CHAPTER – III
REVIEW OF LITERATURE

3. INTRODUCTION

The existence of today, which is certainly modern, modified and extremely advanced, is the result of the developments, investigations and explorations made in the past. Tomorrow will see many more changes and modification leading to still much higher stages of advancement which will be impregnated with more subtle and improved knowledge. The survey of the related literature is attempted for the comprehension of the areas and the limits of the research-work. This helps in contemplating the methodology and procedure to be adopted for this survey.

It includes researches made in similar field, various articles, reports, journals, conference proceedings, books, relevant facts published and unpublished material on the similar topic available from various secondary sources. An extensive literature survey is made in this chapter to find the gaps in studies and to plug such gaps.

Here an attempt has been made to give an explicit and brief description of the relevant research works attempted till this time across the globe giving insight into work related occupational stress and self efficacy.

3.1 OCCUPATIONAL STRESS AND SELF-EFFICACY

Brief and Aldag (1981)\(^1\), implied that one of the immediate effects of job-related stressors may be to lower one's level of self-efficacy. Reductions in self-efficacy beliefs, in turn may lead to job-related strains. According to this viewpoint, self-efficacy would be a mediating variable.

Lan and Gill (1984)\(^2\) examined the influence of self-efficacy on stress responses, assessed with both self-report and physiological measures in first phase and extended the examination of the relationship of self-efficacy to physiological and perceived arousal to another motor performance setting and in second phase the effect of a cognitive feedback manipulation on self-efficacy and stress responses was examined. The order effect was also examined in these analyses by comparing Group A, who performed the easy task first and the difficult task second, to Group B, who
performed the two tasks in reverse order. A manipulation check revealed that the easy
task clearly elicited higher self-efficacy than the difficult task. Individuals reported
lower cognitive and somatic anxiety and higher self-confidence, as assessed with the
Competitive State Anxiety Inventory (CSAI-2), and had lower heart rate increases
when performing the easy (high-efficacious) task. After the subjects finished both the
easy and difficult tasks, half of them were given a cognitive feedback manipulation
suggesting that elevated arousal levels were typical responses of good competitors
under stress. Contrary to predictions, the manipulation did not induce higher self-
efficacy and the manipulation group did not differ from the no-manipulation group on
self-reported anxiety scores or heart rates. The findings supported Bandura's
contention that self-efficacy mediates arousal changes and demonstrate the influence
of self-efficacy on multidimensional anxiety measures, but fail to demonstrate any
influence of a cognitive feedback manipulation on self-efficacy or subsequent stress
responses.

Lent and Hacket, (1987)\(^3\) in their experiment found that Career self efficacy
is a moderator variable in work setting with reference to stress and career adjustment.

Jex and Gudanowski (1992)\(^4\) in their study investigated the possible role of
self-efficacy in the stress process by examining relations between stressors (role
ambiguity, situational constraints, and hours), strains (job dissatisfaction, anxiety,
frustration, and turnover intent), and self efficacy beliefs (both individual and
collective). It was found that individual efficacy was related to only two of the four
strains and had no mediating or moderating effects where as Collective efficacy was
strongly related to both stressors and strains. Collective efficacy also moderated the
effect of work hours and mediated the relation between situational constraints and two
of the strain measures. It was concluded that the theory of individual self-efficacy
(Bandura, 1977) may not adequately explain collective efficacy. Future research on
the self-efficacy construct as well as its role in the stress process was suggested.

Bandura (1993)\(^5\) People with high self-efficacy beliefs will visualize
successful scenarios when planning courses of action, increase the difficulty and
specificity of task-related goals, and decrease the amount of stress experienced in
challenging situations.
Mastui and LoOnglateo, (1997) studied self-efficacy as a moderator variable in work setting with reference to different relationships. They concluded that self-efficacy has a moderator influence on stress and strain.

Jex and Bliese (1999) study was built on previous exploratory research (Jex and Gudanowski, 1992) that examined both self-efficacy and collective efficacy as moderators of stressor–strain relations. Based on survey data collected from 2,273 U.S. Army soldiers representing 36 companies, it was found that both self- and collective efficacy moderated the relationship between stressors and strains. Multilevel random coefficient model results revealed that respondents with strong self-efficacy reacted less negatively in terms of psychological and physical strain to long work hours and work overload than did those reporting low levels of efficacy. In addition, respondents with high levels of self-efficacy responded more positively in terms of job satisfaction to tasks with high significance than did those with low efficacy. The results also revealed that group-level collective efficacy moderated the relationship between work overload and job satisfaction and between task significance and organizational commitment.

Jimmieson (2000) studied employee reactions to behavioral control under conditions of stress and the moderating role of self-efficacy in a sample of 100 customer service representatives, a significant three-way interaction among role conflict, work control and self-efficacy (measured at Time 1) was observed on (low) depersonalization (measured at Time 2). The work control reduced the negative effects of work stress on this outcome measure only for employees who perceived high levels of self-efficacy at work. In addition, there was evidence which suggested that self-efficacy moderated the main effects of work control on job satisfaction and somatic health.

Schaubroeck, Lam and Xie (2000) in their cross-cultural study of Chinese and American bank tellers found that job demands, job control, and self-efficacy interacted in the prediction of several strain measures. They also concluded that increasing job control for low efficacy individuals could be harmful. Furthermore, they suggest that organizations should focus on increasing self-efficacy. One method to do this is use of supportive supervisory practices.

Brouwers and Tomic (2000) analyzed the relationships between self-efficacy and burnout in 243 secondary school teachers by using structural equation
model and concluded that self-efficacy has a synchronous effect on personal accomplishment and a longitudinal effect on depersonalization. However, low self-efficacy had a synchronous effect on emotional exhaustion but the direction of the causal relationship between self-efficacy and stress symptomatology was particularly significant as it suggested that cognitive interventions designed to improve self-efficacy mediated the effects of stress.

Goddard, Hoy, and Hoy (2000) stated that organizations or faculties have affective states. Just as individuals react to stress, so do the organizations. Organizations with a robust sense of collective efficacy can tolerate pressure and crises and continue to operate without detrimental consequences. In contrast, organizations with a weak sense of collective efficacy react to stress and crises in dysfunctional ways, which reinforce their basic propensity for failure.

Grau, Salanova and Peiro (2001) analyzed two self-efficacy measures: generalized and professional, as a moderator in the occupational stress process. Based on data collected from 140 workers that used new technologies in their jobs, it was found that self-efficacy moderates the stress-strain relationship in general, in the sense that low levels of self-efficacy related to high levels of occupational stress. The results of hierarchical multiple regression analyses showed that general and professional self-efficacy is complementary as moderators in stress processes, depending on the specific strain studied. However, it was found that professional self-efficacy has more interaction effects. Specifically, they found that individuals with low levels of generalized self-efficacy show more emotional exhaustion when their job autonomy is higher, while those with low levels of professional self-efficacy show greater cynicism when routine and role conflict are high, and have low levels of organizational commitment when the level of role conflict is high i.e. the increase in stressors is not associated with strain for workers with high levels of self-efficacy.

Jex, Bliese and Buzzell (2001) conducted a study to examine whether coping style influenced the impact of self-efficacy on stressor-strain relations. It was hypothesized that high self-efficacy would weaken stressor-strain relations when accompanied by frequent use of active coping and infrequent use of avoidance coping. Data collected from 2,293 members of the U. S. army revealed 3-way interactions among self-efficacy, role clarity, and active coping and among self-efficacy, work overload, and avoidance coping. It was concluded that self-efficacy

50
mitigated the effects of low role clarity on strain only when active coping was high also, strain levels will be lower for participants with high self-efficacy than for participants with lower self-efficacy when work overload was low but avoidance coping was high.

Chemers, Hu, and Garcia (2001) A longitudinal study of 1st-year university student adjustment examined the effects of academic self-efficacy and optimism on students' academic performance, stress, health, and commitment to remain in school. Predictor variables (high school grade-point average, academic self-efficacy, and optimism) and moderator variables (academic expectations and self-perceived coping ability) were measured at the end of the first academic quarter and were related to classroom performance, personal adjustment, stress, and health, measured at the end of the school year. Academic self-efficacy and optimism were strongly related to performance and adjustment, both directly on academic performance and indirectly through expectations and coping perceptions (challenge-threat evaluations) on classroom performance, stress, health, and overall satisfaction and commitment to remain in school. Observed relationships corresponded closely to the hypothesized model. Using a path analytic model, found that the effect of academic self-efficacy on stress was completely mediated by evaluations of demands as threat or challenge.

Brouwers, Ever's and Tomic (2001) in their nonrecursive model with relationships between perceived lack of social support, perceived self-efficacy in eliciting support at the workplace, and the three successive burnout dimensions (emotional exhaustion, depersonalization, and personal accomplishment), in a sample of 277 secondary-school teachers in the Netherlands found that the teachers' perceived lack of support from colleagues and principals had a significant effect on their self-efficacy beliefs in eliciting support from them, while these self-efficacy beliefs were shown to predict their level of burnout. An additional effect of the personal-accomplishment dimension of burnout on perceived self-efficacy was suggested. It was concluded that perceived self-efficacy in eliciting support at the workplace is a usable construct in the prediction of teacher burnout and stress.

Karademas and Kalantzi-Azizi (2003) in this study the effects of the stress process after a stressful encounter, that is an examination period, on university students' psychological health, as well as certain factors that play a significant role in
this relationship were examined. According to the findings, psychological symptoms are predicted by prior health, appraisal variables, and certain coping strategies. Self-efficacy expectations play a significant role in shaping threat, challenge, and stakes. These appraisal categories in turn exert influence upon psychological health, even after controlling for prior psychological health and coping strategies. Self-efficacy serves as the key variable in the appraisal process, as well as a mediator between inner cognitive structures and stress outcomes.

**Chan (2002)** assessed teacher stress, self-efficacy, social support, and psychological distress in a sample of 83 Chinese prospective teachers in Hong Kong. The teachers had reported significantly higher levels of symptoms in somatic problems, followed by anxiety and dysphoria. On exploring the role of personal and social resources in the stress-symptom process, neither self-efficacy nor social support were found to mediate the impact of teacher stress on psychological distress however, social support moderated the influence of stress on distress in addition to the main effects of stress. It was further concluded that there were subtle differences when specific symptoms were considered, however self-efficacy and social support were the protective factors for teacher stress.

**Friedman (2003)** investigated the association between perceived self-efficacy and burnout among teachers where self-efficacy was defined operationally based on a three-dimensional conceptualization: task, relations and organization. Efficacy variables were three classroom efficacy factors: instruction (task), discipline control (task), and consideration (relations), and two organizational efficacy factors: inclusion (task) and influence (relations). Burnout was measured as both a three-dimensional measure comprised of exhaustion, un-accomplishment and depersonalization, and as a single dimension (a composite score including all three dimensions). A sample of 322 Israeli teachers completed a self-report questionnaire. Multiple analyses of variance and multiple regression analysis were used. It was found that perceived sense of self-efficacy was inversely correlated with perceived burnout: the lower the sense of self-efficacy, the higher the perceived burnout. The salience of organizational influence efficacy, and consideration efficacy (both are relations efficacies) were noted as important variables in predicting exhaustion, un-accomplishment and depersonalization. Task efficacies (e.g., instruction, discipline control, and inclusion) had no significant or meaningful weight in statistically
predicting burnout beyond the relations efficacies.

Hanif (2004)\textsuperscript{19} conducted research to identify levels and sources of teacher stress, relationship of teacher stress with teachers’ job performance and self-efficacy of women school teachers, and to find out the moderator role of self efficacy in teacher stress and job performance relationship. The research was carried with two independent samples i.e., teachers and students. Sample I was comprised of 330 women secondary school teachers, Sample II was 990 students, randomly selected from the classes of sample I. Results showed that teachers displayed moderate levels of stress, and highest scores were displayed on work related stressors. The significant negative correlation was found between teacher stress and job performance and teacher stress and teacher efficacy. The moderated multiple regression analysis revealed that high self-efficacy could play a moderator role in the relationship of teacher stress and job performance.

Benight and Bandura (2004)\textsuperscript{20} integrated findings from various studies regarding the role of self-efficacy in retrieval from various types of traumatic experiences (terrorist attacks, natural disasters, military combat, technological catastrophes, criminal and sexual assaults). Analysis found perceived self-efficacy to be a mediator of post-traumatic retrieval. The contribution of perceived coping self-efficacy as the sole mediator for post traumatic retrieval indicated the effective functioning of an individual’s belief in his or her capabilities to exercise control over traumatic and stressful encounters.

Adeyemo and Ogunyemi (2005)\textsuperscript{21} studied the interactive effects of emotional intelligence and self-efficacy on occupational stress among academic staff of Nigerian University. The results indicated that the two independent variables, when taken together, were effective in predicting occupational stress. Each of the variables contributed significantly to the prediction of occupational stress with self-efficacy making higher contribution to the prediction of occupational stress. On the basis of this finding, it is suggested that emotional intelligence programming and self-efficacy intervention techniques will benefit teachers immensely in coping with stress.

Zazacova, Lynch and Espenshade (2005)\textsuperscript{22} in their paper investigated the joint effects of academic self-efficacy and stress on the academic performance of 107 nontraditional, largely immigrant and minority, college freshmen at a large urban commuter institution. A survey instrument to measure the level of academic self-
efficacy and perceived stress associated with 27 college-related tasks was developed. Both scales had high reliability, and moderately negatively correlated. The structural equation models were used to assess the relative importance of stress and self-efficacy in predicting three academic performance outcomes: first-year college GPA, the number of accumulated credits, and college retention after the first year. The results suggested that academic self-efficacy is a more robust and consistent predictor than stress of academic success.

Hoy and Spero (2005)\(^{23}\) found that teacher efficacy increased during the teacher preparation program, and continued to increase during student teaching. However, once student teachers became teachers, efficacy began to decrease. The decrease in efficacy was believed to be attributable to the amount of support received during the first year of teaching.

Fives, Hamman, and Olivarez (2005)\(^{24}\) administered four instruments and a background information form to 49 student teachers. The study had sought to determine if there were relationships between efficacy beliefs, amount of support and levels of burnout; if these variables change during student teaching; and whether differences existed among these variables depending on levels of support. Efficacy and burnout were found to be negatively correlated and the relationship intensified over time. Thus, as student teachers felt more efficacious, they were less likely to experience burnout.

Çelik Orucu (2005)\(^{25}\) in his study investigated the effects of Stress Management Training Program on perceived stress, self-efficacy and coping styles of preparatory students in Middle East Technical University. The results of analysis of variance showed that there is a gender difference between males and females. Females scored higher in perceived stress, socially related life events and emotion-focused coping. The results of Wilcoxon test showed that there was a significant reduction between pre and post test scores of experimental group in perceived stress scores and the frequency of socially related life events.

Thomas, Melba and Paul (2006)\(^{26}\) studied the importance of self-efficacy in the moderating effects of social support on stressor and strain relationship on ninety-six US military police soldiers. The results showed that organizational constraints, supervisor support and self-efficacy had statistically significant interactions in the prediction of job satisfaction and psychological well-being. Organizational
constraints, co-worker support and self-efficacy had a significant interaction in the predicted of psychological well-being. Social support buffered the stressor and strain relationship when self-efficacy was high and reverse buffered the relationship when self-efficacy was low. These results indicate that interventions aimed at reducing strains by increasing social support should consider an individual's self-efficacy.

Cormick, Ayres and Beechey (2006) investigated relationships among teachers' occupational stress, coping, teacher self-efficacy and relevant teachers' perceptions of curriculum changes in a major educational reform. They found that – Stress attributions to personal and organizational domains were associated with the teachers' perceived stress from implementation of the new curriculum. Furthermore, results suggested that these teachers may have coped with stress associated with the changes using palliative strategies rather than direct problem solving. Teachers' greater understanding of what the curriculum changes entailed was associated with lower teacher self-efficacy.

Hughes, Robinson-Whelen, Taylor and John (2006) this study provided an evaluation of the efficacy of a stress self-management intervention, designed specifically for women with physical disabilities. The results were found to be consistent with a model in which the stress management intervention enhances self-efficacy and social connectedness, which leads to reduced stress, which then contributes to improved mental health.

Betroret and Domenech (2006) studied the relationships among teacher occupational stressors, self-efficacy, coping resources, and burnout in a sample of 247 Spanish secondary school teachers. The main aim was to examine the effect of teaching stressors on teacher burnout and the role of self-efficacy and school coping resources as mediator or moderator variables in the stressor-burnout relationship. It was reported that when the teachers, pedagogical practice in the school setting was being interfered with or hindered by a set of factors from the multiple contexts involved in students' learning, problems of burnout occurred. In addition, results revealed that teachers with a high level of self-efficacy and more coping resources reported suffering less stress and burnout than teachers with a low level of self-efficacy and fewer coping resources, and vice versa.

Ling, Quin and Paul (2007) in a study investigated the direct and moderating effect of general self-efficacy on the relationship between stressors and
well-being in Chinese societies. Survey data were collected from 386 and 306 employees in Hong Kong and Beijing, respectively. The results consistently showed that general self-efficacy was positively related to mental well-being and physical well-being. A series of hierarchical regressions revealed that general self-efficacy moderated the relationship between stressors and mental well-being, yet did not moderate the relationship between stressors and physical well-being. Results verified that general self-efficacy plays an important role in employees' well-being in the collectivist society of China.

Skaalvik, Einar and Skaalvik, Sidsel (2007)\(^1\) in their study, the authors developed and factor analyzed the Norwegian Teacher Self-Efficacy Scale. They also examined relations among teacher self-efficacy, perceived collective teacher efficacy, external control (teachers' general beliefs about limitations to what can be achieved through education), strain factors, and teacher burnout. Participants were 244 elementary and middle school teachers. The analysis supported the conceptualization of teacher self-efficacy as a multidimensional construct. They found strong support for 6 separate but correlated dimensions of teacher self-efficacy, which were included in the following subscales: Instruction, Adapting Education to Individual Students' Needs, Motivating Students, Keeping Discipline, Cooperating with Colleagues and Parents, and Coping with Changes and Challenges. They also found support for a strong 2nd-order self-efficacy factor underlying the 6 dimensions. Teacher self-efficacy was conceptually distinguished from perceived collective teacher efficacy and external control. Teacher self-efficacy was strongly related to collective teacher efficacy and teacher burnout.

Arora (2007)\(^2\) indicated that when individual compromise on self-esteem, the body goes out of balance. Therefore, it may be computed that one leading cause behind stress or emotional exhaustion can be low efficacy or self-belief regarding being productive at work or successfully accomplishing organizational tasks. It was therefore inferred that perceived self-efficacy accredits to a wide and constant sense of personal competence to deal effectively with a variety of stressful situations. Individuals with a low sense of self-efficacy tend to have low self-esteem and have pessimistic thoughts about their accomplishments and personal development than self-efficacious counterparts.

Shambaugh (2008)\(^3\) This study examined the relationships between teacher
self-efficacy, collective teacher efficacy, automatic thoughts, Balanced States of Mind (BSOM) model, and levels of stress in regular education elementary school teachers where from a sample of 66 teachers from rural and urban south central Pennsylvania school districts were taken. A ratio of positive to positive-plus-negative automatic thoughts from the Balanced States of Mind model (BSOM) became the fifth variable. This study presumed that teachers have more stress today following the onset of No Child Left Behind legislation in 2001. Hence, this study hypothesized that a positive relationship exists between teacher self-efficacy, collective teacher efficacy, and the BSOM ratio, while an inverse relationship exists between negative automatic thoughts and teacher stress. Data consisted of the total and subscale scores from the questionnaires and the BSOM ratio. A Pearson product-moment correlation coefficient identified the relationships between the continuous variables; a point-biserial correlation identified the relationships with the BSOM ratio. Additional analysis using a MANOVA and independent samples t-test examined mean differences between rural and urban teachers on the variables. Results indicated that teacher self-efficacy correlated positively with collective teacher efficacy and the BSOM ratio, but that collective teacher efficacy did not relate significantly with the BSOM ratio. However, these variables correlated inversely to negative automatic thoughts and teacher stress. Teacher stress related significantly with the frequency of negative automatic thoughts. A MANOVA and the independent t test revealed that no significant differences existed between rural versus urban teachers on any of these variables using school context as the dependent variable. These results suggest that by enhancing teachers' efficacy beliefs and educating them to the benefits of regulating their positive and negative thinking, they become a crucial contributor to student achievement. In addition, they will be better equipped to manage their stress. Finally, a discussion of the summary of the results, limitations, and recommendations for future research conclude this study.

Dickerson (2008) in his study determined, special education and general education student teachers differed significantly in stress and self efficacy during and following the student teaching semester in top ten teacher producing universities in Texas and the sample was drawn from the four institutions which agreed to participate. Data analysis concluded with following research findings.1. General and special education student teachers were significantly more stressed and demonstrated
higher levels of self-efficacy from pretest to posttest. 2. Stress was most often caused by poorly motivated students and by students not trying to the best of their abilities. 3. Self-efficacy was highest for the Disciplinary Self-Efficacy Subscale. 4. Special education student teachers did not differ significantly in either stress or self-efficacy from pretest to posttest. 5. General education student teachers differed significantly in both stress and self-efficacy from pretest to posttest. The results of this study may provide a catalyst for further research examining the interplay between stress and self-efficacy, specifically for special education student teachers, and ultimately produce additional findings that may inform student teacher curricula. Additionally, the results informed teacher preparation programs about methods to help mediate stress in the early stages of stress onset.

Alarcon, Eschleman and Bowling (2009) examined various personality dimensions—locus of control, self-efficacy, self-esteem, optimism, negative and positive affectivity, extraversion, emotional stability, proactive personality and psychological hardiness, across the three dimensions of Maslach burnout inventory (emotional exhaustion, depersonalization and personal accomplishment). Analysis of the data yielded significant relationship of the personality dimensions with burnout. Hence, it was suggested that given the significance of occupational stress and burnout, personality variables must be taken into account as significant predictors of job stress.

Schwarzer and Hallum (2008) examined the relationships between self-efficacy, job stress, and burnout, focusing on mediation (self-efficacy, job stress, burnout). In study I, with two samples of teachers (N = 1,203), examined this putative mechanism cross-sectionally and found such an effect, in particular for younger teachers and those with low general self-efficacy. Study II, with 458 teachers, replicated the results longitudinally over a period of one year by employing structural equation models. In a cross-lagged panel design, low self-efficacy preceded burnout. The findings showed that there was a negative relation between self-efficacy of teaching and job stress as a result of teaching.

John, Ayer and Paul (2009) studied teachers' self-efficacy and occupational stress in the context of a large-scale curriculum reform in New South Wales, Australia. The study aimed to follow up and replicate a study carried out earlier. A theoretical framework, primarily based on social cognitive theory 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. Findings: 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.

Klassen, Robert M; Foster, Rosemary Y; Rajani, Sukaina; Bowman, Carley (2009)\textsuperscript{38} This article presented mixed methods of examination of teachers' job beliefs in the Yukon Territory in northern Canada. It was found that teachers' self-and collective efficacy and workload stress were lower for Yukon teachers, but levels of overall stress and satisfaction were similar across settings. It was further found that job stress and job satisfaction were influenced by physical and human geography, level of connection with the community, and by the community's cultural transitions i.e. the teachers' working lives is influenced by cultural and community factors.

Zavaleta (2009)\textsuperscript{39} in his study explored the relationship between Head Start teacher demographics, teacher occupational stress, and teacher self efficacy in classroom behavior management. The results indicated a statistically significant negative relationship between teacher age and teacher reported self efficacy in classroom behavior management. Results also indicated a negative relationship between teachers with children and their reported self efficacy in classroom behavior management. Lastly, results indicate a relationship between reported teacher coping ability and reported self efficacy in future classroom behavior management.

Van Dijk (2009)\textsuperscript{40} in his study focused on the impact of self efficacy and risk perception on employee job stress in a period of drastic change that is economic recession. The results of the study stated that both risk perception and self efficacy appear to be positively related to job stress. The results confirmed main effect of self efficacy on job stress, and a mediating effect of risk perception with a reverse causal effect. These results lead to a conclusion that during a recession, self efficacy of change negatively relates to job stress, and supports the general notion that self efficacy will effect job stress. Because of the confirmation of the reversed causality, a
mediating effect of risk perception couldn’t be confirmed. However, it was made clear that there is a relation between job stress and risk perception.

The **TALIS summary report**\(^{41}\) for Ireland (2009) documented levels of job satisfaction among Irish teachers in comparison with other countries. The survey focuses on the learning environments and teaching conditions in second level schools. The authors found that average job satisfaction in Ireland was somewhat lower in Ireland than in other comparison countries except Poland. Shiel and colleagues found that, across all TALIS countries, teachers’ job satisfaction was positively related to classroom disciplinary climate, teacher student relations and self-efficacy.

Salami-Samuel (2010)\(^{42}\) in his study investigated the relationship between occupational stress and psychological well-being and the moderator roles of trait EI, self-efficacy, coping strategies, negative affectivity and social support in the relationship. Self-efficacy was found from this study to be a significant predictor of psychological well-being and moderator of the occupational stress-well-being nexus. These findings were in agreement with the work of previous researchers who find similar results (Jex and Bliese, 1999)\(^{31}\). However, these results contradicted that of Jex and Gudanowski (1992)\(^{30}\) who found that self-efficacy did not moderate the stress well-being link. The findings were supported with an explanation that the teachers who experience occupational stress and also believed that they have the capability to cope effectively with stress, utilized available resources at their disposal to reduce it.

Klassen (2010)\(^{43}\) This study examined how teachers’ collective efficacy (TCE), job stress, and the cultural dimension of collectivism are associated with job satisfaction for 500 teachers from Canada, Korea (South Korea or Republic of Korea), and the United States. Multi-group path analysis revealed that TCE predicted job satisfaction across settings. Job stress was negatively related to job satisfaction for North American teachers (i.e., teachers from Canada and the United States), whereas the cultural dimension of collectivism was significantly related to job satisfaction for the Korean, but not for North American teachers. For motivation theorists, the results from this study provided evidence that cultural context influences how motivation beliefs are understood and expressed in diverse settings. For educators, this study underlined the importance of collective motivation as a source of individual job satisfaction.
Klassen and Chiu (2010)' The authors of this study had sought to examine the relationships among teachers’ years of experience, teacher characteristics (gender and teaching level), three domains of self-efficacy (instructional strategies, classroom management, and student engagement), two types of job stress (workload and classroom stress), and job satisfaction with a sample of 1,430 practicing teachers using factor analysis, item response modeling, systems of equations, and a structural equation model. The results revealed that: teachers’ years of experience have nonlinear relationships with all three self-efficacy factors, increasing from early career to mid-career and then falling afterwards. Female teachers had greater workload stress, greater classroom stress from student behaviors, and lower classroom management self-efficacy. Teachers with greater workload stress had greater classroom management self-efficacy, whereas teachers with greater classroom stress had lower self-efficacy and lower job satisfaction. Those teaching young children (in elementary grades and kindergarten) had higher levels of self-efficacy for classroom management and student engagement. Lastly, teachers with greater classroom management self-efficacy or greater instructional strategies self-efficacy had greater job satisfaction.

Caldwell, Karen; Harrison, Mandy; Adams, Marianne; Quin, Rebecca H; Greeson, Jeffrey (2010)' in their study examined whether mindfulness increased through participation in movement-based courses and whether changes in self-regulatory self-efficacy, mood, and perceived stress mediated the relationship between increased mindfulness and better sleep. Participants: 166 college students enrolled in the 2007-2008 academic year in 15 week classes in Pilates, Taiji quan, or GYROKINESIS. Methods: At beginning, middle, and end of the semester, participants completed measures of mindfulness, self-regulatory self-efficacy, mood, perceived stress, and sleep quality. The results showed that the total mindfulness scores and mindfulness subscales increased overall. Greater changes in mindfulness were directly related to better sleep quality at the end of the semester after adjusting for sleep disturbance at the beginning. Tiredness, Negative Arousal, Relaxation, and Perceived Stress mediated the effect of increased mindfulness on improved sleep. It was concluded that movement-based courses can increase mindfulness. Increased mindfulness accounts for changes in mood and perceived stress, which explain, in part, improved sleep quality.
Nauert (2010)\textsuperscript{46} in his article referred to the research at the University of Granada, where the researchers had tested the training program on 14 patients diagnosed with paranoid schizophrenia or schizoaffective disorder. The patients were evaluated successively three and six months after implementation of the training program. The results were compared to those obtained by a control group that did not receive any training.

The program had included 15 training sessions: firstly, patients were trained on general self-efficacy, and secondly on specific self-efficacy to acquire skills to deal with stress. The second training period included sessions to learn to deal with interpersonal difficulties (communication and social skills) and family conflicts, improve discipline with their biomedical/psychological treatments, cope with their symptoms and hallucinations, avoid negative thinking, and prevent and deal with daily stress. It was found that after participation in the training program, patients’ perception of their own specific self-efficacy increased – both their expectations regarding the results after the training, and its efficiency – to deal with stress. Additionally, a significant reduction in negative, affective, psychotic symptoms, disorientation and confusion was observed. Conversely, patients from the control group did not report any change in their perceived self-efficacy to deal with stress and their psychotic symptoms. Thus, they obtained lower scores than the intervention group in their levels of wellness, areas of change and general satisfaction.

Kocoglu (2011)\textsuperscript{47} This study investigated the relationship between emotional quotient and teacher efficacy among 90 English language pre-service teachers from a university in Turkey. Data sources included Tschannen-Moran and Woolfolk-Hoy’s Teachers’ Sense of Efficacy Scale and Reuven Bar-On’s Emotional Quotient Inventory. The findings indicated that Turkish EFL pre-service teachers felt more efficacious in managing the class rather than in making the class enjoyable. The findings also showed that the pre-service teachers scored highest in the stress tolerance and assertiveness competencies, but lowest in independence and self-regard in terms of emotional Quotient (EQ). Findings revealed a significant, positive relationship between EQ and pre-service teachers' efficacy. The greatest correlation is between the interpersonal EQ subscale and the engagement efficacy subscale. On the other hand, both adaptability EQ scale and stress management EQ scale scores were not significantly correlated with the three efficacy subscales.
Tahir (2011) explored the stress level in teaching job at college level in Pakistan. There were two main questions discussed in this study, is there any stress in teaching job if yes what are those and second how stress effect the performance of cadres of college teachers in public and private sectors in Pakistan. Stress in teaching varies to the ranks hold by the teachers and environment where they are working. The study examined all the factors causing the stress for teachers working in different levels and the performance of teachers in terms of output and the satisfaction level of teachers towards their jobs. A statistical treatment was given to the data gathered from 106 college teachers of public and private sectors selected through stratified sampling technique. The test of regression analysis, t-test, one-way ANOVA and two-way ANOVA were applied. It was found that intrinsic and extrinsic variables have positive effects on academic performance of college teachers. As a result of the study, no statistical difference was noted in academic performance of teachers of boys and girls colleges whereas significant difference was found between academic performance teachers of public and private colleges. There was no statistical significance found at the p>0.05 level of academic performance for different cadres of college teachers and also for their teaching experience. However, there was statistical significance noted at the p<0.05 level in academic performance for the public and private colleges. The interaction effect between cadres of college teachers and their experience was not statistical significant and the main effect for these two factors did not reach the statistical significance.

Saleem and Shah (2011) in their research paper entitled Self-efficacy as a stress-coping mechanism among Teachers: a critical review, encapsulated the major theoretical developments in the area of teacher stress and the concept of self-efficacy as a tool for coping with stress. In this review it was found that literature within the sphere of teachers’ self-efficacy and its relationship with stress-coping is still in its infancy, lacking good empirical support in terms of sound methodologies and measurement tools. This paper concluded with implications for future research in relation to the limitations of the existing studies.

Klassen (2011) used a cross-sectional survey design to examine the impact of teachers' self-efficacy, job stress, and contextual factors on occupational commitment and quitting intention of 434 practicing teachers and 379 pre-service teachers. Results revealed that similar factors—self-efficacy, job stress, and teaching
context—influence the occupational commitment and quitting intention of practicing and pre-service teachers. Pre-service teachers displayed higher levels of commitment and less overall stress than practicing teachers.

Vaezi and Fallah (2011)\textsuperscript{51} in their study investigated the relationship between self- efficacy and stress among 108 EFL teachers in Iran. The participants were administered self-efficacy and stress questionnaires. Pearson Product-Moment Correlation and Multiple Regression analyses were used. The results indicated significant negative correlation between self efficacy and stress. Also it was found that both dimensions of self-efficacy, namely, classroom and organizational efficacies, either collectively or separately, could predict stress among EFL teachers. Their findings resulted in reporting that enhancing teacher self efficacy has positive impact on diminishing their stress.

Ruble, Usher, Ellen, John and McGrew (2011)\textsuperscript{52} explored the relationship between three factors hypothesized to be related to self-efficacy and the efficacy beliefs reported by teachers of students with autism. The findings of the study suggested that burnout is most closely related to what happens on the ground in the classroom and by teachers’ beliefs in their ability to handle it, but burnout did not appear to have a direct relationship to teachers’ perceptions of their ability to gain support from administrators or others. Although support from others may buffer the degree of stress or burnout experienced, the key stressor is what occurs within the classroom. The findings suggested an indirect effect of support on burnout.

Page, M. (2011)\textsuperscript{53} this study investigated the impact of self-efficacy on organizational stress. The Teacher Self-Efficacy scale and Occupational Stress Inventory was administered to investigate the impact of self-efficacy on role stress and role ambiguity in the occupation in high school teachers. The outcomes of the study did not produce a significant relationship between teacher self-efficacy and role stress and role ambiguity. The study showed a need to create a more individualized approach to training of teachers to sustain the level of teaching and to retain teachers in the classroom.

Mohan (2012)\textsuperscript{54} in his study indicated an interesting interaction between the person and situation variables on the work outcome of job well-being of teachers in international schools. It was revealed that internal characteristics of an individual tend to dictate how they will react to stressful events (Fimian, 1982), stressful events, and
work locus of control is one such important characteristic. This information can be of importance to the applied behavioral scientist in order to develop some strategies to elevate the job well-being of teachers using "self" as the tool for empowering teachers.

Muftil, Zaheer, Parvaiz, Khan (2012)\textsuperscript{55} in their study stated stressors causing stress in the faculty members of public and private sector universities of Khyber Paktunkhwa, Pakistan. Stressors identified were; Work Load, Reward, Student/faculty interaction, Collegial/Social interaction, Self Efficacy, Procedural Justice, Distributive Justice, Leadership Style and Organizational Politics.

Collie, Shapka and Perry (2012)\textsuperscript{56} The aims of this study were to investigate whether and how teachers' perceptions of social-emotional learning and climate in their schools influenced three outcome variables -- teachers' sense of stress, teaching efficacy, and job satisfaction -- and to examine the interrelationships among the three outcome variables. Along with sense of job satisfaction and teaching efficacy, two types of stress (workload and student behavior stress) were examined. The sample included 664 elementary and secondary school teachers from British Columbia and Ontario, Canada. Participants completed an online questionnaire about the teacher outcomes, perceived school climate, and beliefs about social-emotional learning (SEL). Structural equation modeling was used to examine an explanatory model of the variables. Of the 2 SEL beliefs examined, teachers' comfort in implementing SEL had the most powerful impact. Of the 4 school climate factors examined, teachers' perceptions of students' motivation and behavior had the most powerful impact. Both of these variables significantly predicted sense of stress, teaching efficacy, and job satisfaction among the participants. Among the outcome variables, perceived stress related to students' behavior was negatively associated with sense of teaching efficacy. In addition, perceived stress related to workload and the sense of teaching efficacy were found to be directly related to sense of job satisfaction.

Helms-Lorenz, Slof, Vermue, Canrinus, Esther T. (2012)\textsuperscript{57} The aim of this study was to gain more insight into two key psychological processes involved in the work of a qualified beginning teacher (BT), namely perceived stress and self-efficacy. This unfolding is necessary to find a path of influence to lead the way to meaningful support interventions. Support in the form of induction arrangements is hypothesised to decrease perceived stress and to increase self-efficacy and, thus, decrease stress.
outcomes. To test the hypotheses 30 BTs and their school-based educators, working in 13 different schools, were surveyed. The analyses revealed that stress causes and stress outcomes are indeed interrelated and that self-efficacy affects this relationship in a mediating way. However, besides decreasing a beginning teachers' perceived lack of learning opportunities, no other influences of induction arrangements were obtained.

Sawatzky, Ratner, Richardson, Washburn, Sudmant, Mirwalde (2012) in their study examined the extent to which the relationship between adverse stress and depression was mediated by university students' perceived ability to manage their stress. The students were sampled randomly at a Canadian university in 2006 (n = 2,147) and 2008 (n = 2,292). Data about students' stress, depression, stress management, self-efficacy, and their demographics were obtained via the online National College Health Assessment survey. It was found that greater stress management self-efficacy was associated with lower depression scores for students whose stress impeded their academic performance, irrespective of their gender and age (total depression = 41%). The relationship between stress and depression was mediated partially by stress management self-efficacy (37% to 55% mediation, depending on the severity of stress).

Pisanti (2012) the main purpose of the study was to gain more insight in the relationships between occupational stressors, job resources (job control and social support), occupational coping self-efficacy, and job-related and general psychological distress and well being in nurses. The findings of the study supported the notion that it is important to measure self-efficacy related to the specific tasks employees have to deal with in their work context in order to gain insight into employee well-being and distress. Individuals with higher levels of Occupational Coping Self-Efficacy (OCSE) are more likely to interpret occupational situations as challenging tasks. As a result, they may be more likely to invest more effort to effectively deal with a less favourable work situation, thereby reducing the potential for development of negative affective outcomes (Bandura, 1997).

Ethnie (2012) in his study examined what factors (self-efficacy, self-esteem and job stress) influenced job satisfaction among teachers. The results showed that, respondents reported high levels of self-esteem, high levels of job satisfaction, moderate levels of self-efficacy and moderate perceived stress levels. Correlations
showed significant relationships between variables. Multiple regression suggested that the block of predictor variable explained 17% of variance in job satisfaction indicating perceived stress as the best predictor. Findings from this study indicated the importance of influencing job satisfaction which ultimately affects study learning in addition to outlining the implications of teacher stress.

Adeyemo and Bola Ogunyemi (2012) in their study explained the interactive and relative effects of emotional intelligence and self-efficacy on occupational stress of University academic staff. The results indicated that the two independent variables, when taken together, were effective in predicting occupational stress. Each of the variables contributed significantly to the prediction of occupational stress with self-efficacy making higher contribution to the prediction of occupational stress. On the basis of this finding, it was suggested that emotional intelligence programming and self-efficacy intervention techniques will benefit teachers immensely in coping with stress.

Bradley (2012) this study investigated the constructs of job satisfaction, self-efficacy, burnout and path of certification in relation to attrition (intent to leave) of special education teachers. A correlational, predictive design assessed the five facets of the abridged Job Descriptive Index and the abridged Job in General survey, the factors of the Teacher Self-Efficacy Scale, the categorizations of the Maslach Burnout Inventory - Educator Survey, and path of certification. Correlational analyses were used to uncover relationships among the four predictor variables and attrition (intent to leave) the field of special education. Regression analysis was conducted to determine how well each of the constructs predicted attrition and to uncover the extent to which each element of the constructs supported the special education teachers' attrition (intent to leave) at the end of the 2009-2010 school year. In general, there were low to moderate correlations across the spectrum of the variables to support any intent to leave the field of teaching. Specifically, the facets of opportunities for promotion, people at work and supervision were identified as possible reasons why teachers may leave the field of special education. Self-Efficacy factors were shown to support that teachers would not have intentions of leaving the field of special education. Burnout categorizations of depersonalization and personal accomplishment were identified as possible reasons why teachers many leave the field of special education. Overall, the results supported teachers being content with their
current teaching positions and have they no intention of leaving the field of special education at the end of the school year.

Awanis (2012) The aim of this research was to examine issues confronting prison officers at work: i) the level of wellness, occupational stress, personality, self efficacy and perceived fairness of prison officers, ii) the difference in wellness, personality and occupational stress variables according to prison officers’ gender, age and tenure, iii) the relationship between wellness, personality, occupational stress, perceived fairness and self efficacy variables, iv) self efficacy and perceived fairness as possible mediators and lastly, v) the model fit of prison officers’ wellness. Respondents were 417 prison officers from eight prison locations. Multistage sampling technique consisting of stratified random sampling and simple random sampling was used. Findings of the study indicated that there were significant correlations between variables in the study. There was a significant difference in wellness according to prison officers’ tenure group. There was also a significant difference in occupational stress according to prison officers’ gender. The study also revealed significant differences in prison officers’ personality domains i.e. neuroticism, extraversion, openness, agreeableness and conscientiousness, according to their gender. Self efficacy and perceived fairness were revealed as mediators. The finding also showed that the model fitted the data after modification. In conclusion, this study had contributed and further enhanced the knowledge about prison officers’ wellness in relation to their personality, occupational stress, self efficacy and perceived fairness specifically in areas pertaining to organizational behavior, and prison management studies in Malaysia.

A paper published on S-paper.com (2012) illustrated the current situation of teachers’ sense of teaching efficacy, occupational stress, and occupational burnout after new Curricular reformation in the middle school in the south of Fujian province. The conclusions of the research revealed that, when the high occupational stress increases the occupational burnout also rises, and when the high occupational stress increases the sense of teaching efficacy decreases, but when the sense of teaching efficacy increases the occupational burnout decreases moreover the sense of teaching efficacy and occupational stress could forecast occupational burnout. Sense of teaching efficacy might have an effect on adjusting the relationship between occupational stress and occupational burnout.
Reilly (2012)\(^{65}\) the main aim of the study was to examine what factors (self efficacy, self esteem and job stress) influence job satisfaction among teachers. The results of the study showed that there is a positive relation between self efficacy and stress and teachers who possess high levels of self efficacy also reported high levels of stress which could be reduced by realistic goals and self assessment.

Perrewe and Pamela\(^{66}\) A country-by-country summary of the relationships for role conflict, role ambiguity, burnout, and self-efficacy was provided. The findings from this research suggested that environmental role stressors are associated with lower perceived self-efficacy, which in turn has a negative effect on burnout. The findings pointed towards the important role of self-efficacy in the stressor-strain relationships.

From the above studies we can conclude that there is definitely a link between Occupational stress and self efficacy and there is impact of self efficacy on the individual’s attitude, belief’s and perception which in turn suggest that self-efficacy acts as a moderator of occupational stress which becomes the basis of further research.

3.2 RESEARCH METHODOLOGY

3.2.1 Introduction

Stress has been introduced as a creatively ambiguous term that brings detrimental consequences to both individuals as well as the organization. Stress, if left unchecked may result in burnout that is the stage where person develops feelings of exhaustion, lack of accomplishment and depression. Job stress at higher education is now becoming a crucial issue for the faculty members and administrators.

3.2.2 Defining the Research Problem

The present study therefore, endeavored to find aforementioned relationships. The title of this study reads as under:

A Study of Occupational Stress of Academic Faculties in relation to their Self efficacy.
3.2.3 Scope of the Study

1. The present study has been conducted in selected cities of Punjab and Chandigarh.

2. The Research has been carried on academic faculty members only.

3.2.4 Significance of Study

The research has contributed to the literature in three ways.

- The results of this research would be relevant to academic faculty members nationwide, giving them criteria for the management of their occupational stress.

- This study has contributed to the understanding of occupational stress and development of self efficacy.

- The study would help policy makers in their attempts to develop and create an environment free from any stress that is conducive and congenial for research, training and development of teachers, which ensures commitment towards institution.

3.2.5 Formulation of Framework

To determine the domain of construct, the conceptual framework was decided for the research study in which the demographic variables like age, income, length of service, teaching experience, working hours of day and week, gender, education, organization, college, department, position, location of work, marital status, extra duties, health disorder and co-curricular activities were decided as the factors affecting the occupational stress along with the self efficacy and job duties parameters as job task demands along with their parameters. The study includes most of the items based on theoretical conceptualizations offered in the literature and prior work done on this field.
Demographic Variables

Age, Gender, Education, Department, Departmental Position, Organization and College Type, Location of Work, Monthly Income, Length of Service

Teaching Experience, Working Hours, Extra Duties, Health Disorder, Leisure Activities, Physical Problem, Hobbies

Occupational Stress

SELF EFFICACY
- Teaching Methodology
- Motivation
- Discipline
- Parent Interaction
- Team Work
- Job Adjustments

JOB TASK DEMANDS
- Negativity at Work
- Job Control
- Harassment & Discrimination
- Skill Utilization
- Social Support
- Physical Problem
- Job Demand
- Promotion
- Security

Figure 3.1: Theoretical Framework of Study

Source: Self Generated for Study

3.2.6 Objectives of Study

The objectives proposed of the study are:

1. To analyze the relationship between the occupational stress and self efficacy of the faculty members.

2. To analyze the effect of respondents demographic profile over its occupational stress and self efficacy.
3. To analyze the levels of the occupational stress and self efficacy.

4. To evaluate the impact of the self efficacy over the occupational stress of the faculty members.

3.2.7 Hypothesis Formulation

The research problem in question constitutes the basis for establishing the following hypotheses to be tested for this quantitative study:

Objective 1

To analyze the relationship between the occupational stress and self efficacy of the faculty member’s

H₀₁: There exists no significant relationship between Occupational Stress and Self Efficacy

H₀₁-₁: There exists no significant relationship between the Role Overload dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₂: There exists no significant relationship between the Role Ambiguity dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₃: There exists no significant relationship between the Role Conflict dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₄: There exists no significant relationship between the Unreasonable group & Political pressure dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₅: There exists no significant relationship between the Responsibility for person dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₆: There exists no significant relationship between the Under Participation dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₇: There exists no significant relationship between the Powerfulness dimension of Occupational Stress and Self Efficacy and its dimensions

H₀₁-₈: There exists no significant relationship between the Poor Peer Relation dimension of Occupational Stress and Self Efficacy and its dimensions
H01.9: There exists no significant relationship between the *Intrinsic Impoverishment* dimension of Occupational Stress and Self Efficacy and its dimensions

H01.10: There exists no significant relationship between the *Low status* dimension of Occupational Stress and Self Efficacy and its dimensions

H01.11: There exists no significant relationship between the *Strenuous working condition* dimension of Occupational Stress and Self Efficacy and its dimensions

H01.12: There exists no significant relationship between the *Unprofitability* dimension of Occupational Stress and Self Efficacy and its dimensions

**Objective 2**

*To analyze the effect of respondents demographic profile over its occupational stress and self efficacy*

H02: **There was no significant difference in the occupational stress and self efficacy of the respondents categorized on the basis of their Demographic profile**

H02.1: There was no significant difference in the occupational stress of the respondents categorized on the basis of their gender

H02.2: There was no significant difference in the occupational stress of the respondents categorized on the basis of their marital status

H02.3: There was no significant difference in the occupational stress of the respondents categorized on the basis of their education

H02.4: There was no significant difference in the occupational stress of the respondents categorized on the basis of their organization type

H02.5: There was no significant difference in the occupational stress of the respondents categorized on the basis of their college type

H02.6: There was no significant difference in the occupational stress of the respondents categorized on the basis of their department

H02.7: There was no significant difference in the occupational stress of the respondents categorized on the basis of their departmental position
There was no significant difference in the occupational stress of the respondents categorized on the basis of their location of work.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their response for extra duties.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their health disorder.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their leisure activity.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their physical activity.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their hobbies.

There was no significant difference in the occupational stress of the respondents categorized on the basis of their Job Status.

There was no significant impact of the age of the respondents on their occupational stress.

There was no significant impact of the monthly income of the respondents on their occupational stress.

There was no significant impact of the length of service of the respondents on their occupational stress.

There was no significant impact of the teaching experience of the respondents on their occupational stress.

There was no significant impact of the working hours of the respondents on their occupational stress.

There was no significant difference in the self efficacy of the respondents categorized on the basis of their gender.

There was no significant difference in the self efficacy of the respondents categorized on the basis of their marital status.

There was no significant difference in the self efficacy of the respondents categorized on the basis of their education.
H02-23: There was no significant difference in the self efficacy of the respondents categorized on the basis of their organization type
H02-24: There was no significant difference in the self efficacy of the respondents categorized on the basis of their college type
H02-25: There was no significant difference in the self efficacy of the respondents categorized on the basis of their department
H02-26: There was no significant difference in the self efficacy of the respondents categorized on the basis of their departmental position
H02-27: There was no significant difference in the self efficacy of the respondents categorized on the basis of their Job Status
H02-28: There was no significant difference in the self efficacy of the respondents categorized on the basis of their location of work
H02-29: There was no significant difference in the self efficacy of the respondents categorized on the basis of their response for extra duties
H02-30: There was no significant difference in the self efficacy of the respondents categorized on the basis of their health disorder
H02-31: There was no significant difference in the self efficacy of the respondents categorized on the basis of their leisure activity
H02-32: There was no significant difference in the self efficacy of the respondents categorized on the basis of their physical activity
H02-33: There was no significant difference in the self efficacy of the respondents categorized on the basis of their hobbies
H02-34: There was no significant impact of the age of the respondents on their self efficacy
H02-35: There was no significant impact of the monthly income of the respondents on their self efficacy
H02-36: There was no significant impact of the length of service of the respondents on their self efficacy
H02-37: There was no significant impact of the teaching experience of the respondents on their self efficacy
Objective 3

*To analyze the levels of the occupational stress and self efficacy*

H$_{03}$: The proportion of the distribution of the faculty members in accordance to their levels of occupational stress was similar

H$_{04}$: The proportion of the distribution of the faculty members in accordance to their levels of self efficacy was similar

H$_{05}$: There was no association presents between the levels of the occupational stress and self efficacy

Objective 4

*To evaluate the impact of the self efficacy over the occupational stress of the faculty members*

H$_{06}$: Self efficacy and its dimensions has no significant impact over the occupational stress

H$_{06-1}$: The *Teaching Methodology* dimension of the Self efficacy has no significant impact over the occupational stress

H$_{06-2}$: The *Motivation* dimension of the Self efficacy has no significant impact over the occupational stress

H$_{06-3}$: The *Discipline* dimension of the Self efficacy has no significant impact over the occupational stress

H$_{06-4}$: The *Parent Interaction* dimension of the Self efficacy has no significant impact over the occupational stress

H$_{06-5}$: The *Team Work* dimension of the Self efficacy has no significant impact over the occupational stress

H$_{06-6}$: The *Job Adjustment* dimension of the Self efficacy has no significant impact over the occupational stress
3.2.8 Assumptions

An assumption of this study will be that Respondents will be aware of Occupational stress and could apply personal experience in the experiment; therefore, they will be able to answer meaningfully, understand the task, and express their opinion by answering the questionnaire honestly. Because respondents represent academic faculties who hold high and responsible positions, aware of all information, i.e. response rates will be high and missing data low.

3.2.9 Sampling Design and Sample Size

The universe of the study as follows:

The term *research population* for the current study is academic faculty members working in affiliated colleges of Punjab. The colleges have been classified on various parameters like

a) Locality of institutes i.e. situated at Urban, Semi-urban and Rural area

b) Ownership i.e. Government colleges, Private aided colleges, Private unaided colleges

c) Nature of Study i.e. Engineering, Medical, Law, General Education, Teacher training etc.

d) Type of students i.e. Women colleges, Men Colleges or Co-ed. Colleges, situated at Punjab constitute the universe of the study.

e) Further, teachers had been classified on the basis of type of employment/ job status like: Permanent, Temporary, Guest Faculty; Level of Employment/ Departmental Position: Professor, Associate Professor and Assistant Professor.

The sample of 500 teachers of different colleges have been taken for study as per above classification. The following table depicts the list of the colleges and the number of faculty members selected from various affiliated colleges in Punjab and around Chandigarh.
Table 3.1: List of the Colleges and Number of Faculty Members Selected from Various Affiliated Colleges in Punjab and around Chandigarh.

<table>
<thead>
<tr>
<th>Government Colleges (162)</th>
<th>Private Aided College (159)</th>
<th>Private College (179)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Govt. College for Men, Chandigarh Sec – 11</td>
<td>DAV College, Chandigarh</td>
<td>Mata Sahib Kaur Nursing College, Kharar</td>
</tr>
<tr>
<td>Govt. College for Girls, Chandigarh Sec - 11</td>
<td>GGDSD College, Chandigarh</td>
<td>SUS College, Tangori</td>
</tr>
<tr>
<td>Govt. College, Chandigarh Sec – 42</td>
<td>SGGS College, Chandigarh</td>
<td>Chandigarh Engineering College, Landra</td>
</tr>
<tr>
<td>Govt. College, Chandigarh Sec – 46</td>
<td>SGGS College for Women, Chandigarh</td>
<td>Rayat Bhara College, Ropar</td>
</tr>
<tr>
<td>Govt. College of Arts, Chandigarh Sec - 10</td>
<td>MCM DAV College, Chandigarh</td>
<td>Doaba College, Ropar</td>
</tr>
<tr>
<td>Govt. College of Architecture, Chandigarh Sec - 12</td>
<td>Dev Samaj College, Chandigarh</td>
<td>Quest Technical College, Jhanjehri</td>
</tr>
<tr>
<td>Chandigarh College of Engineering and Technology, Sec 26</td>
<td>DAV college, Hoshiarpur</td>
<td>Dolphin Life Sciences College, Chunni</td>
</tr>
<tr>
<td>Govt. College, Mohali (SAS Nagar)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. College, Ropar</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.2.10 Questionnaire Design and Development

The questionnaire is an important instrument in research as a tool for data collection. The principles of questionnaire design are concerned with the wording, organisation and power of measurement for the entire questionnaire. Therefore, the quality of the questionnaire is dependent on the skill and judgment of the researcher due to the need for clear understanding of the information needed, sensitivity to the role of the respondents and extensive pre-testing. The questionnaire in this major study will be based on the development process using the following approach. The
design of the questionnaire and its administration for the major study followed six steps which were adapted from Frazer and Lawley, 2000 as shown in table 3.2.

Table 3.2: Steps in Questionnaire Design

<table>
<thead>
<tr>
<th>Step</th>
<th>Where addressed in this thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determine study objectives</td>
<td>Chapter III</td>
</tr>
<tr>
<td>2. Determine the appropriate data collection Method</td>
<td>Section 3.2.12</td>
</tr>
<tr>
<td>3. Determine data required</td>
<td>Section 3.2.13</td>
</tr>
<tr>
<td>4. Develop questions</td>
<td>Section 3.2.10.1</td>
</tr>
<tr>
<td>• Question content</td>
<td></td>
</tr>
<tr>
<td>• Question wording</td>
<td></td>
</tr>
<tr>
<td>• Response format</td>
<td></td>
</tr>
<tr>
<td>• Structure and layout</td>
<td></td>
</tr>
<tr>
<td>5. Pre-test and revise the questionnaire</td>
<td>Section 3.2.10</td>
</tr>
<tr>
<td>6. Assess the reliability and validity of the Questionnaire</td>
<td>Section 3.2.15</td>
</tr>
<tr>
<td>7. Implement survey and gather data</td>
<td>Section 3.2.13</td>
</tr>
</tbody>
</table>

Source: adapted from Frazer and Lawley (2000)

3.2.10.1 Question Development

The design of the questionnaire is dependent on previous decisions regarding the research objectives, the nature of the research design, the source of data, the target population, the sampling plan, the communication method, the measurement techniques and data processing and analysis plan. The first three steps in table 3.2 are discussed in the sections indicated. The fourth step is to develop the questions and the techniques which will be applied, as will now be discussed. The question content is determined by reviewing the research objectives in step 1 and seeing what needs to be addressed. Question content is influenced by respondent’s ability and willingness to respond accurately. Additionally, question wording can be related to systematic biases and random error. Therefore, in developing the questions used in this study, a number of principles related to good question design were used (Kinnear & Taylor 1996).

This study adapts questions from some standardized scales. This study analyses occupational stress and the statements have been adapted from standardized...
scale of *Occupational Stress Index* (OSI) developed by Dr. A.K. Srivastava and Dr. A.P. Singh. Occupational stresses have been further studied with the help of job task demands and self-developed scale of self-efficacy.

### 3.2.10.2 Sources of Measurement Error

To minimize sampling error in this study, the researcher decided to use a sample size of faculty members up to 500. The study has tried to remove Non response error by motivating them through motivation techniques. Response bias occurs when a response to a questionnaire is falsified or misrepresented, either intentionally or inadvertently. This type of bias in this study was controlled through question wording, the sequence of questions and careful editing of questionnaires once completed.

### 3.2.10.3 Level of Measurement

After describing the techniques used to minimize measurement errors in the previous section, this section outlines the levels of measurement chosen for measuring the relevant constructs which were applied to develop the appropriate questions. The way to measure a construct depends on the specific phenomenon of interest (Neuman 1994). Some constructs, such as income level, age, length of service, teaching experience, and working hours, is tangible and can be measured directly by using numerical values whereas others are categorical such as gender, education, organization.

The study has used different scales to measure the data by sophisticated data analysis leading to more meaningful answers.

In this questionnaire, questions using a nominal scale were asked according to the presence or absence of some condition, such as gender or age.

An *ordinal scale* categorizes variables, rank also orders the categories in some meaningful way. Question 2 capturing an ordinal scale is used in this study.

*Interval scale* is the next level of measurement after ordinal scale. It measures the distance between any two points on the scale because the intervals are considered as equal. In this questionnaire, the Likert scale was widely used in questions.

In conclusion, care was taken to select measurement scales that provided the greatest amount of information.
3.2.10.4 Response Format

The choice of measurement scale determines the type of data which will be collected. Additionally, response format for the questions must be designed to capture data in the correct format.

There are different kinds of response format which have been used in questionnaire: dichotomous questions and scaled-response questions.

*Dichotomous questions* provide the respondent with a choice of only two responses, either yes or no, or a choice of two opposite alternatives. It is considered to be easy and fast to administer by both respondents and the researcher. In addition, it reduces cost and time in the data analysis process. In this questionnaire, questions 2 of Section IV used this kind of question.

When using close-ended dichotomous questions in this survey, check-boxes were used throughout the questionnaire. It makes the questionnaire look simple and easy to complete, which may increase the response rate (Kinnear & Taylor 1996).

To avoid a number of alternative issues, the response choices were kept to less than ten as determined from the results of the exploratory research conducted in the previous chapter.

The final kind of response format used in this questionnaire is *scaled-response questions*. They can be used to measure the degree of feeling, attitude and intention. In this study, the Likert scale, with five categories ranging from ‘strongly disagree’ to ‘strongly agree’, was used in questions Section I and II to ask respondents to indicate their degree of agreement. In conclusion, questions in this survey were designed with response formats which would enhance the possible responses, give accurate answers and be easily and accurately recorded.

3.2.11 Survey Administration

The next step to questionnaire development is survey administration i.e. to decide how to collect data for analysis.

3.2.11.1 Surveying with the Questionnaire

Many methods of collecting survey data exist, each with its own advantages and disadvantages.
Surveys are by far the most widely used method to assess the success of a social marketing program as they are highly structured and usually use closed-ended questions that focus on what and how much. In addition, when discussions occur between an investigator and respondent, little information other than the final numerical answer is recorded on the survey.

As a result, survey data are almost always collected in a numerical or coded format. The principal advantage of such surveys is that they can be administered to a large number of individuals, organisations or households using standardized methods.

In this research Questionnaires have been administered to the academic faculty members of different demographic features to collect the first hand information. Questionnaires have been administered via:

**Personal Administration**

The questionnaires have been personally administered through mall intercept survey. It has also been administered to students and faculty of college/universities in all the cities selected for research. In this method, researcher has typically positioned at key locations in a mall, college/universities and interviewed willing consumers. In order to avoid any biasness every fifth consumer coming in that particular selected location was administered questionnaire and requested to spare some time to fill the questionnaire. This led to random selection process in which every person in a population has an equal chance of being included in the sample. The questionnaire was carefully constructed and it contains specific response categories and was administered on random selection process. This led to the project’s results potentially representative.

The researcher made attempts to maximize the response rate and hence reduce problems relating to non response errors. This section describes the steps for administering the online survey, as applied in this study in order to achieve a high response rate.

**3.2.11.2 Techniques of Response Motivation**

There are three courses of action, as suggested by Dillman (1978) for a researcher to take to encourage response: provide rewards to respondents, minimize cost and establish trust that the rewards will be delivered.
A number of techniques, all of which were applied in this study, were specified in the previous studies to improve survey returns and are described in table 3.3 this table shows that several techniques are to be carefully applied in order to stimulate survey response rates.

<table>
<thead>
<tr>
<th>Principle of Good Motivation</th>
<th>Application to the Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide regards</td>
<td>Express positive regard. Wording used in the cover letter of the questionnaire shows positive regard to the target respondents and appeal to them for assistance. For example, the sentence stating ‘Thank you once again for your valuable assistance with this research.’ was included at the end of the cover letter.</td>
</tr>
<tr>
<td>Apply a consulting approach</td>
<td>Respondents were asked to spend only a few minutes to complete the questionnaire.</td>
</tr>
<tr>
<td>Support respondent’s values.</td>
<td>Care was taken to emphasize the importance of the study to improving the program in the following years and society in general.</td>
</tr>
<tr>
<td>Make the questionnaire interesting.</td>
<td>Care was taken in designing the questionnaire with interesting questions, an attractive layout.</td>
</tr>
<tr>
<td>Provide an intangible reward.</td>
<td>A message of appreciation for the respondent’s cooperation was also included.</td>
</tr>
</tbody>
</table>

**Minimize costs**

<table>
<thead>
<tr>
<th></th>
<th>Questionnaire were sent through internet reducing cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminate direct monetary cost.</td>
<td>Because a longer questionnaire can result in lower response rate than a shorter one this questionnaire was divided into three sections I, II III and IV to make the questionnaire look brief.</td>
</tr>
<tr>
<td>Make the requested task appear brief.</td>
<td>The questionnaire was well designed to be quick and easy to complete such as using check boxes.</td>
</tr>
<tr>
<td>Reduce physical/ mental effort required.</td>
<td>The inclusion of sensitive questions was kept to a minimum. In addition, these questions were placed at the end of the questionnaire.</td>
</tr>
<tr>
<td>Principle of Good Motivation</td>
<td>Application to the Questionnaire</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Eliminate any implication of subordination.</td>
<td>Care was taken to appear to the respondent as an expert</td>
</tr>
<tr>
<td><strong>Establish trust</strong></td>
<td></td>
</tr>
<tr>
<td>Ensure confidentiality</td>
<td>The sentence stating ‘Please be assured that your responses will be held in strict confidence and used only to gather data for a doctoral thesis.’ was included in the cover letter to ensure respondent’s confidentiality.</td>
</tr>
<tr>
<td>Identify with an established legitimate organization.</td>
<td>As some studies showed that university sponsorship resulted in higher response rates than corporate sponsorship a sentence stating ‘This research is supported by Himachal University, Shimla.’</td>
</tr>
</tbody>
</table>


The *rewards* provided to respondents can be both tangible and intangible. The level of effectiveness may be different among various respondents. There is a lack of sufficient evidence to show that monetary incentives cause higher response rates in business surveys, therefore, this research has chosen not to include this as an incentive offer.

### 3.2.12 Data Collection

There are two major approaches to gathering information about a situation, person, problem or phenomenon. Sometimes, information required is already available and need only be extracted. However, there are times when the information must be collected. Based upon these broad approaches to information gathering, data are categorized as:

- Primary data.
- Secondary data

To carry out the research, both primary and secondary data have been used.
3.2.12.1 Data Collection and Response Rate

The table indicates that 556 questionnaires were distributed personally. Out of 556 questionnaires distributed 500 valid responses were collected which led to response rate of 90%.

<table>
<thead>
<tr>
<th>Mode of distribution</th>
<th>Sample Size</th>
<th>No. of responses</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal administration</td>
<td>556</td>
<td>500</td>
<td>90%</td>
</tr>
</tbody>
</table>

Source: Self computation for study.

3.2.13 Research Instruments

A questionnaire has been prepared to study the occupational stress and its dimensions. And impact of self efficacy and its dimensions on occupational stress. The questionnaire has been divided into four sections the question number’s before factor analysis are as under.

Section I deals with the *occupational stress* which was having 13 different dimensions. The dimensions and question numbers are as follows Role Overload (1,13,25,36,44,46), Role Ambiguity (2,14,26,37), Role Conflict (3,15,27,38,45), Unreasonable group & Political pressure (4,16,28,39), Responsibility for person (5,17,29), Under Participation (6,18,30,40), Powerfulness (7,19,31), Poor Peer Relation (8,20,32,41), Intrinsic Impoverishment (9,21,33,42), Low Status (10,22,34), Strenuous Working Condition (12,24,35,43), Unprofitability (11,23).

Section II deals with *Job task demands* which was having 9 different dimensions namely the dimensions and question numbers are as follows Negativity at Work (3,8,13,17,22,27,32); Job Control (1,6,20,30,35); Harassment & Discrimination (4,9,14,18,23,33,37); Skill Utilization (7,21,31); Social Support (5,15,38); Physical Problem (11,16); Job Demand (12,26,28,36); Promotion (29,39,42); Security (34).

Section III deals with *self efficacy* which was having 6 different dimensions namely the dimensions and question numbers are as follows Teaching Methodology (4,11,12,13,14,16,22); Motivation (1,2,3,10,21); Discipline (5,9,15,20,23); Parent Interaction (6,24); Team Work (7,8); Job Adjustment (17,18,19).
Section IV deals with the demographics i.e. age, income, length of service, teaching experience, working hours of day and week, gender, education, organization, college, department, position, location of work, marital status, extra duties, health disorder and co-curricular activities. These demographics are linked with the above sections to find the impact of demographics.

These will further be analyzed with the help of Descriptive Analysis, Cross Tabulations, t-test, Correlation Matrix and Non parametric tests such as ANOVA tests

3.2.13.1 Description of the Instruments

Occupational Stress Inventory (Dr. A.K. Srivastava and Dr. A.P. Singh)

Occupation Stress Index (OSI) is a widely acceptable scale for measuring job stress. It has been used effectively by psychologists in researches. OSI was originally developed by Srivastava and Singh (1984) at Banaras Hindu University, Uttar Pradesh (UP), India. The scale purports to measure the extent of stress which employees perceive from various constituents and conditions of their job. The scale may be administered to the employees of every level operating in context of industries or other non-production organizations. The scale consists of 42 items and each of which is rated on a five-point scale. The items are related to almost all relevant components of job life which cause stress in some way or other.

Occupational Stress Inventory is a concise measure of three dimensions or domains of occupational adjustment: Occupational Stress, Psychological strain and Coping resources. In the present study the investigator used only one of the domains for measuring occupational stress.

The occupational stress is measured by a set of twelve scales which are collectively called the occupational stress questionnaire.

Role Overload (RO)- Measures the extent to which job demands exceed resources (personal and work place) and the extent to which an individual is able to accomplish expected workload.

Role Conflict (RC)- Measures the extent to which the individual is experiencing conflicting role demands and loyalties in the work setting.

Role Ambiguity (RA)- Measures the extent to which the priorities, expectation
and evaluation criteria are clear to the individual.

**Unreasonable group & Political pressure (UGPP)** - Measures the extent to which the individual faces unwanted group formations and politics culture.

**Responsibility for person (RP)** - Measures the extent to which the individual has or feels, a great deal of responsibility for the performance and welfare of others on the job.

**Under Participation (UP)** - Measures the extent to which the individual participation in decision making process or some other arbitrary process

**Powerfulness (PL)** - Measures the extent to which there is balance in distribution of powers.

**Poor Peer Relation (PPR)** - Measures the extent of the individual relations with peers at work.

**Intrinsic Impoverishment (II)** - Measures the extent to which the individual utilizes self abilities independently.

**Low Status (LS)** - Measures the extent to which the individual’s nature of the job enhances social status.

**Strenuous Working Condition (SWC)** - Measures the extent to which the individual faces tense circumstances in which work has to be done.

**Unprofitability (UF)** - Measures the extent to which the individual has feeling of neglect in form of their low salary, absence of rewards, lack of motivation, etc

### 3.2.14 Pilot Study

A pilot study is a small designed study to gather information prior to a larger study, in order to improve the latter’s quality and efficiency. The purpose of conducting a pilot study was mainly to validate the drafted questionnaire. A pilot study can reveal deficiencies in the design of a proposed large scale studies. A good research strategy requires careful planning and a pilot study will often be a part of this strategy. The same in this research project, the preliminary study was conducted among the small sample of 50 respondents to validate the questionnaire framed. The pilot study, as already mentioned in the sampling design in chapter three, was conducted among faculty members in an around areas of Chandigarh. Faculty
members from the different colleges which were used for the pilot study were not included in the study sample for the main study.

The thrust of the results obtained were based only on the measurement of occupational stress among the respondents which were sampled from the various demographic profile used in the proposed questionnaire. Thus this study confirmed that the sampled data for the pilot study was homogeneous and belongs to all sections of the demographic profile.

Since the thrust was to assess the occupational stress among the respondents from various demographic profile and it was concluded that, stress level was measured highly among the females as compared to the male faculty members. Similarly, PhD holder faculty feels less stress at occupation than those faculty members those were having either lesser degree of graduation or post graduation or having higher degrees than PhD. The faculty members of the private unaided colleges are under extreme occupational stress than the faculty surveyed from the government and aided private colleges. The faculty members working in the rural locality colleges or institution are again under stress more than the working in the urban suburb. The occupational stress was also measured more among the faculty members those were experiencing some kind of the health disorders and also among those which were not active in any co curricular activities like leisure, physical and hobbies.

3.2.15 Reliability and Validity of Data

In this research, the criteria of validity and reliability, which are important for evaluating the measurement phase, were considered carefully. The reliability of the questionnaire finalized in the research project was also evaluated through the split half method and croanbach’s coefficient for the scale as a whole were found to be 0.921 and 0.924 respectively which is highly above the required value of 0.60.

The Reliability croanbach’s alpha coefficient of the occupational stress questionnaire was 0.855 and in the same the reliability analysis was conducted for its 12 sub-scales also and they also have justified the criteria set under Cronbach’s alpha reliability test. The following table 3.3 records the obtained indices.
The validity of the occupational stress questionnaire was also determined by evaluating coefficient of correlation (Karl Pearson Method) between the scales on the occupational stress questionnaire and the various measures of job task demands and self-efficacy of the faculty members. The validity of the occupational stress questionnaire was established from the results obtained as positive correlation was established between the scores of occupational stress with the scores on the measures of Harassment & Discrimination and Physical Problems i.e. \( r = 0.689 \) (\( p < 0.05 \)) and \( r = 0.702 \) (\( p < 0.05 \)) respectively. The coefficient of correlation between the scores on the occupational stress questionnaire and the measures of job control, job demand, skill utilizations, job certainty, social support and self-efficacy of the faculty members were found to be -0.556, -0.689, -0.449, -0.551, -0.665 and -0.582 respectively.

**Table 3.5: Reliability Indices (Split Half Method) of the 12 Sub Scales of the Occupational Stress Questionnaire**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Sub Scales</th>
<th>Reliability Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Role Overload</td>
<td>0.789</td>
</tr>
<tr>
<td>2</td>
<td>Role ambiguity</td>
<td>0.688</td>
</tr>
<tr>
<td>3</td>
<td>Role conflict</td>
<td>0.759</td>
</tr>
<tr>
<td>4</td>
<td>Unreasonable Group &amp; Political Pressure</td>
<td>0.788</td>
</tr>
<tr>
<td>5</td>
<td>Responsibility for persons</td>
<td>0.841</td>
</tr>
<tr>
<td>6</td>
<td>Under participation</td>
<td>0.802</td>
</tr>
<tr>
<td>7</td>
<td>Powerlessness</td>
<td>0.899</td>
</tr>
<tr>
<td>8</td>
<td>Poor Peer relations</td>
<td>0.692</td>
</tr>
<tr>
<td>9</td>
<td>Intrinsic impoverishment</td>
<td>0.778</td>
</tr>
<tr>
<td>10</td>
<td>Low status</td>
<td>0.733</td>
</tr>
<tr>
<td>11</td>
<td>Strenuous Working conditions</td>
<td>0.748</td>
</tr>
<tr>
<td>12</td>
<td>Unprofitability</td>
<td>0.856</td>
</tr>
</tbody>
</table>
3.2.16 Processing and Analysis of Data

Data obtained through questionnaire were appropriately edited, coded, and entered into an SPSS program for statistical applications (descriptive as well as inferential), wherever is appropriate. The data analysis objectives were met through:

a) Testing goodness of data using the reliability analysis (Cronbach's alpha) and

b) Testing of hypotheses using valid statistical testing instruments such as t-test, correlation, ANOVA, regression tests that may be convenient to the data type collected and the particular hypothesis.

The statistical procedures used in this chapter IV for achieving and making inference from the objectives were as follows:

**Frequency Distribution Table** – This table is most common tabulation form to summarize the information collected in terms of numeric and non-numeric data sets. The common components of frequency distribution table are Frequencies and percentage distribution of each category. In this chapter frequency distribution tables were generated for each of the demographic variables, to analyze the distribution pattern of the subjects in each category.
Descriptive Statistics Table – This table gives the information of each variable in terms of mean and standard deviation values. In this chapter descriptive tables were generated for each measured demographic variables, to analyze the distribution pattern.

Croanbach Alpha Method (Reliability)- Croanbach’s alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items measure an underlying (or latent) construct. Croanbach’s alpha is not a statistical test - it is a coefficient of reliability (or consistency).

Factor Analysis -Factor analysis is a statistical technique used for replacing a large number of variables with a smaller number of “factors” that reflect what sets of variables have in common with one another. It is commonly used in an exploratory way to identify what underlies a set of otherwise loosely related variables.

T- Test – This test of significances was used in the condition to compare two independent groups, like in this research study, the values obtained on the occupational stress, self efficacy was compared among two categorized demographic variables.

1. The data set obtained for two groups should be parametric in nature.

2. The decision of test of significances of was based on the p - values concept.

ANOVA Analysis –

1. This test of significances was used in the condition to compare three or more independent groups like in this research study the values obtained on the occupational stress, self efficacy was compared among three or more categorized demographic variables.

2. The data set obtained for three or more groups should be parametric in nature.

3. The decision of test of significances of was based on the p - values concept.

P – Values -These are the probability of accepting the null hypothesis assumed for any test of significances, as higher values of the “p” implies acceptances of null hypothesis and lower values accounts for the rejection of null hypothesis. Also significances of test are associated with lower p – values and non significances are associated with higher p – values.
**Chi-square test**- The Chi-square test is often used to test whether sets of frequencies or proportions follow certain patterns.

**Regression and Correlation Analysis** - A regression equation models the dependent relationship of two or more variables. It is a measure of the extent to which researchers can predict one variable from another, specifically how the dependent variable typically acts when one of the independent variables is changed. Correlation and regression analysis are related in the sense that both deal with relationships among variables. The correlation coefficient is a measure of linear association between two variables. Values of the correlation coefficient are always between -1 and +1. A correlation coefficient of +1 indicates that two variables are perfectly related in a positive linear sense, and correlation coefficient of -1 indicates that two variables are perfectly related in a negative linear sense, and a correlation coefficient of 0 indicates that there is no linear relationship between the two variables.

### 3.2.17 Limitations of the Study

The cooperation and interest of respondents posed a serious problem in few cases as research was based on exclusive survey. Some respondents showed little interest in filling the questionnaire.

Another important limitation with the research is that the cities from which data is collected have been selected as per the convenience and therefore some of the rural and urban areas were included in the sample due to time and resource constraints.

As the research is conducted in Punjab and Chandigarh only, so the findings may not be exactly applicable to other sectors as occupational stress may vary in every profession and differ across cultures.

Despite these limitations, efforts were made that these limitations do not come in the way of arriving at an authentic conclusion. The sample selection was done very carefully to make the sample representative of the whole population. Further the respondents were guided thoroughly to understand the questions whenever they faced any difficulty.
REFERENCES


93


42. Salami-Samuel (2010). Occupational Stress And Well-Being: Emotional Intelligence, Self-efficacy, Coping, Negative Affectivity And Social Support
43. Klassen, Robert M; Usher, Ellen L; Bong, Mimi (2010). Teachers collective
efficacy, job satisfaction and job stress in cross cultural context. Journal of
44. Klassen, Robert M and Chiu, Ming Ming (2010). Effects on Teachers’ Self-
Efficacy and Job Satisfaction: Teacher Gender, Years of Experience, and Job
Stress. *Journal of Educational Psychology*. American Psychological
Association 2010, Vol. 102, No. 3, 741–756
45. Caldwell, Karen; Harrison, Mandy; Adams, Marianne; Quin, Rebecca H;
Greeson, Jeffrey (2010), Developing Mindfulness in College Students through
Movement-Based Courses: Effects on Self-Regulatory Self-Efficacy, Mood,
Stress, and Sleep Quality , *Journal of American College Health*, ISSN 0744-
patients-manage-stress/15442.html
47. Kocoglu, Zeynep (2012). Emotional Intelligence and Teacher Efficacy: A
Study of Turkish EFL Pre-Service Teachers, Teacher Development, ISSN
Performance Of College Teachers In Pakistan”, *International Journal of
Humanities and Social Science Vol. 1 No. 3; March 2011
49. Saleem and Shah (2011), Self-efficacy as a stress-coping mechanism among
Vol. 5(35), pp. 13435-13441, Available online at
http://www.academicjournals.org/AJBM
commitment and intention to quit of practicing and pre-service teachers:
Influence of self-efficacy, job stress, and teaching context , *Contemporary
Educational Psychology*, Volume 36, Issue 2, Pages 114 – 129, ISSN 0361-
476X, EISSN 1090-2384


58. Sawatzky, RG, Ratner, PA, Richardson, CG, Washburn, C, Sudmant, W, Mirwaldt, P.(2012). Stress and depression in students: the mediating role of stress management self-efficacy. School of Nursing, Trinity Western University, British Columbia, Canada. rick.sawatzky@twu.ca


