politics than their male counterparts. The second most frequently experienced stressor among women managers is the conflict between work and family.

Another case study carried out by Jagadish and Srivastava (1989) on 400 first level technical supervisors of Diesel Locomotive works, at Varanasi concluded that perceived occupational stress impairs employees’ self confidence, perception of reality, environmental mastery, and group oriented attitudes, and consequently result in poor mental health.

Pattanayak and Sarangi (2000) in a study on Role stress in work life management in public sector examined organizational role stress and quality of work life among Indian public sector employees according to type of organization, area of work and role position. Sample of 800 employees of Rourkela steel plant of the Steel Authority of India Ltd. and the National Aluminium company, categorized as those in new and old public sector organizations, production or service work areas and executive and non-executives positions were administered with occupational role stress scale and the quality of work life scale. Service area subjects reported less organizational role stress and greater quality of work life than subjects in the production area. Old public sector subjects experienced more role expectation conflict and greater self-role distance than did new public sector subjects. Total organizational stress was experienced differently by executive and non-executive, new vs. old public sectors subjects and production vs. service subjects. Old organization subjects experienced a
higher degree of stress arising from resources inadequacy than did new organizations. There were significant differences in quality of work life among the 3 categories new organizations, service and non-executives subjects scored higher on quality of work life.

Desai and Hetal (2000) examined the performance appraisal (PA) and Occupational stress focuses on PA of employees in organizations which has been recognized as an important tool of HRD. Both the appraisee and appraiser view appraisal as an unpleasant task as no PA system can be perfect and free from personnel biases and other drawbacks. Little is known about whether an organization’s PA system is significantly influenced by employee stress levels. A sample of 105 managers/supervisors (30-35 yrs) was divided in to high stress and low stress groups. Significant differences were found in the perception on high and low stress groups on some aspects relating to the objectives and PA. On all these counts the high stress group viewed the situation more negatively and was dissatisfied with the manner in which personality traits and skills were judged by appraisers.

Ghosh and Anjali (2000) in a study on Occupational stress, strain and coping in executives and non-executives, investigates the pattern of occupational stress and strain in 2 different occupational groups- executive and non-executives. The occupational stress index was administered to 23 executive and 27 non-executive which measured 3 dimensions of occupational adjustment namely occupational stress, physical strain and coping resources. Subjects were selected randomly from different organizations. In general both groups were with in the normal range of occupational stress though executive experienced more occupational stress than non-executive. It was observed that executive differed significantly from non-executive in terms of role insufficiency and responsibility indicating that there was a poor fit between their skills and the job they were performing, coping resources were found to be high in the areas of social support and rational and coping i.e. both the groups used these resources to solve their problems.

workers with job experience varying from 10-15 yrs was administered the psychological participation index and Occupational stress index.

Moderated regression analysis revealed the moderating effect of participation in decision making on the job satisfaction occupational stress relationship but sub group analysis did not confirm the moderating effect.

Tyagi and Sen (2000) in a study of role stress and coping strategies among managers and supervisor in a organization investigates organizational role stress and coping strategies in male and female managers and supervisors. A sample of 120 personnel’s of organization, 30 from each of the categories –male managers, female managers, male supervisors were administered the organizational role stress scale and the ways of coping questionnaires. Results reveal greater role stress among female managers. Further, supervisors scored significantly higher on inter role distance, role stagnation and role expectation conflict whereas managers scored high on role erosion with regard to coping strategies. Male scored higher on problem focused coping than females.

Vashishtha and Archana (2000) in a study Appraisal support as a moderator variable of the occupational stress and organizational commitment relationship examines the moderating effect of appraisal support on the relationship between occupational stress and organizational commitment. The incidental sample of 200 supervisors selected from a large scooter manufacturing factory was administered the General population form of Interpersonal support evaluation list, the occupational stress index and the organizational commitment scale. Moderated multiple regression analysis and sub group analysis revealed partially moderating effects of appraisal support on the occupational stress and organizational commitment relationship.

Mathew (1992).in a study on managerial satisfaction in relation on the job activities analyzed variations in managerial satisfaction in relation to the reality of managerial activities 170 buddle level managers from 51 organizations completed the managerial activity seek and Job Descriptive Index. Findings indicate that manager’s satisfaction with the job is determined by what managers really do at their job. Manager’s actual work and the frequency of performance of various activities are important in determining the effect of various factors in different aspects of satisfaction.
Singh and Sinha (1987) examined the relationship between ten dimensions of organizational stress and two job related outcomes among 250 executives belonging to three public and seven private sector organizations. The two jobs related outcomes were job performance and job satisfaction. The result showed that six of the ten dimensions of stress, namely, (a) lack of group-cohesiveness, (b) experience of inequity, (c) role ambiguity, (d) lack of group leadership support, (e) job requirement capability mismatch, and (f) inadequacy of role authority had significant negative correlation with both the outcome variables.

A study by Mehra, Gita and Mishra (1991) in “Mental health” as a moderator variable of intrinsic job satisfaction and occupational stress”– explored the relationship between perceived occupational stress (OS) and Job satisfaction (JS) as well as the moderating effort of employee’s mental health on the relationship between the 2 factors. 250 industrial workers completed a Mental Health Inventory and the Occupational Stress Index. Regression analysis suggested that mental health has a moderating effect on the relationship of intrinsic JS and OS.

Ahmed, Sameena, James and Jessy (1991) in a study on “organizational hole stress” a psychological study of middle managers” examined the relationship between organizational Role stress (ORS), as measured by a rule developed by V. Pareek (1981), and job satisfaction and personality dimensions of neuroticism-stability and extraversion introversion, as indicated by the Mandsley Personality Inventory. The subjects were 50 middle managers results indicated that ORS was significantly but negatively correlated with all factors of job satisfaction. The neuroticism stability dimension of personality was significant and positively related to 6 dimensions of ORS including Role ambiguity.

Beena. and Paduval (1991) studied the gender differences in relation to the more stress of 80 first and executives with age as another independent variable. Subjects completed a 25 item work stress related scale from C.A. Illiggins (1991). Results indicated that stress experience increased with increasing age. Sex was found to be a major factor affecting stress condition.

Bharathi (1991) studied that “affect of occupational stress and job satisfaction” They investigated whether occupational stress had any relationship with job satisfaction
among 90 clerical employees of 3 different organizations in India. Subjects completed occupational stress index and job satisfaction. Occupational stress was significantly related to job satisfaction, such that the greater the stress, lower the satisfaction.

Akinnusi (1994) found the relationship between organizational and job stressors, on one hand, and the characteristics of individual of a sample of managers using correlation analysis on the other. It was found that educational attainment and level in the organization are positively related to organizational stress. In a research work by Mishra (1991) on “Powerlessness stressor as a moderator variable of the Job satisfaction relationship”– explored the potential moderating effect of the powerlessness stressor on the relationship of Job Satisfaction and Job Involvement. 400 first-line Industrial supervisors completed the Occupational Stress Index and Job Involvement Scale. Moderated regression analysis and sub-group analysis indicated that the powerlessness stressor does not represent a moderating effect upon the Job Involvement – Job satisfaction relationship.

Pestonjee (1991) made a study on “Top Management Stresses; suggested HRQ interventions and investigated organizational stress among 221 top managers with the help of the organizational role stress scale. Leading stressors identified were role erosion, role expectation, conflict, role isolation and inter role distance. Suggested HRQ interventions include respectively, improving the executives integration in the organization, undertaking role clarity exercises so that roles are clearly defined, role playing and communicating exercises, and helping the individual to fulfill the demands of different roles.

Prakash [1991] made a study on Discrepancy model of stress that describes the importance of perception in the experience of stress, using 50 employees classified in either a high or low stress group. According to the model the disparity between perceived demand and perceived capability produces a feeling of stress. Responses to the occupational stress inventory indicated a negative relationship between perceived capability and perceived demand. The difference between the 2 stress groups was significant on the basis of perceived capability and perceived demand.
A research study by Das (1982) has reported that primary cause of managerial stress is the work environment and the perceived power is secondary cause of managerial stress. According to the research ambiguity did not emerge as a significant cause of stress and dominant causes of stress are negative group climate and powerlessness, stress experienced by the Indian managers.

In another study by Motovidle (1986) on occupational stress and its relation with antecedent variables and job performance using a sample of 104 employees. The information was collected through group discussion and survey method from the respondent. It was found that 115 dominant stressful events for employees such as work overload, unco-operative patients, criticism, negligent coworkers, lack of support from supervisors, and difficulties with managers.

Srivastava (1991) in a study on “Moderating effect of mode of coping on the relationship between occupational stress and performance” examined the effect of approach and avoidance modes of coping on the relationships of occupational stress and job performance. 352 employees operating in a locomotive workshop completed the occupational stress index and semi-projective measures of coping style. A significant inverse relationship was obtained between perceived occupational stress and performance.


Singh (1991) investigated the impact of job stress dimensions on frustration, physical strain, alienation and intent to quit. It was a study of 250 junior and middle level managers from three public and seven private sector organizations. Data was analyzed through regression analysis technique. The results indicated that experience of inequity, role conflict, job requirement and capability mismatch and role overload
significantly influenced all job strain dimensions, namely, frustration, physical strain, alienation and intent to quit. Constraints of change and lack of group cohesiveness influenced frustration and physical strain respectively.

A survey was done (2002) on 2495 Call centers representatives in twelve workplaces. A total of 784 surveys were returned, an overall response rate of 31%. The findings include, workers on average are receiving only sixteen hours of training annually. Only 4 percent of those responding report the training as excellent, while 49 percent suggest it was “marginally useful” or “worthless.” Almost two thirds (61 percent) report that the sufficiency of their privacy is “poor” or “extremely poor.” Respondents rate their space and equipment “adequate” or “good.” Almost three quarters (72 percent) report the pace of work has “increased” or “increased dramatically” over the past year, with 78 percent reporting these same changes over the past two years. Approximately one half (48 percent) report that staffing is “inadequate” or “extremely inadequate.” One third report that their employer’s attendance policy is “not flexible at all,” while 42 percent report that it is “somewhat flexible.” Respondents suggest significant issues in terms of sick time and maternity leave, making it difficult to balance work and family. On a scale of one to ten, with ten being the highest, one third (32 percent) report their stress level at ten. The overall average is 7.9. The most significant factors contributing to stress include demanding customers, time pressures, monitoring, and pressure to complete calls. One third (30 percent) report that stress often affects them physically and emotionally. Forty percent report that stress “often” or “regularly” affects their work performance. Workers report a variety of physical manifestations of stress, including fatigue, irritability, inability to relax, headaches, and backaches. One third (31 percent) of them reported missing some work days due to stress, with a median of five days per year. (http://www.google.com/review of literature on occupational stress).

Ahmad, Safia, and Kapoor (1995) in a study on white collar employees of Britannia industries examined the relationship between occupational stress and locus of control in 50 white collar industrial employees in India. Subjects completed 3 measures. A personal data sheet, an internal – external locus of control and occupational stress index. Results show that occupational stress was negatively correlated with an external locus of control. There were significant differences between high and low
stress groups in relation to both external and internal locus of control. Findings suggested that subjects with internal locus of control experience lower amounts of stress than those with internal locus of control.

Leong and Furnham (1996) in a study on the effect of organizational commitment as a stress moderator of the stress outcome relationship on 106 (39 male, 67 female) professional administrative officers from various departments of public sector organization completed a set of questionnaires which consisted of the occupational stress indicator, the organization commitment questionnaire and a single item for intention to quit. According to previous findings individuals with a high organizational commitment suffered less negative outcome in terms of job satisfaction, mental and physical health and intention to quit as compared to those who were less committed. Regression showed commitment as a main effect, but not in interaction overall. Stress was a significant predictor of all 4 dependent variables; job satisfaction, mental health, physical ill health and intention to quit. Results showed that commitment was significant only in the relationship between stress due to factors intrinsic to job and mental ill health. Commitment was found to affect the outcome variables directly while occupational stress was only found to predict mental and physical health.

Peeters and Maria (1995) in a study on Social interactions, stressful events and negative effect at work in organizations assessed social interactions, stressful events and negative effects at work in 41 female secretaries of the Netherlands. The Dutch organizational stress questionnaire measured the frequency of such negative and positive effects of irritation, anger, and cheerfulness. Four events were categorized, interpersonal frustration, work overload, hectic work environment and problems with organization. Results show that social interactions of secretaries were characterized by 3 dimensions. 1. Intimate support, 2. Instrumental support and 3. Rewarding companionship. These dimensions appear to have different relationships with occupational stress. Instrumental support played the most important role in the work of the subject, where as rewarding companionship played no role at all in alleviating stress.

Barnett and Rosalind (1995) in a study on the relationship between job experience and psychological distress examined the relationship between 7 job conditions and
psychological distress in 240 male and 264 female full time employees. Job conditions identified as potential job stressors included: skill discretion, decision authority, schedule control, job demands, pay adequacy, job security and relations with supervisor. Results showed that only skill discretion and job demands were related to self reported psychological distress. For both men and women, the additive effects of feeling concerned about having to do monotonous work and having to work under pressure of time and conflicting demands were associated with psychological distress. The magnitude of the relationships between job experiences and psychological distress did not differ between men and women.

Scheck and Christine (1995) in a longitudinal study of a multivariate model of the stress process using structural equation modeling, developed and tested a longitudinal multivariate model of the stress process using an intensive structural equations modeling (SEM) approach based on J. Anderson and D. Gerbergs 2-stage process and analysis using 135 employee of a high tech firm, first stage – established construct validity of various key constructs used in stress research. Stage 2 used 91 of the employees from stage first and provided structural verification of the proposed stress process model using a panel design. Findings from both the stages contribute to understanding stress by uncovering some dynamic components underlying the stress process.

Agrawal and Krishna (1998) in a study on Job satisfaction and occupational stress in relation to proximity with top management studies job satisfaction and job stress in 3 hierarchical ranks and employees working in 2 private organizations. A total of 40 employees, 20 from each rank, was administered the job satisfaction scale (Singh and Sharma) and the Occupational stress index (Srivastava and Singh). Results reveal that those who perceived themselves to be close to management were satisfied and less stressed than those who did not perceive themselves to be close to the top management.

Satyanarayana (1995) studied stressors among 75 executives and 75 supervisors of Bharath Heavy Electricals Ltd. (BHEL), the results of the study indicated that personal inadequacy, resource inadequacy and role stagnation were experienced as dominant contributors of role stress in executives and supervisors. Further, two
groups differed significantly in respect of inter-role distance, role overload, and personal inadequacy and role ambiguity dimensions.

Ganster (1986) in their research concerning 326 employees of a large contracting firm examined (a) the main effects of social support on strain outcomes, (b) the interactive, or moderating, effect of social support in combination with work stressors, and (c) higher order interactions involving social support, stressors and personal and job variables. Results of the study indicated that no evidence emerged demonstrating any buffering effect for social support. Further, no support for higher order interactive models was found.

Similarly, Bhandarkar and Singh (1986) in a sample of 300 managers from public and private sectors enterprises of Southern India found that there is no relation between perceived social support and stress. They concluded that the presence of social support in no way contributes to stress reduction.

Howard (1975) discussed in a study the work related coping behaviors of 300 managers from twelve companies. They found that the following were used as the most popular coping techniques by the managers.

(i) Changing to a non-work activity (64%)
(ii) Talk through with peers (49%)
(iii) Change strategy of attack (41%)
(iv) Compartmentalize work and non-work life (40%), and
(v) Engage in physical exercise (35%).

Bhandarkar (1986) studied the impact of personalized habits and way of life on stress reduction by taking a sample of 300 managers. Variables like belief in internal control and positive habits such as yoga, meditation, breathing exercises, walking, prayer, etc., were subjected to correlation analysis with the overall stress score. The analysis revealed that sports and breathing exercise were negatively and significantly related with stress variables and played a vital role in reducing stress.
Schuler (1975) in his study, generated data from 331 employees from different levels of a large manufacturing firm. The main objective of the study was to examine the relationship of role conflict, role ambiguity with job satisfaction and job performance. The major findings of the study were:

(1) Role conflict and performance were less negatively related at the lower level of the organization. There was no significant relationship between role conflict and performance at the higher level of the organization.

(2) Role conflict was found to be significantly negatively related to job performance at the middle level of the organization.

(3) At lower level of the organization, role conflict has a stronger negative relationship with job satisfaction than at higher level.

(4) At lower and middle level of the organization, role ambiguity is negatively related to job performance but this was not found at the higher levels of the organization.

(5) Role ambiguity was negatively related to job satisfaction only at the lower level employees.

2.3: WESTERN STUDIES

Lasky, Gordon, Srebalus (1986) in a study on occupational stress among federal correctional officers across different levels found that the degree of stress across all the security levels to be high. It was also found that the federal correctional officers experience greater level of psychological distress than expected from a non-patient normal male sample.

Rogers Rolf (1994) in a study on perceptions of organizational stress among female executives in the U.S. government investigated the psychometric properties and factor stress of a 15 item self-reporting instrument measuring perception of stress precipitators in a sample of 146 female senior executive service employees of the U.S. federal government. Cluster analysis revealed the presence of 3 relatively homogenous subgroups of sample respondents based on the source and level of their perceived stress. It was found that concerns about one’s performance was the highest
ranked stressor, followed by concerns about work load, responsibility and authority, ambiguities and the fear of making wrong decisions. The cluster analysis resulted in 3 groups of stress patterns. The highest stress group included women who put the job above all else and second highest group had a high propensity for job achievement and the lowest stress group represented women who placed a high emphasis on self-actualization and outside job considerations.

Lambardo (1985) made contrary observations that during conditions of high stress, correctional officers tend to mobilize into a cohesive graph, which will be absent or weal under normal conditions.

Nelson, Cooper and Jackson (1995) in a study on 397 employees of a regional match authority agency in Britain, which was changing from public to private ownership, showed how stressful such an upheaval and re-organization can be. Three levels of employees were studied administrative, management and manual workers. All groups displayed declines in job satisfaction and in measures of mental and physical health. Those affected most by the change were the manual workers, the group that could exercise the least control over the situation.

In a study by John (1995) on 418 employees in 143 different jobs in 65 organizations found that employees in complex jobs who believed their abilities were not high enough to meet the demands of their jobs experienced significantly higher stress than did employees who believed that their abilities match their jobs demands. Employees in a situation of work overload who did not feel competent to cope with the required tasks reported a high level of stress.

Another study by Montman and Kemper (1995) on 662 blue-collar workers in the Netherlands found that the percentage of workers in factory jobs, farming, and highway transport dealing with physical stressors, such as excessive noise is high as 30%. Other physical working condition that are common sources of job stress are temperature extremes, poor lighting, shift work and indoor pollution.

Schwartzberg and Dytell (1996) in a study on “The importance of work stress and family stress for psychological well being found that no significant differences between men and women were found on levels of work stress, family stress, job-home
interference and depression/self esteem. Further, there was significant difference in some of the dimensions of family stress.

A research study by Coleman and Jackson (1996) on 1,301 working women employed in a variety of jobs ranging from day to day labor to upper-level managers found that perceived race based discrimination was a major source of job stress. This stressor rated even higher among younger (24-29 age) and better educated work women.

Cavanaugh and Boswell (2000) in a study on 1,886 business managers in the United States identified the following kinds of daily work stress. Challenge related stress, which includes time pressure and a high level of responsibility that lead to feelings of fulfillment and achievement. Hindrance related stress, which includes excessive job demands and constraints such as job insecurity poor support from higher management that interfere with achieving goals.

Another study by Peterson (1995) on approximately 100 middle managers found higher level of work overload. These managers believed that they had been given so much work, that it was impossible to do it well, in other words they believed that their work loads and levels of responsibility were excessive.

Research by Kobasa (1982) has shown that hardy persons develop fewer physical complaints under highly stressful conditions than do persons who are not hardy. Thus, hardiness may moderate the effects of stress through the way people evaluate and interpret the experiences and events in their lives.

In another study by Daniel and Guppy (1994) of 244 accountants conducted over a 1 month period confirmed that those with an internal locus of control and high social support were significantly less affected by stress than those with an external locus of control.

Another investigation by Manning and Jackson (1996) involving 260 employees of a chemical company and a Life Insurance company in the United States found that stressful job events as measured by self-report inventory correlated positively with health care claims and costs. Employees who reported the greater amount of job stress cost their employees significantly more in health care benefits than employees who reported experiencing little stress on job.
Geller and Pamela (1994) in a study on gender differences in job stress, tedium and social support in the work place, compared the amount of tedium, job stress and home and work, social support available for 61 men and 55 women employed by 4 Ohio employers. The differential effects of each source of support (supervisors, co-workers and partners) on tedium and job stress were also assessed. Results from self-report questionnaires show that women and men reported similar amounts of job stress and similar amount of work support. Women reported the experience of more tedium than men and men reported the receipt of more household assistance than women.

Guppy, Andrew and Rick (1996) in a study on the influences of gender and grade on perceived work stress and job satisfaction in white collar employees. A self-completion questionnaire survey was made resulting in a sample 675 white collar public sector employees. This survey examined the frequency of occurrence of work based stressors and perceived control and included a general measure of job satisfaction. Results reveal that higher levels of job satisfaction were reported by employees in higher grades. It was also observed that higher grades perceived, more control within their working environment. No gender differences were found concerning reported stress problems, although significant differences were observed across grades in relation to role differentiation. Multivariate analyses revealed that grade effects were largely accounted for by differences in perceived control, role-based and organizational stressors as well as gender were the strongest contributors in predicting reported job satisfaction.

Tharakan (2005) in a study on occupational stress and job satisfaction among working women hypothesized that professional women and nonprofessional working women would differ in their job-related stress and level of job satisfaction. 90 professional working women (engineers), were compared with 90 nonprofessional working women (clerks, officers,) on these variables. The Occupational Stress Indicator Scale developed by C. L. Cooper et. al (1988) was administered to measure occupational stress and job satisfaction. The relationship between occupational stress and job satisfaction was significantly associated with job status. It is suggested that professional working women experienced greater work-related stress than
nonprofessional working women because the expectations of the former group were much higher than those of the latter group.

Bourbannais and Renee (1996) in a study on Job strain and psychological distress in white collar workers determined whether workers submitted to high job strain, a combination of high psychological demand and low decision latitude developed more psychological distress than workers not submitted to high job strain and whether social support at work modified the association between job strain and psychological distress. 1,491 male and 1,398 female white-collar workers were measured on the following psychological demand, decision latitude, social support at work and the presence and intensity of anxiety, aggressiveness, depressive symptoms, and cognitive trouble during last week. Result show that a combination of high psychological demand and low latitude was associated with psychological distress. Social support at work was significantly associated with psychological distress. Women, less educated social support and subjects with lower SES more often reported high levels of psychological distress than did their counterparts.

Buck (1972) in a study on the attitude and relationship of workers and managers to their immediate bosses found that those workers who felt that their boss was low on ‘consideration’ reported feeling more job pressure. Workers who were under pressure disclosed that their boss did not give them criticism in a helpful way and played favorites with subordinates. Buck concludes that the lack of considerate behavior among supervisors has contributed significantly to the feeling of job pressure.’

Weimann (1977) in a study examined the relationship between work pressure and stress among 1,540 executives in a major company. This study suggested that the relationship between stressor, stress and disease may be curvilinear. The executives with both overload and under load of work experienced significantly a number of medical problems.

Das (1982) has reported that work environment is an important cause of managerial stress, and perceived power is the second most potent cause of managerial stress. As per the study, role ambiguity did not emerge as a significant cause of stress and negative group climate and powerlessness were perceived as the dominant causes of stress experienced by the Indian managers.
Parker and Decotiis (1983) in a study to test the model of job stress collected data from 367 managers of a large organization. Factor analysis which was used to analyze the data revealed that job stress is multi-dimensional. The study reported two distinct dimensions of job stress: feeling of being under substantial time pressure (time stress), and job-related feelings of anxiety (anxiety). Further, factors intrinsic to the job; structure, climate, information; career development opportunities; and role in the organization have emerged as major contributors to both types of stress.

DiTecco and Cwitco (1992) in a study on Operator stress and monitoring practices, identified the major sources of work-related stress among telephone operators in Call centers, with special emphasis on computer monitoring and telephone surveillance. A cross-sectional random sample of over 300 telephone operators participated in a survey designed to measure perceived stress, management practices, specific job stressors, and monitoring preferences. Call time pressures items were most linked to job stress by operators. About 70% of operators reported that difficulty in serving a customer well and still keeping call-time down contributed to their feelings of stress to a large extent. About 55% of operators reported that telephone monitoring contributed to their feelings of job stress. If given the opportunity, 44% of operators stated they would prefer not to be monitored by telephone at all, while 23% stated they would prefer some monitoring.

Halbesleben and Jonathon (2006) in a study on Action Research as a Burnout Intervention: Reducing Burnout Despite a rapidly growing body of work on the nature of stress and burnout in organizations, relatively little research has been conducted to develop strategies for reducing burnout. In this study, a collaborative action research as a mechanism for the reduction of burnout. The authors demonstrate the efficacy of this approach in the context of a federal fire department. Findings suggest that action research has potential as a mechanism for the reduction of burnout, particularly because it is a more holistic approach that can be tailored to fit the needs of an organization.

In a study by Jackson (2006) Call centers can be considered as lean service systems, with leanness being described in terms of both dialog scripting and performance monitoring. Using data from a sample of 823 call handlers from 36 Call centers, these lean characteristics are examined in relation to the prediction of call handler job-
related strain. Moreover, the extent to which this relationship can be accounted for by work design characteristics are examined. Findings confirm that employees who experience greater dialog scripting and more intensive performance monitoring show higher levels of strain. These relationships are fully mediated by work design. These findings demonstrate the importance of considering the impact of lean working practices on employee health.

Manshor (2003) examined the sources of occupational stress among Malaysian managers working in multinational companies (MNCs). A total of 440 managers participated in this survey. Data is collected through a questionnaire distributed to managers in 34 multinational companies operating in Malaysia. It was found that workloads, working conditions and relationship at work were the main concern of the managers that lead to stress at the work place. The results also indicated that certain demographic variables do influence the level of stress among managers.

Boudarène and Mahmoud (2005) studied occupational stress in an Algerian petroleum company that is located in the south of the country. An investigation was carried out by using Spielberger Job stress survey (JSS) questionnaire to explore the professional events and their impact on subjects, and Amiel-Lebigre life events questionnaire to measure more generally stress of life (psychosocial stress). Middle managers and foremen works have been targeted by the interview. The showed: 1. increased scores of both JSS and life events questionnaires. A positive correlation was noted between the two scores testifying their relationship and their synergic effect; 2. in addition, highest scores of JSS were observed in youngest people, as showed by a positive correlation between age of subjects and JSS scores. Nevertheless, subjects were more sensitive to the professional events recurrence (frequency) than their impact (intensity); 3. the results also pointed out that middle managers were more stressed than foremen: "job pressure" and "lack of support", sub-scales of JSS, were both concerned, principally in their impact. Conclusion: occupational stress is a fact in this petroleum firm. The most stressed are obviously the youngest subjects and middle managers employees.

Jamal and Muhammed (2005) In a study on Personal and organizational outcomes related to job stress and Type-A behavior on Canadian and Chinese employees examined the relationship of job stress, Type-A behavior and its two components
time pressure and hard driving/competitiveness) with burnout, health problems, job satisfaction, organizational commitment and turnover motivation among employees in Canada (N = 535) and mainland China (N = 685). Data were collected by means of a structured questionnaire from Canadian employees in Montreal and Chinese employees in Beijing. Pearson correlation and moderated multiple regression were used to analyze the data. Job stress, global Type-A and its two components were significantly related to a number of dependant variables in both countries.

Bhowon (2004) in a study on Organizational Climate and Stress on managers in Mauritius examined the relationship of perceived organizational climate and stress. Seven dimensions of stress and organizational climate were extracted through varimax rotated factor analysis. Experience of inequity, role overload, and inadequacy of role authority emerged as strong dimensions of stress, whereas job difficulty and lack of group cohesiveness were weak dimensions of stress. The study found significant relationship between dimensions of stress and climate indicating that employee's perceptions of the organizations structure and processes determine stress experience.

Amela and Bechtoldt (2003) in a study on Job characteristics, and service interactions in different Call centers on 375 Call centers employees from eight different Call centers was compared with a sample of non Call centers workers in terms of job characteristics, job stressors, and emotional labor (emotion work). The results showed that Call centers workers had worse job characteristics, but were better off with regard to most job stressors compared to representative comparison groups of no-service workers, service workers, and workers in human services respectively. Moreover, compared to the other groups, customer service representatives had to express less negative emotions, but were most frequently exposed to states of emotional dissonance. A comparison of the working conditions of the eight Call centers revealed that in most Call centers the working conditions could be substantially improved. In addition, various Call centers parameters such as inbound vs. outbound, or in-house vs. external service centers were examined. With some exceptions, the results support the view that the majority of Call centers have been established to organize mass service for customers, that the work in the call
centers is characterized by routine work and low task control, and that Call centers employees are required to suggest a "friendly smile" when they are on the phone.

Lewig and Dollard (2003) in research on Emotional dissonance, emotional exhaustion and job satisfaction in Call centers workers examined the emotional demands (emotional labour) of Call centers work and their relationship to the job satisfaction and emotional exhaustion in a sample of South Australian Call centers workers within the theoretical frameworks of the job demand-control model, the effort-reward imbalance model, and the job demands-resources model. Qualitatively the research confirmed the central role of emotional labour variables in the experience of emotional exhaustion and satisfaction at work. Specifically the research confirmed the pre-eminence of emotional dissonance compared to a range of emotional demand variables in its potency to account for variance in emotional exhaustion and job satisfaction. Specifically, emotional dissonance mediated the effect of emotional labor on emotional exhaustion. Finally, emotional dissonance was found to exacerbate the level of emotional exhaustion at high levels of psychosocial demands, indicating jobs combining high levels of both kinds of demands are much more risky. Potential ways to alleviate emotional exhaustion due to emotional dissonance is to reduce other psychosocial demands, increase rewards, support and control as conceptualized in the JDR model. Ways to boost job satisfaction are to increase control, support, and reward.

Hill and Rinaldi (2003) in a study on Stress affect not only the well-being of the individual but also the productivity of businesses. Two separate studies were undertaken in the Borough of Merton in order to assess what policies employers had to deal with employee stress and how they promoted mental health. Findings indicated that stress was a factor in staff sickness and almost one in four staff absences were stress-related. Although the majority of employers saw it as the responsibility of the organization to deal with such stress and only one third of businesses had a stress management policy, the majority recognized a need for further initiatives to promote mental health in the workplace. The main recommendation arising from this work is the need for employers to take a more active organizational role in monitoring and managing work-related stress. An approach based on the work
of Cox (1990) is proposed, which moves away from working at a personal level to a more strategic organizational level when thinking about occupational stress.

**SUMMARY**

Stressors evoke different responses from different people. Some individuals are better able to cope with stress than others. Many factors can moderate the relationship between stressor, stress and its consequences. Though numerous conditions, behaviours and characteristics may act as job stress, the present study is confined only to the two specific types of occupational namely Role ambiguity, Role Overload, Role Conflict. The above mentioned are a few studies conducted relating to occupational stress.

**2.4: HEALTH STATUS**

Research indicate that routine hassles at work may have significant harmful effects on mental and physical health. Research reveals that stress often plays a role in the onset of full-fledged psychological problems including depression, anxiety, etc. Health is a positive quality. It holds individual in a good stead. Mere disease free state of an individual is not health. It means different things for different individuals. Darrell and others define “Health is a dynamic status that results from an interaction between hereditary, potential, environmental circumstances, and lifestyle selection. In this section studies have been divided into Indian and Western studies.

**2.5: INDIAN STUDIES**

Srivastava and Urmila (2002) in a study on Relationship of job and life stress to health outcomes among Indian managerial personnel examine the relationship between job and life stress and health outcomes of management personnel. A sample of 200 male managers completed questionnaires covering occupational stress, life stress, psychosomatic health complaints (pathogenic health habits (PHH, PHC) and data on blood pressure were also collected. Job stress was significantly related to PHC and PHH, As compared to job stress, life stress was found to be stronger than predictor of health outcomes.
Tripathy and Madanmohan (2002) in a study on burnout stress syndrome among 125 managers administered Maslach burnout inventory and a survey questionnaire on stress and major illness suffered, habits and strategies for reducing stress. Further, only 118 respondents returned the completed questionnaire. Analyses revealed that burnout was higher among married male middle level manager who were working in the production department and those with 21-30 yrs of work experience. Managers working for over 72 hrs/week were more susceptible to burnout. They usually suffered from hypertension, heart disease etc. and tended to bottle up their stress. Suggestions have been made for reducing stress.

Pandey and Ashok. (1991) in a study on employee’s role conflict, role ambiguity and their anxiety, examined the relationship between role conflict and anxiety, and between role ambiguity and anxiety. 100 employees of a chemical plant completed the role conflict scale, the role ambiguity scale, and the anxiety scale. The role conflict and role ambiguity were both high having a low correlation with anxiety.

Shivastava (1991) in another study of role stress-mental health relationship as moderated by adopted coping strategies examined the effects of guidance and approach modes of coping in relation to organizational stress and mental health. 300 supervisory personnel took the organizational role stress scale, the mental health questionnaire and the projective instrument for coping strategies. The findings suggest that approach coping contributes to immediate perceived stress but in the long run reduces tension and anxiety.

Sharma, Sagar and Acharya (1991) in a study on strategy and job anxiety investigated the dominant coping strategies used by 150 male electrical engineers working in a state electricity board to deal with their job hierarchy and job anxiety. Subjects completed job anxiety scale. Job hierarchy did not significantly determine the nature of the dominant mode of coping. Subjects with higher job anxiety exhibited a greater proportion of avoidance-coping relative to total coping effects.

Sharma (2001) in a study on mental health of women in relation to job stress examines the impact of job stress on mental health. The sample comprises of 120 women in the age group of 25-35 yrs and 50 yrs above, experiencing low, moderate and high job stress. There were 40 subjects in each group. The GHQ which measures
psychological distress and a mental health inventory were administered to all the subjects individually. Age and the interaction of and job stress had no significant effort on scores of the GHQ and the health inventory. The moderate job stress group was less prone to psychological depression, manifested least symptoms of neurotic disorders and had better mental health as compared to the low or high job stress group.

Schmitt et al. (1980) in a study on the causes of physical symptoms of stress among workers in 80 organizations in U.S. found that age is related to psychosomatic and physical symptoms. Weiss, Ilgen, and Sharbaugh (1982) in their study related demographic variables to stressful events and job search. The findings of the study indicated that age, tenure in the organization, and the hierarchical positions were negatively related, while marital status and education are unrelated to stress and job search.

2.6 : WESTERN STUDIES

Dejong, Emmel and Kamp (2000) in a study on 300 employees in Netherlands who participated in a corporate stress-management training programs found significant reduction in anxiety and psychological distress, and improvements in assertiveness. These effects lasted up to 6 months. Social workers and other employees who received two days training in managing stress were found to be just as effective in helping other employees reduce stress as were highly trained.

Saunders, Driskell, Johnston and Salas (1996) in a meta-analysis of 37 studies involving 1,837 participants showed that stress-inoculation techniques significantly reduced anxiety and enhanced job performance.

Another study by Lundberg and Laveser (1999) in a study on 42 men and women manager, both groups reported that their jobs were challenging and stimulating, but women showed greater physiological stress responses than did men. Women managers continued to experience high levels of stress after the work day because of greater responsibilities connected with home and family life.

A study by Green et.al (1995) in a study on blue-collar workers in Israel found that ratings of job satisfaction and psychological distress as well as absences due to illness,
were directly related to the self-reported monotony of the work. The higher the monotony the lower the job satisfaction, the higher the psychological distress and the greater the absences due to sickness.

Porbst (2000) in a study of 283 employees in a company undergoing a major re-organization showed that their sense of job insecurity, from worry about their being laid off, was related to a decrease in their organizational commitment and an increase in stress levels and health problems. Employees who reported a high sense of job involvement experienced health problems and greater stress than did employees who were less involved with their jobs.

A study of 102 accountants by Doby and Caplan (1995) revealed that they considered role ambiguity (as well as work load) to be a high job stressor because it threatened their reputations with their supervisors, with this sample of subjects, the stress of role ambiguity was also found to generate anxiety on the job.

A study by Long (1998) on women employees in Canada compared 214 clerical workers (the low control group) with 249 managers (the high control group) people with low job control were described as more distressed and less satisfied than people with high job control. The managers reported fewer hassles on the job and less depression, anxiety and health complaints.

Research by Dormann and Zapf (1999) involving 543 workers in Germany found that social support offered by supervisors reduced the symptoms of depression that resulted from social stressors on the job. Another study by Frese (1999) of 90 German workers showed that social support given by supervisors, co-workers, friends and family members significantly reduced physical and psychological effects of stress both on and off the job.

A comparative study by Pines and Guendelman (1995) on 241 Mexican women factory workers and 729 U.S. human services workers found that burnout was experienced in different ways and for different reasons. The most significant predictors of burnout for the factory workers were a low level of control over life events and high economic concerns. The most significant predictors of burnout for the human services were work overload and role conflict.
Manning, Micheal (1996) in a study examined relationship between healthcare use and stressful work events, strain, social support, type of job and industry, and the individual characteristics of control, commitment and length of time in position. Subjects were 128 managers and 132 employees with no supervisory responsibility from 2 different industries. Subjects completed a self–report questionnaire regarding type of job, control and commitment, and time in position. Subjects also completed measures of social support, stressful work events, strain and healthcare use. Correlational analyses suggested that health care claims and costs were positively related to stressful work events and negatively related to employee’s length of time in position. Industry type also predicted the health care variables. Multivariate analyses suggested that environmental stressor and strain variables accounted for up to 16% of variance in health care costs.

Lerner and Debra (1994) in a study on Job strain and health related quality of life in a national sample examined the relationship of job stress to more comprehensive health status measures, encompassing health related quality of life. In a National cross sectional survey 1,319 working adults completed a modified version of job content questionnaire, jobs were classified into high stress, passive, low stress , and active . Subjects also completed the medical outcome study short form health survey and a health distress scale. Logistic regression analysis controlled for age, race, ethnicity, gender and education. Job stress was significantly associated with physical functioning, role functioning related to physical health, vitality social functioning, and mental health. Job stress made a statistically significant contribution beyond the effects of chronic illness and psychosocial variables. Results provide justification for investigating job strain as an independent risk factor for health related quality of life.

Frone and Micheal (1995) in a study on Job stressors, Job involvement and employee health. Identity theory postulates that the psychological importance or salience of the job role may intensify relationships between job stressor and employee health. This study tested the moderating influence on job involvement on the relationships of work pressures, lack of monotony, and role ambiguity to depression, physical health and heavy alcohol use. Data were obtained through household interviews with a randomly selected community sample of 795 employed adults. Moderator regression analyses provided limited support for the stress. Exacerbating influence of job involvement of
9 interactions tested, 3 were significant. Specifically high levels of job involvement exacerbated the relationship between role ambiguity and physical health.

Driscoll and Richard (1995) in a study examined the psychological effects of physical assault at the work place and the effects of more traditional psychological job stressors (high demands, low control, and low social support) among approximately 5,000 public service employees. Subjects who were assaulted were more likely to report depression, anxiety and low job satisfaction than their non–assaulted co–workers.

Siu, Oi-Lung and Donald (1995) in a study on psychosocial factors at work and workers health in Hong Kong, interviewed 142 males and 190 female Hong Kong workers from 8 occupational groups. The most common health complaints were muscle ache, nervousness, headache, and gastro intestinal problems. There was a significant relationship between subjects perceived work stress and psychosocial factors at work. Subject’s perceived stress was also related to health complaints and job satisfaction. Perceived environmental conditions and relationships to superiors were common predictors of health complaints and job satisfaction. Results show that subjects who were dissatisfied with the physical conditions had a stronger awareness of the harmful effects of the work environment, work shifts and overtime and bad relationships with co–workers and superiors, in general had a higher level of perceived stress and more health complaints. Female working in shifts reported more health complaints and male who received no payment for overtime reported more perceived stress and health complaints. The proposed psychosocial stress health system framework was supported.

Siegriest and Johannes (1995) in a study on emotions and health in occupational life, describes a theoretical model of model effort–reward imbalance at work. The model states that the role in adult life defines a link between self-regularity functions of a person and the social structure of opportunities of rewards. It defines job conditions where high costs are associated with low gain and two different sources of high effort; an extrinsic source (the motivation of individual workers in a demanding situation) evidence from 3 epidemiologic studies on work- related distress and cardiovascular risk in middle aged male populations shows that workers who exhibit high effort in combination with low reward and especially with low job security or promotion
prospects suffer from a 3 to 4 fold increased risk of cardiovascular disease. These workers also exhibit higher blood pressure, blood lipids and fibrinogen.

Brook and Brook (1995) in a study on relationship between job satisfaction and mental health analyzed data from a study of 178 managers using sequential decision tree method that segmented the sample into homogeneous sub groups and gave insight in to the relationship between job satisfaction and mental health. Subjects completed the job related tension index (R.C. Khan and Hopkins symptom checklist) lack of needed information was the first stressor to divide the sample followed for the majority of managers by acceptance by fellow workers, superiors, evaluations and conflicting demands. Results suggest that these are sub groups of managers whose response to work stressors depends on which aspects of the work environment they consider to be most important.

Mansell (2006) in study on Recent changes in employment conditions have resulted in the increased exposure of workers to unfavorable job characteristics and to consequential increases in adverse individual and organizational health outcomes. They evaluated the steps undertaken by one proactive employer to reduce these adverse outcomes. Three organization-wide surveys (n = 350, 316, and 405) were conducted over a 3-year period within the New Zealand Customs Service to determine the influence of perceived job conditions on individual and organizational health outcomes. Staff retention and employee satisfaction significantly improved over time and these increases were attributable to workplace improvements. Stable predictors of job satisfaction included minor daily stressors, positive work experiences, job control, and perceived supervisor support.

Call centers are often perceived to have a negative impact on employee wellbeing, mainly attributed to four factors: job design, performance monitoring, HR practices and team leader support. A survey by Carlson (2000) of 557 customer service representatives that examined the relationship of these factors to four measures of wellbeing: anxiety, depression and intrinsic and extrinsic job satisfaction. One distinctive feature of this article is its focus on anxiety and depression, two major dimensions of wellbeing not addressed in Call centers research to date. Results demonstrated that the factors most highly associated with wellbeing were high control over work methods and procedures, a low level of monitoring and a
supportive team leader. Evidence also indicates that the level of wellbeing in some Call centers is similar to that in other comparable forms of work.

In a study by Maki and Nancy (2005) on the responses of Male and Female Managers to Workplace Stress examined the impact of downsizing on worker health, and interviewed managers and employees to identify possible questions for a data collection survey. This presents observation summaries of qualitative interviews with 19 managers from a large manufacturing organization. Participants were asked semi structured questions on health behaviors, stress coping strategies, alcohol and substance use, job stress, and work overload with latitude to digress as different issues emerged. Responses from female managers and male managers revealed differences in judgments about work motivators, stressors, and coping strategies. For example, female managers displayed a greater tendency to use alcohol as a coping mechanism in response to stressful conditions. Gender differences also emerged regarding impressions of the treatment of women in the workplace. Men viewed relationships between genders as significantly improved from ten to twenty years ago. Women noted improvements over the same time frame, but gave numerous examples where men continue to dismiss the contributions of female workers. Insight into motivations underlying commonly identified stressors and coping methods for both women and men offers direction for future data collection efforts.

Kalimo’s (2004) Prospective research on psychosocial effects on employees’ health associated with organizational mergers has been scarce. The aim of this study was to explore the subjective health effects (exhaustion and functional incapacity) of an organizational merger among employees who had experienced a change in their own job position differently (improved, unaltered, and declined). Secondly, the effects of pre-merger social support (organizational, supervisor, and coworkers) at work on the experienced change in job position and on subjective health were examined. The results indicate that all sources of social support had a significant effect on the experience of change in one's job position. A decline in job position strongly increased the risk of poor subjective health after the merger.

Tuten and Tracy (2004) in a study on Performance, satisfaction and turnover in Call centers reports the results of a study, which measured the role of optimism and
its effect on stress in Call centers. Service providers at inbound Call centers answered questionnaires designed to measure their personal orientation towards optimism, perceptions of job stress, work/ nonwork conflict, performance, absenteeism and intent to turnover. We found that optimists did perceive lower levels of job stress and lower work/ nonwork conflict. Further, pessimists reported higher levels of performance and satisfaction and lower turnover intent.

**SUMMARY**

The relationship between stress, job performance or personal effectiveness and health status has been examined by a number of researchers. Further, the research findings have not been unanimous. The cited studies previously are related to the establishment of linkage between stress, performance and health status.

**2.7: PRONENESS TO PSYCHO MEDICAL ILLNESSES**

Research on the effects of stress on human health has sought to measure the amount of stress a person has experienced and then correlates this with illness. Recent research also suggests that stress affects the immune system, which is an important consideration in infectious disease, cancer and allergies. A host of biological changes occur during encounters with stressors that could mediate the role on stress on illness, for ex. Increase in heart rate and blood pressure. World Health Organization’s statistics suggest that people world over were prone to suffer cardio-vascular diseases, diabetes, and respiratory diseases due to work stress. The concept that a majority of medical and psychiatric illnesses are due to stress and a spectrum of emotional factors as old as the history of recorded medicine itself (Rosch 1979).

Carruthers (1980) has noted that some occupations place individual’s usually on high level of stress which result in vulnerabilities to heart disease. Stressors evoke different responses from different people. Some individuals are better able to cope with stress than others. Many factors can moderate the relationship between stressor, stress and its consequences.

In this section studies have been divided in to Indian and Western studies.
2.8: INDIAN STUDIES

Reddy, Srikanth and Ramamurali (1991) in an investigation the relation between stress experience on the job, age, personality and general ability examined the effect of age, personality and general intellectual ability on stress in 200 male executive in 4 age groups. Subjects took the Standard Progressive Matrices, the 16Personality Factor Questionnaire and a measure of stress and coping. Results of a stepwise multiple regression analysis show there were age differences in the sources of stress. The influences of personality and general ability on stress experience were limited but significant.

Singh, and Shailandra (1991) made an interesting investigation- Executives under stress: search for some preventive measure”. He outlined some personal and organizational attributes that can prevent stress. 250 junior and middle level male executives from 7 private and public sector manufacturing organizations of North India provided personal data on 10 dimensions of organizational stress namely lack of group cohesiveness, role conflict, experience of inequity, role ambiguity, role overload, lack of leadership support, constraints of changes, job difficulty, job requirement-capacity mis-match, and inadequacy of role authority. Findings suggest that organizational stress could be prevented by attracting highly qualified people and retaining them on equitable compensation.

Another interesting study made by Iqbal and Ahmad (1999) examined the stress in cardiovascular disorders taking 200 managers from an organization falling under four main groups, viz., Coronary Heart Disease (CHD), Hypertension (HT), Combined disease (those who are suffering from CHD and HT simultaneously) and disease free group. Stress was measured through Life Experience Survey Scale developed by Sarason, Johnson and Siegal. The t-test showed that all three disease groups scored significantly higher than the disease free group on stress scale. Further, results also highlighted significant differences between CHD group and combined disease group. Combined disease group scored higher than CHD group on stress scale.

A study by Siddegowda Urs and D'Souza (2000) attempts to assess the vulnerability of executives, managers, and engineers to major medical and psychiatric illnesses. A total of 135 respondents (69 executives, 42 managers, and 24 engineers) completed
the Short interpersonal Reaction Inventory (Grossarth – Maticik and Eysenck 1990). The results revealed that Engineers are more prone to have cancer and are also more prone to have coronary heart diseases as compared to Executives and managers. Remedial measures to improve the mental health and to get away with vulnerability to major psychiatric illness are discussed.

2.9: WESTERN STUDIES

Theorell, Tores and Karasek (1996) in a study on relating to Job stress and cardiovascular disease examines recent reviews of cardiovascular, job stress research by Schnall and Landsbergis (1995) which conclude that job stress as defined by the demand control model is confirmed as a risk factor for cardiovascular mortality in a large majority of studies. Lack of social support at work appears to increase this risk. Several unresolved issues are discussed in light of recent research methodological issues related to the use of occupations and larger aggregate estimates, use of standard scales of job analysis and recall was in issues of self reporting are administered. Confounding factors and differential strengths of associations by subgroups in job stress – cardiovascular disease analyses with respect to social class, gender and working ours are addressed. A review of results monitoring job stress – blood pressures associations and associated methodological issues is provided.

Greenland, Kurt (1995) in a study on psychosocial work characteristics and cardiovascular disease risk factors in employees examined the associations of high job demands (JD) low decision latitude (DL) and job stress (JS) with cardiovascular disease (CVD) risk factors (high blood pressure or high cholesterol) . 2665 black and white working women and men were examined in the Coronary artery risk development in employee study. The job content questionnaire was administered to assess the relationship between JD, DL, and JS with CVD risk factors. Resting blood pressure was measured and alcohol intake was devised from interviewer administered questions. Analysis reveals an inverse association with risk factors in high JD, low DL and JS. Few associations supported the hypothesis that high JD, low DL or JS are associated with increased levels of CVD risk factors. Among women subjects higher job DL was related to higher values for blood pressure and alcohol consumption.
Xie, Jialin, and Johns (1995) in a study on job scope and stress examined the relationships among job scope, perceived fit between job demands and ability and stress. Data on scope and stress were provided by 418 respondents. All subjects were full-time employees (90 professional workers, 125 managers, 37 sales workers, 101 clerical workers, and 65 blue-collar workers). Rating of job complexity from dictionary of occupational titles (DOT), the job diagnostic survey, and all the occupational prestige index (OP) also measured job scope. All 3 job scope measures had a U-shaped curvilinear relationship with emotional exhaustion. Anxiety had a negative association with incumbent reported job scope but none with the DOT and OP measures. Perceived demands ability fit moderated and relationship between the DOT and OP measures and stresses. People with complex jobs who perceived fit experienced less exhaustion and anxiety than those perceiving misfit.

Another study by Siegevist (1995) on 1,100 factory workers in China found that increased pressure on the job, combined with job security during a period of layoffs, led to significant increases in the workers' blood pressure and cholesterol levels.

A study by Kivimaki and Kalimo (1996) on 5450 blue-collar workers in Finland also found a significant relationship between job monotony and increased psychological distress, such as anxiety and worry, as well as greater physiological symptoms of that stress. These relationships were staggierest in men under the age of 35 and in women over the age of 35.

A meta-analysis of 87 studies by Booth Kewly & Friedman (1987) reported a modest relationship between type A behavior and heart disease but stronger relationship between heart disease and the emotion of anger, hostility, and depression. These researchers concluded that the coronary-prone personality is not necessarily the typical workaholic but rather someone ridden by negative emotions such as anger and anxiety.

Recent studies have focused on two psychosocial variables that appear to have a significant impact on the induction and growth of cancer cells. These two factors are 1 stress and life events, 2. Personality. Further, in the present era the impact of mental states and neurohormonal events on immune responses in being intensively studied (Cunningham, 1993). The evidence for a brain-immune link was
demonstrated by Ader and Cohne (1975). They showed that the depression of antibody responses could be behaviorally conditioned Sklar and Anisman (1981) in a review of the work done on stress and cancer found that stress generated by life events frequently preceded the appearance of several forms of neoplasia. Furthermore, the incidence of cancer was particularly prevalent among individuals who had lost an important emotional relationship. Change of residence and marital problems were also related to the development of cancer.

Rosenman et al. (1976) conducted research and found a strong association between the Type A Behavior Pattern (TABP) and Coronary Heart Disease (CHD). TABP and CHD were first demonstrated in the Western Collaborative Group Study (WCGS) by this study was conducted over a period of 8½ years on a population of 3,154 male employees. The coronary prone behavior pattern, body measurements, blood pressure, dietary and smoking habits, cholesterol, triglycerides were measured annually during the period of the study.

The major findings of the study were:

(a) A large proportion of Type A people (as determined by the structural interview (SI) technique at onset of the study) developed CHD as compared to Type B;

(b) The Type A people had risk factors of decreased blood clotting time, elevated serum cholesterol, etc;

(c) The Type A people had twice the rate of clinical coronary disease when compared to Type B;

(d) The Type A people had twice the rate of fatal heart attacks as experienced by Type B people at the follow-up; and

(e) Type A behavior was established as a significant predictor of premature CHD.

Life events research has shown that it is not merely the stress itself, but also the way the individual perceives and appraises it that potentates its effects (Lazarus & Folkman, 1984). It was seen that those individuals who expressed a sense of loss and hopelessness and an inability to cope with the stress had a higher incidence of cancer and depression (Le Shan, 1959). The cancer prone personality is a concept that is
increasingly being studied. The two characteristics that are emphasized in cancer patients are – the suppression of emotion, the lack of outlets for strong feelings and failure to express such emotion, the inability to cope with interpersonal stress, leading to feelings of hopelessness and helplessness and finally depression and a tendency to give up rather that fight (Eysenck, 1991). Temoshock (1987) described a type C personality who are co-operative, unassertive, suppress negative emotions and accept or comply with external authorities. They are the polar opposites to type A individuals whose behavior has been linked with heart disease.

A comparison study by Bosma and Stanfeld (1998) of more than 10,000 men and women employees in Britain focused on the issue of job control. The results showed that people with low level of job control were one and a half of two times more likely to develop heart disease than were those greater control over the demands and responsibilities of their job. Research on more than 96,000 workers in the United States and in Sweden reported that employees in high stress jobs had a rate of heart disease four times greater than did employees in low stress jobs. A survey by Cartwright (2000) of more than million workers in Britain found that more than half of them reported physical health problems that resulted from stress of unusually long working hours.

Siegrist and Johannes (1994) in a study on Job stressors and coping characteristics in work related disease to improve the prediction of coronary risk and disease information was combined on psychosocial work stressors and work related coping characteristics in several studies. The theoretical model, termed “effort – reward imbalance” assumes that high extrinsic and intrinsic effort spent at work in combination with low reward trigger sustained neuro hormonal activation. Results of a prospective study with 329 male blue-collar workers support the validity of this model. Findings indicate that components of effort reward imbalance are strongly related to new coronary events and to elevated levels of established coronary risk factors as well as to reduce cardiovascular responsiveness. Results indicate the need for structural and behavioral interventions in work place to prevent CHD.

A comparison study by Mael and Ashforth (2002) of 234 Call centers agents with 572 workers in traditional jobs with long lasting training revealed lower job control and task complexity/variety and higher uncertainty among call agents. Further, time
pressure, concentration demands, and work interruptions were lower in call agents. Within the call agent sample, controlling for negative affectivity and other working conditions, job control predicted intention to quit, and job complexity/variety predicted job satisfaction and affective commitment. Social stressors and task-related stressors predicted uniquely indicators of well-being and job-related attitudes. Furthermore, data confirm the role of emotional dissonance as a stressor in its own right, as it explained variance in irritated reactions and psychosomatic complaints beyond other working conditions. Results indicate that strong division of labor may be a rather general phenomenon in Call centers. Therefore, working conditions of call agents require a redesign by means of job enrichment or--better--organization development. Moreover, measures of social stressors and emotional dissonance should be integrated routinely into stress-related job analyses in service jobs. Although several studies have shown that women make up the majority of the Call centers workforce, their role and position in this new and expanding industry has not yet been examined.

Personality characteristics and stress combine and interact to produce feelings of helplessness, hopelessness and depression. Research has shown this can produce hormonal imbalances and immune deficiencies, which allow the illnesses to grow and proliferate. The present study is aimed at assessing the level of vulnerability of stress and personality resulting in medical and psychiatric illnesses of various types of professionals in variety of industries. The effects of stress is many and varied. Some effects, of course, are positive, such as self motivation and stimulation to satisfy individual goals and objectives. Nevertheless, many stress consequences are disruptive, counterproductive, and even potentially dangerous. It has been established by the research that stress manifests itself in the form of many physiological, psychological and behavioral problems.

2.10: OVERVIEW

To conclude, it would be appropriate to consider some of the general findings of the researchers on stress which would provide several guidelines for future research on Occupational Stress. They are as follows.
• There are gross differences among occupations with respect to the presence of factors known as stressors from laboratory and field research.

• These differences can be classified into 4 occupational clusters namely blue collar unskilled, blue collar skilled, white collar skilled and white collar non-professional.

• These groups can also vary with respect to participation in decisions, social support, certainty about the future, complexity and freedom from quantitative overload and unwanted overtime.

• Exposed to stress is associated with negative affective responses especially boredom and dissatisfaction.

• These negative reactions are associated with negative affects such as depression, irritation, anxiety etc.

• Occupations having a high degree of social psychological descriptors have advantage over other occupations.

• The effects of stressors appear to be buffered or moderated by the presence of social support, the sense that one is a part of the network of people who communicate, understand and help each other.

• The empirical output examining the consequences of stress is relatively vast. Evidence indicates that stress manifestations are many and varied. Stress is manifested at different levels within the individual, viz., physiological, psychological and behavioral levels.

• Few attempts have been made to explore the relationship between stress, performance and job satisfaction. Further, the results are inconsistent and inconclusive.

• The studies on coping strategies indicate that more than one coping styles are adopted by the executives to cope with stress in stressful situations.
Keeping in view these general findings, the present study is designed to identify the psychological problems among employees of multinational companies and Call centers to measure the mediating effect of stress and coping techniques on health and to determine the effect of stress on the employees in terms of work stress, general health and proneness.