CHAPTER - II

REVIEW OF LITERATURE

During the past decade, researchers have been paid much attention to occupational stress and its impact on well-being of the employees. The various research studies of occupational stress have provided substantial evidence supporting the notion that exposure to work stressors has a negative impact on a worker’s mental and physical health and job satisfaction. Therefore a flurry of studies on occupational stress has since emerged. Some of the studies are presented in this chapter.

2.1 INTERNATIONAL STUDIES

Kirk L. Froggatt and John L. Cotton,² (1987) in their study controlled laboratory experiment investigated the effects of Type A behavior pattern on role overload-induced stress and performance attributions. Although previous correlation studies have concluded that Type A individuals are more likely to feel stressed than Type B individuals, the present study did not find this. The current study reports the alternative hypothesis that differences in reported stress between Type A and Type B individuals may occur because the Type A seeks out situations that are objectively more stressful. In contrast to the stress findings, performance attributions varied between Type A and Type B individuals. Results are discussed in terms of their theoretical and practical implications.

Charles R. Greer and Marry Anne Dorland Castro,³ (1986) their study examines the functional relationship between occupational stress and perceived unit effectiveness. Purchasing agents in a Southwestern U.S. city responded to a self-report questionnaire, which solicited measures of stress and effectiveness and such information as respondents’ gender, age, number of subordinates, and position tenure and their organizations’ size and type of industry. A regression analysis of these responses which controlled for individual and organizational differences-found that perceived unit effectiveness was negatively related to occupational stress and positively related to age. The researchers found no evidence of an inverted-U-shaped relationship between stress and effectiveness, and little support for the proposition that gender moderates the relationship. Nonetheless, the researchers point out that research on the relationship between occupational stress and perceived unit effectiveness should control for the effects of individual characteristics.

Crawford Hollingworth et.al.⁴ (1988) in their study, they found that there is a strong association between job satisfaction and stress, with low job satisfaction being associated with high stress. This association did not reflect the confounding of job satisfaction with demographic variables, and was not modified by day of week. Possible causal relationships accounting for this correlation have been discussed in the study.

Muhammad Iamal,⁵(1990) his study examined the relationship of job stress, job stressors, and Type-A behavior pattern with employees' job

³ The Relationship Between Perceived Unit Effectiveness and Occupational Stress: The Case of Purchasing Agents, The Journal of Applied Behavioral Science April 1, 1986 22: 159-175
⁵ Relationship of Job Stress and Type-A Behavior to Employees' Job Satisfaction, Organizational Commitment, Psychosomatic Health Problems, and Turnover Motivation, Human Relations August 1, 1990 43: 727-738
satisfaction, organizational commitment, psychosomatic health problems, and turnover motivation among full-time nurses (N = 215) working in a large Canadian hospital. Both job stress and stressors (role ambiguity, overload, conflict, and resource inadequacy) were significantly related to four outcome variables. Type-A behavior was associated with high job stress, high role ambiguity, conflict, resource inadequacy, and psychosomatic health problems. In addition, Type-A behavior was found to be an important moderator of the stress-outcome relationships. Implications of the findings for management and for future research are highlighted.

John M. Jvancevich,⁶ (1994) points out that the physiological, psychological, and organizational effects of occupational stress are not only costly to individual employees and managers, but also to the organization, society, and family. His study examines the notion of interaction between the employee and the work environment. Stress is defined in terms of a relationship between a person and the work environment. Instead of using a global model of person-environment interaction, a more specific approach incorporating the notion of Type A-B behavior pattern and Type A-B work environment is developed. The study examines the theory, research, and implications of a person-environment model as an explanation of occupational stress and various behavioral, psychological, and organizational consequences.

The model is suggested as a formulation of a dynamic-inter-actional view that emphasizes the reciprocal person-environment processes found in the workplace. It is proposed that the interaction between Type A-B behavior patterns and Type A-B work environment is a fertile area for further theoretical and empirical research.

Maureen F. Dollard⁷ (1999) argue that a conducive production model that emphasizes action and knowledge, and reciprocal learning between academia, practitioners, and organizations may be the way forward for psychologists to respond effectively to the current work stress problems and other emergent organizational issues. Failure to do so may result in exacerbation of problems related to the psychological and social context of work, a slowed response to increased demands, and an ever decreasing practical utility of the profession.

Smith A,⁸(2000) reviews previous research on the scale of occupational stress and describes in detail the Bristol Stress and Health at Work study. His study had three main aims: firstly, to determine the scale and severity of occupational stress in a random population sample; secondly, to distinguish the effects of stress at work from those of stress in general life; and finally, to determine whether objective indicators of health status and performance efficiency were related to perceived occupational stress. These aims were investigated by conducting an epidemiological survey of 17,000 randomly selected people from the Bristol electoral register, a follow-up survey 12 months later, and detailed investigation of a cohort from the original sample.

The results revealed that approximately 20% of the sample reported that they had very high or extremely high levels of stress at work. This effect was reliable over time, related to potentially stressful working conditions and associated with impaired physical and mental health. The effects of occupational stress could not be attributed to life stress or negative affectivity. The cohort study also suggested that high levels of occupational stress may

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influence physiology and mental performance. The prevalence rate obtained in this study suggests that 5 million workers in the UK have very high levels of occupational stress.

Roland P. Chaplain\(^9\) (2001) in his study he investigated that the levels of perceived stress and job satisfaction among primary head teachers. Around half reported high levels of occupational stress but some half were satisfied with their work. Sources of stress and job satisfaction were examined under four headings: managing oneself and others; managing finances; managing the curriculum; and managing change. The highest levels of satisfaction came from personal factors and organizational factors. School organization was a source of stress and of satisfaction. The lowest level of satisfaction was with the level of social support. Two subgroups reporting ‘very high’ levels of stress differed markedly in levels of job satisfaction—one ‘very satisfied’, the other ‘not satisfied’. These differences were related to gender and perceived sources of job satisfaction and stress.

Lawson K. Savery,\(^{10}\) (2001) the data for his study were collected by the federal government from workplaces across Australia and released in late 1997. It seems that having influence on decisions affecting a person and type and speed of work seems to alter the perceived level of job satisfaction rather than the level of job stress. This study investigates these findings further and discusses the influence of some demographic variables on job satisfaction. The final area of the study will look at how all these variables will impact on the perceived productivity of the organization.

\(^9\) "Stress and Job Satisfaction among Primary Head teachers - A Question of Balance?", Homerton College, University of Cambridge, Educational Management Administration Leadership April 2001 vol. 29 no. 2 197-215.

Parvin Bahadoran, et al., (2002) their study was a descriptive-analytic correlation research. Data were collected from two groups and in one stage design. The samples included 93 midwives of delivery rooms and 75 midwives of health centers. The data gathering tool was a questionnaire. The validity of the questionnaire was proved with content and surface validity and the reliability of the questionnaire was checked with alfa Cronbach coefficient. Descriptive and analytic statistical methods were used for data analysis. The results showed a significant difference between occupational stress in both groups (delivery room midwives and health centers midwives). There was no significant relation between age, marital status, level of education with occupational stress, but there was a significant relation between number of children, satisfaction, economic condition, personality type with occupational stress.

There was a significant relation between job satisfaction, education, health services and occupational stress. But, there was not any significant relation between occupational stress with other professional factors. According to the results, change of midwives in delivery rooms with midwives in health centers each 5 years is recommended.

Niels O.Pors, (2003) Niels O.Pors, Based on a survey of British and Danish Library Managers the study explores the concept of job satisfaction and its relation to stress, job content and job conditions. In his

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study he explored the concept of job satisfaction and its relation to stress, job content and job conditions. The study evokes the theories of Hofstede as a tentative explanation of national differences. The study sets out to analyze job satisfaction in relation to a range of demographic variables. On the basis of a multitude of questions and statements the author forms several composite variables. They concern factors such as stress, freedom in the job, perception of management style and the actual job content. Hofstede's theories about cultural differences are at least partly confirmed through the analysis. It is also evident that nationality plays a significant role in relation to factors such as stress and freedom in decision making. The study also hints that an intervening variable could be the way nations adopt different methods to reorganise the public sector. A last point made in the study is the partial rejection of a generic theory about job satisfaction. The factors tend to be the same, but the weighting of the single factor and its significance are influenced by background factors such as nationality and size of the employing institution.

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Alexandros-Stamatios G. et.al.\textsuperscript{14} (2003) This study investigates the occupational stress amongst 355 male and female Greek junior hospital doctors (JHDs) working in the Greater Athens area. The initial phase of the

research involved in-depth interviews with a random stratified sample of sixty JHDs, both male and female, in a variety of specialties of junior hospital staff. An extended version of the occupational stress indicator (OSI) questionnaire was developed, incorporating additional items based on the results of the qualitative part of the study, and on previous research findings in the same area. The sample consisted of 193 males and 162 females JHDs, who completed the OSI.

Analyses of the data demonstrated that, overall, JHDs presented significantly higher levels of sources of pressure than the normative population and other comparative occupational samples. As regards the various sub-group comparisons, bivariate analyses revealed that there were significant differences between male and female JHDs in certain aspects of pressure (“career and achievement” and “home/work interface”). Multivariate analyses revealed that predictors of physical and mental ill health and job dissatisfaction were type A behaviour and “demands of the profession” respectively.

Manshor, et.al.\textsuperscript{15} (2003) in their study examined 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.

Winwood, P.C.,\textsuperscript{16} (2003) in his study, the levels of stress and alcohol consumption of 312 South Australian dentists were measured. Factors known


\textsuperscript{16} The role of occupational stress in the maladaptive use of alcohol by dentists: A study of South Australian general dental practitioners, Australian Dental Journal, 2003; 48(2):102-109
to mediate vulnerability to alcohol disorders were also assessed with appropriate psychometric instruments. High levels of stress/burnout, consistent with other studies of dentists’ stress, were recorded. Hazardous levels of alcohol consumption, which were between two and four times higher than the normative South Australian population, were also reported, particularly among males and rural dentists. To a significant extent, stress and hazardous alcohol consumption are both present among South Australian dentists. However, compared with work stress/burnout, existing personal vulnerability factors are much stronger predictors of such hazardous alcohol consumption. Researcher suggest that professional dental bodies, and state Dental Boards, may play a role in ensuring stress inoculation and guidance on safe limits of alcohol consumption for dentists-in-training; and in creating appropriate mechanisms for assisting dentists who experience alcohol related difficulties.

Martin Loosemore1 and Tom Waters,17 (2004) they emphasized that there is accumulating evidence that stress levels among construction professionals are increasing and that this is manifesting itself in the form of unsafe working practices, higher turnover, lower morale, and poorer performance. However, there has been no research into the influence of gender on stress levels in the construction industry. This is despite evidence that the under representation of women may produce higher levels of stress among this part of the workforce. To redress this deficiency, this study investigates whether there are differences in sources and levels of stress between male and female professionals in the construction industry. The results indicate that overall, men experience slightly higher levels of stress than women. Although there are common sources of stress for both men and

17 Gender Differences in Occupational Stress Among Professionals in the Construction Industry, Journal of Management in Engineering, 20, 126 (2004);
women, there are also some differences. In particular, men appear to suffer more stress in relation to risk taking, disciplinary matters, implications of mistakes, redundancy, and career progression. In contrast, the factors that cause most stress for women were opportunities for personal development, rates of pay, keeping up with new ideas, business travel, and the accumulative effect of minor tasks. These differences reflect women’s traditional and continued subjugation in the construction industry.

Kanemitsu Yoshihiro,\(^\text{18}\) (2005) the purpose of his study was to describe the role of recent Health Psychology in an occupational stress survey. First of all, the study tried to review the importance of the individual and moderating factors which were supposed to mediate between stressors and stress responses, by observing the historical significance in psychology.

Specifically, based on the recent trend of Health Psychology and his research, it was proposed that such intervening variables as coping flexibilities, work control, and mentoring were valid. Finally, this study advanced a suggestion of new perspectives for research on Health Psychology, presenting some useful scales of Health Psychology.

Vegchel, N.\(^\text{19}\) (2005) his study addresses theoretical issues involving different interaction effects between job demands and job resources, accompanied by a thorough empirical test of interaction terms in the demand-control (DC) model and the effort-reward imbalance (ERI) model in relation to employee health and well-being (i.e., exhaustion, psychosomatic health

\(^{18}\) A Health-Psychological Approach To An Occupational Stress: Consideration Of Coping Flexibility, Work Control, And Mentoring As The Mediating Variables In Psychological Stress Model, Kawasaki Medical Welfare Journal, Vol.15;No.1;Page.13-23(2005)

\(^{19}\) Occupational stress in (inter)action: the interplay between job demands and job resources. Journal of Organizational Behavior, 26(5), 535-560.2005
complaints, company-registered sickness absence). Neither the DC model nor the ERI model gives a clear theoretical rationale or preference for a particular interaction term. Hierarchical regression analyses were conducted among 405 nursing home employees and cross-validated in a comparable sample (N = 471). Results including cross-validation showed that only a multiplicative interaction term yielded consistent results for both the DC model and the ERI model. Theoretical as well as empirical results argue for a multiplicative interaction term to test the DC model and the ERI model. Future job stress research may benefit from the idea that there should be a theoretical preference for any interaction form, either in the DC model or in the ERI model. However, more research on interactions is needed to address this topic adequately.

Michailidis M, Georgiou Y.,20 (2005) examines occupational stress of employees in the banking sector. A sample of 60 bank employees at different organizational levels and educational backgrounds was used. Data collection utilized the Occupational Stress Indicator (OSI). Results of data analysis provided evidence that employees' educational levels affect the degree of stress they experience in various ways. Bank employees cannot afford the time to relax and "wind down" when they are faced with work variety, discrimination, favoritism, delegation and conflicting tasks. The study also shows the degree to which some employees tend to bring work-related problems home (and take family problems to work) depends on their educational background, the strength of the employees' family support, and the amount of time available for them to relax. Finally, the drinking habits (alcohol) of the employees were found to play a significant role in determining the levels of occupational stress.

Anne Marie Berg et.al.\textsuperscript{21} (2006) in the study they pointed out that the prevalence of subjective health complaints was relatively high and was mainly associated to job pressure and lack of support. Males showed more depressive symptoms than females. All stress factors on frequency were positively associated to the burnout dimensions depersonalization and emotional exhaustion, except work injuries.

Jennifer McLean\textsuperscript{22}, (2006) the purpose of his study was to provide an initial exploration into the experiences of distance education faculty with regard to occupational stress and job satisfaction. The results of this study indicate that distance education is a rewarding career path for many higher education faculty. The challenges faced by faculty teaching exclusively at a distance are not entirely different from those of their on-campus counterparts, but the form those challenges take and the avenues by which they are managed are necessarily changed in the distance environment.

Bette Prakke, et.al.\textsuperscript{23} (2007) In their study, they examined teacher’s perceptions of their own ability to handle challenging parent behaviour and to establish positive relationships as a possible influence on the quality of teacher parent relationships. Using a canonical correlation method, we found that unsatisfied parents, overprotective parents, neglectful parents and excessively worried parents have the largest impact on teacher stress. Teachers who experience stress from challenging parent behaviour, suffer mostly from negative feelings toward parents, frustration on working with


\textsuperscript{22} “Forgotten Faculty: Stress and Job Satisfaction Among Distance Educators”, Pennsylvania College of Technology, Online Journal of Distance Learning Administration, Volume IX, Number II, 2006.

\textsuperscript{23} Challenging parents, teacher occupational stress and health in Dutch primary schools, International Journal about Parents in Education, 2007, Vol..1, No. 0, 36-44
parents, loss of satisfaction with teaching and to a lesser extent health problems. The data for this research was collected in February and March 2007, amongst 212 elementary school teachers in the middle and middle-east region and urban agglomeration of Western-Holland, the Netherlands. The main aim of this research project is to identify at risk teachers (i.e. those most vulnerable to the presence of behaviourally challenging parents) so that interventions, both in initial teacher training as well as in-service training, can be applied to help them develop adequate attitudes and coping skills.

John J. De Nobile and John McCormick,24 (2007) they pointed out that numerous studies have established that teaching can be a stressful profession. Teacher occupational stress has been linked to absenteeism, turnover, productivity and other negative organisational outcomes. The ‘stressfulness’ of schools, however, cannot be fully understood without the input of non-teaching staff and there is a lack of research involving them. This study reports relationships between biographical variables and occupational stress of staff members in Catholic primary schools. The sample consisted of 356 staff members of Catholic primary schools in New South Wales, Australia. Data were collected using a questionnaire survey. Multivariate analysis and comparison of means were employed to test research hypotheses. Biographical differences, particularly age, sex and position, were related to several aspects of occupational stress. The results are discussed in terms of implications for schools and future research.

Mehrabi T., et.al,25 (2007) in their study, they emphasized that the occupational stress is one of the most important occupational hazards in

modern life which could lead to decrease in productivity, work absence, workforce transfer and high costs for the personnel. American National Association for Occupational Safety has placed nursing at the top of the list of the first forty high-stress jobs. There are various factors known as stressors in nursing. The study was carried out to evaluate the severity of some of them. This is a descriptive, correlative study. 170 nurses in various wards of Isfahan University of Medical Sciences hospitals who met the inclusion criteria took part in the study. The data was gathered using standardized Toft-Anderson questionnaire and then was analyzed using SPSS software with Spearman correlation test, mean and frequency distribution. Findings demonstrate that most of the nurses (73.47%) experienced stress at the medium level. In addition, a positive statistical correlation was found between the overall and fractional stress scores. Conflicts with physicians have the greatest relationship with the overall severity of occupational stress in nurses. Among the demographic parameters, only marital status and work hours had significant statistical correlation with the severity of stress. (p< 0.001). Regarding the findings of the study, it is recommended to employ appropriate methods in preventing and handling occupational stresses at the personal and organizational level.

Marzabadi E A, et.al. 26 (2007) in their study the statistics were collected from 164 individuals who were employees of a governmental organization in Iran. In the study, it was found that a large number of participants were ranked in the low-stress range, which was about 93.9%. Among the roles at work, the role conflict was the one with the highest results of about 35.54. The next highest stress level among the roles was role ambiguity, which got an average of about 31.81. Role overload and role insufficiency both got an average of about 29.25 and 28.96. The stress caused

26 “Job Stress, Job Satisfaction and Mental Health” Baqiyatallah University of medical sciences , Tehran, Iran. 2007.
by physical environment got an average of about 37.93. The stress among individuals due to responsibility was averaged at 20.97. The stress related to the family got an average of about 23.97. In the end, the stresses caused by work and work and family were ranked at an average of 94.87 and 118.81, respectively. The standard deviation was seen to be highest in the category of work and family at 15.57, and the least deviation was reported with family stress at 4.37.

They studied the satisfaction aspects of the individuals by breaking down the satisfaction level into three different standards, which were low satisfaction, intermediate satisfaction and high satisfaction, and analysed it from the perspective of work, chief, cohorts, preferment, salary and premium, and job. The satisfaction from preferment ranked the highest at about 20.1% and the satisfaction from work and salary and premium both were ranked at 13.4%. The lowest level of high satisfaction was seen from cohorts, which was at 1.2%. The satisfaction from cohorts in the intermediate satisfaction category was seen at the highest level with 88.4%. The satisfaction from work and chief in the intermediate satisfaction category were ranked at the second and third place with 86% and 84.8%, respectively. The lowest level of satisfaction was from preferment in the intermediate category with 16.6%. In the study individuals were studied with reference of mental health, anxiety, social dysfunction and depression. Categorically, there were 22% of the individuals who were tending to have problems of mental health; 2.4% of the individuals were suffering from anxiety, 2.4% suffering from social dysfunction and 1.2% were suffering from depression. They have discussed that the relation between total satisfaction and mental health, their relation was significant and negative (p = 0.301). Covariant between job and family stress and job stress was p = 0.87 and this covariant was significant in 99%.
The results in broader terms were really amazing where about 93.9% of individuals were noted in the low stress range, 3% in the intermediate stress range and 0% reported in the high stress range. In the low stress category, there was an increased percentage of people who were having problem balancing their work life and family life, which was about 85.4%, and about 75.6% were suffering from low stress due to role overload. With regards to the satisfaction, the highest rank was taken up by satisfaction from cohorts, which was at 88.4%, 86% from work and 84.8% from chief. They concluded that there is a very close relationship between stress and medical illnesses.

There are a lot of individuals in a lot of studies who have shown to suffer from increased amounts of stress just because they are not paid well, because of bad work environment, because of less growth opportunities, etc., and all these factors just lead to the development of high stress and can ultimately make a person to suffer. This study showed that there were a lot of individuals who were suffering from low stress and that has really helped them to understand the different factors that were related to job satisfaction and mental health, as well as job stress and its relation to mental health.

John McCormick,27 (2009) the purpose of his research was to study teachers’ self-efficacy and occupational stress in the context of a large-scale curriculum reform in New South Wales, Australia. The study aims to follow up and replicate a study carried out approximately one year earlier. A theoretical framework, primarily based on social cognitive theory and the teachers’ attribution of responsibility for stress model and consistent with the

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earlier study, was used to guide the research. Data were gathered using a self-
report questionnaire. Analysis was carried out using structural equation
modelling, based on results of the earlier study, and partial correlation
analysis. A more parsimonious model of the related phenomena than had been
established by the earlier study was confirmed, suggesting that the context of
the educational reform was different one year later, particularly in terms of
perceived social support and occupational stress specifically associated with
the changes. The important result from the earlier study was replicated –
understanding what was required by the reform was negatively associated
with teachers’ self-efficacy for the new type of teaching and self-efficacy for
using technology with the new curriculum.

Jacoba J. et.al,\(^{28}\) (2009) The aim of their study was to assess the
relationship between the occupational stress, sense of coherence, coping,
burnout and work engagement of registered nurses in South Africa. A
crosssectional survey design was used. The study population consisted of 818
registered nurses. The Nursing Stress Inventory, the Orientation to Life
Questionnaire, the COPE, the Maslach Burnout Inventory-Human Services
Survey, and the Utrecht Work Engagement Scale were administered. The
results showed that the experience of depletion of emotional resources and
feelings of depersonalization by registered nurses were associated with stress
due to job demands and a lack of organisational support, focus on and
ventilation of emotions as a coping strategy, and a weak sense of coherence.
Work engagement was predicted by a strong sense of coherence and approach
coping strategies.

\(^{28}\) Occupational stress, sense of coherence, coping, burnout and work engagement
of registered nurses in South Africa, SA Journal of Industrial Psychology,
Vol.35 No.1 Cape Town 2009.
J.E. Agolla,29 (2009) his study is based on the empirical study on the police work stress, symptoms and coping strategies among the police service in Botswana. The data was based on a sample size of (N = 229) of police officers in Gaborone and its surrounding. A total of 10 police stations were sampled for this study. A simple convenient random sampling technique was employed to sample the participants. Data was analysed using a simple descriptive statistics and frequency tables. The finding from this study reveals that the police work stressors are; getting injured while on duty and the use of force when the job demand to do so etc. The coping strategies were identified as exercising, socialising, healthy eating or diets, career planning and employee training.

The research adopted survey approach using quantitative method only, therefore it is suggested that, the study be replicated using triangulation methods to validate these findings. However, it is hoped that these findings will add to the existing body of knowledge and contribute to the understanding of the nature of police work stress.

Liyana Mohd Bokti and Mansor Abu Talib,30 (2009) in their study a total of 40 male officers and non-officers, from the seaman and engineering and supply branch in the Lumut Naval Base participated in the study. Data were collected using a self-administered questionnaire, the Job Satisfaction Survey (Spector, 1985) and Job Related Tension Index (JRTI; Kahn et al., 1964). This preliminary study established internal consistency using Cronbach alpha values for both instruments. Additionally, the study determined the level of occupational stress, job satisfaction and relationship

between occupational stress and job satisfaction facets. The findings of the study revealed that the reliability of both instruments were greater than 0.80. The majority of the male Navy personnel reported moderate levels of job satisfaction in the favorable nature of work facet. High occupational stress on the other hand, was related to an unknown superior’s evaluation of one’s workplace performance. Correlational analyses found that occupational stress was associated with overall job satisfaction and in eight of its facets. Collectively, results provide evidence that both instruments are reliable in the Malaysian military setting context.

Anthony Chukwuka Ugwu, et.al.\(^{31}\) (2009) their study was aimed to determine the impact of role extension of medical radiographers into sonography. 50 self-administered questionnaires were distributed to radiographers and to sonographers (radiographers with sonography responsibility). The questionnaires included questions seeking information on the demographic profile of the radiographer and sonographer, anatomical regions of biomechanical symptoms/stress and visual analogue scale (VAS), which rated job satisfaction and anxiety levels. 96% of the questionnaires were returned and analyzed statistically using SPSS 11.0 software with P<0.05 indicating level of significance. Sonographers had more prevalence of biomechanical stress symptoms than the radiographers. Job satisfaction for sonographers (58.75%) was lower than that for radiographers (64.29%). Anxiety level was higher among sonographers even though this was not statistically significant. Sonography responsibility on radiographers did not have any significant effect on psychosocial stress. A balance in the extended role could aid efficiency in service delivery while improving the social strength of the individual.

Yong Wah Goh, et al.\textsuperscript{32} (2010) examined Lazarus and Folkman's (1984) transactional model of stress and coping. One hundred and twenty nine Australian participants with full time employment (i.e., nurses and administration employees) were recruited. There were 49 male (age mean = 34, SD = 10.51) and 80 female (age mean = 36, SD = 10.31) participants. The analysis of three path models indicated that in addition to the original paths, which were found in Lazarus and Folkman's transactional model (primary appraisal \(\rightarrow\) secondary appraisal \(\rightarrow\) stress \(\rightarrow\) coping), there were also direct links between primary appraisal and stress level time one and between stress level time one to stress level time two. This study has provided additional insights into the transactional process that will extend their understanding of how individuals appraise, cope and experience occupational stress.

María del Pilar González Vigil\textsuperscript{33}, (2010) in his study, he focused on the stress perception, stressful situations, and stress management strategies in studies of Swedish and Peruvian students from a teacher-training program. The research design that is applied for this purpose is comparative. The sample includes Swedish and Peruvian second year students and administrative staff from a teacher-training program. The research instruments are questionnaires and interviews. The main findings of this study indicate that in spite of the cultural differences, both groups of students present as many similarities as differences. On the one hand, Swedish and Peruvian students manifest a particular profile in the way they perceive the


\textsuperscript{33} Stress Perception, Stressful Experiences and Stress Management Strategies, A Comparative Case Study of Swedish and Peruvian Teacher Students, Stockholm University, Sweden (2010)
concept of stress, experience specific stress effects in studies, and manage stressful academic situations. On the other hand, both groups present some similarities considering specific stressful situations in studies; their perception of stress as negative in their academic performance, emotional state and health; their variable competence to manage stress in studies; and their desire for having a course on stress management.

2.2 NATIONAL STUDIES

Sujatha Muthanna\textsuperscript{34}, (1988) the study looked at top level managers experiencing high occupational stress from different departments and age groups and having different levels of Anxiety, Peer relations and Personality. The results were in turn mapped with organizational requirements as a whole and suggestions were made about the ways in which organizations could be made more effective and efficient to work in.

Charlene Herried,\textsuperscript{35} (1985) the purpose of his study is to look at the associations between measures of Type A ("Type A" personality, said to be at higher risk for developing physiological stress symptoms, notable coronary heart disease) and stress symptoms and sales performance in a real estate company, and to examine the implications for managing commission sales people in small businesses, both in real estate and elsewhere. Type A has received considerable attention as a key personality construct with substantial consequences, both good and bad. Thus, Type A behavior may contribute to successful individual sales performance as well as to problematic behavioral and physical expressions of stress. The real estate setting is particularly appropriate for studying the implication of Type A for individual performance.


\textsuperscript{35} Type A, occupational stress and salesperson performance, Journal of Small Business Management, Vol. 23, 1985
and stress, because (1) individuals tend to work independently, (2) individuals control their work commitments, work hours, and work intensity, and (3) performance is directly linked to an individual's efforts.

Hl Dhar\textsuperscript{36} (2002) in his study he suggested that the meditation is the best technique for stress free life. Meditation is not a path of information but a path of transformation, not the path of knowing but the path of becoming. It is said five perversions (lust, anger, greed, attachment and ego) of mind create stress in the body like mental tension, migraine, high blood pressure, heart attack, diabetes, constipation, sleeplessness etc. Meditation develops virtues of chastity rather than lust, forgiveness rather than anger, detachment rather than attachment, generosity rather than greed, humility rather than ego. When the mind is detached from aforesaid five weaknesses, peace of mind automatically surfaces, balance of mind and state of well being are experienced resulting in life free from stress. He also suggested that regular practice of integrated type of yoga can not only prevent the development of various psychosomatic disorders but also improve a person’s resistance and ability to endure stressful situations more effectively.

Manju Mehta,\textsuperscript{37} (2002) in his study he found that the significant stress factors (stressors) experienced by Indian expedition members during voyage and stay in Antarctic continent and to determine the impact of stressors on social behaviour. Effect of stress on social behaviour. In the study Different individual responses were observed during stressful situations. The most common negative behaviours were criticising each other, nagging, passing negative comments, taunting, blaming, crying, withdrawing and in

\textsuperscript{36}“Stress management - special reference to executives and elderly” Bombay Hospital Journal, Vol.44 No.04 October 2002.

few situations violent behaviour after drinking were observed. However, majority of the expedition members manifested positive behaviours e.g. cooperation, helping others, providing social support, organizing group activities to channelize anxiety.

It is found that 60% of the wintering members had high enthusiasm, achievement motivation, competition, 40% were high on leadership. Though tension level was low for almost all the expedition members but self control and maturity was also low in 65% of the members. Sensitiveness, getting emotionally upset was low in 12 expedition members. Symptoms like insomnia, irritability, headache, migraines, anxiety and depression was reported. The post Antarctic evaluation carried out by us for the last three years has also suggested difficulties in work, communication, physiological and psychological problems. There have been instances of excessive drinking of alcohol, smoking, interpersonal conflicts, physical fights, anxiety and depression.

Some members become sensitive to trivial issues like celebration of birthdays, personal comments, food and work management. Conflicts and differences between scientific and army groups were observed. The few persons who had low coping skills were repeatedly manifesting negative behaviours. These problems in coping were being observed in both wintering and summer expedition members. Fifteen wintering over members had developed rashes on various parts of the body, which can be physical manifestation of stress. Boredom/fatigue, reduced motivation to work-, impaired memory and concentration were also reported by winter-over expedition members. Five members had reported disturbed dreams. These were related to not being able to do work according to their plans, and some were related to their family. Finally the author concluded that though various stresses are encountered by the members during the expedition, the responses
are different due to individual personality and coping ability. With proper screening and psychological preparation of individuals these problems can be minimized. This will enhance adjustment and productivity of the expedition members.

K. Chandraiah, S.C.\(^{38}\) (2003) his study was planned to investigate the effect of Age on Occupational stress and job satisfaction among managers of different age groups. A sample of 105 industrial managers working in different large-scale organizations was selected randomly for the study. The findings of the study reveals higher levels of job stress and less job satisfaction among managers of 25-35 years age than their counterparts in the middle age (36-45 years) and the old age groups (46-55 years). The study also found that the age found to be negatively correlated with occupational stress and positively with job satisfaction.

Rajeswari K.S and Anatharaman R.N\(^{39}\) investigate sources of negative pressure among software professionals, from the perspective of the software development process. A multiple response questionnaire (survey instrument) was developed to measure sources of pressure among software professionals, based on a series of interactions with academicians, software professionals and senior software professionals employed in software industry. Ten key factors that cause stress in software professionals are identified using exploratory factor analysis from 156 usable responses. These ten factors are found to explain nearly two-thirds of the variance. The results indicate that stress resulting from fear of obsolescence and individual team interactions account for maximum variance. The results reveal that the stress levels are not high, among the respondents of the current study.

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\(^{39}\) Unpublished thesis, Indian Institute of Technology, Madras, Chennai, India
John Mathew, et.al.\textsuperscript{40} (2003) In their study they observed that significant numbers of individuals [80\%] like to return to their workplace which shows the willingness among the people of the sample to go to work. This can be an indication of the high degree of work ethics prevalent among people, that in spite of stress situations, they are willing to go to their workplace. This might also be the reason of the various incentives like enjoying the work, moving out of the house, meeting people, increasing and sharing knowledge and of course earning.

When they were asked of the reason for the stress or the factors causing stress, majority (43\%) of individuals stated the factor of "working with a disagreeable person" as the major cause or reason of stress at the workplace. There are other reasons also for stress like the "impossible standards" and "too much of responsibilities" which were reported as the stressors by a relatively good number of individuals.

Regarding the effects of stress, there was a unanimous result that we observed; out of the total sample, 76\% individuals replied stating that stress affects them mentally and hence impairing the quality work that they can do at their workplace. While there were very few people who replied that it affects them physically, quiet a few number of people agreed that stress affects them mentally as well as physically. Regarding the symptoms of stress, the answers were spread evenly as no significant solution came out. This point to the fact that the evil of stress has no common recognizable label. It can result in bad behavior or losing out the energy or person, becoming argumentative and becoming over-reactive and frustrated resulting in losing the control over them.

\textsuperscript{40}“Stress at the Work Place” National Conference on Stress Organized by Department of Psychology, Saurashtra University on February 19-20, 2003.
Nearly 36% of the sample indicated that they feel lack of energy than usual when they are under stress. Although working people are under stress, still they are efficient. This might be the reason of their personal remedies. 37% individuals are doing away with making an adjustment with them or to say compromising with the situation by choosing the middle path for the decision. As the sample includes the educated work force lot of people (27%) apply a thought over the situation and think a lot over the matter. This shows the consciousness among the educated workforce regarding the presence of stress in their workplace. Some startling facts were observed when a straight question was asked to them regarding their decision taking capability. As good as 33% (1/3\textsuperscript{rd}) of the total people surveyed replied negatively, confessing their inefficiency in taking the most simplest of decisions. 27% people replied positively when they were asked whether they are over-reactive to the mild things and 23% people were having the stress of overburden of work. They concluded that the Individuals vary greatly in their capacity to endure stressful situations, and there is, undoubtedly, self-selection in the kinds of jobs and stressors that individuals choose. Because sources of stress may vary from worker to worker, providing a solution for one worker may create stress for another worker. For example, if the organization provides more opportunity for influence over the work process, the change in control may be experienced positively by some but negatively by others. A partial solution to this problem (Lazarus, 1991) may involve intervening with groups of workers that are formed based on person-environment relationships, and which contribute to the generation or reduction of stress.

Prof. Dileep Kumar. M\textsuperscript{41} (2004) in his study he found that there is significant difference in the level of occupational stress between nationalized

\textsuperscript{41} “A Study on Job Stress of Nationalized and Non Nationalized Bank Employees” Sinhgad Business School, Kusgoan, Lonavala, Maharashtra (2004)
and non-nationalized bank employees. Occupational stress is found higher among non-nationalized employees compared to nationalized employees. Among different occupational stress variables Role over load, Role authority Role conflict and Lack of Senior level Support contribute more to the occupational stress among non-nationalized employees compared to nationalized employees. He recommended that to alleviate the negative consequences of stress more effort on the part of policy makers, practitioners, and organizational management envisaged. The author, there by making a few effort to suggest some effective measures, that can alleviate the stress of bank employees and leads to their better adjustment within the organization. They are the management Organize a Stress Management Program that focuses on different leave categories of employees at all hierarchical level. Organize Stress Management training programs' with specific human resource development goals in consultation with Senior Management. Finally he concluded that the productivity of the work force is the most decisive factor as far as the success of an organization is concerned. The productivity in turn is dependant on the psychosocial well being of the employees. In an age of highly dynamic and competitive world, man is exposed to all kinds of stressors that can affect him on all realms of life. The growing importance of interventional strategies is felt more at organizational level.

Mohsin Aziz (2004) points out that the organisational stress originates in organisational demands that are experienced by the individual. Stress is built up in the concept of role which is conceived as the position a person occupies in a system. his study investigates the intensity of organisational role stress among women informational technology professionals in the Indian private sector. Organisational role stress scale is used on a sample of 264 to explore the level of role stress. Resource

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inadequacy has emerged as the most potent role stressor, followed by role overload and personal inadequacy. The research finds differences in the level of stress between married and unmarried employees on several role stressors. However, level of education does not emerge as a significant differentiator of stressors.

Prof. Lakshman\(^4^3\) (2005) in his study he specifically found that 76% of survey respondents thought that their career prospects would be damaged if they complained of stress, and managers confirmed that they are right to think this. 79% of managers said they would be less likely to employ a candidate if they suspected that they were prone to stress and 87% would be less likely to promote an existing employee if they had doubts over their ability to handle stress. One in four said that their average stress levels at work were either high or very high. Only 9% considered poor compensation and benefits to be a major concern, which indicates that those who have not been affected by redundancy or restructuring are grateful to be in employment. Job insecurity was stated as being a cause of stress for almost half of all respondents. A large proportion of managers said that core people management tasks such as handling performance appraisals or conducting the recruitment interview were a significant source of stress for them.

This suggests that managers are not receiving the training needed to perform in their role. Only one third (34%) of respondents said that stress was recognised as an issue in their workplace and just 31% of respondents said that personal counselling services were available to them. Fewer still (27%) said that their organisation has any formal process for handling grievances or concerns relating to stress. His other findings include 86% of respondents considered that stress was a problem in their organisation. 36% rating it as being significantly so. 79% identified increased absence as the main symptom

\(^4^3\) “Project on stress management” published in the CiteHR.com (2005)
of stress in an employee. 53% regard stress as something an organisation can address proactively. 95% view supportive managers as the workplace factor most likely to help employees cope with stress. He concluded that having a comprehensive stress policy, which is part of the organisational fabric and develops with the organisation, can help reduce the likelihood of individuals experiencing occupational stress, improve productivity levels and so benefit the bottom line.

Suparna, K. et al., \(^{44}\) (2005) A cross sectional study was done among 200 Information Technology (IT) professionals in the National Capital Region (NCR) to study the computer related health problems and role of ergonomic factors. The computer related morbidity was present in 93% of the study subjects. The visual problems were seen in 76% and musculoskeletal in 77.5% while 35% felt stressful symptoms. The study subjects having inadequate lighting and not using an antiglare had greater visual problem, i.e. 81.3 and 76.3%, respectively. Of the 152 subjects that had visual discomfort, 80.2% did not have the monitor at correct distance. This observation was found to be statistically significant (\(P<0.05\)). The musculoskeletal problems were also higher in the study subjects using inappropriate ergonomics. The study has brought forth a very high prevalence of computer related morbidity among IT professionals and it further concluded that all aspects of ergonomic variables appear to be acting in cohesion in relation to computer related health.

R Lakshminarayan\(^{45}\) (2006) “in his study he concluded that every person has a working life-time/period of about 35 years, normally between 25 to 60 years of age. Given the Indian scenario of competitive market, over

\(^{44}\) Occupational health problems and role of ergonomics in information technology professionals in national capital region, Indian Journal of occupational & Environmental Medicine, Vol. 9, Iss. 3 pp 111-114, 2005.

\(^{45}\) An Overview Of Strategic Planning To Combat Occupational Stress – Need Of The Hour In The Present Indian Context”, National Institute of Virology, Indian Council of Medical Research, Pune, Maharashtra, 2006.
population and scarcity of good jobs, runs on the theory of “Survival of the Fittest”, no profession is stress free. The degree and depth may vary from one another. Both employer and employee must understand that work should be valued and not excessive. Work should not compromise on health and family life; rather offer happiness, peace of mind, certainty, variety and flexibility. As a general rule, actions to reduce job stress should be given top priority in the process of organizational change to improve working conditions and to avert the situation of brain drain. But even the most conscientious efforts to improve working conditions are unlikely to eliminate stress completely for all workers.

Daisy Chauhan\(^{46}\) (2006) he concluded that it is a fact that stress is not similarly experienced by all people. The severity or gravity of a stressful situation depends on certain personality attributes like confidence, self-esteem, attitude, and certain qualities possessed by individuals like decision-making, sense of control, conflict resolution, possibility thinking. In that sense each individual has the capability to choose his/her response to a particular stimulus through his/her self-awareness, independent will, creative imagination and conscious decision. Only the capability varies from person to person.

The researcher further asserted that we need to understand that we have the ability to control and influence the environment and therefore are responsible for whatever is happening in their lives and career. Such an approach would limit the effect of other forces (external circumstances, condition or conditioning) in matters concerning oneself. If the meaning of life is the presence of difficulties, challenges, change and conflicts then we need to learn to confront, adapt and meet the challenges by enhancing our capability and thereby realizing our potential. This is possible by adopting an

integrated holistic approach to stress management. Seen in this regard stress management can be considered to be a preventive mechanism to reduce the risk of illness and thereby aim at a sense of fulfillment in one's professional and personal life by adopting a balanced approach to life.

Latha KS, Dhrl.et.al. 47 (2006) they aimed to assess the nature of stress, social support systems and coping styles among adolescents. 100 students in Pre University College (II year) of both genders in the age range of 16-19 years were assessed with the Adolescent Stress Scale, a semi-structured interview to elicit social support, and a self-report coping scale. The main sources of stress in both genders were getting up early in the morning, pressure to study, having to concentrate for too long during college hours, not having enough money to buy things, and long college hours. Prayer was the main coping strategy used by both genders. Males had larger social network than females. They Concluded that the Schools/colleges should provide opportunities to work through the stresses related to college and studies by instituting specialized programmes.

Geeta S. and Vijayalaxmi A. 48 (2006) an attempt was made by them to find out the impact of emotional maturity of adolescents on their stress and self-confidence. Sample of the study consists of 105 adolescents studying in XI and XII class at Dharwad city Karnataka State, India. The findings revealed that the adolescents with high emotional maturity have significantly high stress (t=10.44; p< 0.001) and self-confidence (t=-2.92; p< 0.01) when compared to those with low emotional maturity. Adolescents with more

47 “Patterns of Stress, Coping Styles and Social Supports among Adolescents” Journal of Indian Association of Child Adolescents Mental Health; 3(1): 5-10, 2006.
number of siblings have shown significantly higher level of self-confidence (t = 2.96; p< 0.01) than their counter parts. It is also found that educational level of father has significantly influenced stress of their adolescent children (F= 5.303; p< 0.01). Adolescent boys tend to have significantly higher stress than girls (t=1.72) and girls tend to have significantly high self confidence (t=1.83) World Socialist Web Site (WSWS), news and analysis study documents exploitation in Indian call centre (by Jake Skeers, 23rd November 2005). Work force at call centres are under constant stress because of their work load, competitive presser and surveillance staff in this sector reported health problems such as nervousness, chronic fatigue, bodyache, insomnia, nausea and anxiety, restlessness and depression due to odd working hours and stress.

N. Panchanatham, et.al.49, (2006) in their study they predicted that there is a positive correlation between executives’ coercive leadership behaviour and their occupational stress. The results shown in study explained the fact that there is a significant and positive relationship between these two variables. Further it is noted from the study that the coercive leaders are more stressful than their counterparts. From the result it is evident that organizations taking efforts to reduce the executive stress level can help them to make changes in the executives’ leadership pattern. It is true, that every executive is expected to follow more than one leadership style according to the situation. However, being always dominant in coercive style particularly the implementor is an obstacle to get things done.

They suggested that the Organizational trainers have to concentrate on various stressors responsible for the executives’ occupational stress. Role

overload, Role ambiguity, Role conflict, Unreasonable group and political pressures, responsibility for persons, under participation, Powerlessness, Poor peer relations, Intrinsic impoverishment, Low status, strenuous working conditions and unprofitability are the stressors. Formulating strategies to deal with these stressors ultimately would result in reducing executives’ level of stress substantially. Such executives’ problem solving behaviour would be highly desirable and their unique style of problem solving behaviour can vividly be seen in the organizations. Panchanatham and Shanmuga Ganesan (1992), Panchanatham et al. (1992,1993 a, b, c 1995) and Panchanatham (1994, 1996) have dealt with the need for problem solving behaviour of the individuals in their corporate world considering the changes taking place in the environment.

Finally they have concluded that the Executives differ in their problem solving styles and leadership styles. There is a significant and positive correlation between executives’ coercive leadership style and their level of occupational stress. Coercive leaders are more stressful than their counterparts. For better leadership pattern the executives’ stress level is to be monitored by an organizational HRD division. Formulating strategies to maintain emotional balance among the problem solvers need thorough dealings with occupational stress.

K.K.Jain, et.al.\(^50\), (2007) in their study they found the results of the study also confirmed the assumption that high age group managers as well as high age group engineers were equally satisfied with their jobs and the study revealed the same findings when low age group managers and low age group engineers were compared on their job satisfaction level.

\(^{50}\) Job Satisfaction as Related to Organizational Climate and Occupational Stress: A Case Study of Indian Oil, International Review of Business, 2007.
Upadhyay, G.R. and Havalappanavar, N.B.\textsuperscript{51} (2007) in their study, they compared the level of stress among widows and widowers to that among families where both parents are alive. Stress among 77 single parents (58 widows and 19 widowers) was compared with that of 77 families (matched group) where both the father and the mother were alive. Results showed that single parents differed significantly regarding total stress and in all four areas of stress (care, emotional, social and financial stress). Stress was high in emotional and social areas compared to care and financial stress. Widows and widowers showed similar care stress. They differed significantly in their social, financial, emotional and total stress. Single parent families of mentally retarded children experience higher levels of stress (total and in all areas) compared to such families where both parents are alive. Total, social, emotional and financial stresses, were higher than the care stress among widows compared to widowers.

Sunetra Bhattacharya and Jayanti Basu (2007)\textsuperscript{52} the purpose of their research was to study Distress, Wellness and Organizational role stress of professionals in the area of Information Technology (IT). The effect of sex and age on the above variables as well as the predictability of the variables from stressful life events and coping resources taken together were also examined. 101 professionals (60 men and 41 women) were administered General Health Questionnaire-28 by Goldberg and Hiller, PGI – Well-Being Scale by Verma, Dubey and Gupta, Organizational Role Stress Scale (ORS-Scale) by Pareek, Presumptive Stressful Life Events Scale (PSLES) by Singh, Kaur and Kaur, and the Coping Checklist by Rao, Subbakrishna and Prabhu.

Results of the study reveal that women experienced greater wellness and older personnel experienced more distress. Distress could not be predicted from the life events and coping resources taken together. Wellness and Organizational role stress could be predicted from these two variables.

Anjum Mahdi\textsuperscript{53} (2007) the major result of the study was, the main effect of organization has a significant effect, on the degree of stress. The interactions between the type of organizations and the type of workers as well as between the organization and intervention techniques also have a significant effect on stress. There is a significant effect of the type of organization and intervention technique on the degree of stress. Likewise the interaction effect between the organization and the intervention techniques had the significant effects on the degree of stress in the after situation. There is a significant difference for the application of medication and non-medication techniques in the degree of stress between before and after situations. Subjects belonging to the three different organizations are highly significantly difference in "the degree of stress in before situations as well as in the after situation. There is a significant difference between the application of medication and non-medication techniques for managing the stress. Moreover there is also a significant difference both in before and after situations for the application, of techniques to manage stress. Supervisors and workers belonging to Air Force are significantly different in religious and moral values. Supervisors and workers belonging to CRPF are significantly different in religious and moral values. He concluded that subjects belonging to three different organizations vary in the magnitude in the stress. And the intervention technique of medication and non-medication helped in the reduction of stress where non-medication had an edged over medication. Even in non-medication techniques yoga was more powerful than spiritualism.

Among the values only religious and moral values were significantly different from the supervisors and, workers of the subject belonging to Air Force and CRPF. The majority of correlation between different values showed inverse relationship.

Richa Darshan\textsuperscript{54} (2008) In his study an attempt was made to analyze the effect of stress in women working at call centres at Indore and problems faced by them. The attempts are also made to understand the various ways in which they try to eliminate stress from their life. The study was mainly at exploratory level and focused on issues such as age, education, motivation, commitment and decision making power and health of those at call centre. The major findings of the study include, the first issue relates to balancing of family and social life for women in call centres. As they work in night shifts and also odd hours of the day, they are unable to spend sufficient leisure time with family members. As a result, the contact between the family members breaks up. The second issue is related to the stress level of women in call centres. The cause being monotony of work and dealing with abusive clients, which leads them to overreact to situations. The final issue identifies the poor work environment. The major problem related to sexual harassment and offensive behavior in work place. The author concluded that it is desirable to employ HR professionals with knowledge of human psychology in call centres. They should look for counselors to refer employee's problems; they actually do not retain them. Young women in call centres between 18 to 21 years should be guided on physical and mental coordination to cope with a job that requires hyper-alert efficiency. Because of the sexual stigma associated with the job, it doesn't bring status to women in the society. Establishing an equitable and gender safe work culture and highlighting the

respectability of call centres creates pleasure in the job and increases the motivation for women in call centres.

R. Bakhshi, et al., (2008) they were undertaken with the objectives to know socio personal characteristics of selected categories of working women and their families; to examine working conditions of selected categories of working women and to analyse the impact of occupational stress on home environment as perceived by selected respondents. The study was conducted in Ludhiana city and a total sample of 150 respondents was selected from three categories of working women namely; doctors, university teachers and bank employees with 50 respondents in each category. Results showed impact of stress on house care and up keep as “pay full attention towards orderliness in home” scored maximum and “my dependency on servants has not changed” scored minimum. Impact of stress on social and leisure life revealed that “going out on holidays” scored maximum and “enjoy meeting social obligation” was least preferred . Impact of stress on miscellaneous work showed that maximum scoring statement was “pay attention towards bill payments, cheques, deposits etc., and least scoring statement was “keeping an eye over kitchen needs is easy for me”.

Dr. Parul Rishi, (2008) he conducted the study relating to stress auditing of forest officers and field forest staff involved in different working divisions of Madhya Pradesh Forest department with the objective of promoting a more conducive atmosphere for forest management with the association of healthy and dedicated forest personnel. The salient findings of the study was overall, both forest officers and field staff were experiencing

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56 “Stress auditing of forest personnel” conducted in different working divisions of Madhya Pradesh Forest department (2008)
stress of varying nature and degree. Forest officers were experiencing more stress because of group and political pressures, work pressures, motivational problems and resource limitations respectively. However, personal and familial stressors were not varying crucial for them. Field staff were experiencing more stress because of resource limitations, motivational problems, group and political pressures and personally familial stressors respectively. However, the least important stressor was work pressure and departmental pressure. He asserted that the study has implications for HRD section of forest department for providing their personnel, adequate opportunity for training in stress management and other developmental opportunities. They should also take care of different types of stressors existing at different levels of forestry sector, so that a conducive working atmosphere for forest management could be generated along with association of healthy and dedicated forest personnel. It will further result in individual and organisational effectiveness. Regular stress auditing of forest personnel will be a very useful OD intervention in this regard.

R.P. Vempati\textsuperscript{57}, (2008) the study evaluated the physiological changes of a yoga based stress management program for 26 a symptomatic, male, middle managers. The Occupational Stress index (OSI) and autonomic parameters were measured. Data of subjects with OSI greater or less than the median were analyzed separately. The 't' test for paired data was used for pre-post comparisons. The whole group (n=26) showed a significant decrease in breath rate (p< .005) after the two day program, with no other changes. Subjects with OSI more than median (n = 13) showed a significant decrease in breath rate (p< .01), in the power of the low frequency component of the heart rate variability spectrum (p<.05), and in the low frequency: high

\textsuperscript{57} Baseline Occupational Stress Levels And Physiological Responses: A Two Day Stress Management Programme, Vivekananda Kendra Yoga Research Foundation, Bangalore, India, 2010.
frequency ratio (LF/ HF) (p<.05) and an increase in the high frequency component (p<.05) after the program, with no changes in the subjects with OSI less than the median.

Katherine M. Richardson, (2008) his study provides an empirical review of stress management interventions, employing meta-analysis procedures. A total of 36 studies were included, which represented 55 stress interventions. The average length of intervention was 7.4 weeks. The overall effect across the studies was .526, which is equivalent to a medium to large effect, indicating that, in general, stress interventions are effective, though the predominant outcome measures targeted psychological outcomes rather than performance or physiological outcomes. The results also revealed that relaxation interventions were the most frequent type of intervention. Further, there were few stress interventions focused at the organizational level. More specific results also indicated that cognitive-behavioral interventions produced larger effects than other types of interventions.

S Subramanian, (2009) he attempts to explore the status of mental health and occupational stress with respect to 2 categories of patients: Those who are suffering from cardiac problems and those suffering from noncardiac health problems. Occupational Stress Questionnaire and Mental Health Questionnaire were administered to both cardiac and noncardiac patients. The cardiac group consisted of 40 patients who were being treated at the cardiology department of a reputed hospital, and noncardiac group (40 patients) consisted of outpatients of the same hospital being treated for noncardiac problems like knee pain, headache, etc. Responses to these self-


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reported questionnaires were subjected to statistical analysis to find out the
difference between cardiac and noncardiac groups. The results revealed that
cardiac patients tend to have lower levels of mental health than noncardiac
patients. Similarly, cardiac patients were reported to have higher levels of
stress due to role ambiguity, powerlessness, intrinsic impoverishment and
unprofitability.

Hirak Dasgupta (2009)\(^{60}\) the objectives of his study is to determine
sources of role stress among doctors in Indira Gandhi Medical College &
Hospital, a Government Medical Hospital located in Shimla (India) and to
examine the stress levels among Male and Female doctors working in the
hospital. Two hundred and fifty three (253) questionnaires were distributed to
the doctors and one hundred and fifty (150) duly completed questionnaires
were received. Non probability (Judgment) sampling method was used to
select the sampled units within the hospital for study. Statistical treatment
included Factor analysis and t-test. The study revealed that factors causing
role stress among doctors is: (1) Role Overload (2) Self-role distance (3) Role
Isolation (4) Inter-role distance (5) Role Stagnation (6) Role expectation
conflict (7) Role ambiguity and (8) Role Inadequacy. Roles overload shows
40 percent variance which was found to be a significant factor causing stress
among the doctors. t-test indicated that there was no significant difference
between the stress levels among male and female doctors except in cases of –
Inter-role distance and Role Inadequacy. The study showed that Role
Overload is most significant source or factor causing role stress among the
doctors working in the hospital. Male doctors are more stressed than the
female doctors in cases of Inter-role Distance and Role Inadequacy.

\(^{60}\) Role Stress Among Doctors Working in a Government Hospital in Shimla
(India), European Journal of Social Sciences – Volume 9, Number 3 (2009)
Piyali Ghosh et al.,\textsuperscript{61} (2010) their study focuses on employees of private banks in India and aims to identify the factors/variables instrumental for their job satisfaction and to empirically test such identified variables with the help of a survey. Several factors/variables have been clubbed as: work aspects, compensation, training, career development, supervision and work life balance. Sample comprised managerial and non-managerial staff of selected private sector banks in India; total sample size was 102. Reliability analysis was carried out using Cronbach alpha and, thereafter, factor analysis was conducted to understand factor loadings on the identified variables.

Pravan Basnet, et al., (2010)\textsuperscript{62} the objective of their study was to determine the impact of job stress on mental, physical and social health of the underground construction workers in Sikkim. The study population comprised of tunnel workers and a comparable group of controls. Using the interview technique, data was collected using the SF-36 General Health Survey Questionnaire. The study population comprised of individuals of whom more than half were below 40 years of age and was comparable to the group of controls. Majority reported good health, while poor health was reported by 22% of the subjects under study. Compared to their health status last year, 52% rated their health as somewhat worse. Majority reported that their physical health problems limited them in activities of daily life, viz., running, lifting heavy objects, participation in strenuous sports, climbing several flights of stairs, bending, stooping or kneeling and walking more than a mile, during the past four weeks. More than half of them had severe body ache in the past four weeks that interfered with both work outside home and housework. This was true for emotional problems also, which interfered with their normal social activities involving family, friends, neighbors or groups. The associations of

\textsuperscript{61} International Journal of Indian Culture and Business Management, Volume 3, Number 5 / 2010, 560 - 576
occupational stress with physical, emotional and social life and with limitation of day-to-day activities among tunnel workers were found to be statistically significant. The results emphasize the importance of assessment of the effects of job stress and of fulfilling the need of underground workers for optimum preventive measures.

Srivastava, Deepak,63 (2010) his study has been designed to examine the degree of job satisfaction of two public sector and two private sector banks in India. The banks were selected and from each organisation 25 subjects were selected randomly. A questionnaire developed by Sinha (1990) was used for ascertaining the level of job satisfaction. Data were analysed employing one-way ANOVA. The means of four organisations were significantly different from one another. The result indicates that layoff threats, quick turnover, less welfare schemes, and less scope for vertical growth increase job dissatisfaction. On the other hand, secure job environment, welfare policies, and job stability increase the degree of job satisfaction.

Mahtab Alam64, (2010) he examined the level of stress among police personal and their coping strategies in the state of Gujarat. Various symptoms of stress includes, family problem either it’s a matter of divorce, Mental Health problem & Committing suicides or organizational which mainly focuses on workload, Target achievement, Attitude and Behavior among internal staff and societal among police. This study also highlights some points about what to do and what not to do when especially police officers’ feels a strong stress on him.

63 Sectorial comparison of factors influencing job satisfaction in Indian banking sector, Published on AllBusiness.com 2010
64 An Analytical Study of Job Stress among Selected Police Personnel in the State of Gujarat with Special Reference to Vadodara City, AIMS International Conference on Value-based Management, August 11-13, 2010
Pradeep S. Tangade, et.al.,65 (2011) they evaluating the factors influence student perception, might allow programmatic changes designed to enhance students’ psychosocial well-being and academic performance. The purpose of their study was to investigate perceived sources of stress on dental students and the role of parents in their career choice decisions. In a cross-sectional design, a modified dental environmental stress questionnaire was administered to all dental students. The responses to the questionnaire were based on a four-point Lickert scale, not stressful to severely stressful. Means and standard deviations were determined for stress scores of individuals for each item and were used to compare the classes, genders, and choices. Student’s t, one way ANOVA, and Newman Keuls multiple comparison post hoc tests were used to analyse the data at the significant level of P ≤ 0.05. A total of 304 undergraduate students constituted the study population. Of the respondent, 60% were men and 40% were women. The final year students presented with higher stress scores. In gender comparison, men suffered more stress (62.9%) than women (60.1%). According to the career choice decision, students forced by parents had more perception of stress (69.0%) and the students staying in the hostel (62.7%) showed more perception of stress than day scholars (56.3%). The study indicates that the congenial environment needs to be created for dental education and the parents also need to be counselled against forcing their children to join an educational programme i.e. not of their choice.

Bushara Bano (2011)66 empirically assesses the occupational stress among the employees of two important government organizations namely archaeological survey of India (ASI), Agra and District Treasury office of

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65 Assessment of Stress Level among Dental School Students: An Indian Outlook, Dental Research Journal (Vol. 8 No. 2, Spring 2011)
Agra. The analysis has been done using ORS scale. This scale comprises of ten role stressors; Inter-role distance, Role Stagnation, Role Erosion Conflict, Role Erosion, Role Overload, Role Isolation, Personal Inadequacy, Self-role distance, Role Ambiguity, Resource Inadequacy indicate key findings as well. The finding reveals that the government employees are facing moderate level of stress. The research established that Resource inadequacy is the most potent stressor. It also identifies that Role Erosion and Role Expectation Conflict has a significant impact on the stress level of employees in different government organizations.

N.Mohan and Dr.J.Ashok (2011) explores the influences of age and experience on stress and depression and the relationship between stress and depression among the women information technology (IT) professionals in Bangalore, Karnataka. Their study aimed at i) To find out the level of stress and depression experienced by women IT professionals ii) To understand the impact of age and experience on stress and Depression iii) to study the relationship between Stress and depression. iv) To know the factors causing of stress in software companies. The study was conducted in Bangalore, Karnataka with a sample of 250 women software professionals. The sample selection was done by convenience sampling method. The data was analyzed using descriptive one way analysis of variance and Pearson’s correlation test. Results showed that the women software professionals experienced moderate level of stress and stress dimension. This study reveals that 85 percent of the respondents experience medium level of depression and also suggested the age and experience significantly influence the over all stress and depression experienced by the employees. The study shows that there might be a strong relationship between over all stress and depression.

Stress And Depression Experienced By Women Software Professionals In Bangalore, karnataka, Global Journal of Management and Business Research Volume 11 Issue 6 Version 1.0 May 2011
Review of earlier studies revealed that the majority of these studies, however, have been directed to stress management practices in the different field. With few exceptions, the occupational stress experienced by the employees in the software industry remains unexplored. The present study “A study of occupational stress among the employees in IT industries in Chennai attempts to fill the research gap. The study focuses mainly on the impact of occupational stress on job satisfaction with special reference to in software industries in Chennai. The findings of this study not only throw light on level of stress and coping strategies adopted by the software industries. It may also help scholars and researchers to develop new ideas, techniques and methods for coping with stress and to improve the employees’ well-being.